



Government of Pakistan  
Ministry of National Health Services,  
Regulations & Coordination



# TOWARDS UNIVERSAL HEALTH COVERAGE

## INTERVENTIONS' DESCRIPTION OF ESSENTIAL PACKAGE OF HEALTH SERVICES/ UHC BENEFIT PACKAGE OF PAKISTAN

Oct 2020







Government of Pakistan  
Ministry of National Health Services,  
Regulations & Coordination



# PAKISTAN

## Interventions' Description of Essential Package of Health Services / UHC Benefit Package of Pakistan

DCP<sup>3</sup>

Disease  
Control  
Priorities

*economic evaluation for health*



World Health  
Organization

@October 2020

Interventions' Description of  
Essential Package of Health Services (EPHS)/ UHC Benefit Package of Pakistan based on  
Disease Control Priorities – Edition 3

Produced by:  
Ministry of National Health Services, Regulations and Coordination and  
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## EXECUTIVE SUMMARY

Government of Pakistan is committed that all individuals and communities should have equitable access to their needed health care, in good quality, without suffering financial hardship. The same has been expressed in the National Health Vision which is:

*‘To improve the health of all Pakistanis, particularly women and children by providing universal access to affordable, quality essential health services which are delivered through a resilient and responsive health system, capable of attaining the Sustainable Development Goals and fulfilling its other global health responsibilities’*

Development of Essential Package of Health Services/ UHC benefit package offers a futuristic vision in the health sector to set strategic direction and accordingly implement prioritized interventions in order to make progress on achieving universal health coverage/ health-related Sustainable Development Goals.

The Disease Control Priorities 3 (DCP3) secretariat and World Health Organization (WHO) organized an international workshop in Islamabad during August 2018, which was also attended by provincial/ area Departments of Health (DOH), UN agencies and other partners. Participants were sensitized on the concept and evidence described in the nine volumes of DCP3 published by the secretariat.

Soon after that the Inter-Ministerial Health & Population Forum (meeting held on 14 September 2018) decided that Pakistan should go ahead with requesting WHO & DCP3 secretariat to select Pakistan for adaptation of the DCP3 recommendations as a Universal Health Coverage Benefit Package (UHC BP) of Pakistan.

Ministry of National Health Services, Regulations and Coordination (NHSR&C) sent a joint request to the DCP3 secretariat and proposed to select Pakistan for the adaptation of DCP3 recommended interventions as UHC benefit package. The proposal was confirmed by the secretariat in October 2019. Thus, Pakistan became the first country in the world to use DCP3 evidence to inform the definition of its UHC benefit package.

Later on, providing UHC benefit package became a cornerstone of the health chapter of 12<sup>th</sup> Five Year Plan (2018-23) and National Action Plan (2019-23) for health sector of Pakistan.

Second joint WHO-EMRO and DCP3 secretariat mission visited Pakistan during 16-18<sup>th</sup> January 2019 and a ‘Roadmap for the development of UHC benefit package for Pakistan’ was produced. By April 2019, the Ministry of NHSR&C completed review of essential health services based on DCP3 recommended interventions in Pakistan.

Third joint WHO-EMRO and DCP3 secretariat mission visited the country during 1-3<sup>rd</sup> of July 2019, when along with further sensitization, processes and needs were defined and steps were agreed for formal partnership of the DCP3-UHC project (LSHTM) and WHO with the Health Planning, System Strengthening and Information Analysis Unit (HPSIU) of the ministry, Department of Community Health Sciences of Aga Khan University (AKU) and Health Services Academy (HSA).

Soon after that WHO and DCP3-UHC project funded by the Bill & Melinda Gates Foundation (BMGF) started technical support through the London School of Hygiene and Tropical Medicine (LSHTM)-UK.

For evidence-based decisions on what should be priority interventions in the essential package of health services, it is critical to describe each intervention to explain briefly the process of interaction with patient/ client for each intervention along with platform and identification of major direct and indirect cost heads. This helps not only in developing an understanding on what is required to be implemented but also to ensure appropriate estimation of cost required to implement the same.

Interventions were described by a core team at HPSIU with support of technical working groups, programme managers, subject experts and other stakeholders. National/ provincial guidelines, curriculum and protocols were used as priority reference document. After that preference was given to WHO guidelines and protocols followed by academic reference document and Delphi.

Relevant analysis and evidence generated for each intervention was also gathered with support of DCP3 secretariat and were shared with stakeholders to have further deliberation and to produce an evidence based EPHS for Pakistan. Costing of all prioritized interventions was also carried out by the department of community health sciences, AKU and LSHTM, to estimate cost implication against the fiscal space for health in the country.

As the EPHS / UHC benefit package for Pakistan has been developed, now the implementation of the same will start at district level to generate evidence on its effectiveness and feasibility in the context of Pakistan.

This document presents description of all interventions that were reviewed for prioritization and inclusion in the generic EPHS / UHC benefit package of Pakistan.



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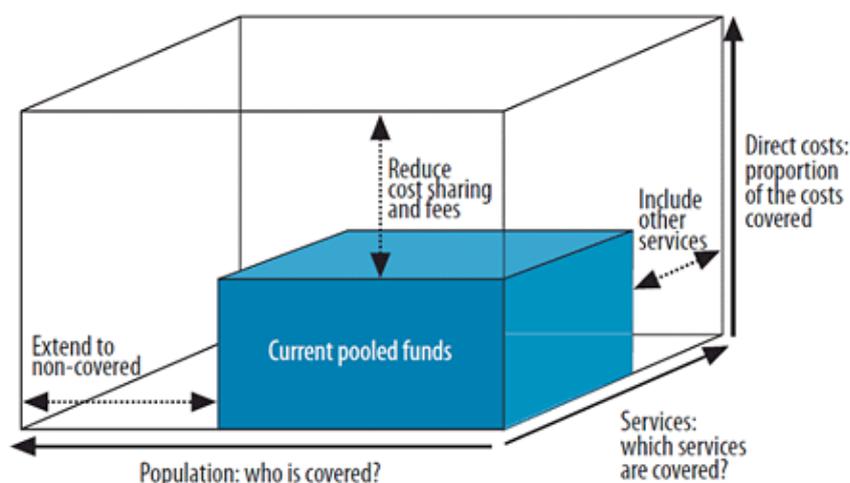
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## Acronyms

AIDS	Acquired Immune Deficiency Syndrome
AJK	Azad Jammu & Kashmir
AKU	Aga Khan University
ARV	Anti-Retro-Viral therapy
BEmONC	Basic Emergency Obstetrical and Neonatal Care
BOD	Burden of Disease
CEmONC	Comprehensive Emergency Obstetrical and Neonatal Care
CKD	Chronic Kidney Disease
COPD	Chronic Obstructive Pulmonary Disease
CVD	Cardio Vascular Diseases
DALYs	Disability Adjusted Life Years
DCP3	Disease Control Priorities – Edition 3
DFID	UK’s Department for International Development
DOH	Department of Health
EIP	Early Inter-sectoral Prevention Policies
EPHS	Essential Package of Health Services
EUHC	Essential Universal Health Coverage
GAVI	Global Alliance on Vaccine & Immunizations
GB	Gilgit Baltistan
GDP	Gross Domestic Product
GFATM	Global Alliance to fight against AIDS, TB and Malaria
GNI	Gross National Income
GPEI	Global Polio Eradication Initiative
HIV	Human Immuno-Deficiency Virus
HPP	Highest Priority Package
HPV	Human Papilloma Virus
ICPD	International Conference on Population & Development
IP	Inter-sectoral Prevention Policies
IHR	International Health Regulations
IMCI	Integrated Management of Childhood Illnesses
JEE	Joint External Evaluation
KP	Khyber Pakhtunkhwa
LMIC	Low-income and middle-income countries
LSHTM	London School for Hygiene and Tropical Medicine
MCH	Maternal and Child Health
MDGs	Millennium Development Goals
MDR	Multi Drug Resistance
M/o NHR&C	Ministry of National Health Services, Regulation & Coordination
NTD	Neglected Tropical Diseases
PMTCT	Prevention of Mother-to-Child transmission
RH	Reproductive Health
RUTF	Ready to Use Therapeutic Food
SDGs	Sustainable Development Goals
STI	Sexually Transmitted Infections
TB	Tuberculosis
UHC	Universal Health Coverage
UN	United Nations
UNICEF	United Nations Children Fund
WASH	Water, Sanitation & Hygiene
WB	World Bank
WHO	World Health Organization

## ESSENTIAL PACKAGE OF HEALTH SERVICES / UHC BENEFIT PACKAGE OF PAKISTAN

Universal Health Coverage (UHC) is based on the principle that all individuals and communities have equitable access to their needed health care, in good quality, without suffering financial hardship. A set of policy choices about benefits and their rationing are among the critical decisions in the reform of health financing system towards universal coverage. Choices need to be made about proceeding along each of the three dimensions, in many combinations, in a way that best fits their objectives as well as the financial, organizational and political contexts. The three dimensions are: i) which services are covered and which needs to be included; ii) covered population and extension to non-covered; iii) reducing cost sharing and fees.



Three dimensions to consider when moving towards universal coverage

Designing of a comprehensive package of health services considering burden of disease, cost effectiveness and social context are critical to define which services are to be covered through different platforms: i) community level; ii) health centre level; iii) first level hospitals; and iv) referral level hospital; and v) population based. In addition, interventions related to inter-sectoral prevention and fiscal policies can play an important role in moving towards UHC.

### 1. BACKGROUND

The 2030 Agenda for Sustainable Development has given impetus to Universal Health Coverage (UHC) as an overarching target to guide health systems transformations to achieve the health-specific and health-related Sustainable Development Goals (SDGs) targets.<sup>1</sup> Specifically, SDG 3.8 calls for achieving universal health coverage, through access to quality essential health care services for all, including financial risk protection.

Disease Control Priorities – Edition 3 (DCP3)<sup>2</sup> defines a model concept of essential universal health coverage (EUHC) that provides a starting point for country-specific analysis of priorities. DCP3 is

<sup>1</sup>: Kieny MP, Bekedam H, Dovlo D, Fitzgerald J, Jarno Habicht, Harrison G, et al. Strengthening health systems for universal health coverage and sustainable development. Bull World Health Organization 2017; 95:537–539.

<sup>2</sup> <http://dcp-3.org/>

intended to be a model starting point for analyses at the country level, but country-specific cost structures, epidemiological needs, and national priorities generally lead to EUHC that differ from country to country.<sup>3</sup>

Identifying what to cover, and not to cover for essential health care services is a critical step for the roadmap towards achieving UHC. There is a relevance of defining a core set of health services and interventions based on global best practices and local needs, to constitute a 'UHC benefit package' for achieving UHC by a country.

Design of UHC benefit package is a key instrument to steer the health systems towards UHC. Ensuring the effective delivery of benefits to people also requires coordination with policies on revenue raising, pooling, purchasing, and service delivery. UHC benefit package consist of two major set of institutionalized reforms:

1. Prioritization and implementation of an Essential Package of Health Services (EPHS) through five platforms, along with health system strengthening and capacity development interventions
2. Prioritization and implementation of Inter-sectoral Interventions (II) using four policy reform tools (fiscal, regulation, information & education and build environment)

In Pakistan, a more formal attempt for developing an essential package of health services (EPHS) was made during 2012-13, in the provinces of Punjab and Khyber Pakhtunkhwa (and later on in Sindh in 2014), corresponding with the 18<sup>th</sup> constitutional amendment. With UK's Department for International Development (DFID)/ Technical Resource Facility (TRF) support, costed EPHS were defined but remained limited to integrated reproductive, maternal, new-born, child health and nutrition services at primary health care level. Non-communicable diseases, communicable diseases, services access, health emergencies, inter-sectoral interventions were not included, while implementation focus remained largely towards the public sector, along with contracting out of public health facilities to NGOs to a variable extent.

However, this offered a good lesson learning opportunity for provision of a package of services, which was positively supported by development of minimum services delivery standards mainly at primary healthcare level. In parallel, legislative reforms were also initiated to establish healthcare commissions/ authority, to set service delivery standards and their enforcement both in the public and private sector.

Pakistan Health Insurance Programme was launched in December 2015. The Programme aimed to protect families living below the poverty line for treatment of diseases leading to catastrophic health expenditure: diabetes, cardiovascular diseases, cancer, kidney and liver diseases, HIV and Hepatitis complications, burns and road accidents. In 2019, the package of services was enhanced to eight group of diseases & secondary care, while per family support was increased to Rs. 720,000 per year.

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<sup>3</sup> Dean T Jamison, Ala Alwan\*, Charles N Mock\*, et al, Lancet 2018; Universal health coverage and inter-sectoral action for health: key messages from Disease Control Priorities, 3rd edition

The 2030 agenda on Sustainable Development has provided an opportunity to revisit the health services and health system in Pakistan to ensure achievements of new targets and goals which are more comprehensive and ambitious than MDGs.

In August 2018, an international meeting on Disease Control Priorities 3 was held in Pakistan and attended by Morocco, Lebanon, Iran, Jordan, Pakistan, WHO EMRO, University of Washington and stakeholders including provincial departments of health. Soon after the workshop, Pakistan requested the DCP3 secretariat to select Pakistan as the first country in the world to adopt DCP3 recommend interventions as UHC benefit package of Pakistan. The proposal was confirmed by the secretariat in October 2019.

In the Inter-Ministerial Health & Population Forum meeting held on 14 September 2019, the following were decisions:

- 1 The forum endorsed that Pakistan should go ahead with requesting WHO & DCP3 secretariat to adopt DCP3 recommendations for a national essential UHC benefit package;
- 2 The development of generic National Essential UHC Package may be assigned to a National DCP3 working group with nomination of focal points from all DOHs; Flexibility to be ensured to have province/area specific essential UHC package;
- 3 Implementation of agreed interventions of the package in 12 districts of Family Practice approach in Phase-I and generate evidence for its effectiveness

Later on, providing Universal Health Coverage Benefit Package (UHC BP) of Pakistan became a cornerstone of the health chapter of 12<sup>th</sup> Five Year Plan and National Action Plan for health sector of Pakistan.

Pakistan is the first country globally to use DCP3 to inform the definition of its health benefit package of health services. WHO and DCP3-UHC project funded by the Bill & Melinda Gates Foundation (BMGF) provided technical support through London School of Hygiene and Tropical Medicine (LSHTM)-UK.

In December 2018, the Ministry of NHR&C started the review and preliminary prioritization of essential services in Pakistan based on DCP3 recommended intervention through a consultative process with provincial / area DOHs and other stakeholders. Four workshops were organized with support of WHO:

- Non-communicable diseases and inter-sectoral interventions – 13th December, 2018
- RMNCAH and nutrition and inter-sectoral interventions – 28th December, 2018
- Communicable diseases, international health regulations and inter-sectoral interventions – 15th January, 2019
- Inter-sectoral interventions and Health in all Policies – 20th February, 2019

Following four criteria were used to assess the situation and carry out initial prioritization:

- 1 Linkage of intervention with the disease burden in Pakistan
- 2 Cost-effectiveness of intervention
- 3 Feasibility for implementation of the intervention in the context of Pakistan
- 4 Consider inclusion of intervention/s which were not included in the DCP3 and may be relevant in the context of Pakistan

Summary findings of the review were as following:

Overall **135 (61.6%) of the 219 DCP3 recommended EUHC interventions** are being currently implemented with significant variation among provinces and districts:

- 42 (19.1%) available generally
- 93 (42.4%) available at limited level

Status of cluster-wise availability of essential services was as following:

Cluster	Recommended EUHC interventions	General & Partial Availability of EUHC	Available Generally	Available at Limited Level
RMNCH/ age related	67	50 (74.6%)	22 (32.8%)	28 (56%)
Infectious diseases	52	32 (61.5%)	10 (19.2%)	22 (42.3%)
NCD and Injures	45	16 (35.5%)	6 (13.3%)	10 (22.2%)
Health service	55	37 (67.2%)	4 (7.2%)	33 (60%)
<b>TOTAL</b>	<b>219</b>	<b>135 (61.6%)</b>	<b>42</b>	<b>93</b>

Platform wise availability of essential services was as following:

Platform	Recommended EUHC interventions	General & Partial Availability of EUHC	Available Generally	Available at Limited Level
Community level	62	30 (48.3%)	12 (19.3%)	18 (29%)
PHC centre level	66	32 (48.4%)	12 (18.1%)	21 (31.8%)
First level hospital	56	43 (76.7%)	9 (16%)	34 (60.7%)
Tertiary level hospital	20	19 (95%)	8 (40%)	11 (55%)
Population level	15	11 (73.3%)	2 (13.3%)	9 (60%)
<b>TOTAL</b>	<b>219</b>	<b>135 (61.6%)</b>	<b>42</b>	<b>93</b>

In the review of essential services, initial prioritization of essential services and inter-sectoral interventions was also attempted for further deliberations. It was realized that with the current situation, it is not be possible for the country to achieve UHC and health related SDGs and that priority should be given to enhance coverage of quality services along with broadening the scope of essential services.

Second joint WHO-EMRO and DCP3 secretariat mission visited Pakistan during 16-18th January 2019 and a 'Roadmap for the development of UHC benefit package for Pakistan' was produced. It was also agreed to start preparation for the implementation of EPHS in Islamabad district while defining the UHC benefit package through a more scientific approach and consultative process.

WHO EMRO and country office provided technical assistance to the ministry in February 2019 to develop a plan for model health system in Islamabad also to observe challenges, lesson learnt and ensuring initial preparation for launching of generic EPHS at a later stage. Accordingly mapping of all public and private sector health facilities was completed. A PC-1 for upgradation health infrastructure in Islamabad was developed to access public sector funds, in addition to synchronization of available support from other development partners and philanthropists. Work

of monitoring and evaluation framework also started, along with adaptation of SARA (Services Access and Readiness Assessment) tool with support of WHO, University of Manitoba (UoM) and HSA. One health facility (Community health centre, Shah Allah Ditta) in rural areas of Islamabad has already been upgraded, equipped and staffed to ensure provision of essential services at facility and community level.

Third joint WHO-EMRO and DCP3 secretariat mission visited the country during 1-3rd of July 2019, when along with further sensitization, processes and needs were defined and steps were agreed for formal partnership of the DCP3-UHC project (LSHTM) and WHO with the Health Planning, System Strengthening and Information Analysis Unit (HPSIU) of the ministry, Department of Community Health Sciences of Aga Khan University (AKU) and Health Services Academy (HSA). Accordingly, memorandums of understanding were signed later on to clearly define roles and responsibilities of partners.

## 2. Purpose and principles

The UHC Essential Package of Health Services or HBP is a policy framework for strategic service provision based on scientific evidence on health interventions. The purpose is to ensure that all people have access to essential **health services** (including prevention, promotion, treatment, rehabilitation and palliation) particularly in the context of limited resources. It aims to address current poor access to health and inequalities in health service provision and helps to clarify health priorities and directs resource allocation. Feasibility and affordability of implementation is key. There are many examples of health benefit packages failing to achieve their objective because they are unrealistically aspirational and inconsistent with available financial and other resources. Costed packages are also essential for detailed budgetary planning, advocacy purposes and to plan on how to increase their contributions.

The guiding principles adopted for the development process of the 'UHC package of essential health services included the following:

- Setting of the package is country executed and owned with broad support from policy makers and other national stakeholders
- Strong commitment and joint work of key stakeholders in government and national stakeholders is essential for success
- An open process in all steps, clearly data driven and evidence-informed and the same time based on country values and clearly defined criteria
- Partnership with other stakeholders including UN agencies and development partners is a critical component of joint work
- Process should adopt a systematic approach of country collaboration elements from data, to dialogue to decisions.
- Package should be linked to robust financing mechanisms and effective service delivery system

### 3. Process and institutional arrangements

The process for developing the EPHS was through a series of consultations that started in August 2018 with government agreement on the objectives, expected outcomes, and methods of work including the role of key local and international stakeholders involved. Initial work involved a comprehensive review covering epidemiology, disease burden, clinical services currently offered, health system capacity, resource allocation, fiscal space, and health plans. The process also included dialogue and evidence-based deliberation on priorities and services. The following box summarizes key steps for setting the package:

Box 1: Key steps for setting the Essential Package of Health Services

<ul style="list-style-type: none"><li>• Assess disease burden, health challenges, priorities, health system capacity including financing</li></ul>
<ul style="list-style-type: none"><li>• Agree on goals and criteria for setting priorities and selecting services for the different health system delivery platforms</li></ul>
<ul style="list-style-type: none"><li>• Establish a governance structure and process for dialogue and evidence-based deliberation on priorities and services</li></ul>
<ul style="list-style-type: none"><li>• Implement evidence-based priority setting and define selection criteria to make recommendations on what to include and exclude</li></ul>
<ul style="list-style-type: none"><li>• Conduct detailed costing of the package by interventions and delivery platforms based on current and planned coverage levels including the UHC target in 2030</li></ul>
<ul style="list-style-type: none"><li>• Assess the budget impact of the proposed HBP and translate decisions to resource allocation and use</li></ul>
<ul style="list-style-type: none"><li>• Establish a monitoring and evaluation framework to assess performance and outcomes</li></ul>
<ul style="list-style-type: none"><li>• Adapt and implement at the provincial level</li><li>• Review periodically based on new evidence, health system capacity and availability of funding</li></ul>

The decision-making process and design of the package is outlined in the following figure.

Figure 1: The process of UHC benefit package design

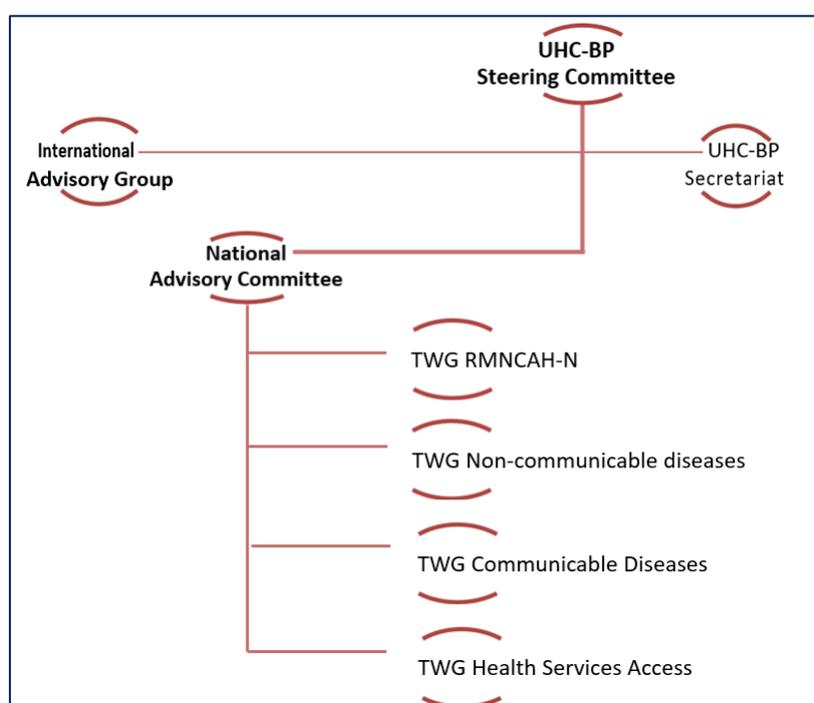


## Establishing the governance and advisory structure

The governance and advisory structure agreed by the Steering Committee of the project is shown in the figure below.

The structure includes three connected stages of deliberation around priorities, with results from each stage feeding into the next stage. The first stage involves four Technical Working Groups (TWG) for the four clusters of the DCP3 model package (Reproductive Maternal Neonatal Child and Adolescent Health, Non-Communicable Diseases, Communicable Diseases, and Health Services Access). The second stage covers the role of the National Advisory Committee (NAC) which reviews the combined outcomes of the TWG stage and propose final recommendations, and the third stage is a Steering Committee (SC), chaired by the Federal Minister of National Health Services, Regulation and Coordination with the authority to accept or demand further revisions of NAC recommendations.

**Figure 2:** The governance and advisory structure.



This governance arrangement reflects three levels:

- **Political level** for decision making at the ministerial level (UHC-BP Steering Committee and Inter-Ministerial Health & Population Council)
- **Technical level** through the National Advisory Committee (NAC), for developing consensus at the technical level and to propose recommendations to the political level for consideration/ endorsement with backstopping from the International Advisory Group (IAG)
- **Cluster level** through different Technical Working Groups (TWGs) to propose prioritized interventions considering evidence and local context. The membership consisted of wider

stakeholders from different constituencies with five types of subject experts (RMNCAH&N, infectious diseases, non-communicable diseases, health services and health system).

A core team (DCP secretariat) supports the advisory and decision process consisting of Health Planning, System Strengthening and Information Analysis Unit (HPSIU) of the Ministry, Health Services Academy and the Department of Community Health Sciences, Aga Khan University with backup support from the DCP3 Secretariat at the London School of Hygiene & Tropical Medicine, the World Health Organization and the Radboud University Medical Centre.

### **Defining goals and criteria**

The goals and criteria were defined in two stages. In January 2019 HPSIU developed initial criteria. Then in preparation for the selection of the primary and community package, with support of the DCP3 secretariat HPSIU organized a survey on decision criteria prior to commencement of the national discourse. The aim was to develop consensus amongst TWG members on criteria for the prioritization of services into high, medium or low priority. The final criteria included burden of disease, cost effectiveness of interventions, budget impact, feasibility, financial risk protection, equity and social context of Pakistan.

### **Preliminary identification of interventions**

An initial scoping exercise was carried out in January 2019 to define the list of interventions that should be included in the prioritisation exercise. Out of the DCP3 EUHC package of 218 health interventions, a subset of interventions labelled as the Highest Priority Package was considered for inclusion.

For evidence-based decisions on what should be priority interventions, it was critical to describe each intervention to explain briefly the process of each interaction between patient/ client and provider along with platform with identification of major direct and indirect cost heads. This helped not only in developing an understanding on what is required to be implemented but also to ensure appropriate estimation of direct cost and cost-effectiveness.

Reference material for the description of interventions was considered and documented according to the priority of: i) national guidelines, training curricula and protocols, followed by ii) WHO global/regional guidelines, iii) guidelines from other specialized organizations, iv) academic curricula and finally v) Delphi (where needed).

The description of intervention included information relevant to i) Platform and types (both in public and private health sector), ii) Process, iii) Provider/s, iv) Medicines, v) Supplies, vi) Equipment, vii) HMIS tools, viii) Supervision, ix) Availability of standard protocols, x) Availability of in-service training curriculum, xi) Reference document/s and xii) Flow chart for each intervention with estimated time required for each step.

Each intervention was thus broken down to describe the process and time required at each step and to define direct and to some extent indirect costs. TWGs validated the information in the country context.

### **Assessment**

Evidence was collated for each intervention based on three criteria: i) burden of disease, ii) unit cost, iii) Incremental Cost Effectiveness ratio (ICER). In addition, the DCP secretariat gathered evidence on iv) current coverage and target population. In parallel, health systems assessment and

health financing assessment/fiscal space analysis were carried out to identify gaps required for the full costing of UHC benefit package. Detailed costing was done adding all inputs' costs for each intervention. In this regard, both public and commercial data were compared and used for the unit cost estimation. Further details are included in the Appendix on costing.

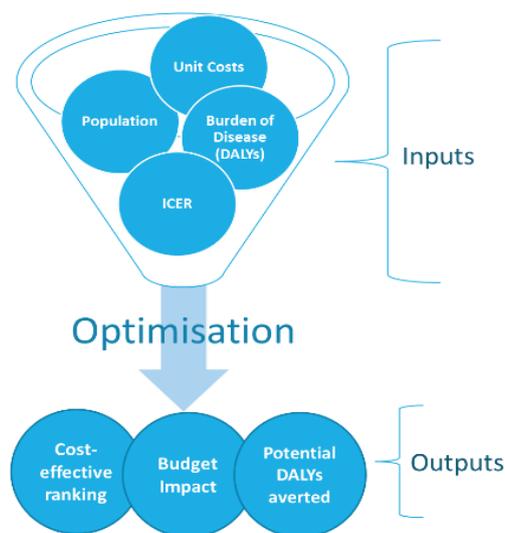
Population current coverage and target coverage for each intervention was provided by the M/o NHSRC using national surveys, specialized surveys, studies and burden of disease data. Utilising this, total cost for each intervention was estimated and was divided by total population to estimate cost per capita for each intervention. The information of total spending per intervention was used for assessing budget implication under three levels as low, medium or high.

To generate evidence on the services that have the potential to maximally improve population health information on ICER (incremental cost effectiveness ratios) was gathered preferably from Pakistan or countries in the region/ developing countries. In cases where information was not available, then global ICER value from the DCP3 was used. The ICERs were listed to assess whether the intervention can be afforded under available budget, increased budget and no budget constraint.

Optimization of interventions based on – cost effectiveness, DALYs averted, targeted population, budgetary impact was done using – ‘Hip tool (Health Interventions Prioritization Tool)’. This consequently led to the Investment Cascade of Interventions.

### Appraisal

The appraisal step involved workshops of the TWGs. In these workshops, TWG members interpreted the collected evidence and classified services in priority classes (i.e. whether they are low, medium or high priority), guided by a group of trained facilitators.



## DESCRIPTION OF INTERVENTIONS FOR PROPOSED ESSENTIAL PACKAGE OF HEALTH SERVICES / UHC BENEFIT PACKAGE OF PAKISTAN

Development of Essential Package of Health Services/ UHC benefit package offers a futuristic vision in the health sector to set strategic direction and accordingly implement prioritized interventions in order to make progress on achieving universal health coverage/ health related SDGs.

For evidence-based decisions on what should be priority interventions in the essential package of health services, it is critical to describe each intervention to explain briefly the process of interaction with patient/ client for each intervention along with platform and identification of major direct and indirect cost heads. This helps not only in developing an understanding on what is required to be implemented but also to ensure appropriate estimation of cost required to implement the same.

This should be noted that description of intervention is not at all a protocol for the intervention which will need to be reviewed separately by respective programme/ project/ organization.

In addition to description of intervention and defining target population for each intervention, following criteria are also considered to prioritize interventions:

Criteria:	Definitions:
Effectiveness	The balance of health benefits and harms that reflects the health impact of an intervention on individuals or populations.
Burden of Disease	The health loss from diseases, injuries and risk factors at the population level; it is usually expressed as a measure that combines morbidity, mortality and disability.
Feasibility	The extent to which the intervention can be delivered through the existing health system taking into account available human resources, infrastructure and other resources and whether it is socio-culturally acceptable to the public.
Cost-effectiveness	The value-for-money of the intervention; usually expressed as a ratio of the costs of the intervention to its benefits.
Equity	The extent to which an intervention gives priority to the worse-off in terms of health-status, socio-economic status and/or service coverage.
Budget impact	The overall financial implications of implementing the intervention for the available national health budget.
Financial risk protection	The extent to which individuals, households or communities can afford the cost of the intervention and are protected from catastrophic health expenditure and health-related financial risk.
Social and economic impact	The societal consequences resulting from the intervention, for instance in terms of stigma, societal cohesion; as well as the broader economic consequences, such as national development and poverty reduction goals.

A quick survey with stakeholders was carried out in November 2019, to develop consensus and prioritize criteria for actual prioritization exercise of interventions.

Following pages will summarize description of each preliminary prioritized interventions along with available evidence.

# Community & PHC Centre level

## EPHS Interventions Description



Preliminary Prioritized Interventions for the  
**GENERIC ESSENTIAL PACKAGE OF HEALTH  
SERVICES**

**CLUSTER**

*A. Reproductive, Maternal, New-born, Child, Adolescent Health Age Related  
Cluster*

**PACKAGE**

**AI. Maternal and New-born Health Package of Services**



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.1. Antenatal and postpartum education on birth spacing

DCP3 code: C1

##### Platform:

Community Level

- LHW/LHV/Community Midwife (and/or Community sessions with women)

##### Process:

Home Visit

##### Greet:

- Communication with the women of the household
- Assess the physical condition of the pregnant woman (if any) (vitals/blood pressure)
- Assess the family planning needs of individual women

##### Ask:

- Assess the current knowledge of the woman about birth spacing

##### Tell:

- Communicate the importance of birth spacing and family planning methods by telling the significance of Healthy Timing and Spacing of Pregnancy (HTSP), a critical and essential preventive child survival intervention that effectively complements curative and other child health interventions, with additional benefits to the mother, family, men, community and the society
- Communicate different categories of contraceptives methods

##### Help:

- Give woman time to ask questions (if any)

##### Explain:

- Ensure the woman has understood the information by asking questions
- Provide woman with IEC material and commodities
- Educate woman about accessing help/guidance (if needed)

##### Return:

- Conclude the meeting on thanking note / Referral if required

##### HMIS Tools:

1. Recording Tool: Treatment register, Family Planning register/Diary
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Flip chart, Leaflet

##### Supervision:

- Lady Health Supervisor (LHS), Assistant Inspector of Health Services (AHIS)

##### Standard Protocol:

- Concept of Family Planning; Unit 1 and Overview of Contraceptive Methods; Unit 2

##### National Training Curriculum/ Guidelines:

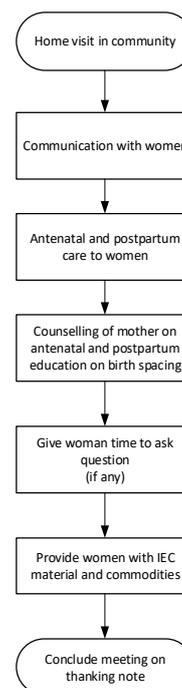
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##### Reference Material:

- Lady Health Workers' Training Manual
- Training Manual on Family Planning for Community Based Workers: Trainee Guide 2018

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.1. Maternal and New-born Health Package of Services  
A.1.1. Antenatal and postpartum education on birth spacing  
Platform: Community Level  
•LHW/LHV/Midwife (and/or Community sessions with women)

Process / Time (Overall: 20 Mins)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.2. Counselling of mothers on providing thermal care for pre-term new-borns (delayed bath and skin to skin contact)

DCP3 code: C2

##### Platform:

Community Level

- LHW/LHV/CMW (and/or Community sessions with pregnant women)

##### Process:

Home visit

##### Greet:

- Communication with the women of the household
- Assess the physical condition of the pregnant woman (if any) (vitals/blood pressure)

##### Ask:

- To assess the current knowledge of the woman about new-born care

##### Tell:

- Communicate information on management and care of new-born
- Counselling of mother specifically on providing thermal care for pre-term new-born

##### Help:

- Give woman time to ask questions

##### Explain:

- Ensure the woman has understood the information by asking questions
- Provide woman with IEC material
- Educate woman about method of KMC and accessing help/guidance (if needed)

##### Return:

Conclude the meeting on thanking note

Counselling focusing on Care of the Preterm and Low-Birth-Weight New-born

- Prevention of hypothermia immediately after birth
- Kangaroo Mother Care and Thermal care for preterm/low birth weight new-borns

##### HMIS Tools:

1. Recording Tool: Treatment register
2. Reporting Tool: Monthly report
3. Client/Patient Card: MCH Card
4. IEC Material: Flip chart/Audio-Video/Brochure

##### Supervision:

- Lady Health Supervisor (LHS), Assistant Inspector of Health Services (AIHS)

##### Standard Protocol:

- Prevention of hypothermia immediately after birth
- Kangaroo Mother Care and Thermal care for preterm/low birth weight new-borns

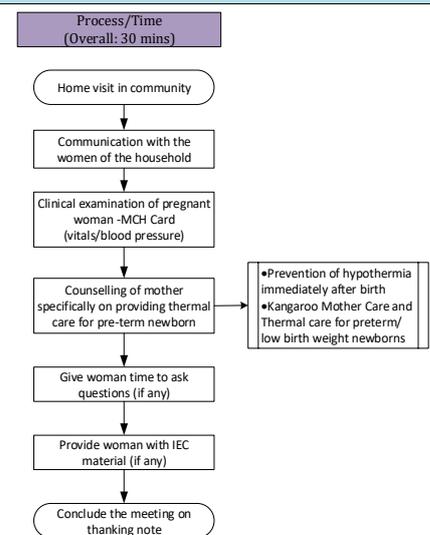
##### National Training Curriculum/ Guidelines:

- Partially included in LHW Training Manual

##### Reference Material:

- CMW Training Curriculum 2017
- WHO Recommendations on New-born Health Guidelines 2017
- WHO Recommendations on Interventions to Improve Preterm Birth Outcomes 2015

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.1. Maternal and New-born Health Package of Services  
A.1.2. Counselling of mothers on providing thermal care for pre-term newborns (delayed bath and skin to skin contact)  
Platform: Community Level  
•LHW/LHV/Midwife (and/or Community sessions with pregnant women)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.3a. Management of labour and delivery in low risk women by skilled attendant

DCP3 code: C3

##### Platform:

Community Level

- LHV/Community Midwife

##### Process:

Home visit

- Medical History
- Clinical Examination
- Normal vaginal delivery (Clean delivery)
- Cord ligation
- Placenta Delivery
- New-Born Assessment
- Maternal assessment
- Postnatal care
- If danger sign in mother and new-born - Referral

Follow up

- If birth is at home, the first postnatal contact should be as early as possible within 6 hours of birth
- Second contact: between day 7 and 14 after birth
- Final postnatal contact (clinic visit): at 6 weeks after birth

##### Medicines:

If required	<ul style="list-style-type: none"> <li>• Oxytocin 10 units IM (x OD)</li> <li>• If oxytocin is not available, give oral misoprostol 600 mcg; – OR ergometrine (0.2 mg IM) or methylergometrine: OR the fixed drug combination of oxytocin and ergometrine (1 mL = 5 IU oxytocin + 0.5 mg ergometrine)</li> </ul>
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##### Supplies:

- Disposable delivery kit
- 7.1% chlorhexidine gluconate (delivering 4% chlorhexidine) (gel or liquid) for umbilical cord care
- Partograph

##### Equipment:

- Stethoscope, sphygmomanometer, thermometer

##### HMIS Tools:

1. Recording Tool: MCH register, Referral Slip
2. Reporting Tool: Monthly Report, Partograph
3. Client/Patient Card: MCH card
4. IEC material: Flip chart/Audio-Video/Brochure

##### Supervision:

- Assistant Inspector of Health Services (AIHS), CMW Tutor

##### Standard Protocol:

- Delivery care
- Acute Management of 3rd stage of labor
- Immediate postpartum care of the mother
- Postpartum care of the new-born

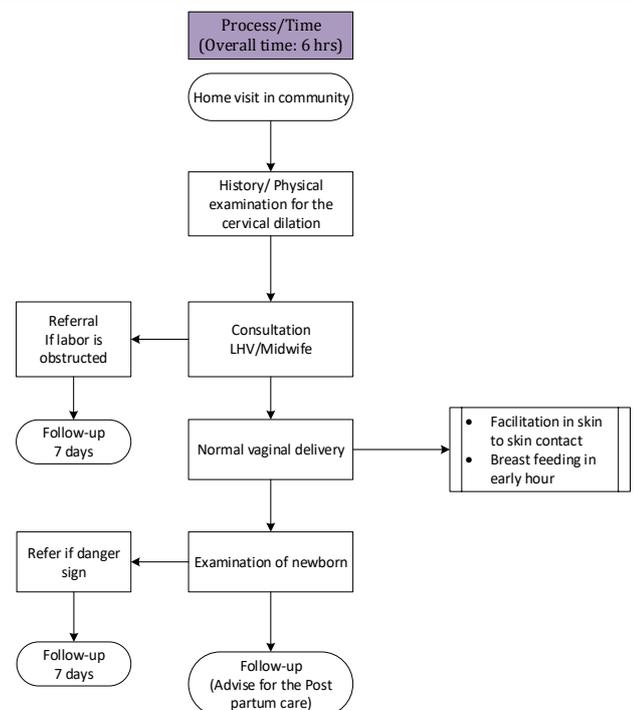
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- Training Module for Community Midwives
- IMPAC Guidelines WHO 2017

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.1. Maternal and New-born Health Package of Services  
 A.1.3a. Management of labour and delivery in low risk women by skilled attendant  
 Platform: Community Level  
 • LHV/ Community Midwife



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.3b. Basic neonatal resuscitation following delivery

DCP3 code: C3

##### Platform:

Community Level

- LHV/Community Midwife

##### Process:

Home visit during delivery

Assess the physical condition of the new-born

- If any complication in new-born

Recommended Method

- Start neonatal resuscitation
  - Thick meconium
  - Preterm new-born (Low Birth weight)
  - Gaspings or Not Breathing

(Dry the baby, suctioning with a bulb syringe &

Clear the airway)

- Assess and then stop resuscitation if:
  - New-born starts breathing spontaneously
  - Rapidly measure the heart rate (normal is more than 100 beats per minute) by – feeling the umbilical cord pulse
  - Listening to the heartbeat with a stethoscope

Referral if needed

Counselling

Conclude meeting on thanking note

##### HMIS Tools:

1. Recording Tool: Treatment Register
2. Reporting Tool: Monthly report
3. Client/Patient Card: MCH card
4. IEC Material: Flip chart, Leaflet

##### Supervision:

- Lady Health Supervisor (LHS), AIHS

##### Standard Protocol:

- Symptoms from Section 2-Immediate New-born Conditions or Problems

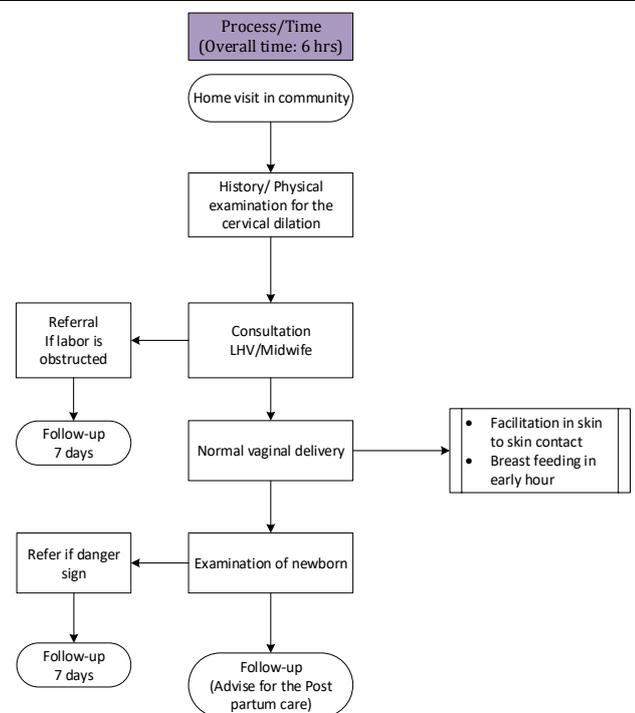
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- Training Module for Community Midwives
- IMPAC Guidelines WHO 2017

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.1. Maternal and New-born Health Package of Services  
 A.1.3a. Management of labour and delivery in low risk women by skilled attendant  
 Platform: Community Level  
 • LHV/ Community Midwife



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.3c. Management of labour and delivery in low risk women by skilled attendant

DCP3 code: C3

##### Platform:

PHC Level

- 24/7 BHU/ RHC/ MCH Centre/ GP Clinic/ Nursing Home

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/ Nurse/ LHV)

- Medical History
- Clinical Examination
- Normal vaginal delivery (Clean delivery)
- Cord ligation
- Placenta Delivery
- New-Born Assessment
- Maternal assessment
- Postnatal care
- If danger sign in mother and new-born - Referral

##### Follow up

- The first postnatal contact should be as early as possible within 6 hours of birth
- Second contact: between day 7 and 14 after birth
- Final postnatal contact (clinic visit): at 6 weeks after birth

##### Medicines:

If required	<ul style="list-style-type: none"> <li>• Oxytocin 10 units IM (x OD)</li> <li>• If oxytocin is not available, give oral misoprostol 600 mcg; – OR ergometrine (0.2 mg IM) or methylergometrine: OR the fixed drug combination of oxytocin and ergometrine (1 mL = 5 IU oxytocin + 0.5 mg ergometrine)</li> </ul>
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##### Supplies:

- Disposable delivery kit
- 7.1% chlorhexidine gluconate (delivering 4% chlorhexidine) (gel or liquid) for umbilical cord care
- Partograph

##### Equipment:

- Stethoscope, sphygmomanometer, thermometer

##### HMIS Tools:

1. Recording Tool: MCH register, Referral Slip
2. Reporting Tool: Monthly Report, Partograph
3. Client/Patient Card: MCH card
4. IEC material: Flip chart/Audio-Video/Brochure

##### Supervision:

- AIHS, ADHO, DHO

##### Standard Protocol:

- Delivery care
- Acute Management of 3rd stage of labor
- Immediate postpartum care of the mother
- Postpartum care of the new-born

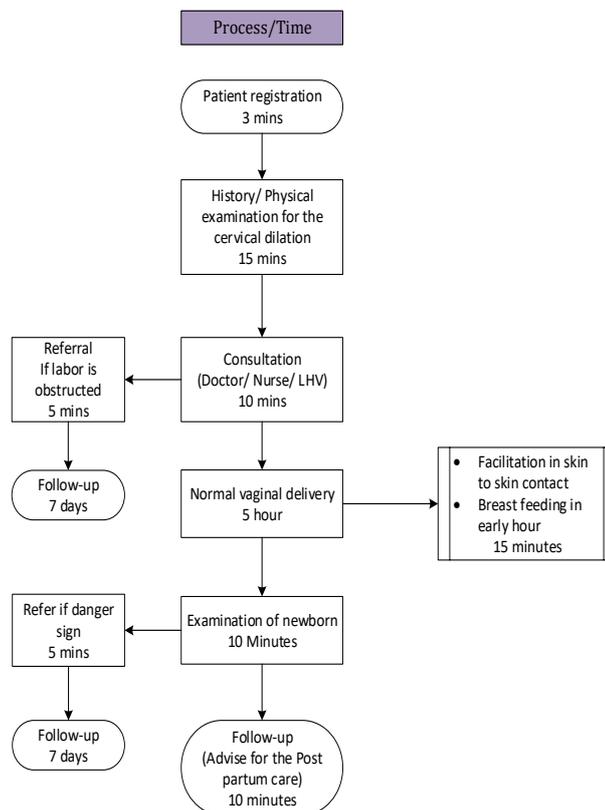
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- Training Module for Community Midwives
- IMPAC Guidelines WHO 2017

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.1. Maternal and New-born Health Package of Services  
 A.1.3c. Management of labour and delivery in low risk women by skilled attended  
 Platform: PHC Level  
 • 24/7 BHU/ RHC/ MCH Center/ GP Clinic/ Nursing Home



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

#### A.1. Maternal and New-born Health Package of Services

##### A.1.3d. Basic neonatal resuscitation following delivery

DCP3 code: C3

#### Platform:

PHC Level

- 24/7 BHU/ RHC/ MCH Centre/ GP Clinic/ Nursing Home

#### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/ Nurse/ LHV)

Assess the physical condition of the new-born

- History and clinical examination
- If any complication in new-born

Recommended Method

- Start neonatal resuscitation
  - Thick meconium
  - Preterm new-born (Low Birth weight)
  - Gasping or Not Breathing
    - (Dry the baby, suctioning with a bulb syringe & Clear the airway)
- Assess and then stop resuscitation if:
  - New-born starts breathing spontaneously
  - Rapidly measure the heart rate (normal is more than 100 beats per minute) by – feeling the umbilical cord pulse
  - Listening to the heartbeat with a stethoscope

Nursing care

Referral if needed

Counselling

Conclude meeting on thanking note

#### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Indoor register, Referral slip, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up card, MCH card, Discharge slip
4. IEC Material: Flip chart

#### Supervision:

- AIHS, ADHO, DHO

#### Standard Protocol:

- Symptoms from Section 2-Immediate New-born Conditions or Problems

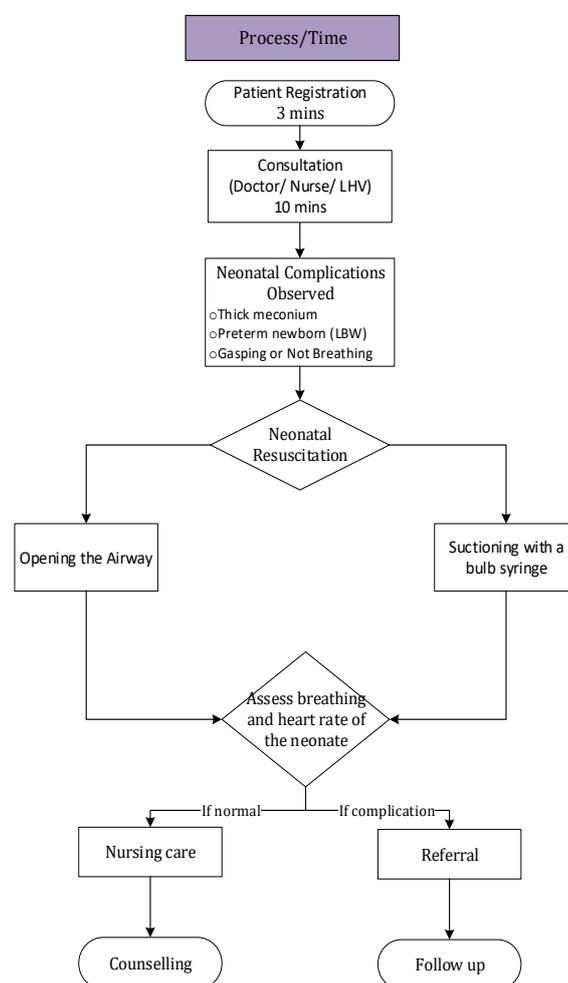
#### National Training Curriculum/ Guidelines:

- Available

#### Reference Material:

- IMPAC Guidelines WHO 2017

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.1. Maternal and New-born Health Package of Services  
 A.1.3d. Basic neonatal resuscitation following delivery  
 Platform: PHC Level  
 • 24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing home



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.4. Promotion of breastfeeding or complementary feeding by community health workers

DCP3 code: C4

##### Platform:

Community Level

- LHW/LHV/CMW/Nutrition Counsellor

##### Process:

Home visit

##### Greet:

- Communication with the women and the household members

##### Ask:

- To assess the current knowledge of the woman and household member(s) about breast feeding

##### Tell:

- Communicate information on breast feeding and complimentary feeding
- Counselling of mother specifically on breast feeding

##### Help:

- Give woman time to ask questions

##### Explain:

- Ensure the woman has understood the information by asking questions
- Provide woman and household member(s) with IEC material
- Educate woman and household member(s) accessing help/guidance (if needed)

##### Return:

- Conclude the meeting on thanking note

##### Recommended Method

- Early initiation of breastfeeding within half hour of birth
- Exclusive breastfeeding for the first 6 months of life
- Complementary Feeding; introduction of nutritionally adequate and safe complementary (solid) foods at 6 months together with continued breastfeeding up to 2 years of age or beyond

##### Follow-up

- After 1 month

##### HMIS Tools:

1. Recording Tool: Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: MCH Card
4. IEC Material: Flip chart/ Brochure

##### Supervision:

- Lady Health Supervisor (LHS), Assistant Inspector of Health Services (AIHS)

##### Standard Protocol:

- National breast-feeding guidelines

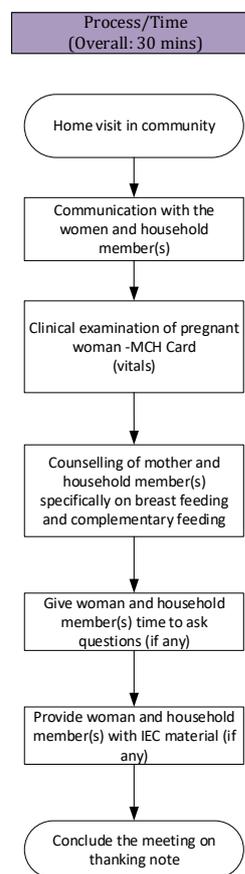
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- WHO Recommendations on breast feeding and complementary feeding 2018

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.1. Maternal and New-born Health Package of Services  
A.1.4. Promotion of breastfeeding or complementary feeding by community health workers  
Platform: Community Level  
• LHW/Community midwife/ Nutrition counsellor



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.7. Early detection and treatment of neonatal pneumonia with oral antibiotics

DCP3 code: HC1

##### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing home

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/ Nurse/LHV)

- History (Ensure vaccination and growth monitoring)
- Clinical Examination (Respiratory rate, Chest indrawing, etc.)
- Differential Diagnosis as per IMNCI guidelines
- Referral if required

##### Recommended Method

- Very severe disease – First dose of antibiotic, rehydration and refer
- Pneumonia – Case management and counselling for home care
- No Pneumonia – Counselling for home care

##### Pharmacy (Dispenser)

- Dispensing of medicine

##### Follow up

- After 3 days

(The mother will also treat the local infection at home and give home care. She should return for follow-up in 3 days to be sure the infection is improving. Local infections can progress rapidly in young infants)

##### Medicines:

- Pneumonia -Amoxicillin 125mg every 8 hour for 7 days

##### Equipment:

- Thermometer, ARI timer

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up card, MCH card
4. IEC Material: Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS

##### Standard Protocol:

- Pneumonia: Infants with fast breathing as the only sign of illness who are 7 to 59 days old are classified

as Pneumonia and can be treated with oral antibiotics at home

- Local Infection: Young infants with this classification have an umbilical or a skin infection. Treatment includes giving an appropriate oral antibiotic at home for 5 days

##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- IMNCI National Guidelines 2019
- IMNCI Guidelines WHO

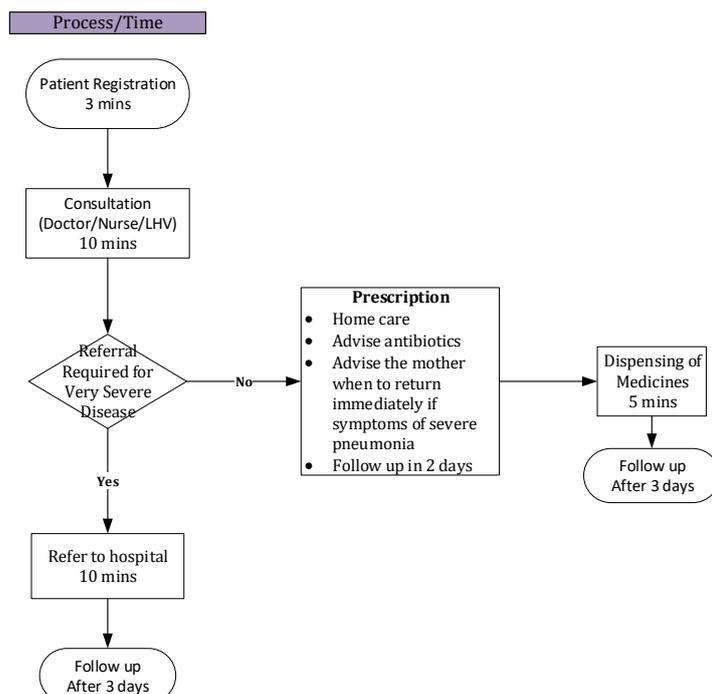
### A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster

#### A.1. Maternal and New-born Health Package of Services

##### A.1.7. Early detection and treatment of neonatal pneumonia with oral antibiotics

Platform: PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing home



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.8. Management of miscarriage or incomplete abortion and post-abortion care

DCP3 code: HC2

##### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing home

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/LHV/Nurse/Midwife)

- History (Ensure vaccination and growth monitoring)
- Clinical examination

Laboratory Test (Lab Technician)

- Lab tests/Ultrasound (if needed)

Recommended Method

- Medicinal Abortion

o Recommended Medicinal method

- Surgical Abortion (Refer to appropriate facility)

o Abortion (Termination of pregnancy through D&E/Vacuum aspiration)

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- Post Abortion Care/ Counselling

##### Medicines:

- Pneumonia -Amoxicillin 125mg every 8 hour for 7 days

##### Equipment:

- Thermometer, ARI timer

##### HMIS Tools:

5. Recording Tool: OPD Ticket, OPD register, Referral, Abstract register
6. Reporting Tool: Monthly report
7. Client/Patient Card: Follow up card, MCH card
8. IEC Material: Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS

##### Standard Protocol:

- Pneumonia: Infants with fast breathing as the only sign of illness who are 7 to 59 days old are classified as Pneumonia and can be treated with oral antibiotics at home

- Local Infection: Young infants with this classification have an umbilical or a skin infection. Treatment includes giving an appropriate oral antibiotic at home for 5 days

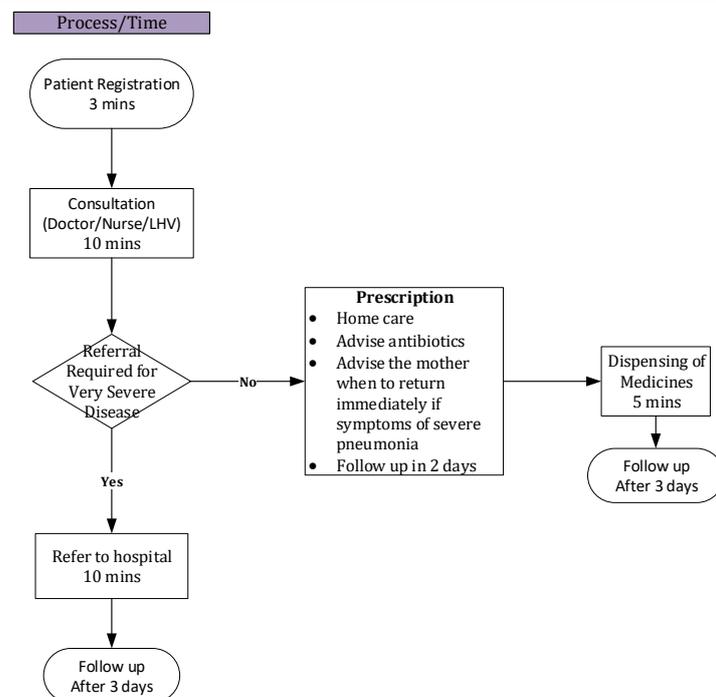
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- IMNCI National Guidelines 2019
- IMNCI Guidelines WHO

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.1. Maternal and New-born Health Package of Services  
 A.1.7. Early detection and treatment of neonatal pneumonia with oral antibiotics  
 Platform: PHC Level  
 • 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing home



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.10a. Provision of condoms, hormonal contraceptives including emergency contraceptives and IUDs

DCP3 code: HC4

##### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic /Nursing home

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse/LHV)

- History
- Counsel

**GATHER** (Greet, Ask, Tell, Help, Explain, Educate woman about accessing help/guidance (if needed), Return,

Recommended Method (Doctor/LHV)

- Condoms/Diaphragm
- Progestin-only Oral Contraceptive Pills
- Combined Oral Contraceptive Pills
- Emergency Contraceptive Pill
- Progestin-only implants
- IUDs

Pharmacy (Dispenser)

- Provision of Contraceptives

Follow up

- After one month for replenishment of commodities. Immediate in case of side effects

##### Medicines:

Condom/ Diaphragm	
Hormonal	
Injection	Medroxyprogesterone acetate (Depot injection: 150 mg/ml in 1-ml vial)
Pills	Levonorgestrel (Tablet 30 micrograms, 1.5 mg) Ethinylestradiol + levonorgestrel (Tablet 30 micrograms + 150 micrograms)
E-contraceptive	Levonorgestrel (750 micrograms (pack of 2))
Implants	Levonorgestrel-releasing implant (Two-rod levonorgestrel-releasing implant; each rod contains 75 mg of levonorgestrel (150 mg total))
IUD (Copper T)	

##### Supplies:

- IUD Insertion Kit

##### Lab Test:

- If required

##### HMIS Tools:

1. Recording Tool: OPD Ticket, FP register, abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Flipchart, Leaflet

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS, District Coordinator, ADC

##### Standard Protocol:

**Counsel: GATHER**

**Method options for the non-breastfeeding woman**

- Immediately postpartum
  - Condoms OR Progestogen-only oral contraceptives OR Progestogen-only injectables
- Delay till 3 weeks
  - Combined oral contraceptives OR Combined injectables OR Fertility awareness methods

**Method options for the breastfeeding woman**

- Immediately postpartum
  - Lactational amenorrhoea method (LAM) OR Condoms /Spermicide
- 6 weeks Postpartum
  - Breastfeeding women who are < 6 weeks postpartum
  - Progestogen-only pills (POPs) OR levonorgestrel (LNG) and Etonogestrel (ETG) implants
  - 6 weeks to < 6 months Breastfeeding women who are >= 6 weeks to < 6 months postpartum can generally use
    - Progestogen-only pills (POPs) OR Progestin only implants (POIs) OR levonorgestrel (LNG) and etonogestrel (ETG) implants

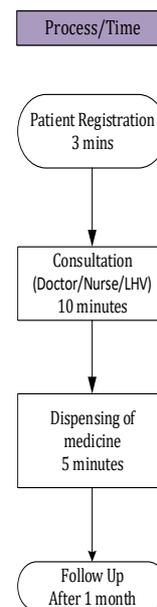
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- Family Planning Training Guidelines
- IMPAC Guidelines WHO 2017

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.1. Maternal and New-born Health Package of Services  
 A.1.10a. Provision of condoms, hormonal contraceptives including emergency contraceptives and IUDs  
 Platform: PHC Level  
 • 8-6 BHU/24-7 BHU/RHC/MCH Centers /Health Centre/GP Clinic /Nursing home



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.10b. Provision of condoms and hormonal contraceptives, including emergency contraceptives

DCP3 code: HC4

##### Platform:

Community level

- LHW/LHV/ Community Midwife

##### Process:

Home visit

Consultation (LHW/LHV/CMW)

- History
- Counsel

**GATHER** (Greet, Ask, Tell, Help, Explain, Educate woman about accessing help/guidance (if needed) and Return

Conclude the meeting on thanking note

- Recommended Method
- Condoms
- Oral contraceptive pills

Emergency Contraceptive

Follow up

- After one month for replenishment of Commodities. Immediate in case of side effects

##### Medicines:

Condom		
Hormonal		
Injection	Medroxyprogesterone acetate	Depot injection: 150 mg/ml in 1-ml vial
Pills	Ethinylestradiol + levonorgestrel	Tablet 30 micrograms + 150 micrograms
E-contraceptive	Levonorgestrel	750 micrograms (pack of 2)

##### Supplies:

- Syringe

##### HMIS Tools:

1. Recording Tool: Treatment Register, Diary, Referral Slip
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Flipchart, Leaflets

##### Supervision:

EDO Health, Deputy DHO, THO, AIHS, District Coordinator, ADC, LHS

##### Standard Protocol:

- Counsel: GATHER
- Advice on family planning

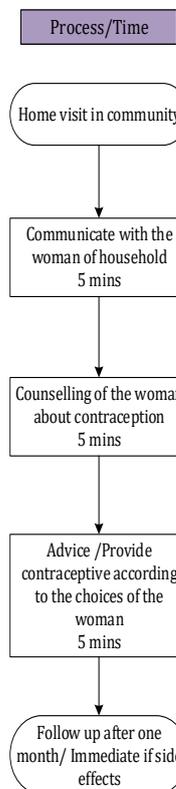
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- Lady Health Worker Training Manual

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.1. Maternal and New-born Health Package of Services  
**A.1.10b. Provision of condoms and hormonal contraceptives, including emergency contraceptives**  
**Platform:** Community level  
 • LHW/ LHV/ Community Midwife



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.11a. Counselling of mothers on providing kangaroo care of new-borns

DCP3 code: HC5

##### Platform:

PHC Level

- 8-6-BHU/24-7 BHU/RHC/MCH Centre/Health Centre/ /GP Clinic/Nursing Home

##### Process:

Consultation (Doctor/Nurse/LHV)

- History of mother and baby (if born with low birth weight or as preterm new-born infants)
- Clinical examination of mother and infant

Counselling (Nurse/LHV)

- Recommended Guide of Providing Kangaroo Care to low birth weight babies and preterm new-born infants
  - Kangaroo position
  - Caring for the baby in kangaroo position
  - Length and duration of Kangaroo Mother Care (KMC)
  - Duration

##### Follow-up

Ensure follow-up for the mother and the baby at facility. The smaller the baby is at discharge; the earlier and more frequent follow-up visits he will need. If the baby is discharged in accordance with the above criteria, the following suggestions will be valid in most circumstances:

- Two follow-up visit per week until 37 weeks of post-menstrual age
- One follow-up visit per week after 37 weeks

##### HMIS Tools:

1. Recording Tool: OPD Ticket, MCH Registers, Referral, Abstract Register
2. Reporting Tool: Monthly Report
3. Client/Patient Card: MCH Card
4. IEC Material: Flip chart/Audio-Video/Leaflet

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS, District Coordinator, ADC

##### Standard Protocol:

- Kangaroo Care Practice Guide

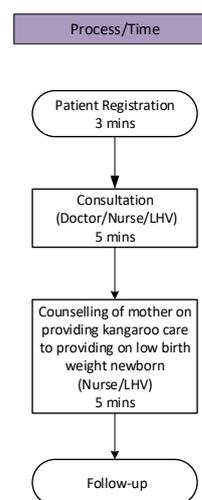
##### National Training Curriculum/ Guidelines:

- Not Available

##### Reference material:

- Kangaroo Mother Care: A Practical Guide WHO 2003
- Kangaroo Mother Care: Implementation Guide WHO 2012

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.1. Maternal and New-born Health Package of Services  
A.1.11a. Counselling of mothers on providing kangaroo care of newborns  
Platform: PHC Level  
• 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/ GP Clinic/ Nursing Home



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.11b. Counselling of mothers on providing kangaroo care of new-borns

DCP3 code: HCS

##### Platform:

Community Level

- LHW/LHV/Midwife (and/or Community sessions with pregnant women)

##### Process:

Home Visit

**GATHER** (Greet, Ask, Tell, Help, Explain, Educate woman about accessing help/guidance (if needed) and Return

Follow up

- Two visits per week

##### HMIS Tools:

Recording Tool: Treatment Register

Reporting Tool: Monthly Report

Client/Patient Card: MCH Card

IEC Material: Flip chart/Audio-Video/Leaflet

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS, District Coordinator, ADC, LHS

##### Standard Protocol:

- Kangaroo Care Practice Guide

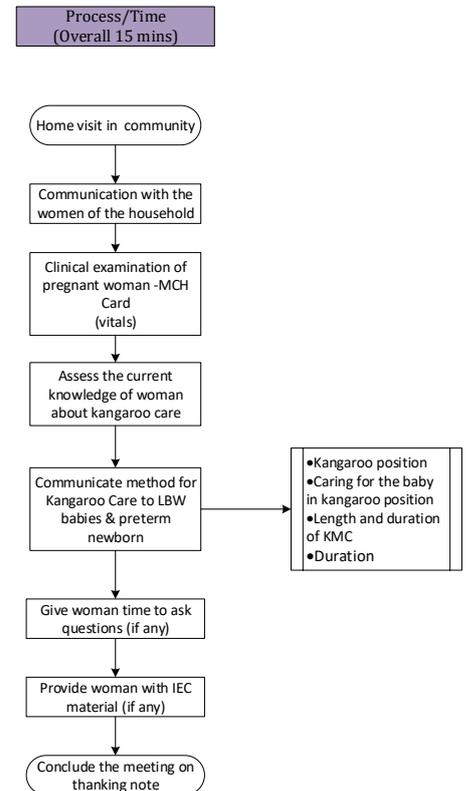
##### National Training Curriculum:

- Not Available

##### Reference Material:

- Kangaroo Mother Care: A Practical Guide WHO 2003
- Kangaroo Mother Care: Implementation Guide WHO 2012

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.1. Maternal and New-born Health Package of Services  
**A.1.11b. Counselling of mothers on providing kangaroo care of newborns**  
Platform: Community Level  
• LHW/LHV/Midwife (and/or Community sessions with pregnant women)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.13. Pharmacological termination of pregnancy

DCP3 code: HC7

##### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse/LHV)

- History
- Clinical examination
- Confirm pregnancy with a physical examination
- Explain available methods, preferred procedure, how it works, side effects, possible risks and complications

Laboratory Test (Lab Technician)

- Lab Test/Ultrasound (if needed)

Recommended Method (Doctor/LHV)

- Oral mifepristone followed by oral misoprostol  
OR Oral mifepristone and vaginal, buccal or sublingual misoprostol  
OR Methotrexate and vaginal misoprostol  
OR Vaginal misoprostol alone
- Diagnosis for signs and symptoms that may require medical attention
- Post-abortion care/Counselling

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- After 7 days

##### Medicines:

Inevitable abortion	<ul style="list-style-type: none"> <li>• Misoprostol 800 mcg every 3–12 hours; maximum three doses</li> <li>• Misoprostol 400 mcg every three hours, maximum five doses</li> <li>• Oxytocin 40 units in 1 L IV fluids at 40 drops per minute (after 16 weeks)</li> </ul>
Incomplete abortion	<ul style="list-style-type: none"> <li>• Misoprostol 400 mcg sublingual or 600 mcg by mouth for one dose</li> <li>• Misoprostol 200 mcg every four hours until expulsion, maximum 800 mcg</li> <li>• Oxytocin 40 units in 1L IV fluids at 40 drops per minute</li> </ul>

##### Supplies:

- Syringe, needle, tourniquet

##### Equipment:

- Stethoscope, sphygmomanometer, thermometer

##### Lab Test:

- Routine Blood tests as per need
- Routine Urine examination as per need

- Ultrasound as per need

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, MCH register, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material:

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS, District Coordinator, ADC

##### Standard Protocol:

- Incomplete Abortion
- Intrauterine fetal demise
- Induced Abortion

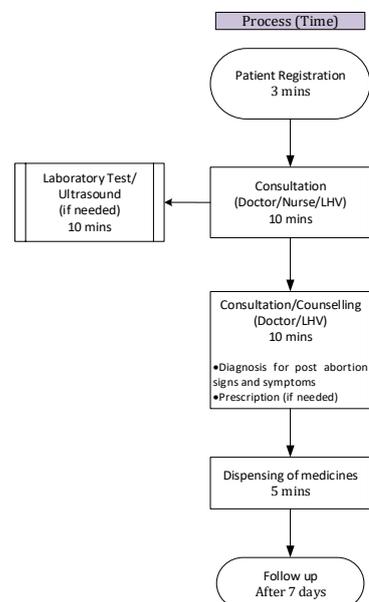
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- IMPAC Guidelines WHO 2017
- Medical Management of Abortion WHO 2018

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.1. Maternal and New-born Health Package of Services  
A.1.13. Pharmacological termination of pregnancy  
Platform: PHC Level  
•8-6 BHU/24-7 BHU/RHC/MCH/Health Centre/GP Clinic/Nursing home



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.14. Tetanus toxoid immunization among school children and women attending antenatal care (Also included in School age health package of services)

DCP3 code: C5

##### Platform:

PHC Level

- 8-6 BHU/ 24-7 BHU/ RHC/MCH Centre/ Health Centre/ GP Clinic/ Nursing Home

##### Process:

Patient registration at reception (Receptionist)

- History

Consultation (Vaccinator/Nurse/LHV)

Recommended Method

- Vaccination

Follow-up

- As per EPI schedule

##### Medicines:

- Injection of tetanus toxoid 0.5 mL IM

##### Supplies:

- AD Syringe, cold chain

##### HMIS Tools:

1. Recording Tool: OPD ticket, EPI Register, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Vaccination card
4. IEC Material: Leaflets, Flipchart

##### Supervision:

- EDO Health, Deputy DHO, THO, Assistant Superintendent Vaccination (ASV), AIHS, District Coordinator, ADC

##### Standard Protocol:

- Vaccine Administration as per National EPI Guidelines:
  - Vaccine is administered to infants in 5 doses at 2,4,6, and 18 months of age

- Again, when the child is 4-6 years old, followed by a booster dose every 10 years
- Recommended: Pregnant women to receive the tetanus toxoid after 3<sup>rd</sup> month; 2<sup>nd</sup> dose after one month of first dose if required

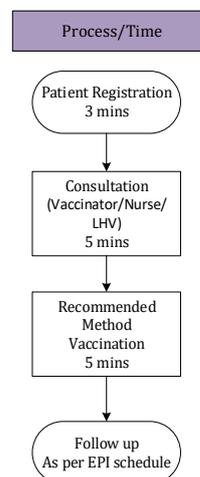
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- National EPI Program Guidelines

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.1. Maternal and New-born Health Package of Services  
A.1.14. Tetanus toxoid immunization among school children and women attending antenatal care (Also included in School age health package of services)  
Platform: PHC Level  
• 8-6 BHU/ 24-7 BHU/ RHC/MCH Centre/ Health Centre/ GP Clinic/ Nursing Home



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.16a. Screening and management of hypertensive disorders in pregnancy

DCP3 code: HC9

##### Platform:

PHC Level

- 8-6BHU/24-7BHU/RHC/MCH Centre/Health Centre/GP Clinic/ Nursing Home

##### Process:

Patient registration at reception (Receptionist)  
Consultation (Doctor/Nurse/LHV)

- History, overall health and symptoms that may be associated with hypertension in pregnancy (Headaches, blurred vision, convulsions and loss of consciousness)
- Clinical examination (Pulse rate, BP)
- Diagnose specific hypertensive disorders (gestational hypertension, mild pre-eclampsia, severe pre-eclampsia, eclampsia, chronic hypertension with superimposed pre-eclampsia) by measuring systolic and diastolic blood pressure, proteinuria along with associated signs and symptoms
- Counsel the woman and her family about danger signs indicating severe pre-eclampsia or eclampsia
- Encourage the woman to eat a normal diet

Laboratory Test/Ultrasound (Lab Technician)

- Lab Test (if needed)

Recommended Method (Doctor/Nurse/LHV)

- Medicine (Alpha methyl dopa/ Nifedipine immediate-release capsule/ Labetalol/ Hydralazine)
- Magnesium sulfate (Treating convulsions in severe pre-eclampsia and eclampsia)
- IV infusion (Ringer Lactate in severe pre-eclampsia and eclampsia)

- Referral (if needed)

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- Regular monitoring as per advice doctor/ nurse/ LHV; initially after one week

##### Supplies:

- IV set including cannula, syringe

##### Equipment:

- Stethoscope, sphygmomanometer, Catheter, CTG machine (other than BHU)

##### Lab Test:

- Random urine testing for Proteinuria, Ultrasound if needed

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD and indoor register, Patient file, Referral, abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: MCH Card, Discharge slip
4. IEC Material: Leaflet, Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS

##### Standard Protocol:

- Diagnosis of Hypertensive Disorders of Pregnancy (S-50) Section-02: Symptoms

- Specific Management of Hypertensive Disorders of Pregnancy (S-55) Section-02: Symptoms

##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- IMPAC Guidelines WHO 2017

##### Medicines:

Treating convulsions in severe preeclampsia and eclampsia.

##### Magnesium sulfate

*Intramuscular Regimen*

Loading dose (IV and IM):

4 g of 20% magnesium sulfate solution IV over five minutes, Follow promptly with 10 g of 50% magnesium sulfate solution ; If convulsions recur after 15 minutes, give 2 g of 50% magnesium sulfate solution IV over five minutes

Maintenance dose (IM): 5 g of 50% magnesium sulfate every four hours. Continue treatment for 24 hours

*Intravenous Regimen*

Loading dose: 4g of 50% magnesium sulfate solution IV, If convulsions recur after 15 minutes, give 2 g of 50% magnesium sulfate solution IV over five minutes

Maintenance dose (IV): Intravenous infusion 1g/ hour

Continue treatment for 24 hours after childbirth or the last convulsion.

##### Severe hypertension

**Hydralazine** - Intravenous treatment: 5 mg IV, slowly (The maximum dose is 20 mg)

Non-severe & Severe hypertension

**Labetalol** - Oral treatment: Administer 200 mg (The maximum dose is 1200 mg in 24 hours); Intravenous treatment: Administer 10 mg IV (The maximum total dose is 300 mg; then switch to oral treatment)

##### Non-severe & Severe hypertension

**Nifedipine immediate-release capsule** - Oral treatment: Administer 5–10 mg (The maximum total dose is 120 mg)

##### Non-severe & Severe hypertension

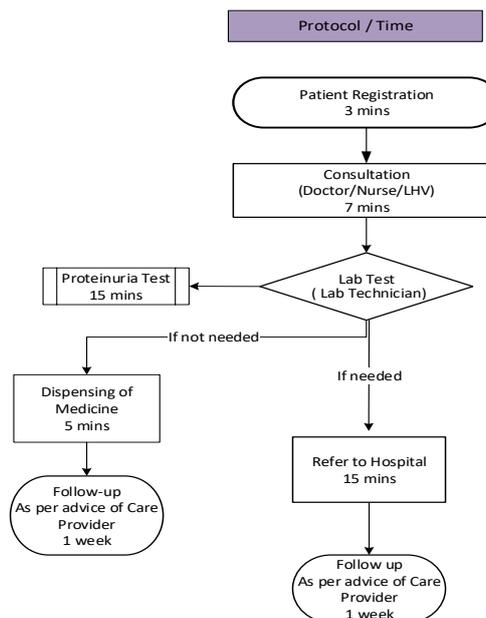
**Alpha methyl dopa** - Oral treatment: 250 mg orally (The maximum dose is 3 g in 24 hours)

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.1. Maternal and New-born Health Package of Services

#### A.1.16a. Screening and management of hypertensive disorders in pregnancy

Platform: PHC Level

- 8–6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.16b. Screening of hypertensive disorders in pregnancy

DCP3 code: HC9

##### Platform:

Community Level

- LHW/LHV /Community Midwife

##### Process:

- Home Visit by LHW/LHV/ CMW History
  - Check the Vital Signs (Pulse rate, Blood Pressure etc.)
  - Refer to health facility if required

##### Follow up

- Regular Monitoring

##### Equipment:

- Stethoscope/sphygmomanometer

##### HMIS Tools:

1. Recording Tool: Treatment Register, Diary
2. Reporting Tool: Monthly report
3. Client/Patient Card: MCH Card
4. IEC Material: Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS, District Coordinator, ADC, LHS

##### Standard Protocol:

- Diagnosis of Hypertensive Disorders of Pregnancy (S-50) Section-02: Symptoms

##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- IMPAC Guidelines WHO 2017
- CMW Training Manual
- LHW Manual ('Maan ki Sehat')

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.1. Maternal and New-born Health Package of Services  
**A.1.16b. Screening of hypertensive disorders in pregnancy**  
Platform: Community Level  
• LHW//LHV/Community midwife (and/or Community sessions with pregnant women)

Process/Time  
(Overall 15 mins)

Home visit in community

Communication with the women of the household

Clinical examination of pregnant woman -MCH Card (vitals/blood pressure)

Refer to health facility (if needed)

Follow up After 1 week

## A.1. Maternal and New-born Health Package of Services

### A.1.18. Management of labour and delivery in low risk women (BEmONC), including initial treatment of obstetric or delivery complications prior to transfer (Also included in Surgery package of services)

DCP3 code: HC11

#### Platform:

PHC Level

- 24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home

#### Process:

Patient registration at reception (Receptionist)

Receiving of patient on emergency trolley (Nurse/LHV)

Rapid assessment and management (Doctor/Nurse/LHV)

- Evaluate overall condition of the women
- History from women (if conscious)/partner
- Quick physical examination and identify emergency
- Prepare to rapidly treat and refer to a higher level of care, as needed
- Informed consent
- Drawing of blood samples
- Support via IV infusion

Laboratory Test (Lab Technician)

- Lab tests/Ultrasound (if needed)

Recommended Method (Doctor/LHV)

- Spontaneous Vaginal Delivery (SVD)
- Management of obstructed labor (/Vacuum-Assisted Birth/Forceps-Assisted Birth)
- Complication management (Post-partum haemorrhage/Antepartum haemorrhage/Eclampsia)

Transport and Referral (Doctor/Nurse/LHV) if needed

- Organize reliable transportation
- Communicate with the receiving facility
- Accompany by a provider and companion

Pharmacy (Dispenser) if needed

- Dispensing of medicine

Follow up

- After 7 days

#### Medicines:

Emergency Management	<ul style="list-style-type: none"> <li>• Infuse IV fluids (normal saline or Ringer's lactate) at a rate appropriate for the woman's condition (two if woman is in shock) via 16-gauge or largest available cannula or needle</li> </ul>
Induction of Labour	<ul style="list-style-type: none"> <li>• Prostaglandin E2: 3 mg pessary or 2-3 mg gel every 6 hours (if needed)</li> <li>• Oral Misoprostol: 25 mcg (one 200 mcg tb. / 200 mL of water), 25 mL of that solution as a single dose every 2 hours (if needed)</li> <li>• Vaginal Misoprostol: 25 mcg (only) every 6 hours (if needed)</li> </ul>
Spontaneous Vaginal Delivery (SVD)	<ul style="list-style-type: none"> <li>• Tetanus vaccine one dose, if needed</li> <li>• Analgesic Drugs During Labour                             <ul style="list-style-type: none"> <li>○ Morphine 0.1 mg/kg body weight IM every four hours as needed</li> <li>○ Promethazine 25 mg IM or IV if vomiting occurs</li> </ul> </li> <li>• Antiseptic solution (e.g. iodophors) three times application</li> <li>• Antibiotics if needed</li> </ul>
Post-partum haemorrhage (PPH)	<ul style="list-style-type: none"> <li>• Oxytocin 10 units IM (or IV as an infusion if an IV infusion line is already in place)</li> <li>• IV infusion and infuse normal saline or Ringer's lactate</li> <li>• 15-Methyl Prostaglandin; F2 alpha 0.25 mg every 15 minutes, Eight doses (total 2 mg)</li> <li>• Misoprostol PGE1; Repeat 200-800 mcg, not more than 1600 mcg</li> <li>• Tranexamic acid; IV every 30 minutes if bleeding continues 3-4 times daily</li> </ul>
Eclampsia	<ul style="list-style-type: none"> <li>• IV infusion and infuse IV fluids 1 L in 8 hours</li> </ul>

	<ul style="list-style-type: none"> <li>• Magnesium sulfate (Intramuscular and intravenous regimen)</li> </ul>
Manual Removal of Placenta (if needed)	<ul style="list-style-type: none"> <li>• Diazepam IV slowly (do not mix in the same syringe) or use ketamine</li> </ul>

#### Equipment:

- Stethoscope, sphygmomanometer, thermometer, Emergency trolley, oxygen cylinder, emergency kit, Labour room equipment

#### Lab Test:

- Routine Blood tests (haemoglobin/haematocrit, type and screen), Routine Urine examination, Ultrasound (if needed)

#### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Patient file, Referral, Abstract register, Partograph
2. Reporting Tool: Monthly report
3. Client/Patient Card: MCH card, Discharge slip
4. IEC Material:

#### Supervision:

- EDO Health, Deputy DHO, THO, AIHS,

#### Standard Protocol:

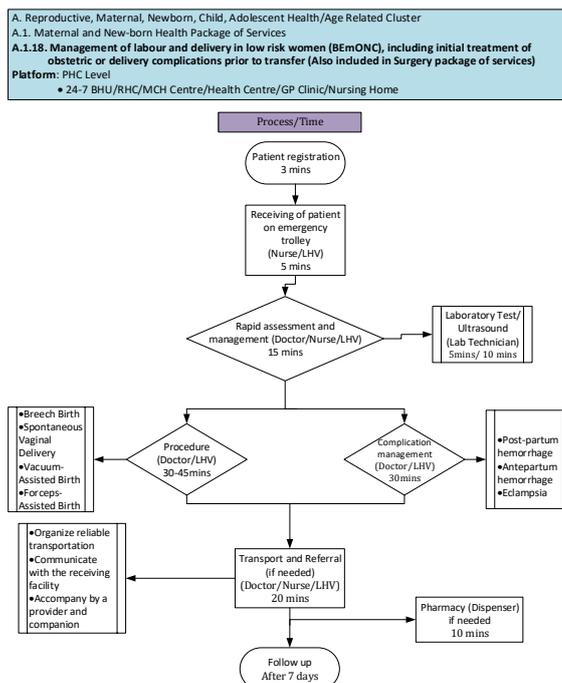
- Emergency Management
- Breech Birth
- Spontaneous Vaginal Delivery (SVD)
- Vacuum-Assisted Birth
- Forceps-Assisted Birth
- Complication Management (PPH, Eclampsia)
- Manual removal of placenta
- Post procedure care

#### National Training Curriculum/ Guidelines:

- Available

#### Reference Material:

- IMPAC Guidelines WHO 2017



Preliminary Prioritized Interventions for the  
**ESSENTIAL PACKAGE OF HEALTH SERVICES**

**CLUSTER**

*A. Reproductive, Maternal, New-born, Child, Adolescent Health Age  
Related Cluster*

**PACKAGE**

**A2. Child Health Package of Services**



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.2. Child Health Package of Services

#### A.2.30. Screening and referral of severe acute and moderate malnutrition, including early detection in community setting

DCP3 code: C8

##### Platform:

Community Level

- LHW/Nutrition Counsellor

##### Process:

Home Visit

Consultation (LHW)

- History
- Clinical examination (edema, anaemia, jaundice, weight and height)

Recommended method

- Feel and look for edema
- Check for Weight
- Check for MAUC in a child 6 month or older
- Provision of supplements (RUSF, MMNP) if moderate acute malnutrition (Yellow MUAC)
- Counselling (Green MUAC) or refer to OTP if Severe Acute Malnutrition (SAM) (Red MUAC) or refer to Stabilization Centre if Severe Acute Malnutrition (SAM) with complication

Follow up

- Uncomplicated severe acute malnutrition
  - After 14 days or during regular follow up
- Moderate acute malnutrition
  - After 30 days

##### Medicines:

- RUSF for MAM
- Multiple micronutrient powder (MMNP)

##### Equipment:

- Thermometer
- MUAC tape
- Weighing machine

##### HMIS Tools:

1. Recording Tool: Treatment register, Referral slip
2. Reporting Tool: Monthly Report
3. Client/Patient Card: MCH card
4. IEC material: Flip chart/Audio-Video/Brochure

##### Standard Protocol:

- Screening malnutrition using MAUC and weighing

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS, District Coordinator, ADC, LHS

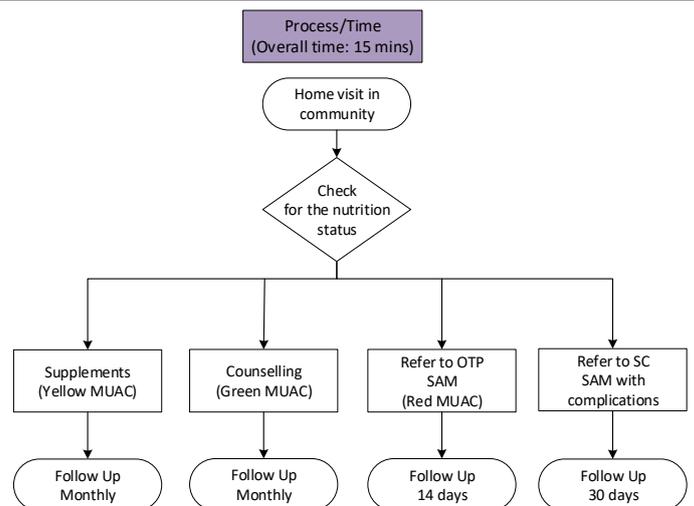
##### National Training Curriculum/Guidelines:

- Available

##### Reference Material:

- LHW Training Manual
- IMNCI National Guidelines 2019
- CMAM Guidelines

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.2. Child Health Package of Services  
A.2.30. Screening and referral of severe acute and moderate malnutrition, including early detection in community setting  
Platform: Community level  
LHW/Nutritional Counselor



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.2. Child Health Package of Services

#### A.2.31. Detection and treatment of childhood infections, including referral if danger signs

DCP3 code: C9

##### Platform:

Community Level

- LHW

##### Process:

Home visit

Consultation (LHW)

- History
- Check for general danger signs for referral
- Clinical examination (Ask, Look, Listen, Feel)
- Ask about main symptoms (cough or difficulty breathing, diarrhea, fever, stridor, fast breathing, chest indrawing) and classify according to community IMNCI Guidelines
- Refer in case of dysentery (blood in stool), cholera, ear infection, persistent diarrhea, measles and malaria

Recommended Method for the following

- Assess, Classify and Treat Child (2 months-U5 Years)

Follow up

- Pneumonia (After 3 days)
- Malaria (If fever persists after 3 days)
- Ear Infection (After 5 Days)

##### Medicines:

Pneumonia and Acute Ear Infection	Amoxicillin (DT) 2 times daily for 5 days. <b>Dose as per weight or age guidelines</b> <ul style="list-style-type: none"> <li>○ Tablet 250mg</li> <li>○ Syrup 250 Mg/ 5ml</li> </ul> Inhaled Salbutamol in case of wheezing. <b>Dose as per weight or age guidelines</b>
Diarrhea	Oral Rehydrating Solution (ORS) Zinc Supplements (DT)
High Fever (>38.5° C) or Ear Pain	Paracetamol. <b>Dose as per weight or age guidelines</b> <ul style="list-style-type: none"> <li>○ Tablet 100 mg</li> <li>○ Tablet 500 mg</li> </ul>
Malaria	Artemether-Lumefantrine tablets. <b>Dose as per weight or age guidelines</b> (20 mg artemether and 120 mg lumefantrine) Give two times daily for 3 days Artesunate – Sulfadoxine-pyrimethamine tablets. <b>Dose as per weight or age guidelines</b> (50 mg Artesunate and 500 mg sulphadoxine+25mg pyrimethamine) Give two times daily for 3 days

##### Supplies:

- Low Osmolar Oral Rehydrating Salt
- Co-packages: ORS with Zn
- Feeding cup
- Zn supplements

##### Equipment:

- Thermometer, Timer

##### HMIS Tools:

1. Recording Tool: Plastic card, Treatment register, Referral register
2. Reporting Tool: Monthly report
3. Client/Patient Card: MCH Card, Follow-up card, EPI card
4. IEC Material: Leaflet, Flipchart

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS, DC, ADC, LHS

##### Standard Protocol:

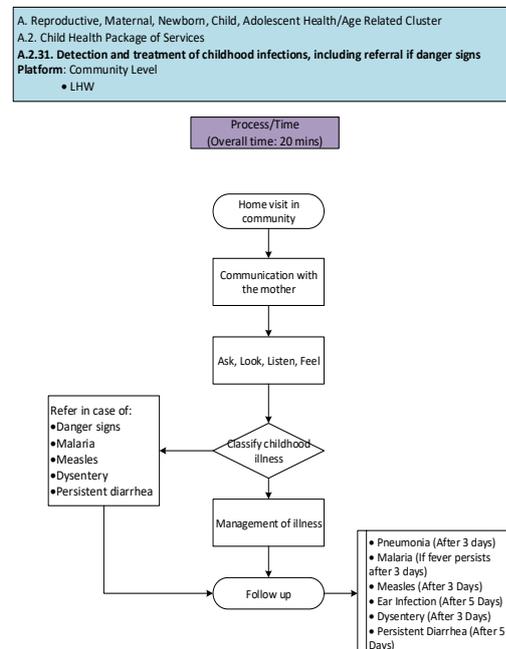
- Detection and Treatment of Childhood Infections

##### National Training Curriculum/Guidelines:

- Available

##### Reference Material:

- LHW Refresher Training Manual (*Bachay ki Sehat*)
- Community IMNCI modules for LHW



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.2. Child Health Package of Services

#### A.2.32. Education on handwashing and safe disposal of children's stool

DCP3 code: C10

##### Platform:

Community Level

- LHW/ Nutrition Counsellor

##### Process:

**Home visit/Community engagement** (LHW/ Nutrition Counsellor)

Educate all family members on the adoption of appropriate hygiene skills

Demonstrate standards of hand washing

Encourage family members to participate in:

- Participatory Hygiene and Sanitation Transformation (PHAST)

- Community-led Total Sanitation (CLTS), School-led Total Sanitation (SLTS) and sanitation marketing

Encourage family members to teach children about safe child faeces disposal behaviour

Recommend family members to adopt WHO's standard of "Hand Hygiene: Why, How & When?"

Emphasis on achieving open defecation free (ODF) status

Certification of community for CLTS/SLTS

**School visit** (LHW/ Nutrition Counsellor)

Give education about importance and key hygiene behaviours for school children

- Personal hygiene, Sanitation etc.
- Standards of hand washing

Recommend school children to adopt WHO's standard of "Hand Hygiene: Why, How & When?"

Give education about the safest way to dispose off faeces by helping the child use a toilet or latrine to put or rinse their faeces into a toilet or latrine

Conclude the meeting on thanking note

##### Supplies:

- Soap, water

##### HMIS Tools:

1. Recording Tool: Diary
2. Reporting Tool: Monthly Report
3. Client/Patient Card:
4. IEC Material: Brochures, leaflet, flipchart

##### Supervision:

- PHED, EDO Health, Deputy DHO, THO, DC, ADC, LHS

##### Standard Protocol:

- Child Participation and Hygiene Education
- Linkage with Community

- Management of Child Feces: Current Disposal Practices

- Pakistan Approach to Total Sanitation (PATS)

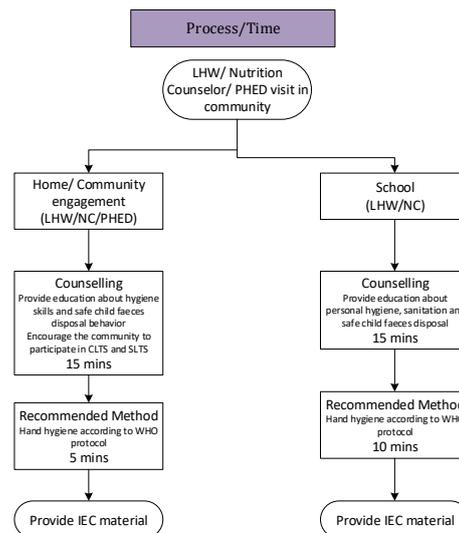
##### National Training Curriculum/Guidelines:

- Available

##### Reference Material:

- Water, Sanitation and Hygiene (WASH) in Schools - UNICEF
- Hand Hygiene: Why, How & When? - WHO
- Water and Sanitation Program - World Bank 2015
- LHW Training Manual
- Pakistan Approach to Total Sanitation (PATS)

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.2. Child Health Package of Services  
 A.2.32. Education on handwashing and safe disposal of children's stool  
 Platform: Community Level  
 • LHW/ Nutrition Counselor/PHED



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.2. Child Health Package of Services

#### A.2.33. Pneumococcus vaccination

DCP3 code: C11

##### Platform:

Community Level

- Vaccinator/LHW

##### Process:

Home visit

Counsel

- GATHER

Follow up

- As per National EPI Schedule

##### Medicines:

Immunization Schedule	
Age	Vaccine
6 weeks	Pneumococcal 1
10 weeks	Pneumococcal 2
14 weeks	Pneumococcal 3

##### Supplies:

- AD Syringe
- Syringe cutter
- Safety box
- Cold chain

##### HMIS Tools:

1. Recording Tool: EPI register, Diary
2. Reporting Tool: Monthly report
3. Client/Patient Card: MCH Card, EPI card
4. IEC Material: Flip chart/Audio-Video/Brochure

##### Supervision:

- EDO Health, Deputy DHO, THO, Assistant Superintendent Vaccination (ASV), AIHS, District Coordinator, ADC, LHS, Vaccinator

##### Standard Protocol:

- Immunization Schedule as per National EPI Guidelines

##### National Training Curriculum/Guidelines:

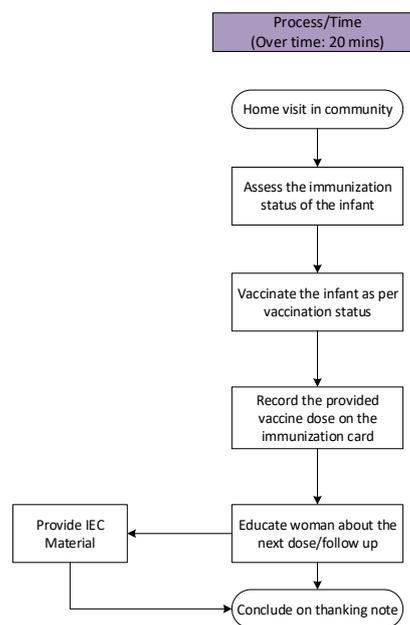
- Available

##### Reference Material:

- National EPI Policy and Strategic Guidelines Pakistan 2015

- Curricula for LHW on Vaccination

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.2. Child Health Package of Services  
A.2.33. Pneumococcus vaccination  
Platform: Community Level  
• Vaccinator/LHW



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.2. Child Health Package of Services

#### A.2.34. Rota Virus vaccination

DCP3 code: C12

#### Platform:

Community Level

- Vaccinator/LHW

#### Process:

Home visit

Counsel

- GATHER

Follow up

- As per National EPI Schedule

#### Medicines:

Immunization Schedule	
Age	Vaccine
6 weeks	Rota 1
10 weeks	Rota 2

#### Supplies:

- AD Syringe
- Syringe cutter
- Safety box
- Cold chain

#### HMIS Tools:

1. Recording Tool: EPI register, Diary
2. Reporting Tool: Monthly report
3. Client/Patient Card: MCH Card, EPI card
4. IEC Material: Flip chart/Audio-Video/Brochure

#### Supervision:

- EDO Health, Deputy DHO, THO, Assistant Superintendent Vaccination (ASV), AIHS, District Coordinator, ADC, LHS, Vaccinator

#### Standard Protocol:

- Immunization Schedule as per National EPI Guidelines

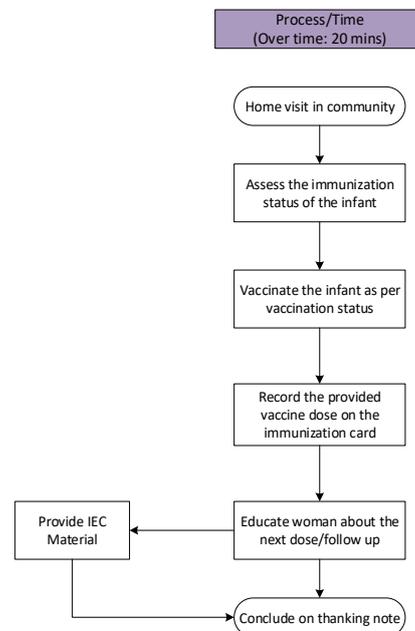
#### National Training Curriculum/Guidelines:

- Available

#### Reference Material:

- National EPI Policy and Strategic Guidelines Pakistan 2015
- Curricula for LHW on Vaccination

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.2. Child Health Package of Services  
**A.2.34. Rota Virus vaccination**  
**Platform:** Community Level  
 • Vaccinator/LHW



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.2. Child Health Package of Services

#### A.2.35. Provision of vitamin A and zinc supplementation to all children according to WHO guidelines and provision of food supplementation to women and children and food insecure households (Also included in School age health, Reproductive health and CVD packages of services) (Intervention to be included when POLIO is eradicated)

DCP3 code: C14

##### Platform:

Community Level

- LHW/Community Volunteers

##### Process:

Home Visit

Provision of supplementation

- **Vitamin Supplementation:**
  - Give first dose any time from 6 months to under 5 years of age children
  - Thereafter vitamin A every six months to ALL CHILDREN
- **Vitamin A treatment:**
  - Give an extra dose of Vitamin A (same dose as for supplementation) for treatment if the child has measles or persistent diarrhoea. If the child has had a dose of vitamin A within the past month or is on RUTF for treatment of severe acute malnutrition, do not give vitamin A
- **Zinc Supplementation**
  - Give Zinc for 14 days for the persistent diarrhoea
- **Multivitamin/Mineral supplement**
  - For persistent diarrhoea give 5 ml (one tea spoon full) once a day for 2 weeks

Follow up

- 6 months for Vitamin A

##### Medicines:

Vitamin A	
AGE or WEIGHT	AGE or WEIGHT
6 up to 12 months	100 000 IU
One year and older	200 000 IU
Zinc	
For persistent diarrhoea management	20 mg per day of zinc supplementation for 10–14 days (10 mg per day for infants under 6 months of age)
Multivitamin / Mineral supplement	
For persistent diarrhoea management	5 ml (one tea spoon full) once a day for 2 weeks

##### HMIS Tools:

1. Recording Tool: Treatment register, Campaign report
2. Reporting Tool: Monthly Report
3. Client/Patient Card: MCH card, Immunization card
4. IEC material: Flip chart, Audio-Video, Brochure

##### Supervision:

- EDO Health, Deputy DHO, THO, ASV, AIHS, District Coordinator, ADC, LHS

##### Standard Protocol:

- Vitamin A Supplementation
- Vitamin A Treatment
- ORS and Zinc Supplementation

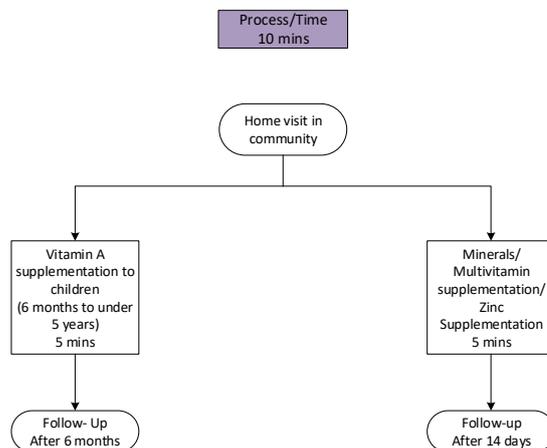
##### National Training Curriculum/Guidelines:

- Available

##### Reference Material:

- IMNCI National Guidelines 2019

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.2. Child Health Package of Services  
 A.2.35. Provision of vitamin A and zinc supplementation to all children according to WHO guidelines and provision of food supplementation to women and children and food insecure households (Also included in School age health, Reproductive health and CVD packages of services)  
 Platform: Community Level  
 • LHW/Community Volunteers



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.2. Child Health Package of Services

#### A.2.37. Childhood vaccination series (diphtheria, pertussis, tetanus, polio, BCG, measles, hepatitis B, HiB)

DCP3 code: C16

##### Platform:

Community Level

- Vaccinator/LHW

##### Process:

Home visit

Counsel

- GATHER

Follow up

- As per National EPI Schedule

##### Medicines:

Immunization Schedule				
Age	Vaccine			
Birth	BCG	OPV 0	Hep B 0	
6 weeks	Pentavalent* 1	OPV 1	Pneumoc occal 1	Rota 1
10 weeks	Pentavalent 2	OPV 2	Pneumoc occal 2	Rota 2
14 weeks	Pentavalent 3	OPV 3	Pneumoc occal 3	IPV
9 months	Measles 1			
15 months	Measles 2			
Space between two doses of multiple dose vaccines is at least 4 weeks				

\*DPT+ Hep B + Hib

##### Supplies:

- AD Syringe
- Syringe cutter
- Safety box
- Cold chain

##### HMIS Tools:

1. Recording Tool: EPI register, Diary
2. Reporting Tool: Monthly report
3. Client/Patient Card: MCH Card, EPI card
4. IEC Material: Flip chart/Audio-Video/Brochure

##### Supervision:

- EDO Health, Deputy DHO, THO, Assistant Superintendent Vaccination (ASV), AIHS, District Coordinator, ADC, LHS, Vaccinator

##### Standard Protocol:

- Immunization Schedule as per National EPI Guidelines

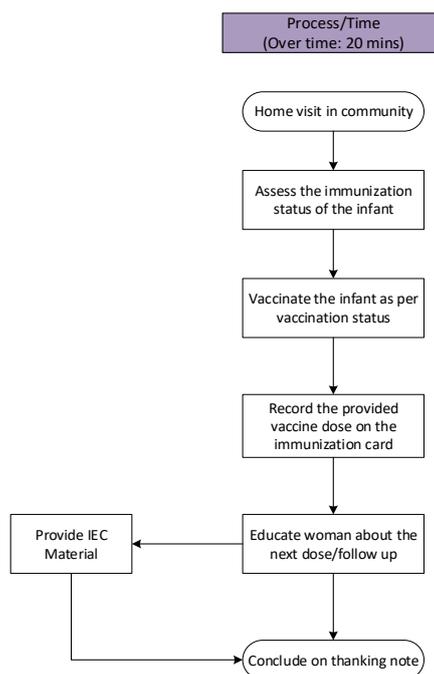
##### National Training Curriculum/Guidelines:

- Available

##### Reference Material:

- National EPI Policy and Strategic Guidelines Pakistan 2015
- Curricula for LHW on Vaccination

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.2. Child Health Package of Services  
 A.2.37. Childhood vaccination series (diphtheria, pertussis, tetanus, polio, BCG, measles, hepatitis B, Hib)  
 Platform: Community Level  
 • Vaccinator/LHW



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.2. Child Health Package of Services

#### A.2.38. In high malaria transmission setting, indoor residual spraying (IRS) in selected areas with high transmission and entomologic data on IRS susceptibility (Also included in Febrile illness package of services)

DCP3 code: C17

##### Platform:

Community Level

- Malaria Inspector/IRS Team Members/CDC Supervisor

##### Process:

Selection of areas for IRS where:

- The vector population feeds and rests inside houses
- The vectors are susceptible to the insecticide in use
- People mainly sleep indoors at night
- Malaria transmission pattern is such that the population can be protected by one or two rounds of IRS per year
- The structures are suitable for spraying
- Structures are not scattered over a wide area, resulting in high transportation costs

IRS team member travels to the target location/Home Visit

Consultation (Malaria Supervisor/IRS Team Members)

- Informs householders the purpose of spraying, details of the spraying schedule, and what residents are expected to do in preparation

Conducting a House Spray

- Preparing rooms and households
- Preparing the spray charge
- Applying insecticide
- Insecticide spray procedure

Post-spraying procedures

Counselling

Conclude the meeting on thanking note

##### Supplies:

Core requirements

- A hand-compression sprayer
- Insecticides
- 8–10-liter compression sprayers
- Sufficient spare parts
- Protective clothing

##### HMIS Tools:

1. Reporting Tool: Monthly Report

2. Recording Tool:

3. Patient/Client Card:

4. IEC Material: Leaflet

##### Supervision:

- EDO Health, Deputy DHO, THO, District Malaria Coordinator, DC, ADC, LHS

##### Standard Protocol:

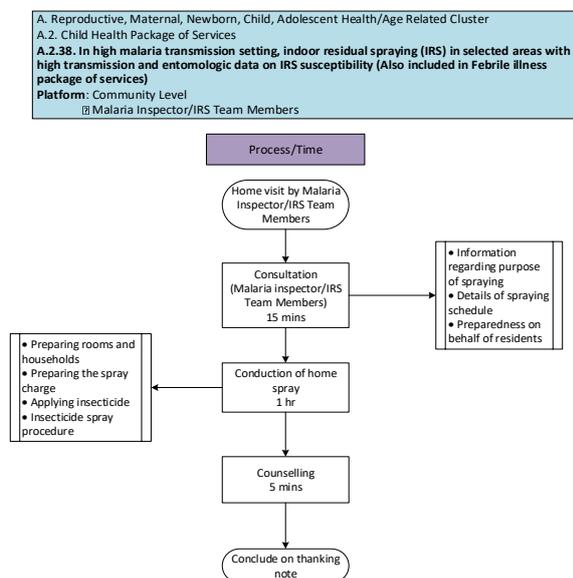
- Indoor residual spraying (IRS) policy and strategy
- Management of an IRS program
- Conducting a house spray

##### National Training Curriculum/Guidelines:

- Available

##### Reference Material:

- Indoor Residual Spraying “An Operational Manual for Indoor Residual Spraying (IRS) for Malaria Transmission Control and Elimination” Second Edition WHO 2015



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.2. Child Health Package of Services

#### A.2.39. Detection and treatment of childhood infections with danger signs (IMCI)

DCP3 code: HC12

##### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse/LHV)

- History
- Check for general danger signs for referral
- Clinical examination (Ask, Look, Listen, Feel)
- Ask about main symptoms (cough or difficulty breathing, diarrhoea, fever) and classify according to IMCI Guidelines

Laboratory Tests (Lab Technician)

- Lab tests/Ultrasound (if needed)

Recommended Method for the following

- Assess, Classify and Treat Child 02 months to Under 5 Years

Follow up

- Pneumonia (After 3 days); Malaria (If fever persists after 3 days); Measles (After 3 Days); Ear Infection (After 5 Days); Dysentery (After 3 Days); Persistent Diarrhea (After 5 Days)

##### Medicines:

Infection	Ampicillin 500 mg/2.1 ml of sterile water, <b>dose as per weight or age guidelines</b> Gentamicin 2ml/40mg/ml vial, <b>dose as per weight or age guidelines</b>
Convulsions	Diazepam 10mg/2ml injection solution, <b>dose as per weight or age guidelines</b>
Pneumonia and Acute Ear Infection	Amoxicillin (Give 2 times daily for 5 days), <b>dose as per weight or age guidelines</b> (Tablet 250mg, Syrup 250 Mg/ 5ml) Inhaled Salbutamol in case of wheezing, <b>dose as per weight or age guidelines</b>
Malaria	Artemether-Lumefantrine tablets (20 mg artemether and 120 mg lumefantrine) give two times daily for 3 days, <b>dose as per weight or age guidelines</b> Artesunate – Sulfadoxine-pyrimethamine tablets (50 mg artesunate and 500 mg sulphadoxine+25mg pyrimethamine) give two times daily for 3 days, <b>dose as per weight or age guidelines</b>
Severe Malaria	Artesunate intramuscular 20mg/ml, repeat dose after 12 hours/daily until child take orally, <b>dose as per weight or age guidelines</b> Artesunate suppository (50mg/200mg) per 10mg/kg, every 24 hours until child takes oral antibiotic, <b>dose as per weight or age guidelines</b> Intramuscular quinine (150mg/300mg) in 2 ml ampoules, repeat at 4 and 8 hours later and then every 12 hours till child takes oral antibiotics, <b>dose as per weight or age guidelines</b>
Dysentery	Ciprofloxacin (Give 15 mg/ kg two times daily for 3 days), <b>dose as per weight or age guidelines</b> (Tablet 250mg, Tablet 500 mg)
Cholera	Ciprofloxacin (Give 10 mg/ kg two times daily for 3 days), <b>dose as per weight or age guidelines</b> (Tablet 250mg, Tablet 500 mg) OR Erythromycin (tablet 250 mg) give four times daily for 3 days), <b>dose as per weight or age guidelines</b> Tetracycline (tablet 250mg) give four times daily for 3 days), <b>dose as per weight or age guidelines</b>
Diarrhea	Oral Rehydrating Solution (ORS) (about 5 ml/kg/hour) every 1-2 hours , Mebendazole (as per requirement), <b>dose as per weight or age guidelines</b>

High Fever (>38.5° C) or Ear Pain	Paracetamol, <b>dose as per weight or age guidelines</b> (Tablet 100 mg, Tablet 500 mg)
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##### Equipment:

- Thermometer, timer, tongue depressor

##### Lab tests:

- Rapid diagnostic test for malaria

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: MCH card, EPI card, Follow up card
4. IEC Material: Leaflet, Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS,

##### Standard Protocol:

- Assess, Classify and Treat Child 02 months to Under 5 Years

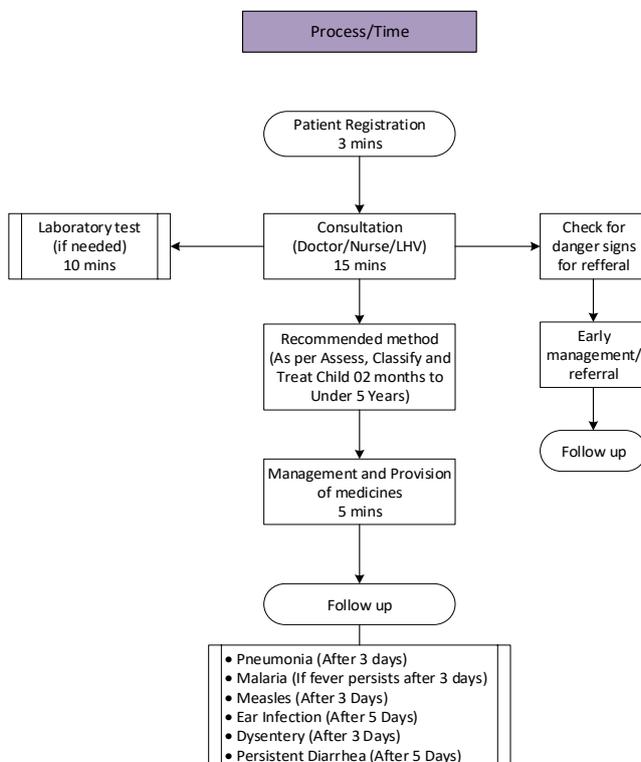
##### National Training Curriculum/Guidelines:

- Available

##### Reference Material:

- IMNCI National Guidelines 2019

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster A.2. Child Health Package of Services A.2.39. Detection and treatment of childhood infections with danger signs (IMCI) Platform: PHC Level • 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing home
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**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH  
SERVICES**

**CLUSTER**

*A. Reproductive, Maternal, New-born, Child, Adolescent Health Age  
Related Cluster*

**PACKAGE**

**A3. School age Health and Development Package of Services**



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.3. School-age Health & Development Package of Services

#### A.3.44. Education of school children on oral health

DCP3 code: C18

**Platform:**

Community Level

- LHW/School Health and Nutrition Counsellor/ Nutrition Supervisor

**Process:**

- Home visit/ School visit
- Screening
- Counselling/awareness session
- Recommended Method
- Education on oral hygiene; twice daily cleaning the teeth
- After screening referral if required
- Follow up
- Monthly visit

**Medicines:**

**Supplies:**

**Equipment:**

**HMIS Tools:**

1. Recording Tool: Treatment register
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC material: Flip chart

**Supervision:**

- Lady Health Supervisor (LHS), Health facility in-charge

**Standard Protocol:**

**National Training Curriculum/Guidelines:**

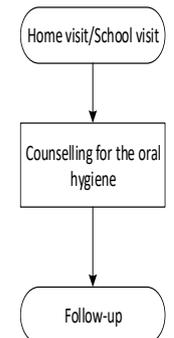
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**Reference Material:**

- LHW Training Manual

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.3. School-age Health & Development Package of Services  
**A.3.44. Education of school children on oral health**  
Platform: Community level  
• LHW/School Health and Nutrition Counselor

Process/Time  
(Overall time: 20 mins)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.3. School-age Health & Development Package of Services

#### A.3.45. Vision pre-screening by teachers; vision tests and provision of ready-made glasses on-site by eye specialists/ trained medical officer

DCP3 code: C19

##### Platform:

Community Level

- LHW/School health & nutrition supervisor (SHNS) School Teachers/Eye Specialist/ Trained Medical Officer from First Level Hospital

##### Process:

School Visit (LHW, Teacher)

- Vision pre-screening for reduced visual acuity, red eyes, white pupils, normal pupil reactions, external eye abnormalities
- Identify and maintain the record of children with vision abnormality
- Refer to visiting Eye Specialist and provision of ready-made glasses on site (if required)

Recommended Method

- Visual Acuity Test

Follow up

- Annual

##### Medicines:

##### Supplies:

- Snellen's visual acuity chart (Pictorial Snellen chart, Snellen E chart and Snellen chart with English alphabets]
- Ready-made glasses (cost at First Level Hospital)

##### Equipment:

Torch

##### HMIS Tools:

1. Recording Tool: Treatment Register, Diary, Referral, vision card
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet, Flipchart

##### Supervision:

- EDO Education, Tehsil Education Officer (TEO), DC, ADC, LHS, In-charge of school health program

##### Standard Protocol:

- Implementing School Eye Health: Detection & Management

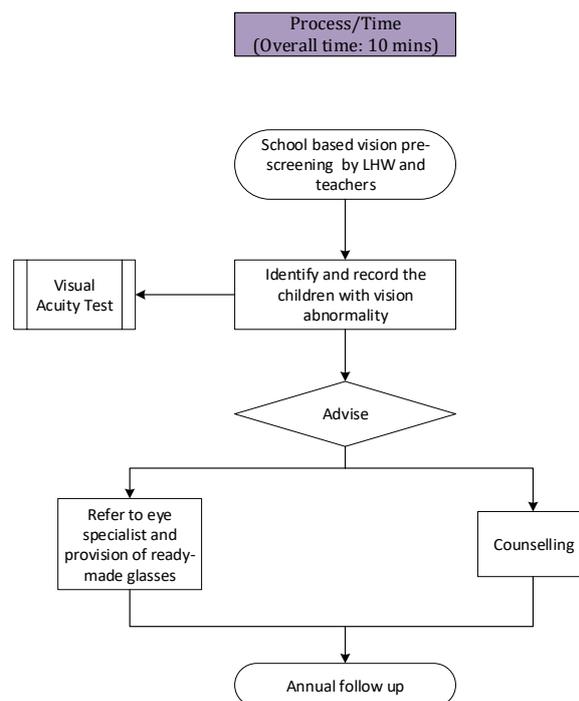
##### National Training Curriculum/Guidelines:

- Available

##### Reference Material:

- LHW Training Manual
- Guidelines for School-based Eye Health Programs (2017)

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.3. School-age Health and Development Package of Services  
A.3.45. Vision pre-screening by teachers; vision tests and provision of ready-made glasses on-site by eye specialists/ trained medical officer  
Platform: Community Level  
• LHW/School Teachers/Eye Specialist at First Level Hospital



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.3. School-age Health & Development Package of Services

#### A.3.46. School based HPV vaccination for girls (Also included in RH, HIV and Cancer packages of services)

DCP3 code: C20

##### Platform:

Community Level

- Vaccinator/LHV

##### Process:

- School visit (Vaccinator/LHV)
- Contacting school management
- Raising awareness about the importance and availability of the HPV vaccine and countering misinformation that undermine acceptance of vaccination

##### Recommended Method

- Vaccine management (cold box) and deliver to the school venue
- Obtain consent/assent from parents for a girl to get vaccinated
- Vaccinate girls (aged 9-13 years) at schools and document records of girls vaccinated, their age and vaccine dose
- Counsel girls to get the subsequent dose(s) needed for full protection

##### Follow up

- 6 months after the first dose

##### Medicines:

HPV Vaccine	<ul style="list-style-type: none"> <li>• Bivalent vaccine (protection against types 16 and 18 only) 1- and 2-dose vials; 0.5 ml of liquid suspension</li> </ul>
	<ul style="list-style-type: none"> <li>• Quadrivalent vaccine (contains additional protection against types 6 and 11) 1-dose vial; 0.5 ml of liquid suspension</li> </ul>

##### Supplies:

##### Equipment:

- Cold box, AD Syringe, syringe cutter, safety box and cotton.

##### HMIS Tools:

1. Recording Tool: HPV vaccination record
2. Reporting Tool: HPV monthly report
3. Client/Patient Card: HPV vaccination card
4. IEC Material: Leaflet, Flipchart, Electronic media campaign

##### Supervision:

- EDO Health, Deputy DHO, THO, DSV, ASV, Facility In-charge

##### Standard Protocol:

- HPV Vaccination

##### National Training Curriculum/Guidelines:

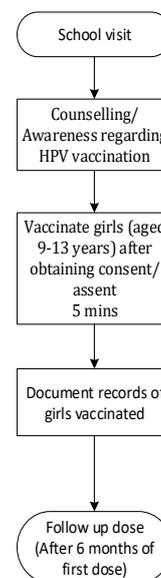
- Not Available

##### Reference Material:

- Comprehensive Cervical Cancer Control: A Guide to Essential Practice WHO 2014

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.3. School-age Health & Development Package of Services  
 A.3.46. School based HPV vaccination for girls (Also included in RH, HIV and Cancer packages of services)  
 Platform: Community Level  
 • Vaccinator/LHV

Process/Time  
 (Overall time: 15 mins)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.3. School-age Health & Development Package of Services

#### A.3.47. Mass drug administration for lymphatic filariasis, schistosomiasis, soil-transmitted helminthiases and trachoma, and food borne trematode infections (Also included in NTDs package of services)

DCP3 code: C21

##### Platform:

Community Level

- LHW/ Volunteer/ Vaccinator

##### Process:

Identify the target population

Home visit/Community engagement

- Collect commodity from agreed-on point (usually the designated health facility/warehouse/ Store)
- Communicate information on potential benefits of MDA
- Issue drug to household/community and ensure proper administration
- Counselling
- Concluding on thanking note

School visit

- Pre MDA-preparations (training of teachers, outreach to students and consent of parents, distribution of medication and other materials to the school)
- Collect commodity from agreed-on point (usually the designated health facility/store)
- Provision of trainings to inform teachers and other personnel involved in the program about their responsibilities
- Issue drug to teachers for ensuring proper administration of children
- Counselling

- Concluding on thanking note

Recommended Method

- Administration of Anthelmintic drugs

Follow up

- Six monthly for 2 years

##### Medicines:

Six monthly treatment with single doses of two medicine

Disease	Drug
Lymphatic filariasis	Albendazole (400mg) + diethylcarbamazine (DEC) OR albendazole + ivermectin (150–200 mcg/kg)
Onchocerciasis (co-endemic)	Albendazole + ivermectin Diethylcarbamazine (DEC) (6 mg/kg) and albendazole
Onchocerciasis not (co-endemic)	
Schistosomiasis	Praziquantel (40 mg/kg body weight)
Soil-transmitted helminthiases	Albendazole + ivermectin OR mebendazole
Trachoma	Azithromycin (500mg)
Food borne trematode infections	Praziquantel 40 mg/kg

##### HMIS Tools:

1. Recording Tool: Treatment register
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS, DC, ADC, LHS, Health Facility In-charge

##### Standard Protocol:

- Azithromycin donation: Report on donation and issues from programs
- Implementation Strategy for School-Based Deworming
- Mass Drug Administration Islamabad Deworming Initiative

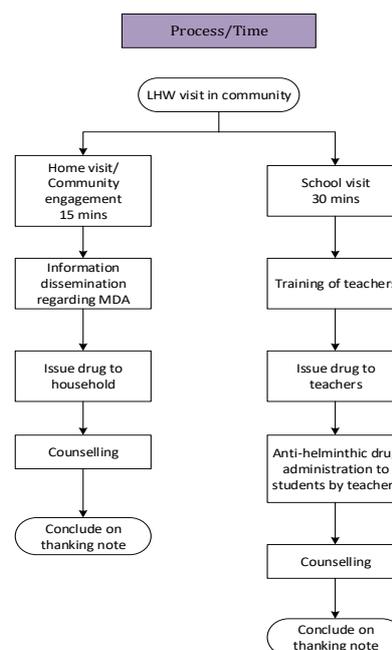
##### National Training Curriculum/Guidelines:

- Not available

##### Reference Material:

- Policy and Institutional Framework for Islamabad Deworming Initiative
- Global Program to Eliminate Lymphatic Filariasis-Monitoring and Epidemiological Assessment of Mass Drug Administration 2011
- Report of the 17th Meeting of The WHO Alliance for The Global Elimination of Blinding Trachoma WHO 2013

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.3. School-age Health & Development Package of Services  
A.3.47. Mass drug administration for lymphatic filariasis, schistosomiasis, soil-transmitted helminthiases and trachoma, and food borne trematode infections (Also included in NTDs package of services)  
Platform: Community Level  
• LHW/ Volunteer



**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH  
SERVICES**

**CLUSTER**

*A. Reproductive, Maternal, New-born, Child, Adolescent Health/ Age  
Related Cluster*

**PACKAGE**

**A4. Adolescent Health and Development Package of Services**



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.4. Adolescent Health & Development Package of Services

#### A.4.49. Adolescent friendly health services including; prevention of STIs; treatment referral of injury in general and abuse in particular; and screening and treatment referral of STIs (Also included in HIV and STI packages of services)

DCP3 code: C23

##### Platform:

Community Level

- LHW/Social Mobilizers/ SHNS

##### Process:

###### Home visit

- Communication with the parents and adolescent of the household
- Impart education about STI and STD
- Counselling, advice and referral if required

###### School Visit

- Communication with the teachers of the household
- Impart education about STI and STD
- Counselling, advice and referral if required

###### Recommended Method

- Awareness campaign

##### Follow-up

- After 1 month

##### HMIS Tools:

1. Recording Tool: Diary, Referral slip
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet, Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS, DC, ADC, LHS

##### Standard Protocol:

- Chapter on Adolescent Health in LHW Training Manual

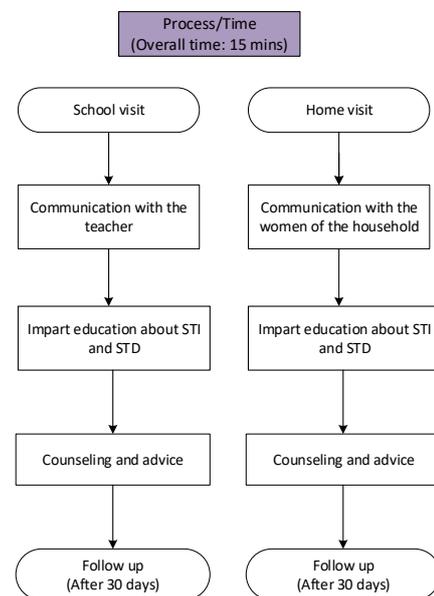
##### National Training Curriculum/Guidelines:

- Not available

##### Reference Material:

- LHW Training Manual
- Global Strategy for the Prevention and Control of Sexually Transmitted Infections: 2006–2015

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.4. Adolescent Health & Development Package of Services  
A.4.49. Adolescent friendly health services including: prevention of STIs; treatment of injury in general and abuse in particular; and screening and treatment of STIs (Also included in HIV and STI packages of services)  
Platform: Community Level  
• LHW



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.4. Adolescent Health & Development Package of Services

#### A.4.50. Life skills training in schools to build social and emotional competencies (Also included in Mental health package of services)

DCP3 code: C24

##### Platform:

Community Level

- Teacher/ Social Counsellor

##### Process:

School visit / community level

- An introduction to life skills education
- Describing the rationale, theory, values and methodology
- Activities to support the life skills lessons – e.g. warm-up activities to help the students feel more comfortable working in groups
- Activities that facilitate the development of life skills that the children can do at home and with their families
- Activities that facilitate the development of life skills that may be carried out with friends or in community projects

##### Recommended Method

- Life skills interventions for adolescent

##### Follow-up

- Regular sessions as per guidelines

##### HMIS Tools:

1. Recording Tool: Diary
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet, Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS, DC, ADC, LHS

##### Standard Protocol:

- Life Skills Education for Children and Adolescents in Schools

##### National Training Curriculum/Guidelines:

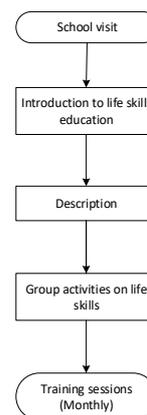
- Not available (Provincial guidelines AA HUNG Sindh)

##### Reference Material:

- Partners in Life Skills Education, Department of Mental Health, WHO
- Life Skills Education for Children and Adolescents in Schools WHO Guidelines

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.4. Adolescent Health & Development Package of Services  
A.4.50. Life skills training in schools to build social and emotional competencies (Also included in Mental health package of services)  
Platform: Community Level  
Teacher/ Social Counsellor

Process/Time  
(Overall time: 30 mins)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.4. Adolescent Health & Development Package of Services

#### A.4.51. Psychological treatment for mood, anxiety, ADHD and disruptive behaviour disorders in adolescents (Also included in Mental health package of services)

DCP3 code: HC14

##### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic

##### Process:

Patient registration at the reception (Receptionist)

Consultation (Doctor/Nurse/LHV)

- History
- Clinical Examination
- Assessment of emotional problems including anxiety, depression, disruptive behavior and ADHD

##### Recommended Method

- Psychotherapy emotional problems/disorders including depression in adolescents
- Refer if pharmacological treatment is required

##### Follow up

- ADHD: Ensure appropriate follow-up every three months or more, if needed
- Emotional Disorders: Ensure appropriate follow-up once a month or more, if needed

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Referral slip, Abstract register
2. Reporting Tool: Monthly Report
3. Client/Patient Card: Follow up visit card
4. IEC material: Leaflet, Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Child and adolescent mental and behavioural disorders

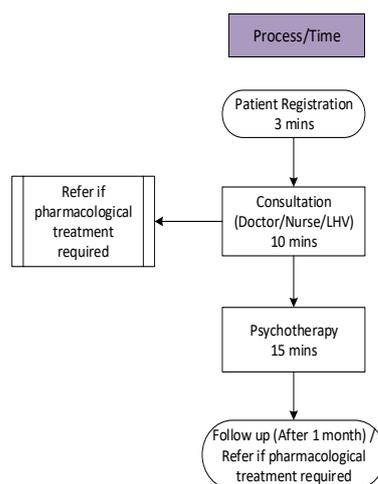
##### National Training Curriculum/Guidelines:

- Available

##### Reference Material:

- mhGAP Intervention Guide

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.4. Adolescent Health & Development Package of Services  
A.4.51. Psychological treatment for mood, anxiety, ADHD and disruptive behaviour disorders in adolescents (Also included in Mental health package of services)  
Platform: PHC Level  
• 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic





Preliminary Prioritized Interventions for the  
**ESSENTIAL PACKAGE OF HEALTH  
SERVICES**

**CLUSTER**

*A. Reproductive, Maternal, New-born, Child, Adolescent Health/ Age  
Related Cluster*

**PACKAGE**

**A5. Reproductive Health and Contraception Package of Services**



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.5. Reproductive Health & Contraception Package of Services

#### A.5.55a. Provision of iron and folic acid supplementation to pregnant women, and provision of food or caloric supplementation to pregnant women in households (Also included in CVD package of services)

DCP3 code: C27

##### Platform:

Community Level

- LHW/LHV/Community Midwife

##### Process:

Home visit (LHW)

- History
- Clinical examination

Recommended Method

- Once daily iron and folic acid during pregnancy (during second and third trimester)
- Assess and manage malnutrition in pregnant and lactating women (PLW)
- Provide nutritional supplements (if required)
- Counselling

Follow up

- Iron and folate: Monthly
- PLW: Monthly

##### Medicines:

Iron and folic acid supplementation for the pregnant woman	tablet= iron (60 mg) + folic acid(400µg) Once daily
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##### Supplies:

- RUSF if feasible (Replace it with the local product)
- B. Mid-arm circumference tape

##### HMIS Tools:

1. Recording Tool: Treatment register
2. Reporting Tool: Monthly Report
3. Client/Patient Card: MCH card, Follow up visit card
4. IEC material: Leaflet, Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO, District Coordinator, ADC, LHS

##### Standard Protocol:

- Preventive measures and additional treatments for the woman

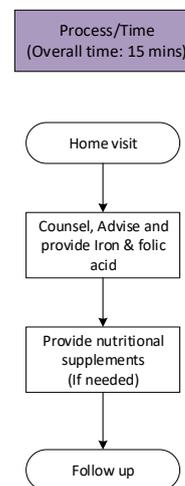
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- IMPAC Guidelines WHO 2017
- LHW Training Manual
- CMW Training Manual

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.5. Reproductive Health & Contraception Package of Services  
A.5.55a. Provision of iron and folic acid supplementation to pregnant women, and provision of food or caloric supplementation to pregnant women in food-insecurity households (Also included in CVD package of services)  
Platform: Community level:  
• LHW/LHV/Community Midwife



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.5. Reproductive Health & Contraception Package of Services

#### A.5.55b. Provision of iron and folic acid supplementation to pregnant women, and provision of food or caloric supplementation

##### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic

##### Process:

Patient registration at the reception (Receptionist)  
Consultation (Doctor/Nurse/LHV)

- History
- Clinical examination

Recommended Method

- Once daily iron and folic acid during pregnancy (during second and third trimester)
- Assess and manage malnutrition in pregnant and lactating women (PLW)
- Provide nutritional supplements (if required)
- Counselling

Follow up

- Iron and folate: Monthly
- PLW: Monthly

##### Medicines:

Iron and folic acid supplementation for the pregnant woman	1 tablet= iron (60 mg) + folic acid(400µg) Once daily
--	--

##### Supplies:

- RUSF if feasible (Replace it with the local product)
- B. Mid-arm circumference tape

##### HMIS Tools:

1. Recording Tool: Treatment register, OPD ticket
2. Reporting Tool: Monthly Report
3. Client/Patient Card: MCH card, Follow up visit card
4. IEC material: Leaflet, Flip chart

##### Supervision:

to pregnant women in food-insecurity households (Also included in CVD package of services)

DCP3 code: C27

- EDO Health, Deputy DHO, THO, District Coordinator, ADC, LHS

##### Standard Protocol:

- Preventive measures and additional treatments for the woman

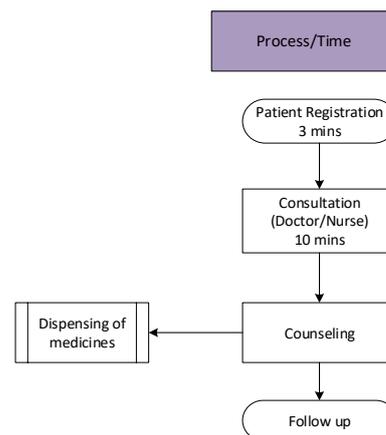
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- IMPAC Guidelines WHO 2017
- LHW Training Manual
- CMW Training Manual

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.5. Reproductive Health & Contraception Package of Services  
A.5.55b. Provision of iron and folic acid supplementation to pregnant women, and provision of food or caloric supplementation to pregnant women in food-insecurity households (Also included in CVD package of services)  
Platform: PHC Level  
8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.5. Reproductive Health & Contraception Package of Services

#### A.5.57. Post-gender-based violence care, including counselling, provision of emergency contraception, and rape-response referral (medical and judicial) (Also included in HIV package of services)

DCP3 code: HC16

**Platform:**

PHC

Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home

**Process:**

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse/Social Counsellor)

- Identification and referral
- First line support (LIVES)
- History of the incident
- Providing supportive counselling and psychosocial support
- Performing a thorough physical examination, treatment for injuries, evaluation for STIs/ detection/diagnostic test of HIV, provision of preventive care and pregnancy prevention
- Referral if required (for additional assistance and services)

Recommended Method

- Survivor-centred Response
- Survivor-centred Health Care
- Psychosocial and Mental Health

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- As per health care provider's advice

**Medicines:**

Within 120 hours	<ul style="list-style-type: none"> <li>• Emergency contraception to prevent pregnancy</li> <li>• Paracetamol</li> <li>• Tetanus booster</li> </ul>
Within 72 hours of possible exposure	<ul style="list-style-type: none"> <li>• Post-exposure prophylaxis (PEP) /HIV</li> <li>• Medication to treat STIs (Symptomatic treatment)</li> <li>• Hep B vaccination</li> </ul>

**Supplies:**

- Rapid Test Kits for HIV
- Pregnancy Test Kits
- Reproductive health Rape kit

**HMIS Tools:**

1. Recording Tool: OPD Ticket, OPD register, Referral slip, Abstract register
2. Reporting Tool: Monthly report

3. Client/Patient Card: Follow up card

4. IEC Material: Flip chart, Brochures

**Supervision:**

- EDO Health, Deputy DHO, THO, AIHS

**Standard Protocol:**

- Responding to Gender-Based Violence in Emergencies - Survivor-centred Health Care
- National Protocol to Health System Response for Gender Based Violence

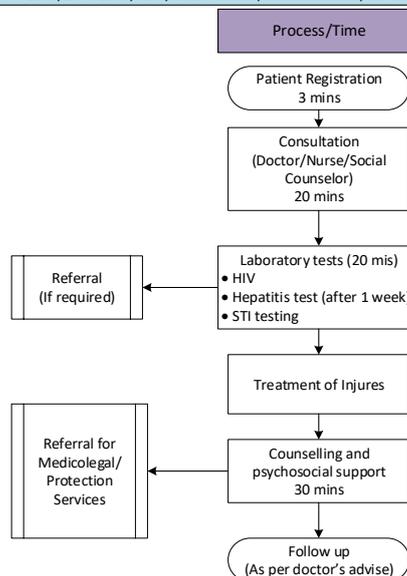
**National Training Curriculum/Guidelines:**

- Not Available

**Reference Material:**

- Managing Gender-based Violence Programs in Emergencies E-learning and Companion Guide UNFPA
- Clinical Handbook for Care to the Survivor of GBV including Sexual Violence (Humanitarian and Natural Setting both)
- Pathway for GBV - WHO

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.5. Reproductive Health & Contraception Package of Services  
 A.5.57. Post-gender-based violence care, including counselling, provision of emergency contraception, and rape-response referral (medical and judicial) (Also included in HIV package of services)  
 Platform: PHC Level  
 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing home



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.5. Reproductive Health & Contraception Package of Services

#### A.5.58. Syndromic management of common sexual and reproductive tract infections (for example urethral discharge, genital ulcer and others) according to WHO guidelines (Also included in HIV package of services)

DCP3 code: HC17

#### Platform:

PHC Level

- 8-6 BHU/ 24-7 BHU/ RHC/ MCH Centre/ Health Centre/GP Clinic/Nursing Home

#### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/ Nurse/ LHV)

- History
- Clinical examination
- STI's management
- Education and counselling

- Advice/ Referral (if required)

- Partner notification

Recommended Method

- Management of common sexual and reproductive tract infections according to protocols

Pharmacy (Dispenser)

- Dispensing of medicines

Follow up

- After 7 days

#### Medicines:

Gonorrhoea	<b>Uncomplicated Anal/ Genital Infection:</b> Ciprofloxacin 500 mg orally once only (Ciprofloxacin is contraindicated in pregnancy and for children or adolescents) OR Cefixime 400 mg orally once only OR Ceftriaxone 125 mg IM once only OR Spectinomycin 2 gm IM once only <b>Disseminated Gonococcal infection:</b> Ceftriaxone 1 gm IM or intravenous once daily for 7 days OR Spectinomycin 2 gm IM twice daily for 7 days	
Chlamydia	<b>Uncomplicated Anal/ Genital Infection :</b> Doxycycline 100 mg orally twice daily for 7 days (Not to be used for pregnant women, children or adolescents) OR Azithromycin 1 gm orally once only <b>Alternative Regimens:</b> Amoxicillin 500 mg orally 3 times a day for 7 days OR Erythromycin 500 mg 4 times a day for 7 days OR Ofloxacin 400 mg orally twice a day for 7 days OR Tetracycline 500 mg orally 4 times a day for 7 days	
Gonorrhoea	<b>Uncomplicated Anal/ Genital Infection:</b> Ciprofloxacin 500 mg orally once only (Ciprofloxacin is contraindicated in pregnancy and for children or adolescents) OR Cefixime 400 mg orally once only OR Ceftriaxone 125 mg IM once only OR Spectinomycin 2 gm IM once only	
Chlamydia	<b>Uncomplicated Anal/ Genital Infection:</b> Doxycycline 100 mg orally twice daily for 7 days (Not to be used for pregnant women, children or adolescents) OR Azithromycin 1 gm orally once only <b>Alternative Regimens:</b> Amoxicillin 500 mg orally 3 times a day for 7 days OR Erythromycin 500 mg 4 times a day for 7 days OR Ofloxacin 400 mg orally twice a day for 7 days OR Tetracycline 500 mg orally 4 times a day for 7 days	
Trichomonas	Metronidazole 400 or 500 mg orally twice daily for 7 days OR Tinidazole 500 mg orally twice daily for 7 days	
HSV-2	<b>Treatment of First Episode:</b> Acyclovir 400 mg 3 times a day for 7 days <b>Treatment of Recurrent Episodes:</b> Acyclovir 400 mg 3 times a day for 5 days <b>Suppressive therapy:</b> Acyclovir 400 mg twice a day continuously	
Syphilis Early Syphilis (Primary, Secondary or Latent of less than 2 years duration)	<b>Early Syphilis</b> (Primary, Secondary or Latent of less than 2 years duration) Benzathine Penicillin 2.4 million IU intramuscularly once (Due to large volume it is recommended that this dose be divided and given as 2 injections sites) <b>Alternative Regimen</b> Procaine Benzyl Penicillin 1.2 million IU intramuscularly once daily for 10 days <b>Alternative Regimen</b> (for Penicillin allergic patients and non-pregnant patients) Doxycycline 100 mg orally twice a day for 14 days OR Tetracycline 500 mg orally twice a day for 14 days <b>Alternative Regimen</b> (for Penicillin allergic patients and pregnant patients) Erythromycin 500 mg orally 4 times a day for 14 days	<b>Late Latent Syphilis</b> (Infection of more than 2 years duration) Benzathine Penicillin 2.4 million IU intramuscularly once a week for 2 consecutive weeks (Due to large volume it is recommended that this dose be divided and given as 2 injections sites) <b>Alternative Regimen</b> Procaine Benzyl Penicillin 1.2 million IU intramuscularly once daily for 20 days <b>Alternative Regimen</b> (for Penicillin allergic patients and non-pregnant patients) Doxycycline 100 mg orally twice a day for 30 days OR Tetracycline 500 mg orally 4 times a day for 30 days <b>Alternative Regimen</b> (for Penicillin allergic patients and pregnant patients) Erythromycin 500 mg orally 4 times a day for 30 days
Bacterial Vaginosis	Metronidazole 2 gm orally once (also treats Trichomonas) OR Clindamycin 2% vaginal cream, 5 gm intravaginally at bedtime for 7 days OR Metronidazole 0.75% gel, 5 gm intravaginally twice daily for 7 days OR Clindamycin 300 mg orally twice daily for 7 days	<b>Treatment during Pregnancy</b> <b>First Trimester (only if treatment is imperative):</b> Metronidazole 2 gm orally once <b>2nd or 3rd trimesters:</b> Metronidazole 200- 250 mg 3 times a day for 7 days <b>Alternative regimen</b> Metronidazole 2 gm orally once OR Clindamycin 300 mg orally twice daily for 7 days OR Metronidazole 0.75% gel, 5 gm intravaginally twice daily for 7 days

**Supplies:**

- Gloves
- D/Syringe
- Speculum
- Soaps Necessary cultural material
- Test kits for STIs

**Equipment:**

- Colposcope
- Spot lamp

**Lab tests:**

- Urine test
- Take culture and send to lab or on spot tests for STIs through RTKs

**HMIS Tools:**

1. Recording Tool: OPD Ticket, OPD register, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow-up visit card
4. IEC Materia: Leaflet, Flipchart

**Supervision:**

- EDO Health, Deputy DHO, THO

**Standard Protocol:**

- Section 4: Co-infections and Opportunistic: Management/Screening/Prevention

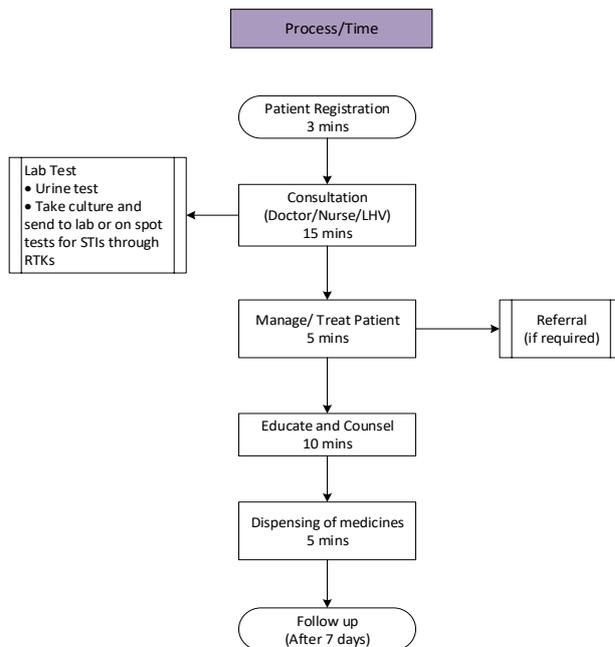
**National Training Curriculum/Guidelines:**

- Available

**Reference Material:**

- The National Guidelines for the Management of Sexually Transmitted Infections WHO and National Control Program

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.5. Reproductive Health & Contraception Package of Services  
**A.5.58. Syndromic management of common sexual and reproductive tract infections (for example urethral discharge, genital ulcer and others) according to WHO guidelines (Also included in HIV package of services)**  
Platform: PHC Level  
• 8-6 BHU/ 24-7 BHU/ RHC/ MCH Center/ Health Centre/GP Clinic/Nursing Home





Preliminary Prioritized Interventions for the  
**ESSENTIAL PACKAGE OF HEALTH  
SERVICES**

**CLUSTER**

*B. Infectious Diseases Cluster*

**PACKAGE**

**B6. HIV and STI Package of Services**



## B. Infectious Diseases Cluster

### B.6. HIV and STIs Package of Services

#### B.6.66. Community-based HIV testing and counselling with appropriate referral or linkages to care and immediate ART initiation

DCP3 code: C28

##### Platform:

Community Level

- LHW/CBOs workers

##### Process:

First level of contact should be through the LHW, who can identify the families in their catchment areas suspected of exposure to HIV (migrants, IDUs etc).

For the key populations MSM, Transgender & commercial sex workers, Gurus and Madams respectively, would be the first contact to access target population.

##### Visit

- Voluntary counselling and testing for the HIV and AIDS
- Referral for ART Initiation if required

##### Supplies:

- Rapid Testing Kits (RTKs) - rapid test 1 & 2 according to national algorithm
- Gloves
- Alcohol swabs

##### HMIS Tools:

1. Recording Tool: VCT Register, Referral Slip
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet, Flip charts

##### Supervision:

- Managers of CBOs, VCT in-charge, NACP/PACP Managers and Supervisors

##### Standard Protocol:

- Protocols for the community-based testing

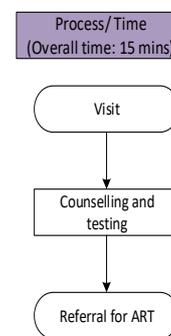
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- HIV Voluntary Counselling and Testing (VCT) Guidelines for Pakistan

B. Infectious Diseases Cluster  
B.6. HIV and STIs Package of Services  
B.6.66. Community-based HIV testing and counselling with appropriate referral or linkages to care and immediate ART initiation  
Platform: Community Level  
CBO worker



## B. Infectious Diseases Cluster

### B.6. HIV and STIs Package of Services

#### B.6.68a. Provision of condoms to key populations, including female sex workers, men have sex with men, people who inject drugs (IDU), transgender populations, and prisoners

DCP3code: C30

##### Platform:

Community Level

- CBOs workers

##### Process:

Identify the target population - For the key populations MSM, Transgender & commercial sex workers, Gurus and Madams respectively, would be the first contact to access target population.

Community engagement and Prison visit

- Collect commodity from the designated health facility/warehouse
- Communicate information on potential benefits and resulting risks of STIs
- Distribution of condoms and lubricants among community members and key points; both in community and prisons
- Counselling on condom use
- Conclude on thanking note

##### Recommended Method

- Provision of condoms and lubricants

##### Follow up

- Monthly

##### Supplies:

- Condoms
- Water-based lubricant (to reduce probability of condom breakage and/or rectal tearing/)

##### HMIS Tools:

1. Recording Tool: Supply distribution register
2. Reporting Tool: Stock Card
3. Client/Patient Card:
4. IEC Material: Leaflet, Flip charts, Brochure

##### Supervision:

- NACP/ PACP Coordinator, EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Discuss HIV/ STIs and condom use with community groups
- Community Based Organizations and HIV Service Delivery

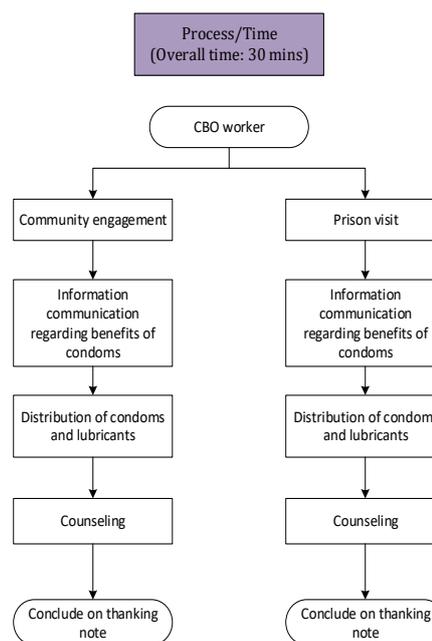
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- Condom Programming for HIV Prevention- A Manual for Service Providers UNFPA
- Effectiveness of Interventions to Manage HIV in Prisons – Provision of condoms and other measures to decrease sexual transmission WHO
- Targeted HIV Prevention Interventions Services Delivery Guidelines for Key Population Specific Community-Based Organizations NACP

B. Infectious Diseases Cluster  
B.6. HIV and STIs Package of Services  
B.6.68a. Provision of condoms to key populations, including sex workers, men have sex with men, people who inject drugs (IDU), transgender populations and prisoners  
Platform: Community Level  
• CBO worker



## B. Infectious Diseases Cluster

### B.6. HIV and STIs Package of Services

#### B.6.68b. Provision of disposable syringes to people who inject drugs (IDU)

DCP3 code: C30

##### Platform:

Community Level

- CBOs workers

##### Process:

Identify the target population

Community engagement

- Collect commodity from the designated health facility/warehouse
- Communicate information on potential risks related to syringe sharing
- Collection of reused syringes distributed on previous visit
- Distribution of disposable syringes among IDUs
- Counselling on syringe use
- First Aid for any injection wound/abscess referral to health facility accordingly
- Conclude on thanking note

Recommended Method

Provision of disposable syringes

Follow up

- Monthly

##### Supplies:

- Disposable syringes

##### HMIS Tools:

1. Recording Tool: Supply distribution register
2. Reporting Tool: Stock Card
3. Client/Patient Card:
4. IEC Material: Leaflet, Flip charts, Brochure

##### Supervision:

- NACP/ PACP Coordinator, EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Discuss HIV/ STIs and condom use with community groups
- Community Based Organizations and HIV Service Delivery

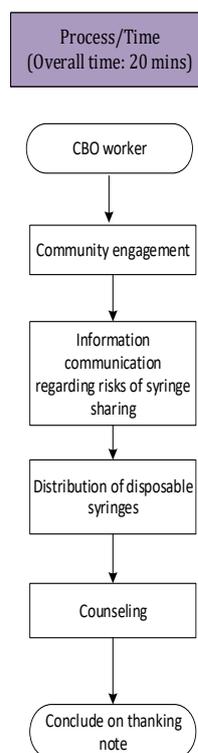
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- Effectiveness of Interventions to Manage HIV in Prisons WHO
- Targeted HIV Prevention Interventions Services Delivery Guidelines for Key Population Specific Community-Based Organizations NACP

B. Infectious Diseases Cluster B.6. HIV and STIs Package of Services <b>B.6.68b. Provision of disposable syringes to people who inject drugs (IDU)</b> Platform: Community Level • CBO worker
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## B. Infectious Diseases Cluster

### B.6. HIV and STIs Package of Services

#### B.6.70. Hepatitis B and C testing of high-risk individuals identified in the national testing policy with appropriate referral of positive individuals to trained providers

DCP3 code: HC20

##### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic

##### Process:

Patient registration at the reception (Receptionist)  
Consultation (Doctor/Nurse/LHV)

- History
- Clinical examination
- HBsAg testing for HBV to be offered to pregnant women visiting for ANC and to population with high HBV prevalence
- Anti-HCV antibody testing be offered to individuals of a population with high HCV prevalence or who have a history of HCV risk exposure/behaviour

Laboratory tests (Lab Technician)

- HBsAg testing for HBV
- Anti-HCV antibody test
- Recommended Method
- Referral of positive cases of HBV/HCV for the management/treatment of viral hepatitis
- Check for HBV and HCV co-infection
- Encourage testing of partners and at-risk people for acquiring infection with Hep B & C
- Follow up

##### Supplies:

- Syringe, needle

##### Lab Tests:

- HBsAg testing for HBV
- Anti-HCV antibody test for HCV

##### HMIS Tools:

5. Recording Tool: OPD Ticket OPD register, Referral slip, Abstract register
6. Reporting Tool: Monthly report
7. Client/Patient Card:
8. IEC Material: Leaflet, Flip charts

##### Supervision:

- Facility in-charge, EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Screening Protocol for HBV and HCV

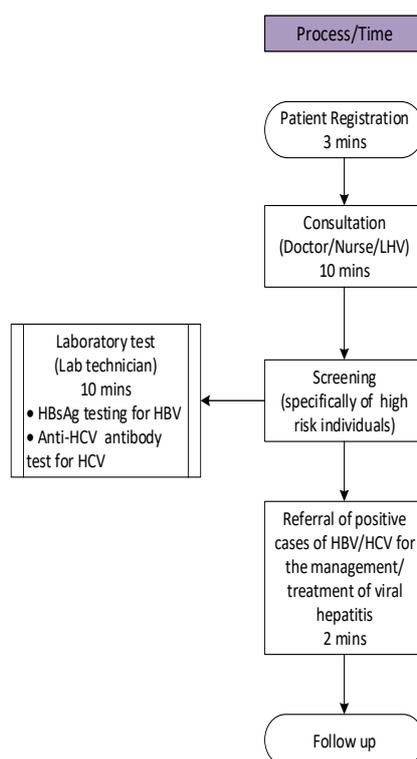
##### National Training Curriculum/ Guidelines:

- Not Available

##### Reference Material:

- Guidelines for the Care and Treatment of Persons Diagnosed with Chronic Hepatitis C Virus Infection Guidelines WHO July 2018
- Guidelines for the Prevention, Care and Treatment of Persons with Chronic Hepatitis B Infection WHO March 2015

B. Infectious Diseases Cluster  
B.6. HIV and STIs Package of Services  
B.6.70. Hepatitis B and C testing of high-risk individuals identified in the national testing policy with appropriate referral of positive individuals to trained providers  
Platform: PHC Level  
• 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic



## B. Infectious Diseases Cluster

### B.6. HIV and STIs Package of Services

#### B.6.71. Partner notification and expedited treatment for common STIs including HIV

DCP3 code: HC21

##### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic

##### Process:

- Patient registration at reception (Receptionist)
- Consultation (Doctor/ Nurse/ LHV)
- Counselling with index patient with regards to partner's treatment for STIs
- Clinical examination of partner
- Treatment
- Referral (If required)
- Laboratory test (Lab technician): If needed
- Recommended Method
  - Syndromic management of
  - Gonococcal infections
  - Chlamydia trachomatis infections
  - Syphilis
  - Genital herpes infections
  - Trichomonas vaginalis infections
  - Bacterial vaginosis
  - Candidiasis

Pharmacy (Dispenser)

- Dispensing of medicine
- Follow up

##### Supplies:

- Gloves
- Syringes

##### Equipment:

- Spatula
- Sterilization equipment

##### Lab test:

- N. gonorrhoea/Chlamydia: Gram stain

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up card
4. IEC Material: Flip chart

##### Supervision:

- Facility in-charge, EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Syndromic Management

##### National Training Curriculum/ Guidelines:

- Not Available

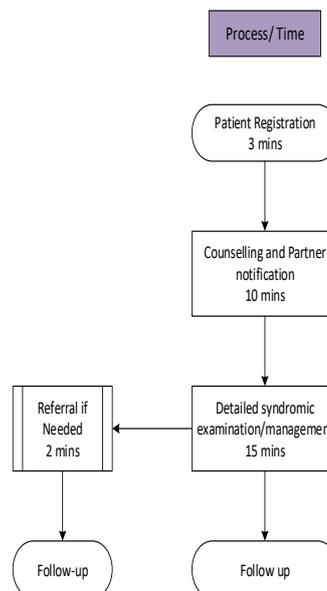
##### Reference Material:

- Consolidated Guidelines for the Prevention and Treatment of HIV and AIDS in Pakistan

##### Medicines

Gonococcal infections	Ceftriaxone 250 mg intramuscular (IM) as a single dose PLUS azithromycin 1 g orally as a single dose Cefixime 400 mg orally as a single dose PLUS azithromycin 1 g orally as a single dose
Chlamydia trachomatis infections	Azithromycin 1 g orally as a single oral dose Doxycycline 100 mg twice daily for 7 days
Syphilis	<u>Benzathine penicillin</u> G 2.4 million units as a single dose OR Doxycycline 100 mg twice daily orally for 14 days or ceftriaxone 1 g intramuscularly once daily for 10–14 days OR Erythromycin 500 mg orally four times daily for 14 days OR Ceftriaxone 1 g intramuscularly once daily for 10–14 days OR Azithromycin 2 g once orally
Trichomonas vaginalis infections	<u>Metronidazole</u> , 2 g orally, in a single dose (genital infection) Metronidazole, 400 mg or 500 mg orally, twice daily for 7 days (Urethral infection)
Bacterial vaginosis	Metronidazole, 2 g orally, as a single dose OR Clindamycin 2% vaginal cream, 5 g intravaginally, at bedtime for 7 days
Candidiasis	<u>Topical Clotrimazole (Vaginal cream)</u>

B. Infectious Diseases Cluster  
B.6. HIV and STIs Package of Services  
B.6.71. Partner notification and expedited treatment for common STIs including HIV  
Platform: PHC Level  
• 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic



## B. Infectious Diseases Cluster

### B.6. HIV and STIs Package of Services

**B.6.73. Provider-initiated testing and counselling for HIV, STIs and hepatitis for all in contact with the health system in high- prevalence setting, including prenatal care with appropriate referral/ linkages to care including immediate ART initiation for those testing positives for HIV**

DCP3 code: HC23

#### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home

#### Process:

Patient registration at reception (Receptionist)  
Consultation (Doctor/Nurse/LHV)

- History
- Clinical examination
- Screening of suspected HIV case (HIV rapid test kits) at high prevalence settings
- Testing for STIs and Hepatitis; Referral if needed
- Counselling
- Symptomatic treatment and referral for ART Initiation
- Recommended Method
  - Rapid Test Kits for screening
- Pharmacy (Dispenser)  
Dispensing of medicine (if required)  
Follow up
- As per health care provider's advice

#### Supplies:

- Rapid Testing Kits (RTKs)
- Disposable syringe

#### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Referral slip, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up card
4. IEC Material: Flip chart, Brochures

#### Supervision:

- Facility in-charge, NACP/ PACP Coordinator, EDO Health, Deputy DHO, THO

#### Standard Protocol:

- HIV self-testing procurement forecast
- Laboratory Tests for HIV Infection

#### National Training Curriculum/ Guidelines:

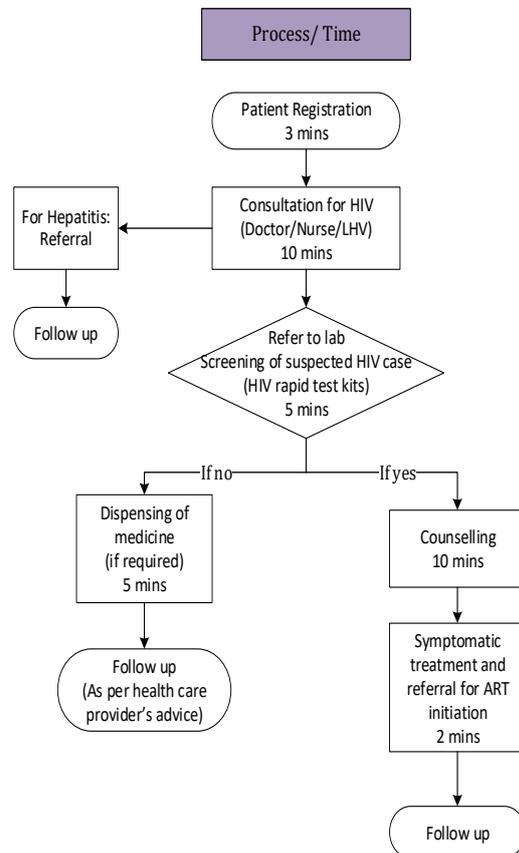
- Available

#### Reference Material:

- National Guidelines on Clinical Management of HIV/AIDS- National AIDS Control Program

- HIV Rapid Diagnostic Tests for Self-Testing WHO 2018

B. Infectious Diseases Cluster  
B.6. HIV and STIs Package of Services  
**B.6.73. Provider-initiated testing and counselling for HIV, STIs and hepatitis for all in contact with the health system in high- prevalence setting, including prenatal care with appropriate referral/ linkages to care including immediate ART initiation for those testing positive for HIV**  
Platform: PHC Level  
• 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing home



## B. Infectious Diseases Cluster

### B.6. HIV and STIs Package of Services

#### B.6.76. Provision of voluntary medical male circumcision in setting with high prevalence of HIV (Also included in Surgery package of services)

DCP3 code: HC25

#### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre

#### Process:

Patient registration at reception (Receptionist)  
Consultation (Doctor/Nurse/LHV)

- History
- Clinical examination
- Counselling about male circumcision, HIV risk reduction and other aspects of reproductive and sexual health, including the circumcision procedure
- Screening to determine client eligibility, followed by informed consent as appropriate
- Surgical circumcision
- Immediate postprocedural care, including wound care instructions

#### Recommended Method

- Aseptic surgical circumcision

#### Follow-up

- 48–72 hours, seven days and six weeks

#### Medicines:

- Paracetamol \*SOS

#### Supplies:

- Syringe, needle
- Surgical kit

#### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material:

#### Supervision:

- Facility in-charge, EDO Health, Deputy DHO, THO, AIHS

#### Standard Protocol:

- Male circumcision under local anaesthesia and HIV prevention services

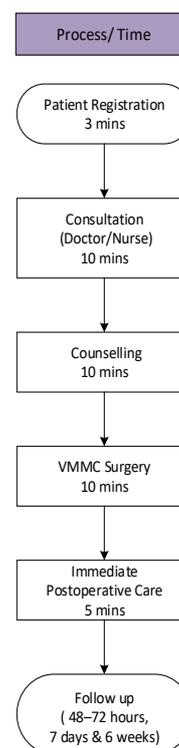
#### National Training Curriculum/ Guidelines:

- Not Available

#### Reference Material:

- Manual for Male Circumcision Under Local Anaesthesia and HIV Prevention Services for Adolescent Boys and Men, WHO Guidelines

B. Infectious Diseases Cluster  
B.6. HIV and STIs Package of Services  
B.6.76. Provision of voluntary medical male circumcision in setting with high prevalence of HIV (Also included in Surgery package of services)  
Platform: PHC Level  
• 8-6BHU/24-7BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home





Preliminary Prioritized Interventions for the  
**ESSENTIAL PACKAGE OF HEALTH  
SERVICES**

**CLUSTER**

*B. Infectious Diseases Cluster*

**PACKAGE**

**B7. Tuberculosis Package of Services**



## B. Infectious Diseases Cluster

### B.7. Tuberculosis Package of Services

#### B.7.78. Routine contact tracing to identify individuals exposed to TB and link them to care

DCP3 code: C32

##### Platform:

Community Level

- LHW

##### Process:

Identify the potentially exposed target population

Recommended Method

Visit (LHW)

- Contact investigation (Household/close contact) to find previously undiagnosed cases of active TB (History of cough for > 2 weeks and / or fever, weight loss or night sweats)
- Identification & Prioritization
- An interview with the household to obtain the names and ages of contacts and an assessment of contacts, risk for having (generally based on the presence of symptoms compatible with TB) or developing TB
- Counselling for medical attention
- Ensure referral of all household contacts for evaluation to TB diagnostic centre

Follow up

##### HMIS Tools:

1. Recording Tool: Treatment register, Referral slip
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC material: Leaflet, Flip chart

##### Supervision:

- TB Coordinator, EDO Health, Deputy DHO, THO, District Coordinator, ADC, LHS

##### Standard Protocol:

- Recommendations for Contact Investigations
- Algorithms for ruling out active tuberculosis disease

##### National Training Curriculum/ Guidelines:

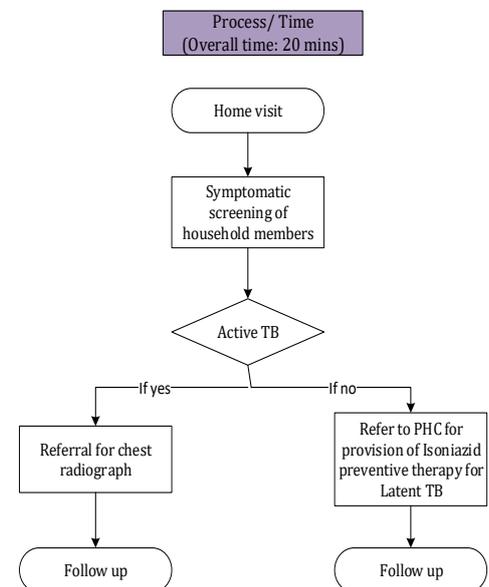
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##### Reference Material:

- National TB guidelines for control of Tuberculosis in Pakistan 2019

- Latent tuberculosis infection: Updated and Consolidated Guidelines for Programmatic Management 2018
- Recommendations for investigating contacts of persons with infectious tuberculosis in low- and middle-income countries WHO 2012

B. Infectious Diseases Cluster  
B.7. Tuberculosis Package of Services  
B.7.78. Routine contact tracing to identify individuals exposed to TB and link them to care  
Platform: Community Level  
• LHW



## B. Infectious Diseases Cluster

### B.7. Tuberculosis Package of Services

**B.7.79. Screening for latent TB infection following a new diagnosis of HIV, followed by yearly screening among PLHIV at high risk of TB exposure; initiation of isoniazid preventive therapy among all individuals who screen positive but do not have evidence of active TB**

DCP3 code: HC29

#### Platform:

PHC Level

• 8-6 BHU/24-7 BHU/RHC /Health Centre/GP Clinic/Nursing Home

#### Process:

Consultation (Doctor/Nurse)

Recommended Method

- Providing the HIV patient an agreed set of information about TB testing
- Encouraging patient to ask questions/elaborations/clarifications and respond accordingly
- Seeking patient consent for his/her participation as per agreed process
- Screening of TB via Tuberculin skin test
- Provision of isoniazid preventive therapy if positive but with no active TB (for Latent TB)
- Maintain records and ensure confidentiality of positive diagnosed TB cases

Follow up

- Monthly
- Yearly screening for high risk group

#### Supplies:

- Tuberculin skin test kit

#### HMIS Tools:

1. Recording Tool: Screening data, Referral slip
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet, Flip chart

#### Supervision:

TB-HIV Coordinator, EDO Health, Deputy DHO, THO, NGO staff

#### Standard Protocol:

- TB/HIV Coinfection

#### National Training Curriculum/ Guidelines:

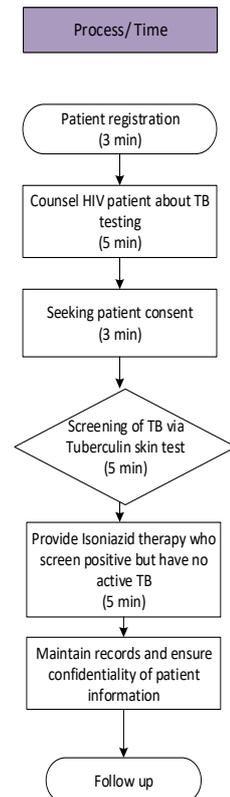
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#### Reference Material:

- National Guidelines for the Control of Tuberculosis of Pakistan Revised 2019

- Consolidated Guidelines for Prevention and Treatment of HIV and AIDS in Pakistan 2017
- WHO policy on collaborative TB/HIV activities Guidelines for national programs and other stakeholders 2012

B. Infectious Diseases Cluster  
B.7. Tuberculosis Package of Services  
**B.7.79. Screening for latent TB infection following a new diagnosis of HIV, followed by yearly screening among PLHIV at high risk of TB exposure; initiation of isoniazid preventive therapy among all individuals who screen positive but do not have evidence of active TB**  
Platform: PHC Level  
• 8-6 BHU/24-7 BHU/RHC/Health Centre/GP Clinic/Nursing Home



## B. Infectious Diseases Cluster

### B.7. Tuberculosis Package of Services

#### B.7.80. Diagnosis and treatment of Tuberculosis

DCP3 code: HC27

##### Platform:

PHC Level

- 8-6 BHU/ 24-7 BHU/ RHC/ Health Centre/ MCH Centre/ GP Clinic (Pvt.)/ Nursing Homes

##### Process:

Consultation (Doctor/Nurse)

Recommended Method

History

Clinical examination

- Sputum smear test / X-ray chest

- Diagnosis

- Treatment (Provision of Anti-TB drugs)

- Referral of complicated and drug resistant cases

Laboratory Test/Ultrasound (Lab Technician)

- Sputum smear test (Ziehl-Neelsen stain)

Pharmacy (Dispenser)

- Dispensing of medicines

Follow up

After 1 month

##### Medicines:

		Duration	Weight band (kg/ based FDC drug dose (Tablets)		
			30-39	40-54	55 & >
<b>NEW</b>	<b>New TB and B+ and CD Previously treated TB cases</b>				
Initial Phase	HRZE (H 75mg + R 150mg + Z 400mg + E 275mg)	2month	2	3	4
Continuation Phase	HR (H 75mg + R 150mg)	4month	2	3	4
Clinically diagnosed previously treated cases	HR* (H 150mg + R 300mg)	4month	1	1.5	2
<b>Previously treated TB Cases</b>	<b>All B+/Rif sensitive Previously treated TB cases</b>				
Bacteriologically confirmed previously treated cases with INH resistance (laboratory confirmed) and FQ resistance (laboratory confirmed) or FQ status unknown					
Initial Phase	HRZE (H 75mg + R 150 mg + Z 400mg + E 275mg)	2 month	2	3	4
Continuation Phase	HRZE (H 75mg + R 150mg + Z 400mg + E 275mg)	4month	2	3	4
Bacteriologically confirmed previously treated cases with INH resistance and FQ sensitive (laboratory confirmed)					
		6HRZE+ Lfx	2	2	3

\*(H = Isoniazid, R = Rifampicin, Z = Pyrazinamide, E= Ethambutol, if HR (H 75mg + R 150mg) is not available, then use HR (H 150mg + R 300mg) + E (E400 mg+ Levofloxacin 250 mgs)

##### Equipment:

- Stethoscope, BP apparatus, thermometer

##### HMIS Tools:

1. Recording Tool: OPD Register, TB register, Abstract register, Referral Slip
2. Reporting Tool: Monthly report
3. Client/Patient Card: TB treatment card
4. IEC Material: Leaflet, Flipchart

##### Supervision:

- EDO Health, Deputy DHO, TB focal point

##### Standard Protocol:

- Protocols for TB treatment

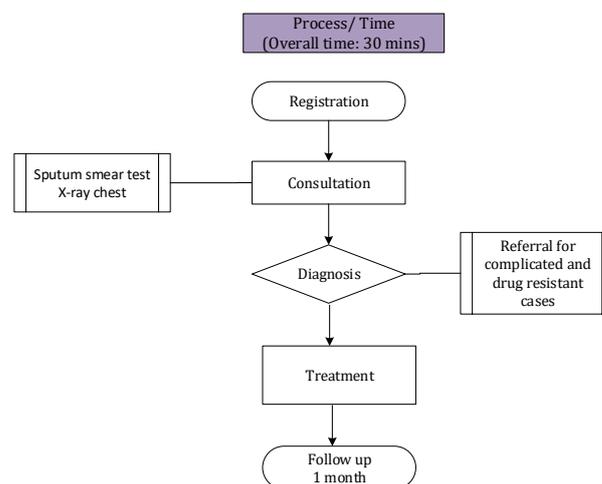
##### National Training Curriculum/Guidelines:

- Available

##### Reference Material:

- National guidelines for the control of TB in Pakistan, 2019

<p>B. Infectious Diseases Cluster B.7. Tuberculosis Package of Services B.7.80. Dignosis and treatment of Tuberculosis</p> <p><b>Platform:</b> PHC Level • 8-6 BHU/24-7 BHU/RHC/Health Centre/GP Clinic/Nursing Home</p>
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##### Supplies:

- Sputum collection bottle

## B. Infectious Diseases Cluster

### B.7. Tuberculosis Package of Services

**B.7.81. Screening of HIV in all individuals with a diagnosis of active TB; if HIV infection is present, start (or refer for) ARV treatment and HIV care**

**DCP3 code: HC28**

#### Platform:

Community Level

- LHW/CBOs

#### Process:

- Providing the TB patient an agreed set of information about HIV testing
- Encouraging patient to ask questions/elaborations/clarifications and respond accordingly
- Seeking patient consent for his/her participation as per agreed process
- Refer for screening of HIV
- Maintain records and ensure confidentiality of positive diagnosed HIV cases
- Referring the HIV positive TB patients to ART centre for treatment and management

Follow up

#### HMIS Tools:

1. Recording Tool: VCT Register, Referral Slip
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet, Flip charts

#### Supervision:

- Managers of NGOs, VCT in-charge, NACP/PACP Managers and Supervisors, TB-HIV Coordinator

#### Standard Protocol:

- Protocols for the community-based testing

#### National Training Curriculum/ Guidelines:

- Available

#### Reference Material:

- HIV Voluntary Counselling and Testing (VCT) Guidelines for Pakistan
- Consolidated Guidelines for the Prevention and treatment HIV and AIDs in Pakistan 2017

B. Infectious Diseases Cluster

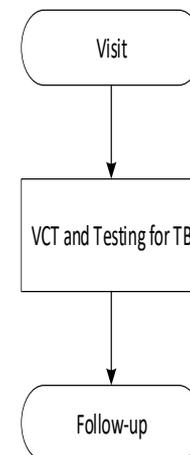
B.7. Tuberculosis Package of Services

**B.7.81. Screening of HIV in all individuals with a diagnosis of active TB; if HIV infection is present, start (or refer for) ARV treatment and HIV care**

Platform: Community Level

- NGOs workers

Process/Time  
(Overall time: 30 mins)



## B. Infectious Diseases Cluster

### B.7. Tuberculosis Package of Services

**B.7.82. For PLHIV and children under five who are close contacts or household members of individuals with active TB, perform symptom screening and chest radiograph; if there is no active TB, provide isoniazid preventive therapy according to current WHO guidelines**

**DCP3 code: HC26**

#### Platform:

PHC Level

• 8-6 BHU/24-7 BHU/RHC /Health Centre/GP Clinic/Nursing Home

#### Process:

Recommended Method

Consultation (Doctor/Nurse)

Recommended Method

- Providing the HIV patient, under 5 child, and household members in contact with active TB patient, an agreed set of information about TB testing
  - Encouraging patient to ask questions/elaborations/clarifications and respond accordingly
  - Seeking patient consent for his/her participation as per agreed process
  - Screening of TB via Tuberculin skin test
  - Chest radiograph for household members having contact with active TB individuals
  - Provide Isoniazid therapy as per WHO guidelines
  - Maintain records and ensure confidentiality of positive diagnosed TB cases
- Follow up
- Monthly
  - Yearly screening at community level for high risk group

#### HMIS Tools:

1. Recording Tool: Screening data, Referral slip
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet, Flip chart

#### Supervision:

- TB-HIV Coordinator, EDO Health, Deputy DHO, THO, NGO staff

#### Standard Protocol:

- TB/HIV Coinfection

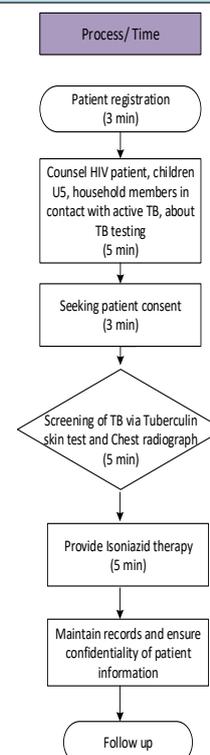
#### National Training Curriculum/ Guidelines:

- Available

#### Reference Material:

- National Guidelines for the Control of Tuberculosis of Pakistan Revised 2019
- Consolidated Guidelines for Prevention and Treatment of HIV and AIDS in Pakistan 2017
- WHO policy on collaborative TB/HIV activities Guidelines for national programs and other stakeholders 2012

B. Infectious Diseases Cluster  
B.7. Tuberculosis Package of Services  
**B.7.82. For PLHIV and children under five who are close contacts or household members of individuals with active TB, perform symptom screening and chest radiograph; if there is no active TB, provide isoniazid preventive therapy according to current WHO guidelines**  
Platform: PHC Level  
• 8-6 BHU/24-7 BHU/RHC /Health Centre/GP Clinic/Nursing Home



## B. Infectious Diseases Cluster

## B.7. Tuberculosis Package of Services

### B.7.85. Systematic identification of individuals with TB symptoms among high-risk groups and linkages to care (active case finding)

DCP3 code: P5

#### Platform:

Community Level

- LHW

#### Process:

Visit

- History of cough for > 3 weeks and/or fever

Recommended method

- Active case findings among pre-determined target groups
  - Household contacts of all bacteriologically confirmed pulmonary TB patients.
  - Marginalized population e.g. Urban slums
  - Highly vulnerable population
  - Internally displaced population

Referral of suspected TB cases

Follow up

#### HMIS Tools:

1. Recording Tool: Treatment Register, Referral Slip
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet, Flip charts

#### Supervision:

- NTP/PTP Managers and Supervisors

#### Standard Protocol:

- Protocols for the community-based testing

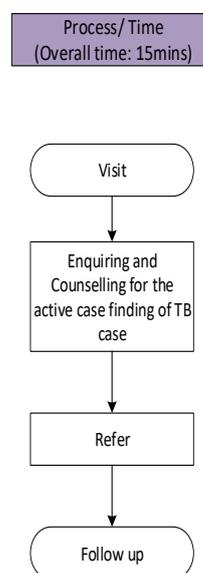
#### National Training Curriculum/ Guidelines:

- Available

#### Reference Material:

- National TB Guidelines 2019

B. Infectious Diseases Cluster  
B.7. Tuberculosis Package of Services  
**B.7.85. Systematic identification of individuals with TB symptoms among high-risk groups and linkages to care (active case finding)**  
Platform: Community Level  
• LHW



Preliminary Prioritized Interventions for the  
**ESSENTIAL PACKAGE OF HEALTH  
SERVICES**

**CLUSTER**

*B. Infectious Diseases Cluster*

**PACKAGE**

**B8. Malaria and Adult febrile illness Package of Services**



## B. Infectious Diseases Cluster

### B.8. Malaria and Adult Febrile Illness Package of Services

**B.8.86. Every malaria suspect to be tested with RDT; confirmed *P. vivax* treated with oral chloroquine and *P. falciparum* with mixed Artemisinin based combination therapy (as per National Guidelines)**

DCP3 code: C33

**Platform:**

PHC Level  
 • 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home

**Process:**

Patient registration at reception (Receptionist)  
 Consultation (Doctor/ Nurse/ LHV)

- History
- Clinical examination
- Counselling
- Treatment

Laboratory Test (Lab Technician)

Recommended Method

- Rapid diagnostic tests
- Antimalarial drugs

Pharmacy (Dispenser)

Follow up

- After 48 hours

**Supplies:**

RDT kits

**Lab Tests:**

- Rapid Diagnostic Test (BHU)
- Microscopy (RHC)

**HMIS Tools:**

1. Recording Tool: VCT Register, Referral Slip
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet, Flip charts

**Supervision:**

Malarial Supervisor, EDO Health, Deputy DHO, THO, District Coordinator, ADC, LHS

**Standard Protocol:**

Malarial Case Diagnosis and Management

**National Training Curriculum/ Guidelines:**

Available

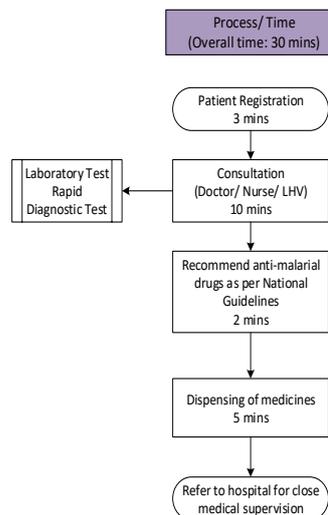
**Reference Material:**

National Malaria Case Guidelines Directorate of Malaria Control Pakistan

**Medicines:**

Plasmodium. vivax	
<b>First Line Treatment</b>	
Chloroquine (CQ) + Primaquine	25mg CQ base /kg body weight divided over 3 days Day 1: 10 mg/kg Day 2: 10mg/kg Day 3: 5mg/kg 0.25mg/kg for 14 days (single dose daily)
<b>Second Line Treatment</b>	
Dihydroartemisinin + Piperavaquine (DHAP) AND Primaquine	Dihydroartemisinin (4 mg/kg/day) + Piperavaquine (18 mg/kg/day) once a day for 3 days 0.25mg/kg for 14 days (single dose daily)
Plasmodium. falciparum	
<b>First Line Treatment</b>	
Artemether + Lumefantrine AND Primaquine	Artemether (20mg/kg body weight) + Lumefantrine (120 mg/kg body weight) twice daily for 3 days (total six doses) single dose 0.25 mg /kg primaquine on the first day of treatment
<b>Second Line Treatment</b>	
Dihydroartemisinin + Piperavaquine (DHAP) AND piperavaquine	Dihydroartemisinin (4 mg/kg/day) + Piperavaquine (18 mg/kg/day) once a day for 3 days

B. Infectious Diseases Cluster  
 B.8. Malaria and adult Febrile illness Package of Services  
**B.8.86. Every malaria suspect to be tested with RDT; confirmed *P. vivax* treated with oral chloroquine and *P. falciparum* with mixed Artemisinin based combination therapy (as per National Guidelines)**  
 Platform: Primary Health Care  
 • 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home



## B. Infectious Diseases Cluster

### B.8. Malaria and Adult Febrile Illness Package of Services

#### B.8.87. Conduct larviciding and water-management programs in high malaria transmission areas where mosquito breeding sites can be identified and regularly targeted. Promoting the use of mosquito repellents (DEET)

DCP3 code: C34

##### Platform:

Community Level

- Malaria Supervisor, CDC Supervisor, Larval Surveillance and Control Staff, LHWs

##### Process:

Visit

Identify the target areas where larvicidal and water management need to be implemented

Implement larvicidal in the selected locations

Recommended Method

- Plan larvicidal and water management implementation
- Arrange larvicides – Temephos and Insect Growth Regulators (IGRs)
- Formulate larvicidal implementation teams
- Implement larvicidal in the selected locations

Education and counselling on using DEET (N, N-Diethyl-meta-toluamide)

##### Supplies:

- Larvicides
- Protective clothing

##### Equipment:

- Spray pumps

##### HMIS Tools:

1. Recording Tool:
2. Reporting Tool: Vector Control Surveillance Tool, IRS Tool
3. Client/Patient Card:
4. IEC Material: Leaflet

##### Supervision:

- Malaria Supervisor, LSM program manager, EDO Health, Deputy DHO, THO, District Malaria Coordinator, DC, ADC, Sanitary Inspectors and Patrol

##### Standard Protocol:

Implement LSM targeted to eliminate malaria foci in districts and to support urban malaria control & elimination, and general nuisance mosquito control

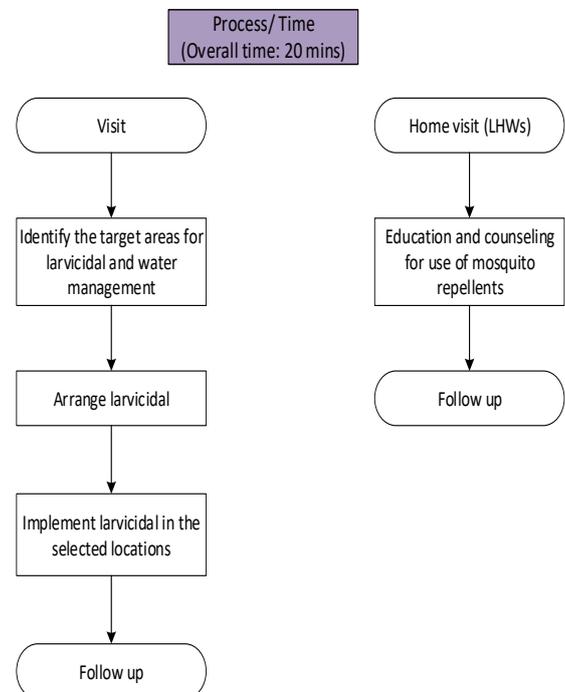
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- National Malaria-Strategic Plan-Pakistan 2015-2020

B. Infectious Diseases Cluster  
B.8. Malaria and adult Febrile Illness Package of Services  
**B.8.87. Conduct larviciding and water-management programmes in high malaria transmission areas where mosquito breeding sites can be identified and regularly targeted. Promoting the use of mosquito repellents (DEET)**  
Platform: Community Level  
• Malaria Supervisor/ LSM programme manager/Larval surveillance staff / Larval control staff



## B. Infectious Diseases Cluster

### B.8. Malaria and Adult Febrile Illness Package of Services

#### B.8.94. Mass drug administration in outbreak settings (including high risk groups in geographic or demographic clusters) as per National Guidelines

DCP3 code: C41

##### Platform:

Community level

- LHW/ Malarial supervisor

##### Process:

Identify the target population/outbreak setting

Recommended Method

- Screen all fever cases, irrespective of fulfilling case definition criteria
- If positivity rate is above 50% then provide all individuals with antimalarial drugs
- Provide species specific treatment to all diagnosed individuals
- Referral/ treatment of uncomplicated and severe/complicated malaria as per national guidelines
- Referral for women in early pregnancy and should not be excluded when ACTs are given for malaria MDA

Follow up

##### HMIS Tools:

1. Recording Tool: Treatment register, Referral slip
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up visit card
4. IEC material: Leaflet, Flip chart

##### Supervision:

- Malarial Supervisor, EDO Health, Deputy DHO, THO, District Coordinator, ADC, LHS

##### Standard Protocol:

- Malaria Treatment During Outbreaks

##### National Training Curriculum/ Guidelines:

- Not Available

##### Reference Material:

- National Malaria Case Management Guidelines Directorate of Malaria Control Pakistan
- Mass Drug Administration for Falciparum Malaria 2017

##### Medicines:

Uncomplicated Vivax Malaria (Tab. Chloroquine Dose)			
Weight in Kg	<30 kg	30-50 kg	>50 kg
	400 mg	600 mg	800 mg
11-15	250 mg	500mg	750 mg
16- 22	50 mg	100 mg	100 mg
23 - 30	800 mg	800 mg	1200 mg
31 - 37	1000 mg	1500 mg	2000 mg
38 - 45	300 mg	400 mg	600 mg
46 - 50	15 mg/kg body weight (maximum 1 G)		

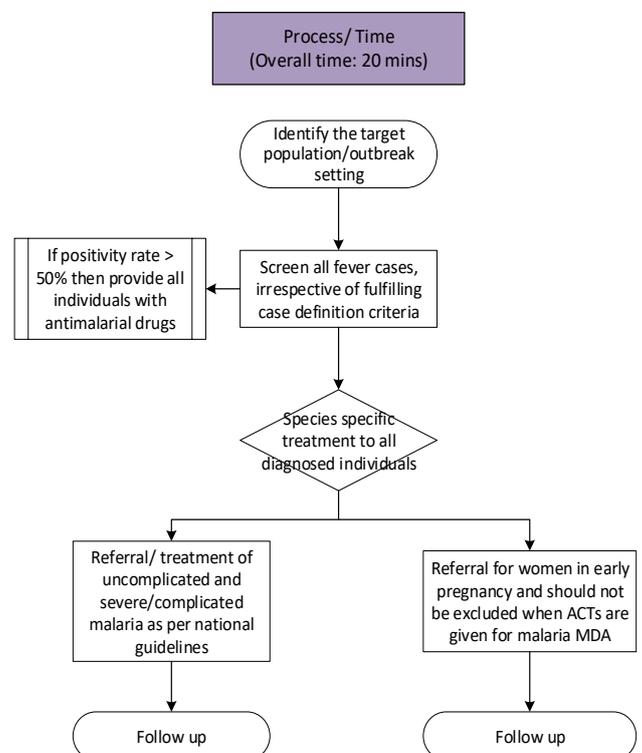
+ Tab: Primaquine, 0.25 mg/kg body weight daily for 14 days

Uncomplicated Mixed Infection (PF+PV)	
Weight in Kg	Daily dosage (mg/kg)
	7.5-10 mg (max 400mg)
5-14	15-20 mg (split into two doses/day)
(20/120)	Safety in children with the use of 1 mg/kg
(20/120)	15 mg (max 1200mg)

(20/120)	30-40 mg (max 2000 mg)
(20/120)	16-20 mg (max 600mg)
(20/120)	15-22.5 mg (max 1000 mg)
(20/120)	15-30 mg (max 1000 mg)
15-24	15-30 mg (max 1000 mg)

Uncomplicated Falciparum Malaria							
Weight in Kg	Age	Tab Artemether (20mg) + Lumefantrine (120mg)					
		Day1		Day 2		Day 3	
5-14	6 months – 3 years	1 (20/120)	1 (20/120)	1 (20/120)	1 (20/120)	1 (20/120)	1 (20/120)
15-24	3 - 8 years	2 (20/120)	2 (20/120)	2 (20/120)	2 (20/120)	2 (20/120)	2 (20/120)
25-34	8 – 12 years	3 (20/120)	3 (20/120)	3 (20/120)	3 (20/120)	3 (20/120)	3 (20/120)
Tab Artemether (80mg) + Lumefantrine (480mg)							
>35	> 12 years	1 (80/480)	1 (80/480)	1 (80/480)	1 (80/480)	1 (80/480)	1 (80/480)

B. Infectious Diseases Cluster  
 B.8. Malaria and adult Febrile illness Package of Services  
**B.8.94. Mass drug administration in outbreak settings (including high risk groups in geographic or demographic clusters) as per National Guidelines**  
 Platform: Community level  
 • LHW/ Malarial supervisor



## B. Infectious Diseases Cluster

### B.8. Malaria and Adult Febrile Illness Package of Services

**B.8.95. For every malaria suspect test with RDT/Microscopy; confirmed *P. vivax* treated with oral chloroquine (3 days) + Primaquine (14 days) and *P. falciparum* with mixed Artemisinin based combination therapy (3 days) + PQ single dose (as per National Guidelines). Pre-referral treatment in severe and complicated case (injectable or rectal artesunate)**

**DCP3 code: HC30**

**Platform:**

PHC Level

- 8-6 BHU/ 24-7 BHU/ RHC/ Health Centre/ GP Clinic

**Process:**

Patient registration at reception (Receptionist)

Consultation (Doctor/ Nurse/ LHV)

- History: Patient with fever of >37.5°C or history of fever in the last 72 hours

- Clinical examination

Recommended Method

- Case Management
- Confirmed Vivax Malaria
- Confirmed Falciparum Malaria
- Refer in case of Severe Malaria

Pharmacy (Dispenser)

Follow up

- After 48 hours

**Medicine:**

P-Vivax	Chloroquine (25mg base/kg) over 3 days Day 1: 10 mg base/kg Day 2: 10mg base/kg Day 3: 5mg base/kg + Primaquine (0.25mg/kg) daily for 14 days
P-Falciparum	Artemether (1.7mg/kg body weight) + Lumefantrine (12 mg/kg body weight) twice daily for 3 days (total six doses) + Primaquine 0.25 mg/kg (maximum 15mg), single dose on the first day
Pre-referral treatment	Artesunate is given IM or Per Rectal at doses of 2.4mg/kg body weight (maximum of 240 mg)

**Equipment:**

- Thermometer

**HMIS Tools:**

1. Recording Tool: OPD Ticket, OPD register, Referral
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up card
4. IEC Material:

**Supervision:**

EDO Health, Deputy DHO, THO, District Coordinator

**Standard Protocol:**

- Malaria Case Management

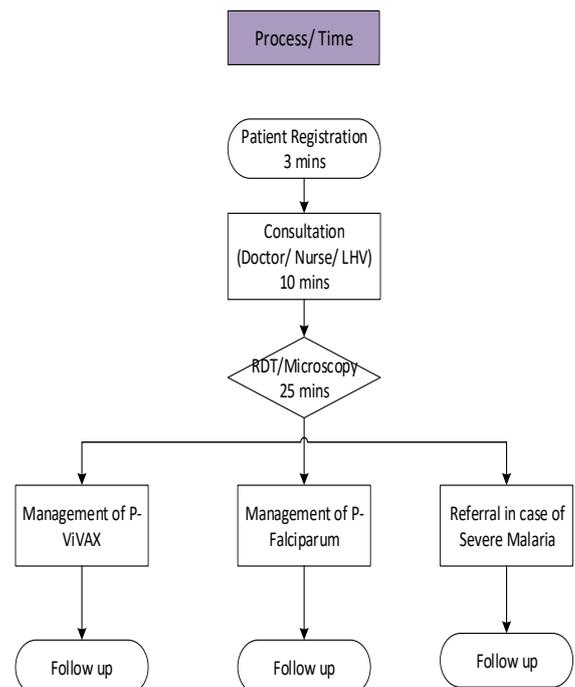
**National Training Curriculum/ Guidelines:**

- Available

**Reference Material:**

- National Malaria Case Management Guidelines-2018

B. Infectious Diseases Cluster  
B.8. Malaria and adult Febrile illness Package of Services  
**B.8.95. For every malaria suspect test with RDT/Microscopy; confirmed *P. vivax* treated with oral chloroquine (3 days) + Primaquine (14 days) and *P. falciparum* with mixed Artemisinin based combination therapy (3 days) + PQ single dose (as per National Guidelines). Pre-referral treatment in severe and complicated case (injectable or rectal artesunate)**  
**Platform:** PHC Level  
• 8-6 BHU/ 24-7 BHU/ RHC/ Health Centre/ GP Clinic



## B. Infectious Diseases Cluster

### B.8. Malaria and Adult Febrile Illness Package of Services

#### B.8.97. Provision of insecticide treated nets to under five children and pregnant women attending health centres

DCP3 code: HC32

##### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/ Nurse/ LHV)

- Provision of insecticide treated nets to U5 children and pregnant women

Counselling

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, MCH Register, Patient file
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up visit card
4. IEC material: Leaflet, Flip chart

##### Supervision:

- Malarial Supervisor, EDO Health, Deputy DHO, THO, District Coordinator, ADC, LHS

##### Standard Protocol:

- Continuous distribution of LLINs through antenatal care clinics
- Mass distribution in targeted districts

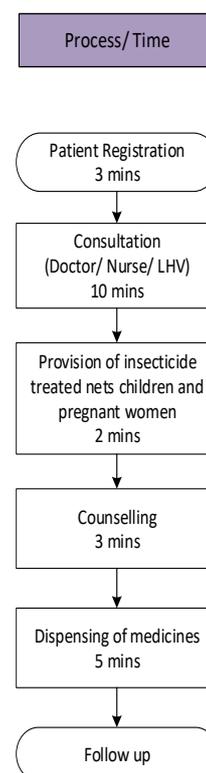
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- Malarial Annual Report 2018

B. Infectious Diseases Cluster  
B.8. Malaria and adult Febrile illness Package of Services  
**B.8.97. Provision of insecticide treated nets to under five children and pregnant women attending health centers**  
Platform: Primary Health Care  
• 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home



## B. Infectious Diseases Cluster

### B.9. Neglected Tropical Diseases Package of Services

#### B.9.103. Early detection and treatment of Chagas disease, human African trypanosomiasis, leprosy and Leishmaniasis (Priority to Trachoma, Rabies, Dengue, Mycetoma, Soil transmitted helminthiasis)

DCP3 code: C43

##### Platform:

- Community Level PHC Level
- 8-6 BHU/ 24-7 BHU/ RHC/ Health Centre/GP Clinic (Pvt.)

##### Process:

- Patient registration at reception (Receptionist)
- Consultation (Doctor/Nurse/LHV)
- History
- Clinical examination
- Detection and management of (Dengue, Trachoma, Rabies, Soil transmitted helminthiasis)
- Early detection and referral to First level Hospital/Respective treatment centres (Mycetoma, Trachoma, Leishmaniasis, Leprosy)
- Education and counselling
- Laboratory Test (Lab Technician)

##### Recommended Method

Diagnosis and management according to WHO guidelines

##### Follow up

- After a week

##### Medicines:

<b>Dengue</b>	<ul style="list-style-type: none"> <li>Acetaminophen: 500 mg</li> <li>In higher centers where dengue shock syndrome patients are managed provision of Dextron 40 should also be considered</li> <li>Shock (Emergency treatment): intravenous fluid resuscitation with isotonic crystalloid solutions at 5–10 ml/kg/hour over one hour</li> </ul>
<b>Trachoma</b>	<ul style="list-style-type: none"> <li>Azithromycin: 20mg/kg</li> <li>OR Tetracycline: 1% Eye ointment twice daily for 6 weeks</li> </ul>
<b>Soil Transmitted Helminthiasis</b>	<ul style="list-style-type: none"> <li>Albendazole: 400mg, single dose</li> <li>OR Mebendazole composite (mebendazole 100 mg and levamisole 25mg bid x 3d)</li> </ul>

##### Supplies:

- Syringes, needle, IV set

##### Equipment:

- B.P Apparatus, Stethoscope, Thermometer, Torch, Tongue depressor (disposable), Ophthalmoscope / retinoscope

##### Lab Tests:

- Complete Blood Count (CBC) for Dengue, NS1, IGG, IGM antigen/antibody detection test

##### HMIS Tools:

- Recording Tool: OPD Ticket, OPD register, Patient file, Referral, Abstract register
- Reporting Tool: Monthly report
- Client/Patient Card: Follow-up visit card
- IEC Materia: Leaflet, Flipchart

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- History taking asking patients about their condition and examining the skin, Sections: 2.3, 3, 4

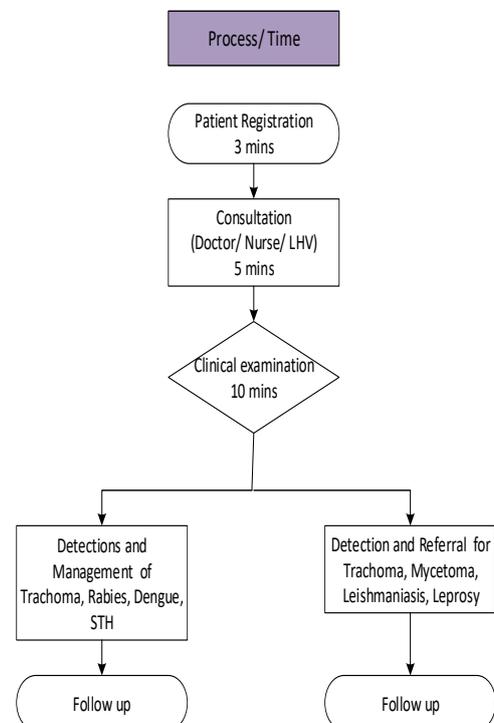
##### National Training Curriculum/Guidelines:

- Available for some NTDs

##### Reference Material:

- Recognizing Neglected Tropical Diseases Through Changes on The Skin, A Training Guide for Front-Line Health Workers WHO 2018
- Advisory for the Prevention and Control of Dengue Fever
- Dengue Guidelines by WHO 2009
- Trachoma control by WHO 2006
- Guidelines Leishmaniasis In Pakistan 2002
- Guidelines for leprosy WHO 2018
- Bench aids for the diagnosis of intestinal parasites WHO 2019

B. Infectious Diseases Cluster  
 B.9. Neglected tropical diseases Package of Services  
 B.9.103. Early detection and treatment of leprosy and Leishmaniasis (Priority to Trachoma, Rabies, Dengue, Mycetoma, Soil transmitted helminthiasis)  
 Platform: PHC Level  
 • 8-6 BHU/ 24-7 BHU/ RHC/ Health Centre/GP Clinic (Pvt.)



**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH  
SERVICES**

**CLUSTER**

*B. Infectious Diseases Cluster*

**PACKAGE**

**B10. Pandemic and Emergency Preparedness Package of Services**



## B. Infectious Diseases Cluster

### B.10. Pandemic and Emergency Preparedness Package of Services

#### B.10.105. Identify and refer patients with high risk including pregnant women, young children and those with underlying medical conditions

DCP3 code: C45

##### Platform:

Community Level

- LHW

##### Process:

Visit (LHW)

- History
- Examination
- Identify
  - Influenza Like Illness: Any person with acute respiratory infection with onset within last 10 days; fever > 38°C AND cough or sore throat
  - Measles: Bloodshot eyes, cough, fever, rash, photophobia, muscle pain, conjunctivitis, runny nose, sore throat, any white spots inside the mouth (Koplik's spots)
  - Acute Haemorrhagic Fever: Acute onset of fever of less than 3 weeks duration, haemorrhagic or purpuric rash, epistaxis
  - Acute Respiratory Illness: Severe pneumonia/ pneumonia/ no pneumonia: cough or cold
  - Severe Acute Respiratory Illness: Respiratory symptoms fever ( $\geq 38^{\circ}\text{C}$ ) AND new onset of (or exacerbation of chronic) cough or breathing difficulty
  - Acute Watery Diarrhoea: De-hydration, sunken eye
  - Diphtheria
  - Polio: Headache, fever, sore throat, arm and leg stiffness, muscle tenderness and spasms

Referral to higher facility levels and vaccination centre

Inform to the District Health Office (DHO) if unusual number of cases of aforementioned illnesses through LHS

Follow up

##### Equipment:

- AD Syringe

##### HMIS Tools:

1. Recording Tool: Treatment register, Referral slip
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet, Flipchart

##### Supervision:

- EDO Health, Deputy DHO, THO, LHS

##### Standard Protocol:

- Assess and Classify the Sick Child Age 2 Months Up To 5 Years

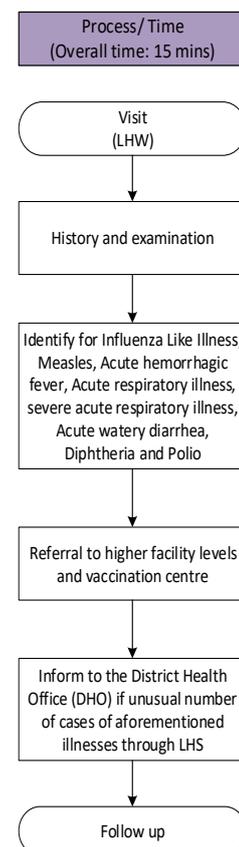
##### National Training Curriculum/Guidelines:

- Available (Upgradation of LHW curriculum)

##### Reference Material:

- IMNCI National Guidelines WHO 2019
- Operational guideline for ARI/ILI/SARI Surveillance - Public Health Laboratory 2013

B. Infectious Diseases Cluster  
B.10. Pandemic and Emergency Preparedness Package of Services  
**B.10.105. Identify and refer patients with high risk including pregnant women, young children and those with underlying medical conditions**  
Platform: Community Level  
• LHW



## B. Infectious Diseases Cluster

### B.10. Pandemic and Emergency Preparedness Package of Services

#### B.10.106. Provide advice and guidance on how to recognize early symptoms and signs and when to seek medical attentions

DCP3 code: C46

##### Platform:

Community Level

- LHW

##### Process:

Community health workers would sensitize the households on the early signs and symptoms of the notifiable disease (Acute Haemorrhagic Fever, Acute respiratory Infection, Acute Watery Diarrhea, influenza like illness, Measles, Severe acute respiratory infection)

Provide infection control guidance for household caregivers. Advise household contacts to minimize their level of interaction outside the home and to isolate themselves at the first symptom

Initiate public health education campaigns, in coordination with other relevant authorities, on individual level infection control measures

##### HMIS Tools:

1. Recording Tool: Treatment register, Referral Slip
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet, Flip charts

##### Supervision:

- LHS, ADC

##### Standard Protocol:

- Protocols for the identifications of the early sign and symptoms

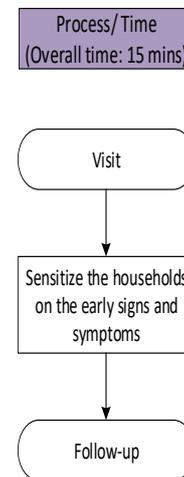
##### National Training Curriculum/ Guidelines:

- Not available

##### Reference Material:

- IDSR Notifiable diseases

B. Infectious Diseases Cluster  
B.10. Pandemic and Emergency preparedness Package of Services  
B.10.106. Provide advice and guidance on how to recognize early symptoms and signs and when to seek medical attentions  
Platform: Community Level  
• LHW



## B. Infectious Diseases Cluster

### B.10. Pandemic and Emergency Preparedness Package of Services

#### B.10.108. Identify and refer to higher levels of health care patients with signs of progressive illness (AHF, ARI, AWD <5, AWD>5, Diphtheria, Measles, ILI, SARI, Polio)

DCP3 code: HC33

##### Platform:

- PHC Level
- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home

##### Process:

Patient registration at reception (Receptionist)  
Consultation (Doctor/ Nurse/ LHV)

- History
- Clinical examination
  - Influenza Like Illness- any person with acute respiratory infection with onset within last 10 days; fever > 38°C AND cough or sore throat
  - Diphtheria - Sore throat, low fever and an adherent pseudo-membrane on the tonsils, pharynx and/or nasal cavity
  - Measles - Bloodshot eyes, cough, fever, rash, photophobia, muscle pain, conjunctivitis, runny nose, sore throat, any white spots inside the mouth (Koplik's spots)
  - Acute Haemorrhagic Fever-cute onset of fever of less than 3 weeks duration, haemorrhagic or purpuric rash, epistaxis, hematemesis, hemoptysis, another hemorrhagic symptom
  - Acute Respiratory Illness - Severe pneumonia/pneumonia/No pneumonia: cough or cold
  - Severe Acute Respiratory Illness: Respiratory symptoms Fever ( $\geq 38^{\circ}\text{C}$ )<sup>1</sup> AND New onset of (or exacerbation of chronic) cough or breathing difficulty
  - Acute Watery Diarrhea: dehydration, sunken eyes
  - Polio-leg stiffness, muscle tenderness, fever, sore throat

##### Recommended Method

- Antibiotics, Bronchodilators, IV infusion
- Prereferral treatment/Symptomatic treatment (According to presenting illness)
- Referral to higher facility levels and vaccination centre
- Counselling
- Pharmacy (Dispenser)
- Dispensing of medicine
- Follow up
- As per health care provider's advice (according to presenting illness)

##### Medicines:

ARI-Severe Pneumonia or Very Severe Disease:	• Single dose of gentamycin (7.5mg/kg)
Pneumonia	• Oral Amoxicillin 250 mg/day for 5 days
No pneumonia: cough OR cold	• Salbutamol (100mcg/puff) 2 puffs for 5 days
Persistent Diarrhea	• Zinc supplements for 14 days, ORS
Measles	• First dose of paracetamol (Pre-referral)

##### Supplies:

- ORS

##### Equipment:

- Stethoscope/thermometer/tongue depressor

##### HMIS Tools:

- Recording Tool: OPD Ticket, OPD register, MCH Register, Patient file, Referral slip
- Reporting Tool: Monthly report
- Client/Patient Card: Follow up visit card
- IEC material: Leaflet, Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Assess and Classify the Sick Child Age 2 Months Up To 5 Years
- Give follow-up care for acute condition

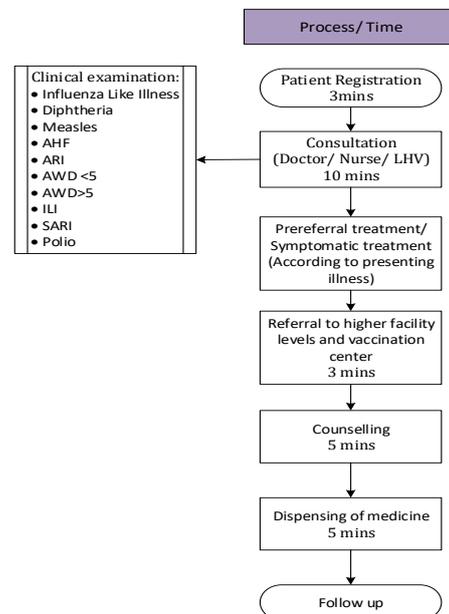
##### National Training Curriculum/ Guidelines:

- Available (ARI, AWD)

##### Reference Material:

- IMNCI National Guidelines WHO 2019
- Operational guideline for ARI/ILI/SARI Surveillance - Public Health Laboratory 2013
- IDSR Notifiable diseases

B. Infectious Diseases Cluster  
B.10. Pandemic and Emergency preparedness Package of Services  
B.10.108. Identify and refer to higher levels of health care patients with signs of progressive illness (AHF, ARI, AWD <5, AWD>5, Diphtheria, Measles, ILI, SARI, Polio)  
Platform: Primary Health Care  
• 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home





Preliminary Prioritized Interventions for the  
**ESSENTIAL PACKAGE OF HEALTH SERVICES**

**CLUSTER**

*C. Non-Communicable Diseases And Injury Prevention Cluster*

**PACKAGE**

**C11. Cardiovascular, Respiratory and Related Disorder Package of Services**



## C. Non-Communicable Disease and Injury Prevention Cluster

### C. 11. Cardiovascular, Respiratory and Related Disorders Package of Services

#### C. 11.117. Exercise based pulmonary rehabilitation for patients with obstructive lung disease

DCP3 code: C47

##### Platform:

Community Level

- LHW

##### Process:

Home Visit

Recommended Method

- Exercise based pulmonary rehabilitation
  - Exercise (lower Body, Upper body, Breathing Techniques)
  - Strength training for building endurance
  - Educate yourself to learn to better manage your COPD
- Smoking
- Inhalers
- Oxygen therapy
- Diet

##### HMIS Tools:

1. Recording Tool: Treatment register, Family Planning register/Diary
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Flip chart, Leaflet

##### Supervision:

- Lady Health Supervisor (LHS), Assistant Inspector of Health Services (AHIS)

##### Standard Protocol:

- Concept of Family Planning; Unit 1 and Overview of Contraceptive Methods; Unit 2

##### National Training Curriculum/ Guidelines:

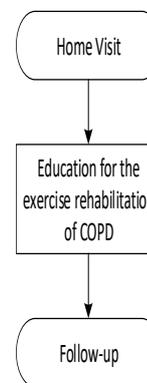
- Available

##### Reference Material:

- Lady Health Workers' Training Manual
- Training Manual on Family Planning for Community Based Workers: Trainee Guide 2018

C. Non-Communicable Disease and Injury Prevention Cluster  
C.11. Cardiovascular, respiratory and related disorders Package of Services  
C.11.117. Exercise based pulmonary rehabilitation for patients with obstructive lung disease  
Platform: Community Level  
• LHW

Process/ Time  
(Overall time: 15 mins)



## C. Non-Communicable Disease and Injury Prevention Cluster

### C. 11. Cardiovascular, Respiratory and Related Disorders Package of Services

#### C.11.118. Long-term combination therapy for persons with multiple CVD risk factors, including screening for CVD in community setting using non-lab-based tools to assess overall CVD risk

DCP3 code: HC36

#### Platform:

PHC Level

8-6 BHU/ 24-7 BHU/ RHC/ Health Centre/ GP Clinic (Pvt.)

#### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse)

- History
  - Age
  - Blood pressure
  - Current smoker
  - History of diabetes
  - History of blood pressure treatment
  - Body mass index
  - Past renal disease

Refer to first level hospital for long term management

#### Recommended Method

- Screening for CVD using non-lab-based tools according to WHO guidelines

Pharmacy (Dispenser)

- Dispensing of Medicines

Follow up

#### Medicines:

Atenolol 50 mg
Glyceryl Trinitrate 500 mg
Verapamil Hydrochloride 40 mg
Captopril 2.5 mg
Hydralazine hydrochloride 25 mg
Aspirin 150-300 mg
Atorvastatin 10mg – 80 mg

#### Equipment:

- Sphygmomanometer
- Stethoscope

#### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Patient file, Referral, Abstract register

2. Reporting Tool: Monthly report

3. Client/Patient Card: Follow-up visit card

4. IEC Materia: Leaflet, Flipchart

#### Supervision:

- EDO Health, Deputy DHO, THO

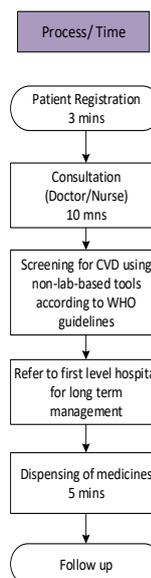
#### National Training Curriculum/Guidelines:

- Not Available

#### Reference Material:

- Prevention of Cardiovascular Disease, Guidelines for assessment and management of cardiovascular risk 2007

C. Non-Communicable Disease and Injury Prevention Cluster  
 C.11. Cardiovascular, respiratory and related disorders Package of Services  
**B.11.118. Long-term combination therapy for persons with multiple CVD risk factors, including screening for CVD in community setting using non-lab-based tools to assess overall CVD risk**  
 Platform: PHC Level  
 • 8-6 BHU/ 24-7 BHU/ RHC/ Health Centre/ GP Clinic (Pvt.)



## C. Non-Communicable Disease and Injury Prevention Cluster

### C.11. Cardiovascular, Respiratory and Related Disorders Package of Services

#### C.11.119. Low-dose inhaled corticosteroids and bronchodilators for asthma and for selected patients with COPD

DCP3 code: HC37

##### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/ Nurse)

- History
- Clinical examination
- Asthma-Cough, difficult breathing, Chest tightness, wheezing
- COPD- Progressive difficulty in breathing, Chronic
- cough (> 8 weeks), Chronic sputum production

Counselling

Recommended Method

- Pharmacological treatment

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- As per health care provider's advice (according to presenting illness)

##### Medicines:

Asthma	
Inhaled salbutamol prn	4 puffs of the 200 mcg (800 micrograms) (max. daily dose in 24 hours) for both adults and children
Inhaled salbutamol prn plus low-dose inhaled beclomethasone	100ug twice daily for adults
Low-dose oral theophylline	300mg/5ml
Oral prednisolone	Less than 10mg daily
COPD	
Inhaled salbutamol	2 puffs as required, up to four times daily

Low-dose oral theophylline	30 mg/5ml
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##### Equipment:

- Stethoscope

##### HMIS Tools:

- Recording Tool: OPD Ticket, OPD register, MCH Register, Patient file
- Reporting Tool: Monthly report
- Client/Patient Card: Follow up visit card
- IEC material: Leaflet, Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Management of Asthma and COPD

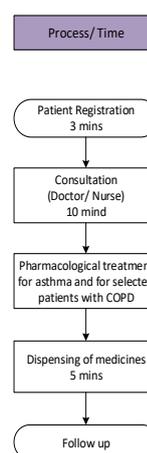
##### National Training Curriculum/ Guidelines:

- Not available

##### Reference Material:

- WHO Package of Essential NCD Interventions (PEN) Management of Chronic Respiratory Diseases

C. Non-Communicable Disease and Injury Prevention Cluster  
C.11. Cardiovascular, respiratory and related disorders Package of Services  
C.11.119. Low-dose inhaled corticosteroids and bronchodilators for asthma and for selected patients with COPD  
Platform: PHC Level  
• 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.11. Cardiovascular, Respiratory and Related Disorders Package of Services

#### C.11.120. Provision of aspirin for all cases of suspected acute myocardial infarction

DCP3 code: HC38

##### Platform:

PHC Level

- 8-6 BHU/ 24-7 BHU/RHC/ Health Centre/ GP Clinic

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/ Nurse/ LHV)

Recommended Method

- Immediate management: Sublingual aspirin

Referral to higher facility for treatment

Follow up

##### Medicines:

Aspirin: 75 mg

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up visit card
4. IEC material: Leaflet, Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Aspirin Therapy
- Role of primary health care in prevention and control of CVDs

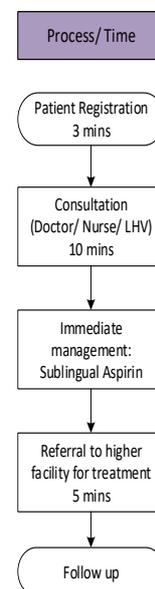
##### National Training Curriculum/ Guidelines:

- Not Available

##### Reference Material:

- Prevention of Cardiovascular Disease Guidelines for Assessment and Management of Cardiovascular Risk WHO 2007
- Global Atlas on Cardiovascular Disease Prevention and Control WHO

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.11. Cardiovascular, Respiratory and Related disorders Package of Services  
C.11.120. Provision of aspirin for all cases of suspected acute myocardial infarction  
Platform: PHC Level  
• 8-6 BHU/ 24-7 BHU/RHC/ Health Centre/ GP Clinic



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.11. Cardiovascular, Respiratory and Related Disorders Package of Services

#### C.11.121a. Screening of albuminuric kidney disease including targeted screening among people with diabetes

DCP3 code: HC39

##### Platform:

PHC Level

- 8-6BHU/24-7BHU/RHC/MCH Centre/Health Centre/GP Clinic/ Nursing Home

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse/LHV)

- History
- Clinical examination
- Diagnose albuminuric kidney disease
- Refer

Laboratory Test (Lab Technician)

- Screening through dipsticks

Recommended Method

- Albumin-specific dipstick
- Albumin-to-creatinine ratio

Follow up

##### Supplies:

- Dip strips

##### Supervision:

- EDO Health, Deputy DHO, THO

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD, patient file, abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material:

##### Standard Protocol:

- National Kidney Foundation Guidelines

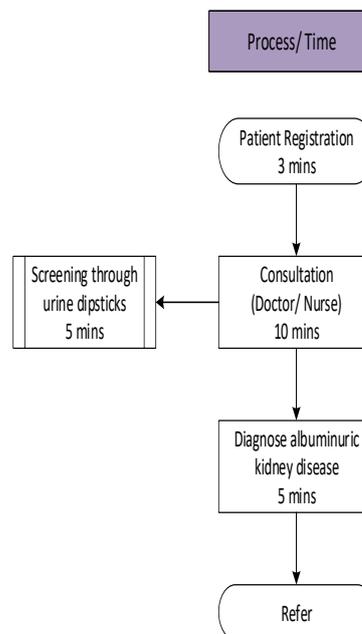
##### National Training Curriculum/Guidelines:

- Not available

##### Reference Material:

- Clinical Practice Guidelines Clinical Practice Guidelines K/DOQI for Chronic Kidney Disease: Evaluation, Classification and Stratification; National Kidney Foundation

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.11. Cardiovascular, Respiratory and related Disorders Package of Services  
C.11.121a. Screening of albuminuric kidney disease including targeted screening among people with diabetes  
Platform: PHC Level  
• 8-6BHU/24-7BHU/RHC/MCH Centre/Health Centre/GP Clinic/ Nursing Home



## C. Non-Communicable Disease and Injury Prevention Cluster

### C.11. Cardiovascular, Respiratory and Related Disorders Package of Services

#### C.11.123. Secondary prophylaxis with penicillin for rheumatic fever or established rheumatic heart disease

DCP3 code: HC41

##### Platform:

PHC Level

8-6 BHU/ 24-7 BHU/ RHC/ Health Centre/ GP Clinic

##### Process:

Patient registration at reception (Receptionist)

Consultation

- History
- Clinical Examination

Recommended Method

- Secondary prevention of rheumatic fever (RF)

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

##### Medicines:

Penicillin G benzathine	Patients weighing less than 30 kg: 600,000 units IM every 4 weeks Patients weighing more than 30 kg: 1,200,000 units IM every 4 weeks
Penicillin V potassium	50 mg orally twice daily
Sulfadiazine	Patients weighing less than 30 kg: 0.5 g orally on once daily Patients weighing more than 30 kg: 1 g orally once daily
Erythromycin	50mg twice daily

##### Equipment:

- Thermometer

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Referral, Abstract register

2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up card
4. IEC Material: Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS, District Coordinator, ADC

##### Standard Protocol:

- Standard protocol for the secondary Prophylaxis

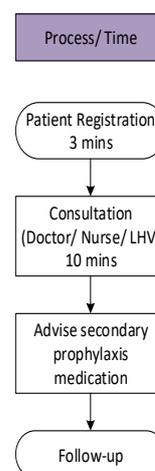
##### National Training Curriculum/ Guidelines:

- Not available

##### Reference Material:

- Rheumatic fever and rheumatic heart disease- WHO Technical Report Series

C. Non-Communicable Disease and Injury Prevention Cluster
C.11. Cardiovascular, Respiratory and Related Disorders Package of Services
C.11.123. Secondary prophylaxis with penicillin for rheumatic fever or established rheumatic heart disease
Platform: PHC Level
• 8-6 BHU/24-7 BHU/RHC/Health Centre/GP Clinic



## C. Non-Communicable Disease and Injury Prevention Cluster

### C.11. Cardiovascular, Respiratory and Related Disorders Package of Services

#### C.11.124. Treatment of acute pharyngitis for rheumatic fever

DCP3 code: HC42

##### Platform:

PHC Level

- 8-6 BHU/ 24-7 BHU/ RHC/ Health Centre/GP Clinic (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse/LHW)

- History
- Clinical examination

Laboratory Test/Ultrasound (Lab Technician)

- Lab Test if needed

Recommended Method

- Treatment of acute pharyngitis according to WHO guidelines

Pharmacy (Dispenser)

- Dispensing of Medicines

Follow up

- 10 days

##### Medicines:

Antibiotic	Administration	Dose
<b>Benzathine</b> Preferable to oral penicillin because of patient adherence problems	Single intramuscular injection	1,200,000 units intramuscularly; 600,000 units for children weighing <27kg
<b>Phenoxy methyl penicillin (Penicillin V)</b> Penicillin resistance by group A streptococci has never been reported	Orally 2–4 times/day for 10 full days	Children: 250mg bid or tid Adolescents or adults: 250mg tid or qid, or 500mg bid
<b>Amoxicillin</b> Acceptable alternative to oral penicillin because of the taste	Orally 2–3 times/day for 10 full days	25–50mg/kg/day in three doses. Total adult dose is 750–1500mg/day
<b>First-generation cephalosporins</b> Acceptable alternative for oral penicillin	Orally 2–3 times/day for 10 full days	Varies with agent
<b>Erythromycin</b> Alternative drug for patients allergic to penicillin. Should not be used in areas where group A streptococci have high rates of macrolide resistance	Orally 4 times/day for 10 full days	Varies with formulation available

##### Supplies:

- Syringe, needle

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Patient file, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet, Flipchart

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS

##### Standard Protocol:

- Primary prevention of rheumatic fever

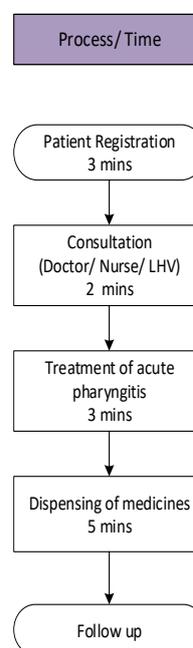
##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Rheumatic Fever and Rheumatic Heart Disease WHO Technical Report 2001

C. Non-Communicable Disease and Injury Prevention Cluster  
C.11. Cardiovascular, Respiratory and Related disorders Package of Services  
C.11.124. Treatment of acute pharyngitis for rheumatic fever  
Platform: PHC level  
• 8-6 BHU/ 24-7 BHU/ RHC/ Health Centre/GP Clinic (Pvt.)



## C. Non-Communicable Disease and Injury Prevention Cluster

### C.11. Cardiovascular, Respiratory and Related Disorders Package of Services

#### C.11.127. Opportunistic screening for hypertension for all adults and initiation of treatment among individuals with severe hypertension and/or multiple risk factors

DCP3 code: HC45

#### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic (Pvt.)

#### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/LHV/Nurse)

- History
- Clinical examination/screening for hypertension
- Treatment (if required)

Recommended Method

- Screening for all adults
- Treatment of individuals with severe hypertension and/or multiple risk factors as per guidelines

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- As per health care provider's advice

#### Medicines:

Antihypertensive Medication	Initial Daily Dose, mg	Target Dose in RCTs Reviewed, mg	No. Of Doses per day
<b>ACE Inhibitors</b>			
Captopril	50	150-200	2
Enalapril	5	20	1-2
Lisinopril	10	40	1
<b>Angiotensin Receptor Blockers</b>			
Eprosartan	400	600-800	1-2
Candesartan	4	12-32	1
Losartan	50	100	1-2
Valsartan	40-80	160-320	1
Irbesartan	75	300	1
<b>Beta-Blockers</b>			
Atenolol	25-50	100	1
Metoprolol	50	100-200	1-2
<b>Calcium Channel Blockers</b>			
Amlodipine	2.5	10	1
Diltiazem extended release	120-180	360	1
Nitrendipine	10	21	1-2
<b>Thiazide-type diuretics</b>			

Bendroflumethiazide	5	10	1
Chlorthalidone	12.5	12.5-25	1
Hydrochlorothiazide	12.5-25	25-100	1-2
Indapamide	1.25	1.25-2.5	1

#### Equipment:

- Stethoscope
- BP apparatus

#### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, MCH Register, Patient file
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up visit card
4. IEC material: Leaflet, Flip chart

#### Supervision:

- EDO Health, Deputy DHO, THO

#### Standard Protocol:

- Diagnosing, treating and monitoring hypertension

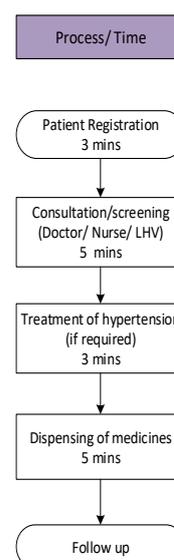
#### National Training Curriculum/ Guidelines:

- Not Available

#### Reference Material:

- NICE hypertension guideline 2019

C. Non-Communicable Disease and Injury Prevention Cluster  
C.11. Cardiovascular, Respiratory and Related disorders Package of Services  
C.11.127. Opportunistic screening for hypertension for all adults and initiation of treatment among individuals with severe hypertension and/or multiple risk factors  
Platform: PHC level  
• 8-6 BHU/24-7 BHU/RHC/ Health Centre/GP Clinic (Pvt.)



## C. Non-Communicable Disease and Injury Prevention Cluster

### C.11. Cardiovascular, Respiratory and Related Disorders Package of Services

#### C.11.128. Tobacco cessation counselling and use of nicotine replacement therapy in certain circumstances (Also included in Cancer package of services)

DCP3 code: HC46

##### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic (Pvt.)

##### Process:

Patient registration at reception (Receptionist)  
Consultation (Doctor/LHV/Nurse)

- History
- Counselling

##### Recommended Method

- Cognitive-behavioural therapies
- Withdrawal symptoms (Cravings, the 4Ds (delay, deep breathing, drink water, do something to distract) strategy to deal with smoking cravings)
- Pharmacological therapy

##### Pharmacy (Dispenser)

- Dispensing of medicine

##### Follow up

- As per health care provider's advice

##### Medicines:

Nicotine polacrilex medicated chewing gum	>20cpd: 4mg 30 min 2mg Initial dosage is 1-2 pieces every 1-2 hours (10/12 pieces a day) for 12 weeks (no more than 24 pieces used per day)
Nicotine Transdermal Patch	5mg, 10mg, 15mg for 16 hours 8-weeks 7mg,14mg, 21mg for 24 hours 8-weeks
Nicotine inhalers	Between 6 and 16 cartridges daily for up to 8 weeks Half that dosage over 2 weeks Reduction to zero over the next 2 weeks
Nicotine nasal sprays	1-2 doses/hour 8ng/ml (max dose 40 doses/day)
Nicotine sublingual tablets	2-mg (20 cig /day) 40 doses for 8 weeks 4mg (>20 cig /day) 40 doses for 8 weeks Gradual reduction over next 4 weeks
Nicotine lozenges	2-mg (condition specified) for 12 weeks 4-mg (condition specified) for 12 weeks

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, MCH Register, Patient file
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up visit card
4. IEC material: Leaflet, Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Strategies and skills to overcome common barriers and challenges to quitting including NRT as an essential medicine is predicted to further improve cost effectiveness of smoking cessation

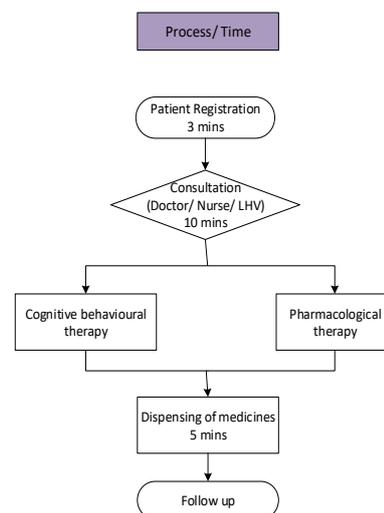
##### National Training Curriculum/ Guidelines:

- Not Available

##### Reference Material:

- A guide for tobacco users to quit WHO 2014
- Proposal for Inclusion of Nicotine Replacement Therapy in the WHO Model List of Essential Medicines-Tobacco Free Initiative 2008

C. Non-Communicable Disease and Injury Prevention Cluster  
C.11. Cardiovascular, Respiratory and Related Disorders Package of Services  
C.11.128. Tobacco cessation counselling and use of nicotine replacement therapy in certain circumstances (Also included in Cancer package of services)  
Platform: PHC Level  
• 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic (Pvt.)





**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH  
SERVICES**

**CLUSTER**

***C. Non-Communicable Diseases And Injury Prevention Cluster***

**PACKAGE**

**C12. Cancer Package of Services**



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.12. Cancer Package of Services

#### C.12.136. Psychological support and counselling services for individuals with serious, complex or life-limiting health problems and their caregivers (Also included in Palliative care package of services)

DCP3 code: HC66

##### Platform:

Community Level

- LHW/ Outreach worker/ Counsellor

##### Process:

Visit

- Provide psychological support and counselling services. Identify the individual and family counselling needs
- Identify other resources that can enable and enhance the scope of physical care to be provided at home
- Improve the quality of daily life at the end of life by ensuring that they receive adequate comfort measures, pain control, emotional and religious support
- Encourage community support
- Facilitate referral to health facility services for management of adverse reactions

##### Recommended Method

- Physical care (positioning and mobility, bathing, wound cleansing, skin care, oral hygiene, adequate ventilation, guidance and support for adequate nutrition)
- Palliative care (social and emotional support, counselling, spiritual care)
- Terminal care (provide spiritual and emotional/ grieving support for patients and their loved ones)

##### Follow up

Provide follow up counselling on repeat visits

##### HMIS Tools:

1. Recording Tool: Treatment register
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC material: Leaflet, Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO, District Coordinator, ADC, LHS

##### Standard Protocol:

- Impact of cancer and recommendations
- Home Based Kits

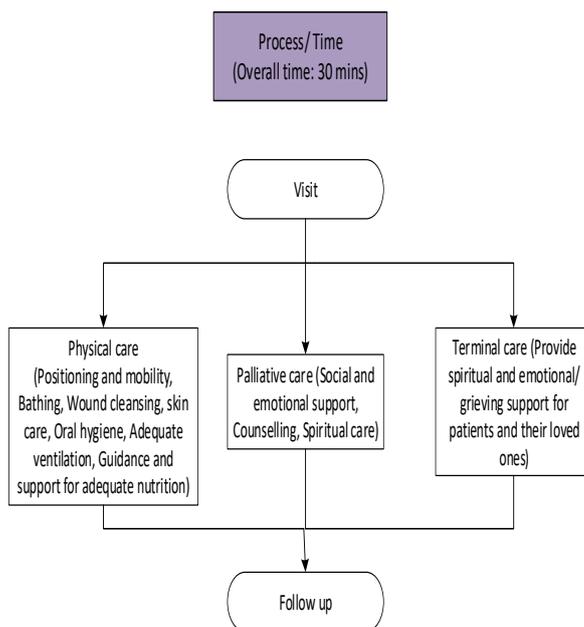
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- Delivering an adult cancer counselling service – an evaluation report 2017
- National Guidelines for Community and Home-Based Care NACP 2015

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.12. Cancer Package of Services  
C.12.136. Psychological support and counselling services for individuals with serious, complex or life-limiting health problems and their caregivers (Also included in Palliative care package of services)  
Platform: Community level:  
• LHW/Outreach worker/Counsellor





**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH  
SERVICES**

**CLUSTER**

*C. Non-Communicable Diseases And Injury Prevention Cluster*

**PACKAGE**

**C13. Mental, Neurological and Substance use disorder Package of Services**



## C. Non-Communicable Disease and Injury Prevention Cluster

### C.13. Mental, Neurological and Substance Use Disorders Package of Services

#### C.13.142. Self-managed treatment of migraine

DCP3 code: C48

**Platform:**

Community Level

- LHW/ LHV

**Process:**

**Home visit**

- Assess the physical condition

Recommended Method

- Assess
- Advise for
  - Calm environment
  - Apply hot or cold compresses to head or neck
  - Healthy sleep
  - Drink a caffeinated beverage
  - Eat wisely
  - Manage stress
  - Avoid the light and move to calm/quiet place for rest during migraine aura
- Analgesics (Paracetamol, Ibuprofen)
- Referral if needed

**HMIS Tools:**

- Recording Tool: Treatment Register, Referral Slips
- Reporting Tool: Monthly report
- Client/Patient Card:
- IEC Material: Leaflet

**Supervision:**

- LHS

**Standard Protocol:**

- Management of the Migraine

**National Training Curriculum/ Guidelines:**

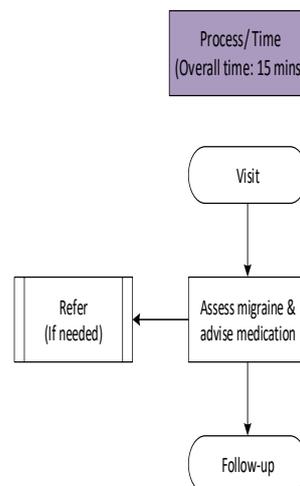
- Not available

**Reference Material:**

- Myoclonic guidelines on Self-management of the Migraine

- (<https://www.mayoclinic.org/diseases-conditions/migraine-headache/in-depth/migraines/art-20047242>)

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.13. Mental, Neurological and Substance Use Disorders Package of Services  
C.13.142. Self-managed treatment of migraine  
Platform: Community Level  
• LHW/ LHV



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.13. Mental, Neurological and Substance Use Disorders Package of Services

#### C.13.143. Interventions to support caregivers of patients with dementia

##### DCP3: HC48

##### Platform:

PHC

Level

- 8-6 BHU/24-7 BHU/RHC/Health Centre/GP Clinic (Pvt.)

##### Process:

Caregiver's registration at the reception (Receptionist)  
Consultation (Doctor/ LHV/ Nurse)

- Assess the impact on the carer and the carer's needs to ensure necessary support and resources for their family life, employment, social activities, and health
- Acknowledge that it can be extremely frustrating and stressful to take care of people with dementia
- Need to be encouraged to respect the dignity of the person with dementia and avoid hostility towards, or neglect of the person
- Encourage the carer giver to seek help if they are having trouble or strain in caring for their loved one
- Provide information to the carer regarding dementia, keeping in mind the wishes of the person with dementia
- Provide training and support in specific skills, e.g. managing difficult behaviour, if necessary
- Consider providing practical support when feasible, e.g. home-based respite care. Another family or suitable person can supervise and care for the person with dementia to provide the main carer with a period of relief to rest or carry out other activities
- Explore whether the person qualifies for any disability benefits or other social/financial support (government or non-governmental)

##### Recommended Method

- Psychosocial support

##### Follow-up

- As per doctor's advice

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up visit card
4. IEC material: Leaflet, Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Dementia

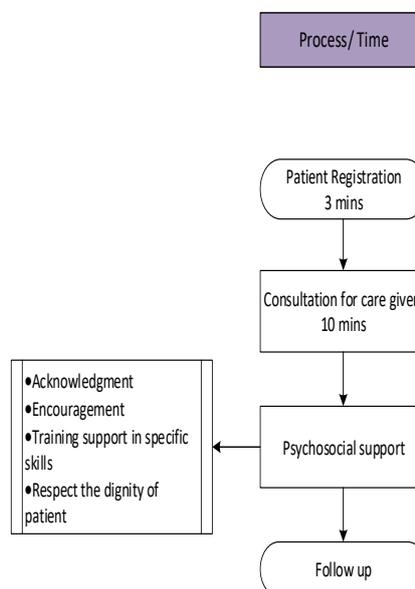
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- mhGAP Intervention Guide for mental, neurological and substance use disorders in non-specialized health settings Version 2.0 WHO 2015

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.13. Mental, Neurological and Substance Use Disorders Package of Services  
C.13.143. Interventions to support caregivers of patients with dementia  
Platform: PHC Level  
• 8-6 BHU/24-7 BHU/RHC/Health Centre/GP Clinic (Pvt.)



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.13. Mental, Neurological and Substance Use Disorders Package of Services

#### C.13.144. Management of bipolar disorder using generic mood- stabilizing medications and psychological treatment

DCP3 code: HC49

##### Platform:

PHC Level

- 8-6 BHU/ 24-7 BHU/ RHC/ Health Centre/GP Clinic (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse)

- History
- Pharmacological treatment of bipolar disorder

Counselling sessions

Recommended Method

- Management of bipolar disorder according to guidelines

Pharmacy (Dispenser)

- Dispensing of Medicines

Follow up

- According to provider's advice

##### Medicines:

Disorder	Medicines	Dose
Manic Disorders	Benzodiazepine	0.5 mg OD
	Valproate	750 mg (OD)
	Olanzapine/ Quetiapine	6mg/400 to 800 mg per day in divided doses
Bipolar Depression	Fluoxetine	25 mg (OD)
	Quetiapine	400 to 800 mg per day in divided doses
	lamotrigine	25mg-200mg (OD)
	Lithium	600 mg orally 2 to 3 times a day

##### HMIS Tools:

- Recording Tool: OPD Ticket, OPD register, Patient file, Abstract register
- Reporting Tool: Monthly report
- Client/Patient Card: IEC Material: Leaflet, Flipchart

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS

##### Standard Protocol:

- Treatment and management of bipolar disorder

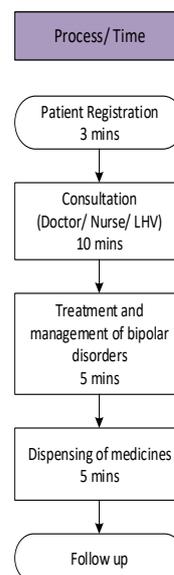
##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Bipolar disorder, the NICE guideline on the assessment and management of bipolar disorder in adults, children and young people in primary and secondary care 2014

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.13. Mental, Neurological and Substance Use Disorders Package of Services  
C.13.144. Management of bipolar disorder using generic mood- stabilizing medications and psychological treatment  
Platform: PHC Level  
• 8-6 BHU/ 24-7 BHU/ RHC/ Health Centre/GP Clinic (Pvt.)



## C. Non-Communicable Disease and Injury Prevention Cluster

### C.13. Mental, Neurological and Substance Use Disorders Package of Services

#### C.13.145. Management of depression and anxiety disorders with psychological and generic antidepressants therapy

DCP3 code: HC50

##### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/ Health Centre/ GP Clinic

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/ Nurse/LHV)

- History
- Clinical Examination
- Assessment
- Management

##### Recommended Method

- Provide psychoeducation to the person and their cares
- Reducing stress and strengthen social supports
- Promote functioning in daily activities and community life

##### Consider antidepressants

- Interpersonal therapy (IPT)
- Cognitive behavioural therapy (CBT)
- Behaviour activation and problem-solving
- Counselling

##### Pharmacy (Dispenser)

- Dispensing of medicine

##### Follow up

- Encourage the person to continue with their current management plan until they are symptom free for 9-12 months. Arrange a further follow up appointment in 1-2 weeks
- Decrease contact as the person's symptoms improve, e.g. once every 3 months after the initial 3 months follow up should continue until the person no longer has any symptoms of depression

##### Medicines:

AMITRIPTYLINE	<ul style="list-style-type: none"> <li>• <b>Start</b> 25 mg at bedtime</li> <li>• <b>Increase</b> by 25-50 mg per week to 100-150 mg daily (maximum 300 mg) lower doses</li> <li>• <b>Elderly/Medically Ill:</b> Start 25 mg at bedtime to 50-75 mg daily (maximum 100 mg)</li> </ul>
FLUOXETINE	<ul style="list-style-type: none"> <li>• <b>Start</b> 10 mg daily for one week then 20 mg daily. If no response in 6 weeks, increase to 40 mg (maximum 80 mg)</li> <li>• <b>Elderly/medically ill:</b> preferred choice</li> </ul>

- **Start** 10 mg daily, then increase to 20 mg (maximum 40 mg)

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up card, MCH card
4. IEC Material: Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Management of the Depression

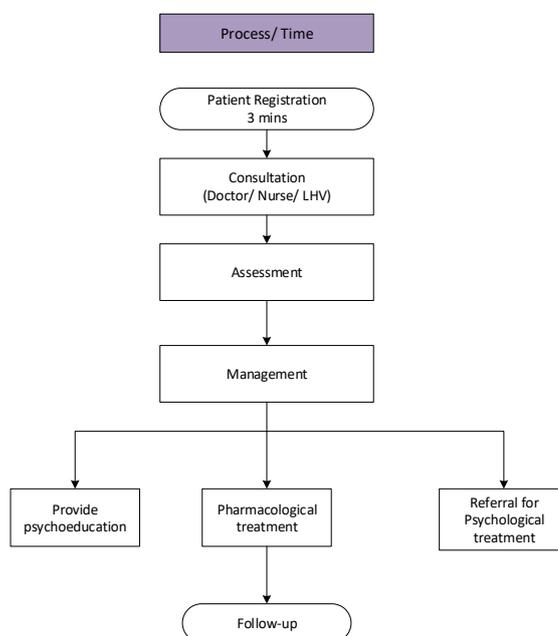
##### National Training Curriculum/ Guidelines:

- Available (mhGap)

##### Reference Material:

- mhGap

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.13. Mental, Neurological and Substance Use Disorders Package of Services  
**C.13.145. Management of depression and anxiety disorders with psychological and generic antidepressants therapy**  
Platform: PHC Level  
• 8-6 BHU/24-7 BHU/RHC/ Health Centre/GP Clinic



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.13. Mental, Neurological and Substance Use Disorders Package of Services

#### C.13.148. Screening and brief intervention for alcohol use disorders (Also included in Injury package of services)

**DCP3 code: HC53**

##### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/ RHC/ Health Centre/ GP Clinic (Pvt.)

##### Process:

Patient registration at the reception (Receptionist)

Consultation (Doctor)

- Screening (The Alcohol Use Disorders Identification Test (AUDIT))
  - Interview Version
  - Self-Report Version
- Brief Intervention
  - Provide psychoeducation and emphasize that the level/pattern of substance use is causing harm to health
  - Explore the person's motivations for substance use
  - Advise stopping the substance completely or consuming it at a non-harmful level, if one exists
  - Address food, housing, and employment needs

Recommended Method

- Psychosocial education
- Psychosocial Intervention
- Motivational interviewing

Refer the person for maintenance treatment

##### HMIS Tools:

- Recording Tool: OPD Ticket, OPD register
- Reporting Tool: Monthly report
- Client/Patient Card: Follow up visit card
- IEC material: Leaflet, Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Disorders due to substance use - management

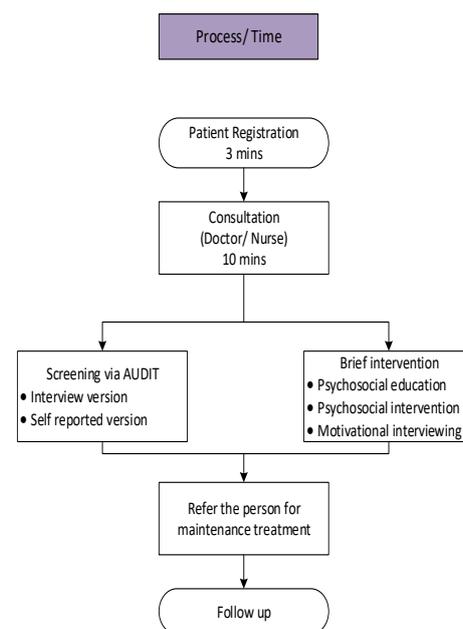
##### National Training Curriculum/ Guidelines:

- Available (Brief Intervention)

##### Reference Material:

- mhGAP Intervention Guide for mental, neurological and substance use disorders in non-specialized health settings Version 2.0 WHO 2015
- The Alcohol Use Disorders Identification Test (AUDIT)-WHO

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.13. Mental, Neurological and Substance Use Disorders Package of Services  
C.13.148. Screening and brief intervention for alcohol use disorders (Also included in Injury package of services)  
Platform: PHC Level  
• 8-6 BHU/24-7 BHU/RHC/Health Centre/GP Clinic (Pvt.)





**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH  
SERVICES**

**CLUSTER**

*C. Non-Communicable Diseases And Injury Prevention Cluster*

**PACKAGE**

**CI4. Musculoskeletal disorders Package of Services**



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.14. Musculoskeletal Disorders Package of Services

#### C.14.150. Calcium and vitamin D supplementation for primary prevention of osteoporosis in high-risk individuals (Women of Reproductive Age, Post-menopausal Women)

DCP3 code: HC55

prevention of osteoporotic fragility fractures in postmenopausal women 2007)

#### Platform:

PHC Level

- 8-6 BHU/ 24-7 BHU/ RHC/ Health Centre/ MCH Centre/ GP Clinic (Pvt.)/ Nursing Homes

#### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/ Nurse/ LHW)

- History
- Provision of supplements
- Recommended Method
- Provision of supplementation for primary prevention of osteoporosis according to guidelines

Pharmacy (Dispenser)

- Dispensing of medicines

Follow up

- After 1 month

#### Medicines:

Calcium supplements	800–1000 mg for 1 month
Vitamin D supplements	400–800 IU for 1 month

#### Supplies:

- Calcium supplements
- Vitamin D supplements

#### HMIS Tools:

5. Recording Tool: OPD Ticket, OPD register, Patient file, Abstract register
6. Reporting Tool: Monthly report
7. Client/Patient Card:
8. IEC Material: Leaflet, Flipchart

#### Supervision:

- EDO Health, Deputy DHO, THO, AIHS

#### Standard Protocol:

- Primary prevention of osteoporotic fragility fractures

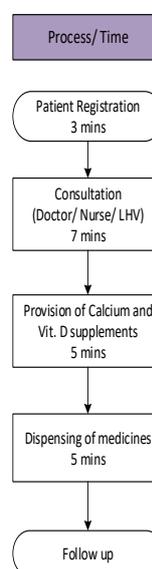
#### National Training Curriculum/Guidelines:

- Not available

#### Reference Material:

- National institute for health and clinical excellence
- (Final appraisal determination-Alendronate, etidronate, risedronate, raloxifene and strontium ranelate for the primary

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.14. Musculoskeletal Disorders Package of Services  
C.14.150. Calcium and vitamin D supplementation for primary prevention of osteoporosis in high-risk individuals  
Platform: PHC Level  
• 8-6 BHU/ 24-7 BHU/ RHC/ Health Centre/MCH Centre/GP Clinic (Pvt.)/Nursing Homes





**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH  
SERVICES**

**CLUSTER**

*C. Non-Communicable Diseases And Injury Prevention Cluster*

**PACKAGE**

**C15. Congenital and genetic disorders Package of Services**

## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.15. Congenital and Genetic Disorders Package of Services

#### C.15.155. Targeted screening for congenital hearing loss in high-risk children, using optoacoustic testing otoscope

DCP3 code: HC56

#### Platform:

PHC

Level

- 8-6 BHU/ 24-7 BHU/RHC/ Health Centre/ GP Clinic

#### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/ Nurse/ LHV)

- History
- Examination of the ear canal (otoscope)
- Management and referral
- Counselling about ear hygiene

Pharmacy (Dispenser) (according to presenting illness)

- Dispensing of medicine

Follow up (according to presenting illness)

- As per health care provider's advice

#### Medicines:

• Antiseptic ear drops
• Antibiotic ear drops
• Anti-fungal ear drops
• Oral Antibiotics (as per condition)

#### Supplies:

- Cotton buds, Cotton fabric

#### Equipment:

- Otoscope

#### HMIS Tools:

- Recording Tool: OPD Ticket, OPD register, Patient file
- Reporting Tool: Monthly report
- Client/Patient Card: Follow up visit card
- IEC material: Leaflet, Flip chart

#### Supervision:

- EDO Health, Deputy DHO, THO, District Coordinator, ADC, LHS

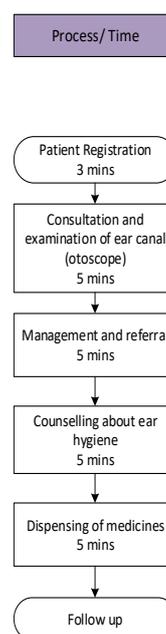
#### National Training Curriculum/Guidelines:

- Not Available

#### Reference Material:

- Primary Ear and Hearing Care Training Resource Trainer's Manual 2006
- Risk Factors for Congenital Hearing Loss: Which Are the Most Relevant? Andor Balázs, Adriana Neagoş

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.15. Congenital and Genetic Disorders Package of Services  
C.15.155. Targeted screening for congenital hearing loss in high-risk children, using otoscope  
Platform: PHC Level  
• 8-6 BHU/ 24-7 BHU/RHC/ Health Centre/ GP Clinic



**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH  
SERVICES**

**CLUSTER**

*C. Non-Communicable Diseases And Injury Prevention Cluster*

**PACKAGE**

**C17. Environmental Improvement Package of Services**



## C. Non-communicable Diseases and Injury Prevention Cluster

### C.17. Environmental improvement Package of Services

#### C.17.164. WASH behaviour changes interventions, such as community led total sanitation

DCP3 code: C51

##### Platform:

Community Level

- LHW/ Nutrition Counsellor/ Community mobilizer (PHED)

##### Process:

**Home visit/Community engagement** (LHW/ Nutrition

Counselor/ Community mobilizer (Public health engineering department (PHED) focal point))

Educate all family members on the adoption of appropriate hygiene skills

Encourage family members to participate in:

- Participatory Hygiene and Sanitation Transformation (PHAST)
- Community-led Total Sanitation (CLTS), School-led Total Sanitation (SLTS) and sanitation marketing

Encourage family members to teach children about safe child faeces disposal behaviour

Teach family members to adopt WHO's standard of "Hand Hygiene: Why, How & When?"

Emphasis on achieving open defecation free (ODF) status

Certification of community for CLTS/SLTS

**School visit** (LHW/ Nutrition Counsellor)

Give education about importance and key hygiene behaviors for school children

- Personal hygiene, Sanitation etc.

Teach school children to adopt WHO's standard of "Hand Hygiene: Why, How & When?"

Give education about the safest way to dispose off faeces by helping the child use a toilet or latrine to put or rinse their faeces into a toilet or latrine

Conclude the meeting on thanking note

##### HMIS Tools:

1. Recording Tool: Diary
2. Reporting Tool: Monthly Report
3. Client/Patient Card:
4. IEC Material: Brochures, Leaflet, Flipchart

##### Supervision:

- PHED, EDO Health, Deputy DHO, THO, DC, ADC, LHS

##### Standard Protocol:

- Child Participation and Hygiene Education

- Linkage with Community
- Management of Child Faeces: Current Disposal Practices
- Pakistan Approach to Total Sanitation (PATS)

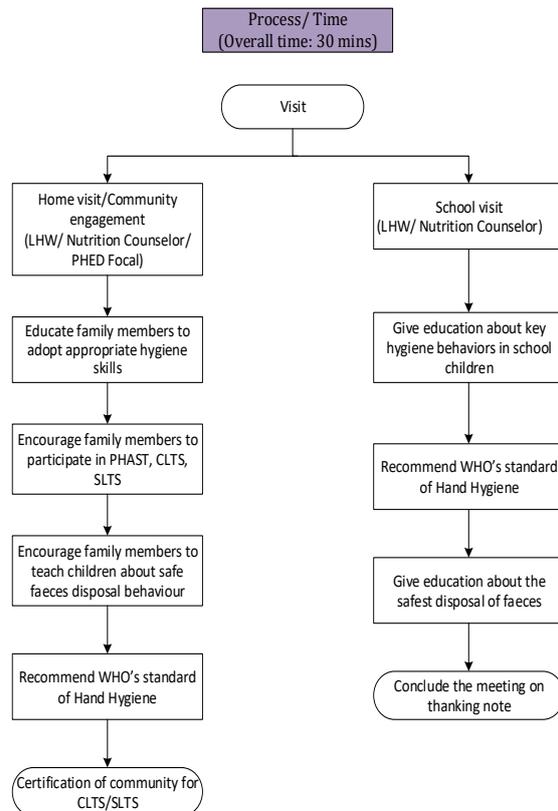
##### National Training Curriculum/Guidelines:

- Available

##### Reference Material:

- Water, Sanitation and Hygiene (WASH) in Schools - UNICEF
- Hand Hygiene: Why, How & When? - WHO
- Water and Sanitation Program - World Bank 2015
- LHW Training Manual
- Pakistan Approach to Total Sanitation (PATS)

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.17. Environmental improvement Package of Services  
C.17.164. WASH behavior changes interventions, such as community led total sanitation  
Platform: Community Level  
• LHW/ Nutrition Counsellor/ Community mobilizer (PHED)





Preliminary Prioritized Interventions for the  
**ESSENTIAL PACKAGE OF HEALTH  
SERVICES**

**CLUSTER**

***D. HEALTH SERVICES CLUSTER***

**PACKAGE**

**D18. Surgery Package of Services**



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.165a. Dental Extraction

DCP3 code: HC57

##### Platform:

PHC Level

- RHC / Health Centre/ GP Clinic

##### Process:

Patient registration at the reception (Receptionist)  
Consultation (Dental surgeon)

- History
- Clinical examination
- Diagnostic Criteria
  - o Trauma
  - o Infected tooth with associated pain and inflammation
  - o Decayed tooth
  - o Tooth causing crowding in the dental arch
  - o Impacted tooth
  - o Deciduous
- Counselling
  - o Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
  - o Obtain informed consent

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

- Give prophylactic antibiotics
- Local Anaesthesia (2 % Lidocaine)
- Simple Tooth Extraction
- Post-operative care
  - o Ice pack for 10 minutes
  - o Take prescribed medications
  - o After 24 hours, use warm saline water for rinsing the mouth
  - o Take soft diet for 24 hours

Follow-up

- After 1 week

##### Medicines:

Pre-operative: Prophylactic antibiotics in patients with cardiovascular disease or prosthetic implants

- Adults: 2g of Amoxicillin orally an hour prior to the procedure
- Children: Amoxicillin 50 mg/kg orally

Intra-operative

- Local Anaesthesia: 2% Lidocaine and Epinephrine 1: 80 000

Post-operative

- Adults: Paracetamol 1000 mg every 6 hours for pain control
- Children: Paracetamol 10-15mg/kg/dose every 6 hours
- Patients with Diabetes/Cardiovascular disease/Stents/Prosthetic joints: 500mg of Amoxicillin orally three times a day for 5 days

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material:

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- 

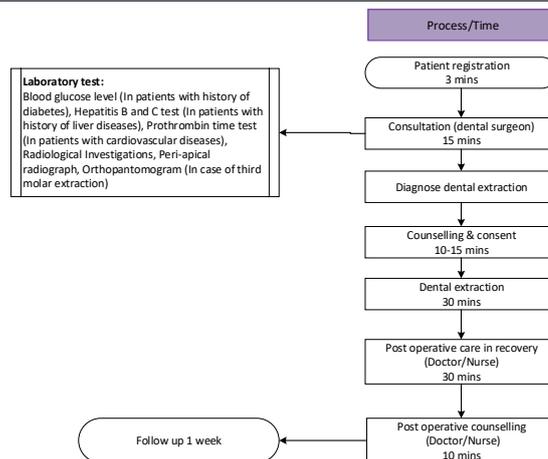
##### National Training Curriculum/ Guidelines:

- Not available

##### Reference Material:

- 

D. Health Services Cluster  
D.18. Surgery Package of Services  
D.18.165a. Dental Extraction  
Platform: PHC Centre  
• RHC/Health Centre/GP Clinic



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.166a. Drainage of Dental Abscess

DCP3 code: HC58

##### Platform:

PHC Level

- RHC/ Health Centre/ Dispensary/ GP Clinic

##### Process:

Patient registration at the reception (Receptionist)

Consultation (Dentist)

- History
- Clinical examination
- Diagnostic Criteria
  - Throbbing pain
  - Sensitivity to hot and cold
  - Referred pain to the ear, neck and jaw
  - Fever
  - Pus filled swelling
- Counselling
  - Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
  - Obtain informed consent

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

##### Root Canal Treatment

- Give prophylactic antibiotics
- Local Anaesthesia (2 % Lidocaine)
- Drainage of the pus
- Root canal treatment
- In case the tooth is severely infected and cannot be saved, extraction of the tooth is recommended
- Post-operative care

Follow up

- After 1 week

##### Medicines:

Pre-operative (Prophylactic antibiotics in patients with cardiovascular diseases or prosthetic implants)

- Adults: 2g of Amoxicillin orally an hour prior to the procedure
- Children: Amoxicillin 50 mg/kg orally

Intra-operative

- Local Anaesthesia for incision: 2% Lidocaine and Epinephrine

Postoperative

- Adults: Paracetamol 1000 mg every 6 hours for pain control.
- Children: Paracetamol 10-15mg/kg/dose every 6 hours
- Adults:
  - 500mg of Amoxicillin orally three times a day for 5 days
  - 400mg of Metronidazole orally twice a day for 5 days
- Children: 250mg Amoxicillin orally three times a day for 5 days

##### Supplies:

- Sterile gloves, Gauze

##### Equipment:

- Dental chair, X-ray Unit, Syringe for local Anaesthesia

##### Lab test:

- Blood glucose level (In patients with history of Diabetes)
- Hepatitis B and C test (In patients with history of liver diseases)
- Prothrombin time test (In patients with cardiovascular diseases)
- Radiological Investigations
  - Peri-apical radiograph
  - Orthopantomogram
  - CT scan (If infection has spread to neck and other areas)

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD and Indoor register, Patient file, Referral, abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Discharge slip
4. IEC Material:

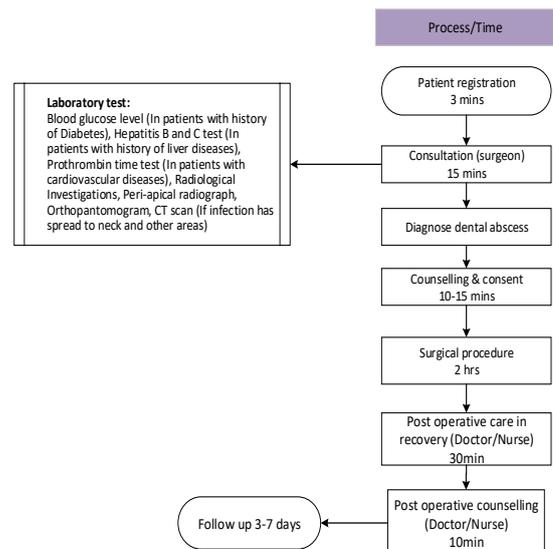
##### Supervision:

- EDO Health, Deputy DHO

##### National Training Curriculum/Guidelines:

- Not available

D. Health Services Cluster D.18. Surgery Package of Services D.18.166a. Drainage of Dental Abscess Platform: PHC Level • RHC/ Health Centre/Dispensary/GP Clinic
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## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.167. Drainage of superficial abscess

DCP3 code: HC59

#### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC /Health Centre/GP Clinic/Nursing home

#### Process:

Patient registration at the reception (Receptionist)

Consultation (Surgeon)

- History
- Clinical examination
- Counselling
  - Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
  - Obtain informed consent

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

#### Incision and Drainage

- Single dose of pre-operative IV antibiotics
- Administer General/Local Anaesthesia
- Perform incision and drainage of abscess
- Complete sign-out and +/- send any specimen for culture and sensitivity
- Post-procedure care

Follow-up

- After 3-7 days

#### Medicines:

##### Pre-operative:

- Adults: Augmentin 1 gm
- For peri-anal abscess: Ceftriaxone 2g PO QD or Ciprofloxacin 500mg IV and Metronidazole 500 mg IV

##### Intra-operative (Adults)

- Local Anaesthesia for incision: 2% Lidocaine and Epinephrine

##### Anaesthesia type at surgeon's discretion:

- General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN)
- General Anaesthesia without intubation – Inj. Ketamine (1-4.5mg/kg IV for induction)

##### Intra-operative (Children)

##### Anaesthesia type at surgeon's discretion:

- General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (1-2 mg/kg IV loading dose, 0.3-0.6 mg/kg IV PRN)
- General Anaesthesia without intubation – Inj. Ketamine (1-4.5mg/kg IV for induction)

##### Post-operative

- Adults: Paracetamol 1000 mg PO q6-8hr PRN for pain control
- If significant cellulitis/induration or diabetic patient
- Adults: Augmentin 1 gm q12 hours x 3-5 days
- For peri-anal abscess: Ceftriaxone 2 gm PO QD x 5-7 days or Ciprofloxacin 500mg PO q12 and Metronidazole 400 mg PO x 5-7 days

#### Supplies:

- Sterile gloves and gowns, Drapes, Gauze, Pyodine/Alcohol swab, Medical tape

#### Equipment:

- General Anaesthesia machine, Endotracheal tube and ventilation equipment, Emergency resuscitation equipment, Incision and drainage/ small procedure kit

#### Lab Test:

- +/- Complete Blood Count (CBC)

#### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up card
4. IEC Material:

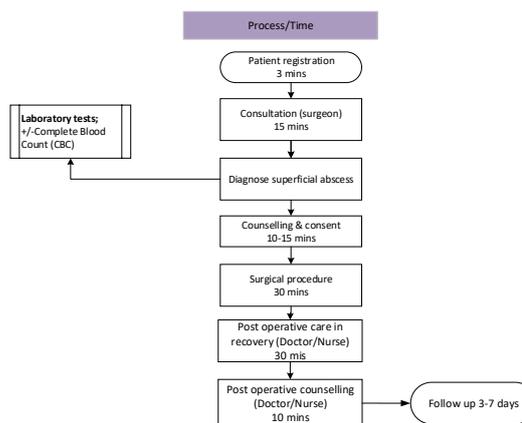
#### Supervision:

- EDO Health, Deputy EDO Health, General surgeon at PHC

#### National Training Curriculum/Guidelines:

- Not available

D. Health Services Cluster  
D.18. Surgery Package of Services  
D.18.167. Drainage of superficial abscess  
Platform: PHC Level  
• 8-6 BHU/24-7 BHU/RHC /Health Centre/GP Clinic/Nursing home



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.168. Management of non-displaced fractures

DCP3 code: HC60

##### Platform:

PHC Level

- 8-6-BHU/24-7 BHU/RHC/MCH Centre/Health Centre/Dispensary/GP Clinic/Nursing Home

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor)

- History
- Clinical examination
- Counselling
  - Explain the procedure, risks, possible complications, and alternatives
  - Obtain consent

Laboratory Tests (Lab Technician)

- Laboratory tests seldom required

Recommended Method

- Oral or IV Analgesia
- Tetanus prophylaxis
- Apply POP cast or slab: Extent of the cast should be a joint above and below the fracture

Post-procedure care and pre-discharge Counselling

- Cast care instructions
- Explain possible complications
- Provide clear instructions for return to health facility if complications occur

Follow-up

- Initial 1-2 weeks after discharge, then after 4-6 weeks

##### Medicines:

Pre-operative

- Paracetamol 1000 mg PO q6-8hr PRN for pain control; I.M Diclofenac or IV Nalbuphine/Opioids

Intra-operative

##### Anaesthesia type at surgeon's discretion (Adults)

- General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN)
- General Anaesthesia without intubation – Inj. Ketamine (1-4.5mg/kg IV for induction)

##### Anaesthesia type at surgeon's discretion (Children)

- General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (1-2 mg/kg IV loading dose, 0.3-0.6 mg/kg IV PRN)
- General Anaesthesia without intubation – Inj. Ketamine (1-4.5mg/kg IV for induction)

Post-operative

- Paracetamol 1000 mg PO q6-8hr PRN for pain control; I.M Diclofenac or IV Nalbuphine/Opioids— Paracetamol/Tramadol combination

##### Supplies:

- Stockinette, Padding (cotton wool), Plaster of Paris Cast and slab, Water

##### Equipment:

- General Anaesthesia machine, Laryngoscope, Endotracheal tube and ventilation equipment, Airway adjuncts, Monitors (ECG, blood pressure, heart rate, pulse oximetry and temperature), Emergency resuscitation kit (Ambu bag, oxygen cylinder, IV kit, IV fluid bag, Epinephrine, Atropine)

##### Lab Test:

- X-rays of the affected limb

##### HMIS Tools:

1. Recording tool: Indoor register and outdoor fracture, Referral form
2. Reporting tool: Monthly report
3. Client/Patient card: Patient medical record card
4. IEC material:

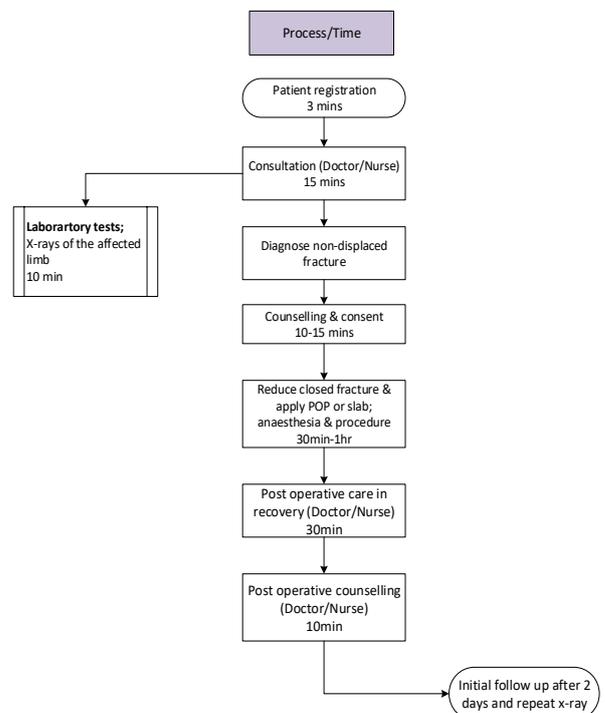
##### Supervision:

- EDO Health, Deputy DHO, THO

##### National Training Curriculum/Guidelines:

- Not available

D. Health Services Cluster  
D.18. Surgery Package of Services  
D.18.168. Management of Non-displaced Fractures  
Platform: PHC Level  
• 8-6-BHU/24-7 BHU/RHC/MCH Centre/Health Centre/Dispensary/GP Clinic/Nursing Home



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.169. Resuscitation with basic life support measures

DCP3 code: HC61

##### Platform:

PHC Level

- 8-6 BHU/ 24-7 BHU/ RHC/ MCH Centre/ Health Centre/ GP Clinic

##### Process:

Reception (Receptionist)

Emergency Consultation (Doctor, Nurses, LHV)

Patient received or the admitted patient

Recommended Method (Paramedical Staff/Nurses/ Doctors trained to provide BLS)

- Assess scene safety
- Assess responsiveness; if none, follow steps below:
  - Shout for nearby help; activate emergency response system (e.g. facility protocol, mobile phone)
  - Get Automated External Defibrillator (AED) and emergency equipment (if available) or send someone to do so
  - Assess for breathing or only gasping
- Assess for no breathing or only gasping and check pulse for less than 10 seconds, simultaneously
  - If normal breathing and pulse present, monitor until emergency responders arrives
- If no normal breathing but pulse present, follow the steps below:
  - Provide rescue breathing: 1 breath every 5-6 seconds or 10-12 breaths/min
  - Activate emergency response system (if not already done) after 2 mins
  - Continue rescue breathing with pulse check every 2 mins; if no pulse, begin CPR
- If no breathing (or only gasping) and no pulse, follow the steps below:
  - Begin CPR at a compressions-to-breaths ratio of 30:2
  - Every 2 minutes, check pulse, check rhythm, and switch compressor
  - Use AED as soon as available; if shockable rhythm, defibrillate and resume CPR immediately for 2 mins. Continue until advanced life support (ALS) providers take over or victim starts to move

##### Supplies:

- Alcohol swab

##### Equipment:

- Automated external defibrillator

##### HMIS Tools:

1. Recording Tool: Outdoor and indoor register, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card
4. IEC Material: Leaflet, Flip chart

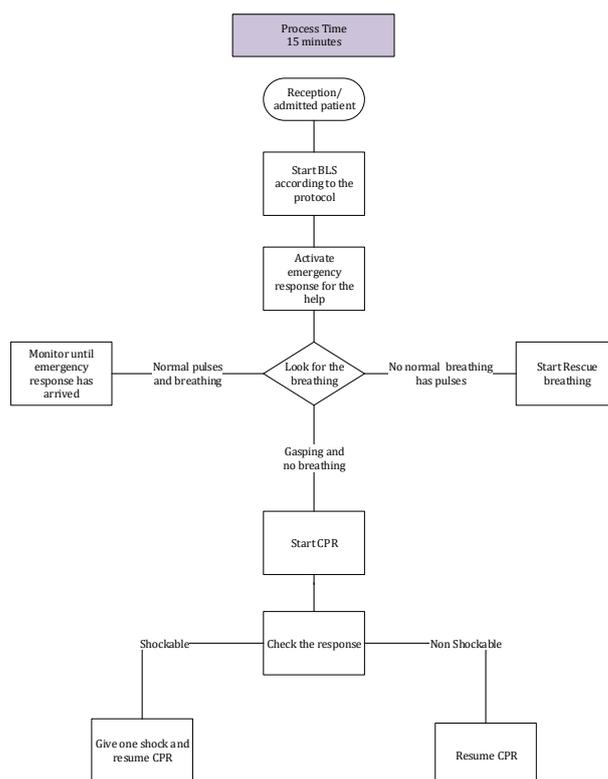
##### Standard Protocol:

- American Heart Association 2015 Update

##### National Training Curriculum/Guidelines:

- Not available

D. Health Services Cluster  
D.18. Surgery Package of Services  
D.18.169. Resuscitation with Basic Life Support Measures  
Platform: PHC Level  
•8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.170. Suturing of lacerations

DCP3 code: HC62

##### Platform:

PHC Level

- 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home

##### Process:

Patient registration at reception (Receptionist)  
Consultation (Doctor/ Nurse)

- History
- Wound assessment
- Counselling
  - Explain the procedure, implications of no surgical procedure and alternatives
  - Obtain informed consent

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

- Initial Management
  - Antibiotics and tetanus prophylaxis if indicated
  - Irrigation and debridement as needed
  - Administer Local Anaesthesia (1% Lignocaine with adrenaline slowly infiltrated into the wound)
  - Select suture based on skin depth
  - Suture using technique appropriate for anatomic site and wound
- Post-procedural instructions about dressing and bathing
- Clear instructions for return to health facility if infection occurs
- Return for suture removal in case of non-absorbable sutures
- Timing of suture removal is usually between 3-14 days depending on the anatomic site

Follow-up

- After 48-72 hrs. for highly contaminated wounds

##### Medicines:

Intra-operative
Local Anaesthesia: 1% Lignocaine without epinephrine
Post-procedure
<ul style="list-style-type: none"> <li>• Adults: Paracetamol 1000 mg every 6 hours for pain control</li> </ul>

- Children: Paracetamol 10-15mg/kg/dose every 6 hours

##### Equipment:

- Laceration tray (Suture kit)

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up card
4. IEC Material:

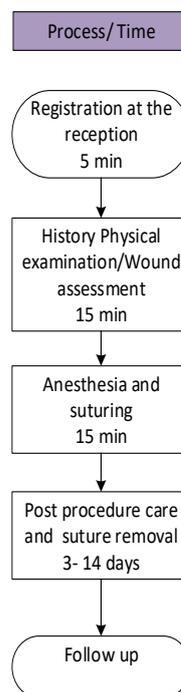
##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS

##### National Training Curriculum/Guidelines:

- Not available

D. Health Services Cluster  
D.18. Surgery Package of Services  
D.18.170. Suturing of Lacerations  
Platform: PHC Level  
• 8-6 BHU/24-7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing Home



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18. 171a. Treatment of Caries

DCP3 code: HC63

##### Platform:

PHC Level

- RHC/ Health Centre/ Dispensary/ GP Clinic/ Nursing Home

##### Process:

Patient registration at the reception (Receptionist)

Consultation (Dentist)

- History
- Clinical examination
- Diagnostic Criteria
  - Decayed tooth (Black/white spots on the tooth)
  - Visible hole (cavity) in the tooth
    - Enamel lesion, no cavity
    - Enamel lesion, cavity
    - Dentin lesion, cavity
    - Dentin lesion, cavity involving the pulp/root
  - Pain and sensitivity to hot and cold
- Counselling
  - Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
  - Obtain informed consent

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

- Prophylactic antibiotics
- Local Anaesthesia (2 % Lidocaine)
- Caries not involving the pulp/root, Removal of the decayed tooth using ultrasonic bur/drill and filling with composite resin
- Caries involving the root, Removal of the decayed tooth using small root canal files and filling with gutta-percha
- Final restoration of the tooth is done by placing a ceramic crown on the affected tooth
- Post-operative care

Follow up:

- After 1 week

##### Medicines:

<p>Pre-operative: Prophylactic antibiotics in patients with Cardiovascular disease or prosthetic implants</p> <ul style="list-style-type: none"> <li>• Adults: 2g of Amoxicillin orally an hour prior to the procedure</li> <li>• Children: Amoxicillin 50 mg/kg orally</li> </ul>
<p>Intra-operative</p> <ul style="list-style-type: none"> <li>• Local Anaesthesia: 2% Lidocaine and Epinephrine</li> </ul>
<p>Post-operative</p> <ul style="list-style-type: none"> <li>• Adults: Paracetamol 1000 mg every 6 hours for pain control</li> <li>• Children: Paracetamol 10-15mg/kg/dose every 6 hours</li> <li>• Patients with Diabetes/Cardiovascular disease/Stents/Prosthetic joints: 500mg of Amoxicillin orally three times a day for 5 days</li> </ul>

##### Supplies:

- Filling material

- Gauze
- Sterile gloves
- Syringe for local anaesthesia

##### Equipment:

- Dental chair
- Rubber dam
- Ultrasonic bur/drill
- Root canal files

##### Lab Test:

- Blood glucose level (In patients with history of Diabetes)
- Hepatitis B and C test (In patients with history of liver diseases)
- Prothrombin time test (In patients with cardiovascular diseases)
- Peri-apical radiograph

##### HMIS Tools:

1. Recording Tool: Outdoor and indoor register, Referral Slip
2. Reporting Tool: Monthly Report
3. Client/Patient Card:
4. IEC material:

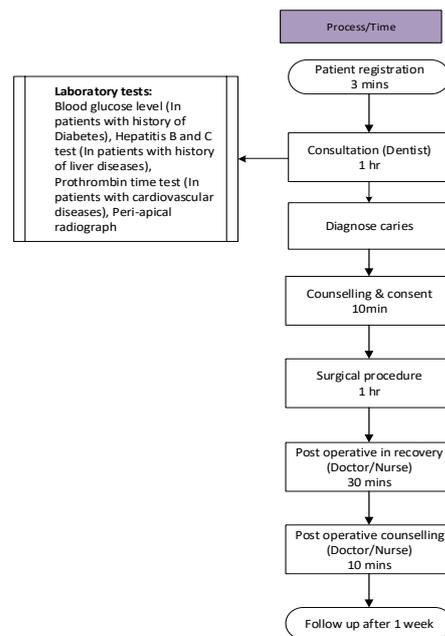
##### Supervision:

- Senior Dental Surgeon at the private clinic or dental hospital, EDO Health, Deputy DHO

##### National Training Curriculum/Guidelines:

- Not available

D. Health Services Cluster  
D.18. Surgery Package of Services  
D.18.171a. Treatment of Caries  
Platform: PHC Level  
• RHC/Health Centre/Dispensary/GP Clinic/Nursing Home





Preliminary Prioritized Interventions for the  
**ESSENTIAL PACKAGE OF HEALTH  
SERVICES**

**CLUSTER**

***D. HEALTH SERVICES CLUSTER***

**PACKAGE**

**D19. Rehabilitation Package of Services**



## D. Health Services Cluster

### D.19. Rehabilitation Package of Services

#### D.19.198a. Identification/screening of the early childhood development issues motor, sensory and language stimulation

DCP3 code: C53

##### Platform:

Community Level

- LHW

##### Process:

Visit

Consultation (LHW)

- History
- Asses motor, sensory and language stimulation of children
- Referral based upon the level of stimulation

Recommended Method

- Screening
- Informal / formal assessment
- Parent/caregiver education session

Follow up

- Provide follow up counselling on repeated visits

##### HMIS Tools:

1. Recording Tool: Treatment register
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet, Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO, District Coordinator, ADC, LHS

##### Standard Protocol:

- Services offered to children

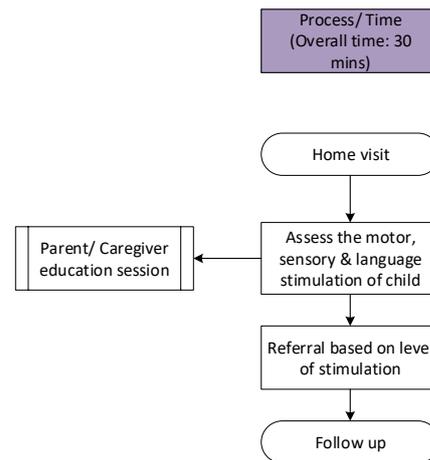
##### National Training Curriculum/ Guidelines:

- Not available

##### Reference Material:

- Early Intervention Therapy Program Guidelines 2009
- World report on disability 2011

D. Health Services Cluster  
D.19. Rehabilitation Package of Services  
D.19.198a. Identification/screening of the early childhood development issues related motor, sensory and language stimulation  
Platform: Community Level  
• LHW



## D. Health Services Cluster

### D.19. Rehabilitation Package of Services

#### D.19.198b. Early childhood development rehabilitation interventions including motor, sensory and language stimulation

DCP3 code: C53

##### Platform:

PHC Level

- 8-6 BHU/ 24-7 BHU/ RHC/ MCH Centre/ Health Centre/ GP Clinic/ Nursing Home

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse)

- History
- Eligibility assessment
- Provide rehabilitative measures (Rehabilitation medicine, therapy)

- Education and counselling
- Referral based upon the level of stimulation

Recommended Method

- Screening
  - Informal/ formal assessment
  - Parent/ Caregiver education session
  - Arranging services and supports with families
- Follow up

- Follow up according to healthcare provider advice

##### HMIS Tools:

1. Recording Tool: OPD ticket, OPD register, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow-up visit card
4. IEC Material: Leaflet, Flipchart

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS

##### Standard Protocol:

- Services offered to children

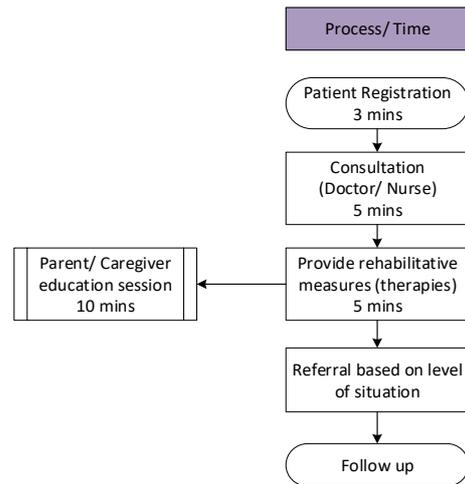
##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Early Intervention Therapy Program Guidelines 2009
- World report on disability 2011

D. Health Services Cluster  
D.19. Rehabilitation Package of Services  
**D.19.198b. Early childhood development rehabilitation interventions including motor, sensory and language stimulation**  
Platform: PHC Level  
• 8-6 BHU/ 24-7 BHU/ RHC/ MCH Centre/ Health Centre/ GP Clinic/ Nursing Home



## D. Health Services Cluster

### D.19. Rehabilitation Package of Services

#### D.19.201. Pressure area prevention and supportive seating interventions for wheelchair users

DCP3 code: C56

##### Platform:

Community Level

- LHW

##### Process:

Home visit

Counselling and advise

Recommended Method

- Supportive seating
  - Education of the carers with regards to seating and postural support requirements of the user
- This includes the size of the wheelchair, the type of cushion, and the adjustability and ergonomic factors of the wheelchair. All wheelchairs should be provided with a cushion that is appropriate to manage the user's risk of developing pressure sores
- Advise on positioning and cleaning of wound
  - Repositioning of the patient
  - Use of supportive surface and air mattresses
  - Cleaning
  - Putting on a bandage

Refer-If needed

##### HMIS Tools:

1. Recording Tool: Treatment register
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet

##### Supervision:

- LHS

##### National Training Curriculum/ Guidelines:

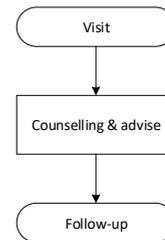
- Available

##### Reference Material:

- <https://www.mayoclinic.org/diseases-conditions/bed-sores/diagnosis-treatment/drc-20355899>

D. Health Services Cluster  
D.19. Rehabilitation Package of Services  
D.19.201. Pressure area prevention and supportive seating interventions for wheelchair users  
Platform: Community level  
• LHW

Process/ Time  
(Overall time: 15 mins)



## D. Health Services Cluster

### D.19. Rehabilitation Package of Services

#### D.19.205. Basic management of musculoskeletal and neurological injuries and disorders such as prescription of simple exercises and sling or cast provision

DCP3 code: HC64

##### Platform:

PHC Level

- 8-6 BHU/ 24-7 BHU/ RHC/ Health Centre/ GP Clinic

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/ Nurse/ LHV)

##### • History

- Mechanism of injury and progress of symptoms over time
- Previous episodes of injury
- Past history/drugs/allergy
- Level of activity in job or sport
- PQRST of pain
  - P—provoking and palliative factors, Q—quality, R—referred pain, S—systemic symptoms/associate symptoms, T—timing

##### • Clinical examination

- Vital signs—particularly temperature and pulse rate
- Inspection (discoloration, swelling, or deformity)
- Palpation (looking for tenderness and deformity)
- Assess proximal joints: Range of motion (both active and passive)
- Neurovascular examination: Spine
- Examination of chest and abdomen if indicated

Laboratory Test (Lab technician) if required

Recommended Method

##### • Muscle

- Closed wounds: R.I.C.E.R. regime
  - (R) rest (I) ice, (C) compression, (E) elevation and obtaining a (R) referral for appropriate medical treatment (Anti-tetanus toxoid if apparent abrasions)
- Open wounds: Cleansing of the wound, Small bandages may be applied but tactical situations will usually preclude applying field dressings, Anti-tetanus toxoid, Referral if needed

##### • Joint Wounds

- Treat as any case of trauma by starting management of airway, breathing, circulation, disabilities, and patients' environment (ABCDE)
- Control haemorrhage
- Treatment for shock
- DO NOT re-place protruding bone or explore the wound

##### • Neurological Injuries

- Airway management and breathing assessment (essential to avoid hypoxia and hypercapnia)
- Circulation & Disability assessment
- Wound care and Anti-tetanus toxoid
- Imaging (X-ray, CT scan)
- Referral if needed

Pharmacy (Dispenser)

Follow up

##### Medicines:

Analgesic	• Paracetamol 500mg SOS
Muscle relaxant	• Baclofen 5mg-20mg

Sedative/ Hypnotic (if need be)	• Alprazolam 1mg
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##### Supplies:

- IV set with fluids (Normal saline, hartman's solution)
- Syringe with evacuator, catheter, cannula
- Pyodine, gauze, bandage, casts, splint, suture with needle

##### Lab Test:

- Full Blood Count (FBC), Urea Electrolytes and Creatinine (UEC), Baseline glucose test, X-ray, CT Scan (if required)

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Patient file
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow-up card
4. IEC material:

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Management of Musculoskeletal Injuries
- Early Management of Neurological Injuries

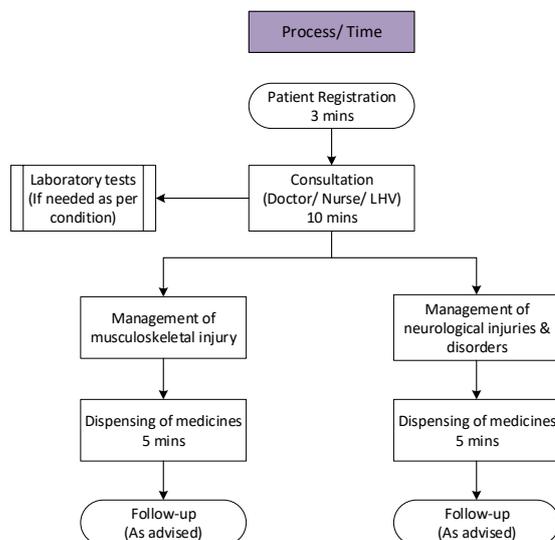
##### National Training Curriculum/ Guidelines:

- Not Available

##### Reference Material:

- Musculoskeletal Injuries: Types and Management Protocols for Emergency Care, Ahmad Subhy Alsheikhly and Mazin Subhy Alsheikhly
- 9 Assessment and Care of Musculoskeletal Problems C R Fitzsimmons, J Wardrope
- <https://trauma.reach.vic.gov.au/guidelines/traumatic-brain-injury/early-management>

D. Health Services Cluster
D.19. Rehabilitation Package of Services
D.19.205. Basic management of musculoskeletal and neurological injuries and disorders such as prescription of simple exercises and sling or cast provision
Platform: PHC Level
• 8-6 BHU/ 24-7 BHU/ RHC/ Health Centre/ GP Clinic



**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH  
SERVICES**

**CLUSTER**

***D. HEALTH SERVICES CLUSTER***

**PACKAGE**

**D21. Pathology Package of Services**



## D. Health Services Cluster

### D.21. Pathology Package of Services

#### D.21.215. Health centre pathology services

##### DCP3 code: HC68

##### **Platform:**

PHC Level

- 8-6 BHU/ 24-7 BHU/RHC/ Health Centre/ GP Clinic

##### **Process:**

##### Preanalytical phase:

- Selecting the appropriate test, obtaining the specimen, labelling with the patient's name, timely transport to the laboratory, accession in the laboratory, and processing prior to testing

##### Laboratory Test (Laboratory Technicians, Laboratory Assistant):

- Serving mostly outpatients in a community, performing point-of-care testing (POCT)/single-use tests and referring more complex work to either tier 2 or 3

##### Postanalytical phase:

- Preparation of a report detailing the analysis and interpretation of the test, authorizing the report, transmission of the report to the clinician, and action by the clinician

##### **Lab Test:**

- POCT and single-use tests:
  - Malaria, TB, Urinalysis, Pregnancy tests
  - Blood glucose
  - Haemoglobin/ haematocrit
  - ESR
  - Blood typing
  - Hep B and Hep C
  - HIV rapid testing
- Slide microscopy:
  - Malaria
  - Wet preparation
  - Stool parasites
- Preparation of fine-needle aspiration cytology (FNAC) and tissue specimens to send to tier 2 facilities

##### **HMIS Tools:**

1. Recording Tool: Laboratory Test Record
2. Reporting Tool:
3. Client/Patient Card:
4. IEC material:

##### **Supervision:**

- EDO Health, Deputy DHO, THO

##### **National Training Curriculum/ Guidelines:**

- Not Available

##### **Reference Material:**

- Clinical Services Capability Framework- Pathology Services

- An Essential Pathology Package for Low- and Middle-Income Countries (Kenneth A. Fleming, MBChB,1,2 Mahendra Naidoo, MBChB,1 Michael Wilson, MD,4,5 John Flanigan, MD,1 Susan Horton, PhD,6 Modupe Kuti, MBBS,7 Lai Meng Looi, MBBS,8 Chris Price, PhD,3 Kun Ru, MD,9 Abdul Ghafur, MD,11 Jianxiang Wang, MD,10 and Nestor Lago, MD12)



# First Level Hospital (FLH) level

## EPHS Interventions Description



**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH SERVICES**

**First Level Hospital Interventions**

**CLUSTER (A)**

***A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster***



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.9. Management of preterm premature rupture of membranes, including administration of antibiotics

##### DCP3 code: HC3

##### Platform:

First Level Hospital

- MCH Hospital/THQ/DHQ/Small Hospital (Pvt)

##### Process:

Patient registration at reception (Receptionist)  
Consultation (Doctor/Nurse/LHV)

- History
- Clinical examination  
Laboratory Test (Lab Technician)
- Lab test /Ultrasound (if needed)  
Recommended Method (Doctor/Nurse/LHV)
- Antibiotics for women with preterm pre-labour rupture of membranes and/or clinical signs of infection
- Antenatal corticosteroid therapy to improve fetal lung maturity and chances of neonatal survival from 24 weeks to 34 weeks of gestation
- Magnesium sulfate up to 32 weeks of gestation to prevent preterm birth-related neurologic complications
- Monitor maternal and fetal condition (pulse, blood pressure, signs of respiratory distress, uterine contractions, loss of amniotic fluid or blood, fetal heart rate, fluid balance)  
Pharmacy (Dispenser)
- Dispensing of medicine  
Follow up
- After 7/8 days

##### Medicines:

- Betamethasone 12 mg IM, two doses 24 hours apart OR Dexamethasone 6 mg IM, four doses 12 hours apart
- Amoxicillin 500 mg every eight hours for seven days OR Erythromycin 250 mg every six hours for 10 days (or until birth) OR Ampicillin 2 g IV every six hours

##### Supplies:

- Delivery kit
- IV set
- Syringe, needle, cannula, tourniquet

##### Equipment:

- Stethoscope, sphygmomanometer, thermometer

##### Lab Test:

- Routine blood and urine tests
- Ultrasound (if needed)

##### HMIS Tools:

- Recording Tool: OPD Ticket, OPD and indoor register, Patient file, Partograph, Referral, Abstract register
- Reporting Tool: Monthly report
- Client/Patient Card: MCH card, Discharge slip
- IEC Material:

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS

##### Standard Protocol:

- Antibiotics for women with preterm pre-labour rupture of membranes and/or clinical signs of infection
- Antenatal corticosteroid therapy to improve fetal lung maturity and chances of neonatal survival from 24 weeks to 34 weeks of gestation
- Magnesium sulfate up to 32 weeks of gestation to prevent preterm birth-related neurologic complications

##### National Training Curriculum/ Guidelines:

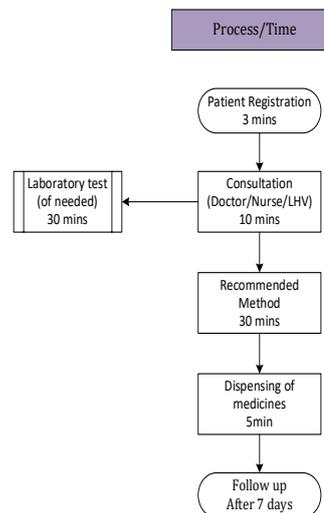
- Available

##### Reference Material:

- Midwifery Training Manual

##### IMPAC guidelines WHO 2017

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.1. Maternal and New-born Health Package of Services  
A.1.9 Management of ~~preterm~~ premature rupture of membranes, including administration of antibiotics  
Platform: First Level Hospital  
• MCH Hospital/THQ/DHQ/Small Hospital (Pvt)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.12. Management of Neonatal sepsis, pneumonia and meningitis using injectable and oral antibiotics

DCP3 code: HC6

##### Platform:

First Level Hospital

- MCH Hospital/THQ/DHQ/Small Hospital (Pvt)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/LHV/Nurse)

- History
- Clinical examination
- Differential Diagnosis
- Prereferral treatment if required
- Referral if required

##### Recommended Method

- Severe Pneumonia or Very Severe Disease: Any general danger sign or Stridor in calm child. Admit and treat as per guidelines
- Pneumonia: Chest indrawing or fast breathing. Treat as per guidelines
- No signs of pneumonia or very severe disease: No pneumonia: Cough or cold
- Neonatal Sepsis & Neonatal Meningitis: Admit and treat as per guidelines

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- 3 days after discharge

##### Medicines:

Severe Pneumonia	<ul style="list-style-type: none"> <li>• Give benzylpenicillin (50 000 units/kg IM or IV every 6 hours) for at least 3 days.</li> <li>• When the child improves, switch to oral amoxicillin (25 mg/kg 2 times a day). The total course of treatment is 5 days..</li> </ul>
Very Severe Disease:	<ul style="list-style-type: none"> <li>• Give ampicillin (50 mg/kg IM every 6 hours) and gentamicin (7.5 mg/kg IM once a day) for 5 days; then, if child responds well, complete treatment at home or in hospital with oral amoxicillin (15 mg/kg three times a day) plus</li> <li>• IM gentamicin once daily for a further 5 days.</li> </ul>
Pneumonia	<ul style="list-style-type: none"> <li>• Give oral Amoxicillin for 5 days</li> <li>• If wheezing (or disappeared after rapidly acting bronchodilator) give an inhaled bronchodilator for 5 days</li> </ul>
Neonatal Sepsis	<ul style="list-style-type: none"> <li>• IM/IV: 50 mg/kg every 12 hours (first week of life); Every 8 hours (week 2-4 of life) for 10 days PLUS</li> <li>• Gentamycin:</li> </ul>

	<p>Ist week of life – 3mg/kg/dose for low birth weight and 5mg/kg/dose for normal weight once daily</p> <p>Weeks 2-4 of life – 7.5mg/kg/dose once daily for 10 days</p>
Meningitis	<ul style="list-style-type: none"> <li>• Chloramphenicol: 25 mg/kg IM (or IV) every 6 hours plus ampicillin: 50 mg/kg IM (or IV) every 6 hours (5 days)</li> <li>OR</li> <li>• Chloramphenicol: 25 mg/kg IM (or IV) every 6 hours plus benzylpenicillin: 60 mg/kg (100 000 units/kg) every 6 hours IM (or IV) (5 days)</li> </ul>

##### Equipment:

- Stethoscope, thermometer, tongue depressor

##### Lab test:

- Blood C/P, Blood culture, Lumbar Puncture

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Referral, Abstract register
2. Reporting Tool: Monthly
3. Client/Patient Card: Follow-up card, MCH Card
4. IEC Material: Flip Chart

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS, District Coordinator, ADC

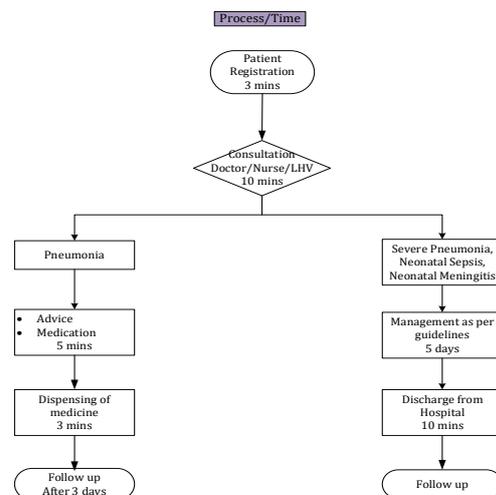
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- Pocket book of hospital care for children WHO 2019

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.1. Maternal and New-born Health Package of Services  
 A.1.12. Management of Neonatal sepsis, pneumonia and meningitis using injectables and oral antibiotics  
 Platform: First Level Hospital  
 • MCH Hospital/THQ/DHQ/Small Hospital (Pvt)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.17. Screening and management of diabetes (gestational diabetes or pre-existing type II diabetes)

DCP3 code: HC10

**Platform:**

- First Level Hospital
  - MCH Hospital/THQ/DHQ/Small Hospital (Pvt)

**Process:**

Patient registration at reception (Receptionist)  
 Consultation (Doctor/LHV/Nurse)

- Medical History
- Laboratory Test/Ultrasound (Lab Technician)

- Lab test (if needed)

Recommended Method

- Screening of Diabetes
- Management through oral hypoglycemics/ basal insulin
- Advise for healthier life style, weight reduction & physical activity

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- As per doctor's advice

**Medicines:**

- Metformin from 500 to 2000 mg per day
- Insulin algorithms start with 10 unit or 0.2 units/kg
- and titrate once or twice weekly at 1 to 2 units each time

**Supplies:**

- Blood glucose meter and strips

**Lab Test:**

- Fasting blood glucose

**HMIS Tools:**

- Recording Tool: OPD Ticket, OPD and indoor register, Patient file, abstract register
- Reporting Tool: Monthly

3. Client/Patient Card

4. IEC Material: diabetes control charts

**Supervision:**

- EDO Health, Deputy DHO, THO, AIHS, District Coordinator, ADC

**Standard Protocol/ Guidelines:**

- IDF Clinical Practice Recommendations for managing Type 2 Diabetes in Primary Care

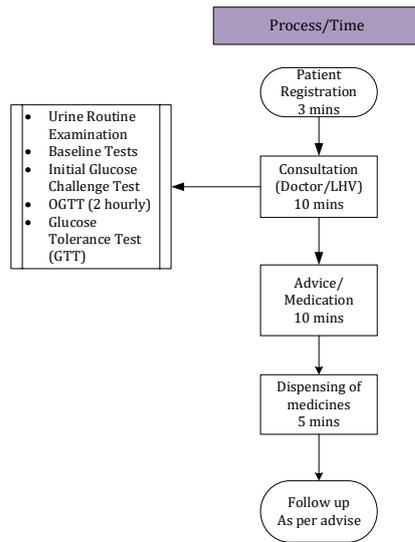
**National Training Curriculum/ Guidelines:**

- Not available

**Reference Material:**

- International Diabetes Federation 2017

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.1. Maternal and New-born Health Package of Services  
 A.1.17. Screening and management of diabetes (gestational diabetes or pre-existing type II diabetes)  
**Platform:** First Level Hospital  
 • MCH Hospital/THQ/DHQ/Small Hospital (Pvt)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.19. Surgical termination of pregnancy by maternal vacuum aspiration and dilatation & curettage (Also included in Surgery package of services)

DCP3 code: FLH10

##### Platform:

First Level Hospital

- MCH Hospital/THQ/DHQ/Small Hospital (Pvt)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse/LHV)

- History
- Clinical examination
- Counselling for the termination of Pregnancy
- Give pain killer and encourage the woman to eat, drink and walk about as she wishes
- Procedure of maternal vacuum aspiration and dilatation & curettage
- Offer other health services, if possible, including tetanus prophylaxis, counselling and a family planning method
- Discharge uncomplicated cases in one to two hours

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- Advice women to watch for symptoms and signs requiring immediate attention: - prolonged cramping (more than a few days) - prolonged bleeding (more than two weeks) - bleeding more than normal menstrual bleeding - severe or increased pain - fever, chills or malaise - fainting)

##### Medicines:

- Tablet Paracetamol 500mg/ 1 dose pre-procedure
- Lidocaine (Paracervical block) 5%
- Oxytocin 10 units IM
- Ergometrine 0.2 mg IM

##### Supplies:

- IV set including cannula, syringe
- D&C kit

##### Equipment:

- Stethoscope, sphygmomanometer, thermometer
- OT equipment

##### Lab Test:

- Ultrasound (if needed)

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD & indoor register, Patient file, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Discharge slip
4. IEC Material:

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS

##### Standard Protocol:

- Section 4: Procedures- Dilation and Curettage

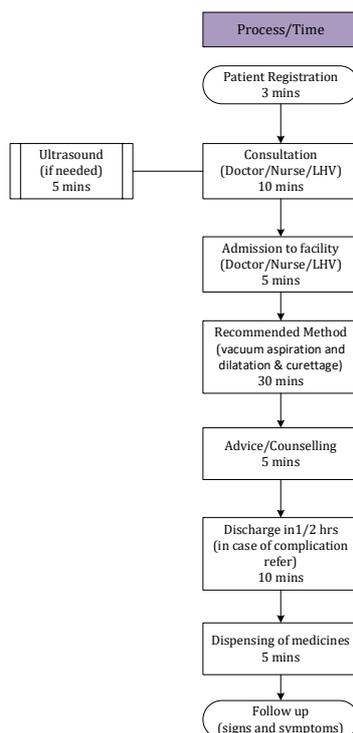
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- IMPAC Guidelines WHO 2017

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.1. Maternal and New-born Health Package of Services  
A.1.19. Surgical termination of pregnancy by maternal vacuum aspiration and dilatation & curettage  
(Also included in Surgery package of services)  
Platform: First Level Hospital  
• MCH Hospital/THQ/DHQ/Small Hospital (Pvt)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.20. Detection and management of fetal growth restriction

DCP3 code: FLH1

##### Platform:

First Level Hospital:

- MCH Hospital/THQ/DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Specialist (Gyn/Obs), Nurse)

- History
- Clinical examination (Body Weight, Blood pressure, nutrition profile, cardiovascular examination, etc.)
- Refer if diagnosed at < 32 weeks; Length of stay (NVD 1 day, C-section 2 days), Laboratory Test (Lab Technician, Radiologist)
- Ultrasound (fundal height measurements and sonographic fetal weight estimation) (14 weeks gestation-for FGR, if there is no risk, scan at 28-30 weeks)
- Doppler – Only if IUGR is detected; CTG – Only if IUGR is detected
- Routine Blood /Urine test; Fasting Blood Sugar

##### Causes /Risk factors:

###### Maternal

- Parity (Grand multipara), Malnutrition, low gestational weight gain, Overweight, Previous IUGR pregnancy, Extremes of maternal age (<16 years, >40 years), Assisted reproductive techniques, Multiple pregnancies, Maternal systemic infections, Uterine malformations, Low socio-economic status, Hypertension/ pre-eclampsia, Medical disorders (Systemic lupus erythematosus, pre-existing diabetes, renal disease, restrictive lung disease, heart disease, anemia/ haemoglobinopathy)

###### Fetal

- Congenital malformations, Intrauterine infections (CMV, Toxoplasmosis, Rubella, Varicella, Tuberculosis, HIV, Syphilis, congenital, Malaria)

###### Environmental

- Smoking, High altitude/ hypoxia, Irradiation, Exposure to teratogens (Warfarin, anti-epileptic drugs, methotrexate)

##### Recommended Method

- Ultrasound Monitoring from 14th Week of gestation (10 times), If diagnosed as FGR repeat every 2-weekly interval (Fetal biometry should be assessed no more frequently than every 2 weeks, Amniotic fluid volume and umbilical artery doppler, Prenatal corticosteroids- 24 and 34 (Multiple courses of steroids are not recommended)
  - Doppler is recommended from 26 weeks gestation in 2 to 4-weekly intervals until birth (2-4 times), CTG Monitoring (If there is reduced end-diastolic flow in the umbilical artery (AEDF) prior to 34 weeks' gestation), Plan for the Expedite Delivery (NVD/C-Section), Pharmacy (Dispenser)
  - Dispensing of medicine
- Follow up

- Antenatal visit after every two weeks for 20 weeks (10 visits); One postnatal visit

##### Medicines:

Prenatal corticosteroids (28-36+6 weeks) (single course in a timed manner) - betamethasone 12 mg IM, two doses 24 hours apart

Magnesium sulfate (Before 34weeks at the time of planned delivery) - IV bolus of 4 g given as single dose

##### Equipment & Supplies:

- Stethoscope, sphygmomanometer, thermometer, fetoscope, CTG, Ultrasound, D/Syringes

##### Lab Test:

- Complete Blood Count, Blood grouping, Hepatitis B and C, Blood Sugar (FBS), Creatinine if needed, Rubella, Urine DR, Ultrasound (Doppler, Fetal biometry)

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD and Indoor register, Patient file, Referral, abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Discharge slip
4. IEC Material: Brochures, Pamphlets

##### Supervision:

- EDO Health, MS Hospital, DHO, THO

##### Standard Protocol:

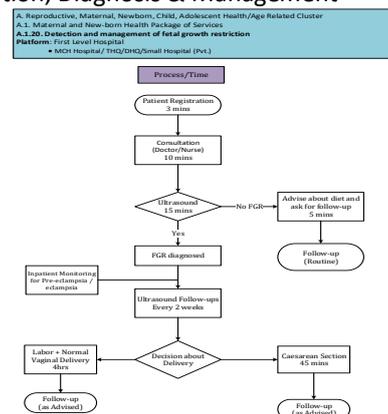
- Ultrasound Monitoring; Expedite Delivery of the baby

##### National Training Curriculum:

- Not available

##### Reference Material:

- Clinical Practice Guideline Fetal Growth Restriction; Recognition, Diagnosis & Management



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.20. Detection and management of fetal growth restriction

DCP3 code: FLH1

##### Platform:

First Level Hospital:

- MCH Hospital/THQ/DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Specialist (Gyn/Obs), Nurse)

- History
- Clinical examination (Body Weight, Blood pressure, nutrition profile, cardiovascular examination, etc.)
- Refer if diagnosed at < 32 weeks; Length of stay (NVD 1 day, C-section 2 days), Laboratory Test (Lab Technician, Radiologist)
- Ultrasound (fundal height measurements and sonographic fetal weight estimation) (14 weeks gestation-for FGR, If there is no risk, scan at 28-30 weeks)
- Doppler – Only if IUGR is detected; CTG – Only if IUGR is detected
- Routine Blood /Urine test; Fasting Blood Sugar

##### Recommended Method

- Ultrasound Monitoring from 14th Week of gestation (10 times)
- If diagnosed as FGR repeat every 2-weekly interval (Fetal biometry should be assessed no more frequently than every 2 weeks, Amniotic fluid volume and umbilical artery doppler, Prenatal corticosteroids- 24 and 34 (Multiple courses of steroids are not recommended)
- Doppler is recommended from 26 weeks gestation in 2 to 4-weekly intervals until birth (2-4 times)
- CTG Monitoring (If there is reduced end-diastolic flow in the umbilical artery (AEDF) prior to 34 weeks' gestation)
- Plan for the Expedite Delivery (NVD/C-Section)

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- Antenatal visit after every two weeks for 20 weeks (10 visits); One postnatal visit

##### Medicines:

Prenatal corticosteroids (28-36+6 weeks) (single course in a timed manner) - betamethasone 12 mg IM, two doses 24 hours apart

Magnesium sulfate (Before 34weeks at the time of planned delivery) - IV bolus of 4 g given as single dose

##### Equipment & Supplies:

- Stethoscope, sphygmomanometer, thermometer, fetoscope, CTG, Ultrasound, D/Syringes

##### Lab Test:

- Complete Blood Count, Blood grouping, Hepatitis B and C, Blood Sugar (FBS), Creatinine if needed, Rubella, Urine DR, Ultrasound (Doppler, Fetal biometry)

##### HMIS Tools:

5. Recording Tool: OPD Ticket, OPD and Indoor register, Patient file, Referral, abstract register
6. Reporting Tool: Monthly report
7. Client/Patient Card: Discharge slip
8. IEC Material: Brochures, Pamphlets

##### Supervision:

- EDO Health, MS Hospital, DHO, THO

##### Standard Protocol:

- Ultrasound Monitoring; Expedite Delivery of the baby

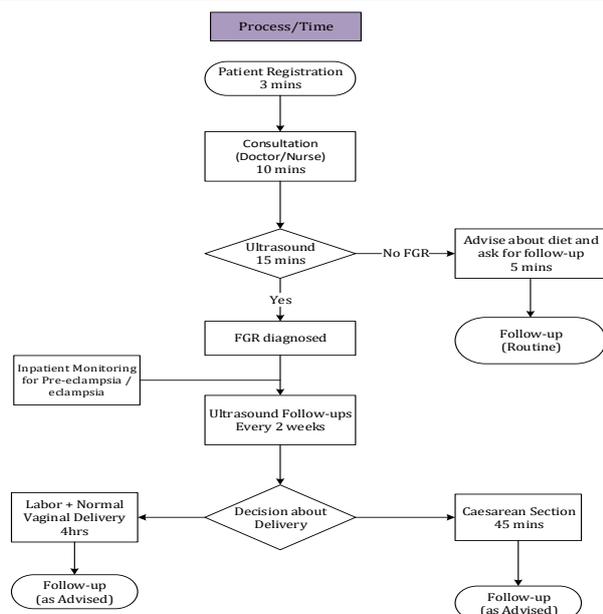
##### National Training Curriculum:

- Not available

##### Reference Material:

- Clinical Practice Guideline Fetal Growth Restriction; Recognition, Diagnosis & Management

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.1. Maternal and New-born Health Package of Services  
A.1.20. Detection and management of fetal growth restriction  
Platform: First Level Hospital  
• MCH Hospital/ THQ/DHQ/Small Hospital (Pvt.)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.21. Induction of labour post-term

DCP3 code: FLH2

##### Platform:

First Level Hospital

- MCH Hospital/ THQ/DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Specialist (Gyn/Obs), Nurse)

- History (41 weeks (>40 weeks + 7 days) of gestation, past C-section, No of pregnancies)

- Clinical examination

- Advice and counseling

- If Bishop score is 7 or more then induction can be done otherwise C-section

Laboratory Test (Lab Technician)

- Lab Test/Ultrasound if needed

Recommended Method of Post-term Labour (Doctor/Nurse)

- Sweeping membranes/Foley Catheter/Prostaglandins/Oxytocin

- Vital signs monitoring (woman's pulse, blood pressure)

- Monitor with CTG

- Hospital Admission or referral if needed

- Post-term labour Procedure

Discharge

- After 24 hours of delivery

Follow up

- After 7 days

##### Medicines:

**Oxytocin:** Infuse 2.5 units in 500 mL of Ringers Lactate (or normal saline) at 2.5 ml U per minute (i.e. 0.5 mL per minute or 10 drops per minute if the giving set has a drop factor of 20 drops/mL), In a primigravida: – Infuse oxytocin maximally at a higher concentration (10 units in 500 mL), (20 ml U/mL)

##### Prostaglandins

###### Oral:

- 25mcg (dissolve one 200 mcg tablet in 200 ml of water and administer 25ml of that solution as a single dose): if require repeat after 2 hours

###### Vaginal ( place in to the posterior fornix):

- 25 mcg (only if misoprostol is available in the form of 25 mcg tablet): if require repeat after 6 hours

##### Supplies:

- IV set including cannula

- Syringe

##### Equipment:

- Foley (24 F, 50 ml water), Balloon Catheter
- Stethoscope, sphygmomanometer, fetoscope
- OT Equipment
- Cardiac tocographic machine

##### Lab Test:

- Routine Blood test , Ultrasound CTG

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD and indoor register, Patient file, Partograph, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Discharge slip
4. IEC Material:

##### Supervision:

- EDO Health, MS hospital, DHO, THO

##### Standard Protocol:

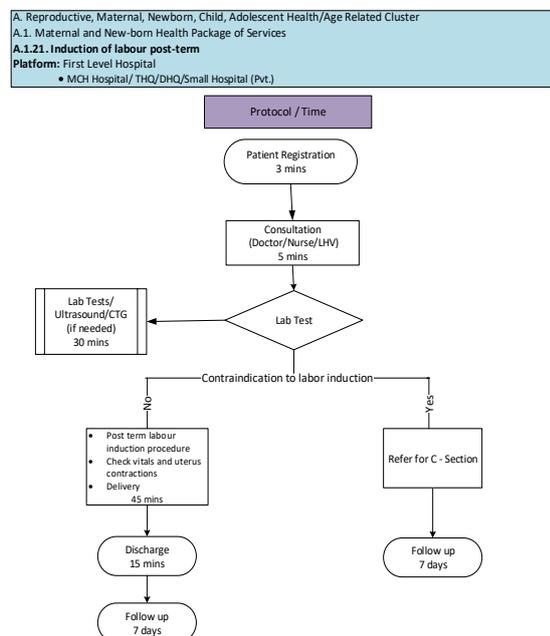
- Methods of Induction of Labour (P-20) Section 3: Procedures

##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- IMPAC Guidelines WHO 2017



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.22. Jaundice Management with Phototherapy

DCP3 code: FLH3

##### Platform:

First level Hospital

- MCH Hospital/THQ/DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration (Receptionist)

Consultation (Paediatrician, Nurse)

- History
- Clinical examination (Yellow palms or soles and yellow sclera)
- Clinical decision based on following criterion

*Treatment of jaundice based on serum bilirubin level*

Age	Phototherapy		Exchange transfusion <sup>a</sup>	
	Healthy infant $\geq 35$ weeks	Preterm infant < 35 weeks' gestation or any risk factors <sup>b</sup>	Healthy infant $\geq 35$ weeks	Preterm infant < 35 weeks' gestation or any risk factors
Day 1	Any visible jaundice <sup>c</sup>		260 $\mu\text{mol/l}$ (15 mg/dl)	220 $\mu\text{mol/l}$ (10 mg/dl)
Day 2	260 $\mu\text{mol/l}$ (15 mg/dl)	170 $\mu\text{mol/l}$ (10 mg/dl)	425 $\mu\text{mol/l}$ (25 mg/dl)	260 $\mu\text{mol/l}$ (15 mg/dl)
Day $\geq 3$	310 $\mu\text{mol/l}$ (18 mg/dl)	250 $\mu\text{mol/l}$ (15 mg/dl)	425 $\mu\text{mol/l}$ (25 mg/dl)	340 $\mu\text{mol/l}$ (20 mg/dl)

<sup>a</sup> Exchange transfusion is not described in this *Pocket book*. The serum bilirubin levels are included in case exchange transfusion is possible or if the infant can be transferred quickly and safely to another facility where exchange transfusion can be performed.

<sup>b</sup> Risk factors include small size (< 2.5 kg at birth or born before 37 weeks' gestation), haemolysis and sepsis.

<sup>c</sup> Visible jaundice anywhere on the body on day 1.

##### Laboratory Test (Lab Technician)

- Serum Bilirubin

##### Recommended Method

- Ensure hydration
- Initiate phototherapy at bilirubin levels well. Phototherapy to be administered till levels reach safe range (24- 96 hours) before having a measurable effect

##### Follow up

- After 2 days

##### Medicines:

- IV Infusion (R/Lactate)

##### Supplies:

- Drip set, D/Syringe, Butterfly cannula, Spirit Swab, arm band (or 24-gauge cannula)

##### Equipment:

- Incubator (Thermostatic, Digital, Servo Controlled)
- Radiant Heat Warmer

- Neonate Monitoring (Cardiac and Apnea Monitor)
- Trans-Cutaneous Bilirubin (TCB) Monitors

##### Lab Test:

- Serum Bilirubin
- Blood group (mother and child)
- Coombs test
- Glucose-6-phosphate dehydrogenase (G6PD) test if required 10% of all cases

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD and indoor register, Patient file, Referral
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up visit card, Discharge slip
4. IEC Material: Flipchart

##### Supervision:

- EDO Health, MS, DHO, THO,

##### Standard Protocol:

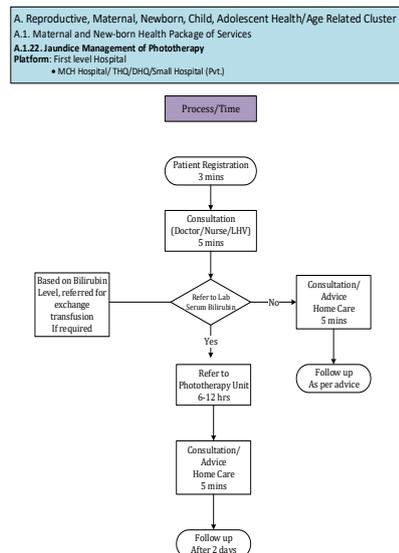
- Section 6 - Assess and Classify the Young Infant (0-2 months)
- Give Follow-Up Care for Acute Conditions (Jaundice)

##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- IMNCI National Guidelines 2019



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.23. Management of eclampsia with magnesium sulphate, including initial stabilization at health centres

DCP3 code: FLH4

##### Platform:

First level Hospital

- MCH Hospital/THQ/DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/LHV/Nurse)

- History
- Clinical Examination (pulse, blood pressure, respiration and pulse oximetry), reflexes and fetal heart rate hourly

Laboratory Test (Lab Technician)

- Lab tests/Ultrasound (if needed)

Recommended Method (Doctor/LHV/Nurse)

- Treatment Regime Intramuscular OR Intravenous

- If severe eclampsia then inpatient monitoring, stabilize and deliver
- If severe pre – eclampsia, with extreme prematurity before 32 weeks, preferable in utero transfer to tertiary care after initial stabilization

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- Twice Weekly

Advise woman to watch for symptoms and signs of severe pre-eclampsia. See her twice weekly to monitor blood pressure and fetal well-being and to assess for symptoms and signs of severe pre-eclampsia

##### Medicines:

Intramuscular Regimen	<p><b>Loading dose(IM):</b></p> <ul style="list-style-type: none"> <li>• 5 g of 50% magnesium sulfate solution with 1 mL of 2% lidocaine</li> </ul> <p><b>Maintenance dose (IM):</b></p> <p>Deep IM dose: 5g of 50% magnesium sulfate solution with 1 mL of 2% lidocaine every 4 hours with hourly assessment of deep tendon reflexes, respiratory rate and urine examination to detect magnesium toxicity</p>
Intravenous Regimen	<p><b>Loading dose:</b></p> <ul style="list-style-type: none"> <li>• 4g of 50% magnesium sulfate solution IV</li> <li>• If convulsions recur after 15 minutes 2g of 50% magnesium sulfate solution IV over 20 minutes</li> </ul> <p><b>Maintenance dose (IV):</b></p> <ul style="list-style-type: none"> <li>• Intravenous infusion 1g/ hour/day</li> </ul> <p>Continue treatment for 24 hours after</p>

	childbirth or the last convulsion, whichever occurs last.
Antidote	<u>1% calcium gluconate IV slowly over three minutes, until respiration begins to counteract the effect of magnesium sulfate</u>

##### Supplies:

- IV infusion set, Infusion pump

##### Equipment:

- Stethoscope, sphygmomanometer, thermometer
- Pulse oximetry (If feasible)

##### Lab Test:

- CBC, Spot Urinary protein test, ALT Ultrasound (to assess gestation age/IUGR) if needed

##### HMIS Tools:

1. Recording Tool: OPD Ticket, MCH register, Indoor register, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly
3. Client/Patient Card: MCH card, Discharge slip
4. IEC Material: Flipchart

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS, District Coordinator

##### Standard Protocol:

- Protocol for Intramuscular Regimen
- Protocol for Intravenous Regimen

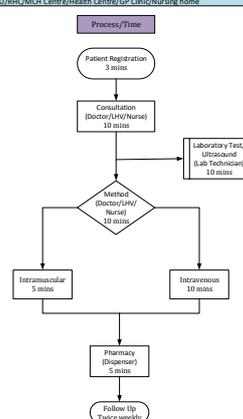
National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- IMPAC Guidelines WHO 2017

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.1. Maternal and New-born Health Package of Services  
 A.1.23. Management of eclampsia with magnesium sulphate, including initial stabilization at health centres  
 Platform: PHC Level  
 24.7 BHU/RHC/MCH Centre/Health Centre/GP Clinic/Nursing home



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.24. Management of maternal sepsis

DCP3 code: FLH5

##### Platform:

First Level Hospital

- MCH Hospital/THQ/DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Specialist (Gyn/Obs), Nurse)

- History
- General examination (Pulse, BP etc)
- Clinical examination (Fever, abdominal discomfort, vaginal discharge)

Laboratory Test (Lab Technician)

- Lab tests/Ultrasound (if needed)

Recommendation

- Antibiotics
  - Before Birth
  - Delivery
  - Post-Partum
- Monitoring of vital signs
- Shift/Refer the patient to the ICU if there are signs of collapse and organ failure

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- Post-natal visits

##### Medicines:

Triple drug regime

- Ampicillin + Gentamicin 2 g IV every six hours+5 mg/kg body weight IV every 24 hours (5-7 days) + Flagyl

Double drug regime:

- Clindamycin 600 mg IV every six to eight hours (5 days)
- Gentamicin was administered as 1–1.5 mg/kg IV or 240 mg IM single dose every day

##### Supplies:

- D/Syringes, IV infusion, gloves

##### Equipment:

- Stethoscope, sphygmomanometer, thermometer, Pulse Oximeter/ Cardiac Monitors

##### Lab Test:

- Blood Complete Picture, culture and sensitivity, Serum Electrolytes, Blood Urea and Nitrogen, Urinalysis with culture, High vaginal swab, Serum lactate, Chest X-rays Ultrasound, Pulse oximetry

##### HMIS Tools:

1. Recording Tool: OPD Ticket, Indoor register, Patient file, Referral, abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: MCH Card, Discharge slip
4. IEC Material:

##### Supervision:

- EDO Health, MS hospital, DHO, THO

##### Standard Protocols:

- Treatment of Maternal Peripartum Infections
- Refer if Circulatory Collapse/Organ failure is observed

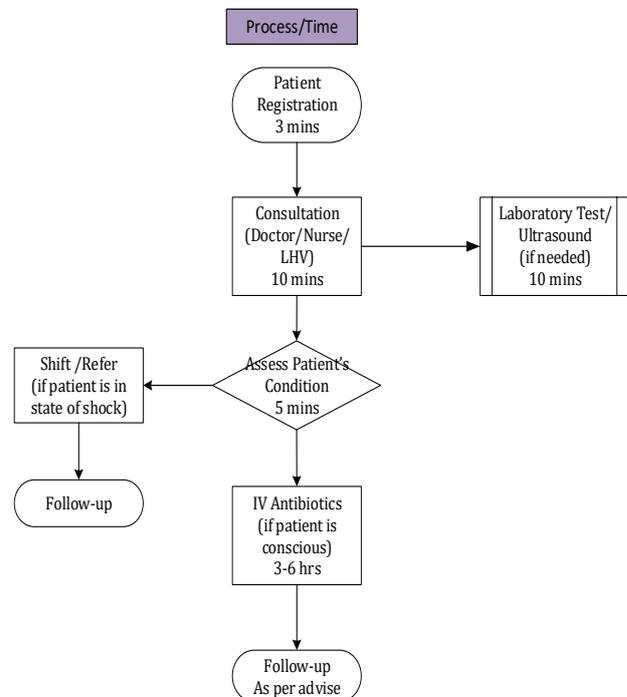
##### National Training Curriculum/ Guideline:

- Available

##### Reference Material:

- IMPAC Guidelines WHO 2017
- WHO Recommendations for Prevention and Treatment of Maternal Peripartum Infections

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.1. Maternal and New-born Health Package of Services  
 A.1.24. Management of maternal sepsis, including early detection at health centres  
 Platform: First Level Hospital  
 • MCH Hospital/ THQ/DHQ/Small Hospital (Pvt.)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.25. Management of new-born complications infections, meningitis, septicemia, pneumonia and other very serious infections requiring continuous supportive care (such as IV fluids and oxygen)

DCP3 code: FLH6

##### Platform:

First-level hospital

- /THQ/DHQ /Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Paediatrician, Doctor Nurse, )

- History
- Clinical examination (Clinical signs, Danger Signs and others)
  - Is the newborn able to drink / breastfeed?
  - Does the newborn vomit everything?
  - Has the newborn had convulsions?
  - Is the newborn lethargic or un-consciousness?
  - Is the newborn convulsing now?

Laboratory Test (Lab technician)

- Lab tests/Ultrasound (if needed)

Recommended Method (WHO guidelines for the following)

- Possible serious bacterial infection or very severe disease

- Severe Pneumonia

- Severe Meningitis

Pharmacy (Dispenser)

- Dispensing medicine

Length of stay

- On average 4 days

Follow up (Doctor)

- 4-7 days

##### Medicines:

**Severe bacterial infection** - Give first dose of 2 IM antibiotics--refer

Drug	Dosage	From	Weight of Infant in kg						
			1-< 1.5	1.5-< 2	2-2.5	2.5-< 3	3-3.5	3.5-< 4	4-< 4.5
<b>Ampicillin</b>	IM/IV: 50 mg/kg First week of life: every 12 h Weeks 2-4 of life: every 8 h	Vial of 250 mg mixed with 1.3 ml sterile water to 250 mg/1.5 ml	3-0.6 ml	0.6-0.9 ml	0.9-1.2 ml	1.2-1.5 ml	1.5-2.0 ml	2.0-2.5 ml	2.5-3.0 ml
<b>Gentamicin</b>	Preferably calculate exact dose based on the infant's weight								
	First week of life: Low-birth-weight infants: IM /IV: 3 mg/kg once a day Normal birth weight: IM/IV: 5 mg/kg per dose once a day	Vial 20 mg/2 ml Vial 80 mg/2 ml Dilute to 8 ml with sterile water to 10 mg/ml	0.3-0.5 ml	0.5-0.6 ml	0.6-0.75 ml	1.25-1.5 ml	1.5-1.75 ml	1.75-2 ml	2-2.25 ml
	Weeks 2-4 of life: IM/IV: 7.5 mg/kg once a day		0.75-1.1 ml	1.1-1.5 ml	1.5-1.8 ml	1.8-2.2 ml	2.2-2.6 ml	2.6-3.0 ml	3.0-3.3 ml

**Severe dehydration:** Give 100 ml/kg Ringer's Lactate Solution-refer

Age	First give	Then give
	30 ml/kg in	70 ml/kg in:
<b>Less than 12 months</b>	1 Hour	5 hours

### Severe Pneumonia

Drug	Dosage	From	Weight of Infant in kg						
			1-< 1.5	1.5-< 2	2-2.5	2.5-< 3	3- 3.5	3.5-< 4	4-< 4.5
<b>Ampicillin</b>	IM/IV: 50 mg/ kg First week of life: every 12 h Weeks 2-4 of life: every 8 h	Vial of 250 mg mixed with 1.3 ml sterile water to 250 mg/1.5 ml	3- 0.6 ml	0.6- 0.9 ml	0.9- 1.2 ml	1.2- 1.5 ml	1.5- 2.0 ml	2.0- 2.5 ml	2.5- 3.0 ml

### Severe meningitis

- The first-line antibiotics are ampicillin and gentamicin for 3 weeks
- Alternatively, give a third-generation cephalosporin, such as ceftriaxone (50 mg/kg every 12 h if < 7 days of age and 75 mg/kg after 1 week) or cefotaxime (50 mg/kg every 12 h if < 7 days or every 6-8 h if > 7 days of age), and gentamicin for 3 weeks.

### Convulsion

- Phenobarbital (loading dose 20 mg/kg IV)
  - If convulsions persist, give further doses of phenobarbital 10 mg/kg up to a maximum of 40 mg/kg. Watch for apnoea.
- Treat Hypoglycemia, give glucose IV or nasogastric ally (2 ml/kg of 10% glucose)

### Supplies:

- D/Syringes, Examination Gloves, Spirit Swabs, I/V Cannula, Drip set, Stethoscope,

### Equipment:

- Digital monitor, thermometer

- Equipped Baby nursery (Cardiac monitors, Warmers, Humidified oxygen, Apnea monitors, Incubators)

### Lab Test (If needed):

- Blood Complete Picture, Blood smear for malaria parasites, Blood glucose, Microscopy of CSF ,Urinalysis (including microscopy) ,Blood grouping and cross-matching ,Pulse oximetry, Chest X-ray, Blood cultures

### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD and indoor register, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up visit, Discharge slip
4. IEC Material:

### Supervision:

- EDO Health, MS hospital, DHO, THO'

### Standard Protocol:

Young infant for possible serious bacterial infection or very severe disease, pneumonia and local infection

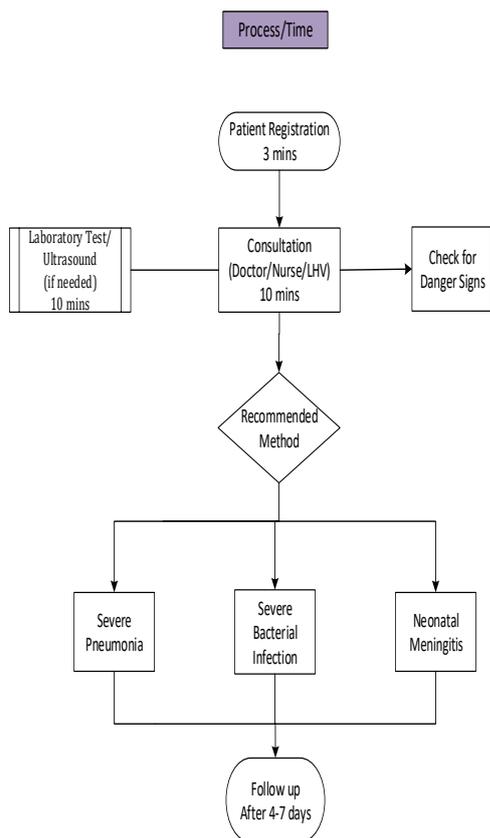
### National Training Curriculum:

- Available

### Reference Material

- WHO Library Cataloguing-in-Publication data: Pocket book of hospital care for children: guidelines for the management of common childhood illness.

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.1. Maternal and New-born Health Package of Services  
**A.1.25. Management of new-born complications, neonatal meningitis, and other very serious infections requiring continuous supportive care (such as IV fluids and oxygen)**  
**Platform:** First-level hospital  
 • MCH Hospital/ THQ/DHQ/Small Hospital (Pvt.)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.26. Management of preterm labour with corticosteroids, including early detection at health centers

DCP3 code: FLH7

##### Platform:

First Level Hospital

- MCH Hospital/THQ/DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Specialist (Gyn/Obs), Doctor/Nurse)

- History (gestational age of the fetus, last menstrual period, physical examination in early pregnancy, ultrasound performed in the first trimester, symphysis fundal height)
- Clinical examination (BP, Pulse rate, cervix effacement and dilatation for diagnosis)
- Hospital Admission OR Referral if needed
- Administration of corticosteroids to improve fetal lung maturity and chances of neonatal survival from 24 weeks to 34 weeks of gestation
- Refer if <32 weeks or < fetal weight < 1.8 kg

Laboratory Test (Lab Technician)

- Lab test/ Ultrasound (if needed)

Recommended Method

- Antenatal corticosteroid therapy (tocolysis) to improve fetal lung maturity and chances of neonatal survival from 24 weeks to 34 weeks of gestation
- Magnesium sulfate up to 32 weeks of gestation to prevent preterm birth-related neurologic complications
- Antibiotics (Erythrocin 500mg 8 hourly orally; avoid Augmentin) for women with preterm pre-labour rupture of membranes and/or clinical signs of infection

Discharge

- After 24 hours of delivery

Follow up

- After 7 days

##### Medicines:

- Betamethasone 12 mg IM, two doses 24 hours apart OR Dexamethasone 6 mg IM, four doses 12 hours apart
- If preterm birth does not occur within seven days after the initial course of corticosteroids, repeat a single course of antenatal corticosteroids

Tocolytic agent – Nifedipine 20 mg oral

(Give a loading dose of 20 mg nifedipine immediate-release capsule orally. - If required, give an additional 10 mg every 15 minutes up to a maximum of 40 mg in the first hour. - Follow up with 20 mg sustained-release tablet orally daily for up to 48 hours or until transfer is completed, whichever comes first

##### Supplies:

- Gloves, IV set including cannula, syringe Delivery kit

##### Equipment:

- Stethoscope, Sphygmomanometer
- Cardiac Tocographic Machine

##### Lab Test:

- Ultrasound, Complete Blood Count, High level vaginal swab, If suspected ruptured membranes, check PH (Ph Tests strips)

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD and indoor register, Patient file, Partograph, Referral, Abstract register,
2. Reporting Tool: Monthly Report
3. Client/Patient Card: Discharge slip
4. IEC Material:

##### Supervision:

- EDO Health, MS hospital, DHO, THO

##### Standard Protocol:

- “Preterm Labor” (S-144) Section 3 “Symptoms”

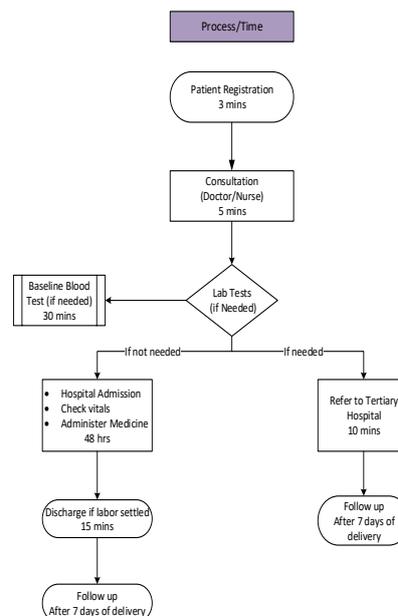
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- IMPAC Guidelines WHO 2017

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.1. Maternal and New-born Health Package of Services  
A.1.26. Management of preterm labour with corticosteroids, including early detection at health centres  
Platform: First Level Hospital  
• MCH Hospital/ THQ/DHQ/Small Hospital (Pvt.)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.27. Management of labour and delivery in high-risk women, including operative delivery (CEmONC)

DCP3 code: FLH8

##### Platform:

First Level Hospital

- MCH Hospital/THQ/DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (receptionist)

OR Receiving of patient on emergency trolley (Nurse)

Rapid Assessment and management (Doctor, Nurse)

- History from women (if conscious)/partner
- Prepare to rapidly treat and refer to a higher level of care, as needed
- Informed Consent
- General and Systematic Clinical Examination (Uterine size, heart rate of fetus, and bishop scoring)
- Support via IV infusion

Laboratory Test (Lab Technician)

- Lab test/Ultrasound (if needed)

Emergency Management (Specialist (Gyn/Obs), Doctor, Nurse)

Recommended Method

- Pre-Operative Care (OT preparation)
- Procedure (Assisted Vaginal Delivery, C-Section)
- Post-Operative Care (Recovery, NVD 2 days, Induction/C-section 3 days, Complicated Gyn surgeries 4 days)

Management of complication (IMPAC protocols for the following)

- Cesarean-Section
- Safe blood transfusion
- Providing oxytocin
- Manual Removal of Placenta
- Resuscitation of the newborn
- Blood Transfusion

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- After 7 days

##### Medicines:

Emergency Management	<ul style="list-style-type: none"> <li>• Infuse IV fluids (normal saline or Ringer's lactate) at a rate appropriate for the woman's condition (two if woman is in shock) via 16-gauge or largest available cannula or needle</li> </ul>
Assisted Vaginal	<ul style="list-style-type: none"> <li>• Local Anesthesia dose (Once per C-section patient)</li> </ul>

Delivery (for Episiotomy)	<ul style="list-style-type: none"> <li>○ Lidocaine 0.5% (40mL) - 4mg/kg of body weight</li> <li>○ Lidocaine (0.5%, 200mL) +Adrenaline (1:200,000) - 7mg/kg of body weight</li> </ul>
Caesarean Birth	<ul style="list-style-type: none"> <li>• Spinal (Subarachnoid) Anesthesia (Once per C-section patient) <ul style="list-style-type: none"> <li>○ 1.5 mL of the local anesthetic: 5% lidocaine in 5% dextrose+0.25 mL of adrenaline (1:1000) for longer than 45 minutes</li> </ul> </li> <li>• Ketamine Anesthesia (dose vary as per condition) (Once per C-section patient)</li> <li>• Analgesic Drugs (If fetus is alive) Promethazine 25 mg IV OR Nalbuphin, Toradol as per body weight IM every four hours (as needed)</li> <li>• Antacid (sodium citrate 0.3% 30 mL or magnesium trisilicate 300 mg) (3-5 days)</li> <li>• Oxygen at 6–8 L per minute by mask or nasal cannula</li> <li>• Prophylactic antibiotics (3-5 days) <ul style="list-style-type: none"> <li>• Ampicillin 2 g IV OR Cefazolin 2 g IV</li> </ul> </li> <li>• Complication: Therapeutic Antibiotics: serious infections of the pelvic organs (e.g. uterus, fallopian tubes, ovaries) or upper urinary tract</li> <li>• Ampicillin 2 g IV every six hours;</li> <li>• Less infection: amoxicillin 500 mg by mouth every eight hours may be used instead of ampicillin</li> <li>• Gentamicin 5 mg/kg body weight IV every 24 hours</li> </ul>
Induction of Labor	<ul style="list-style-type: none"> <li>• Prostaglandin E2: 3 mg pessary every 6 hours (only 2 doses in 24 hours) OR Oral Misoprostol: 25 mcg (one 200 mcg tb. /200 mL of water), 25 mL of that solution as a single dose every 2 hours (if needed) OR Vaginal Misoprostol: 25 mcg (only) every 6 hours (if needed) (two doses)</li> </ul>
Post-partum hemorrhage (PPH)	<ul style="list-style-type: none"> <li>• IV infusion and infuse isotonic crystalloids (e.g. normal saline or Ringer's lactate)</li> </ul>

	<ul style="list-style-type: none"> <li>Oxytocin 10 units IM (or IV as an infusion if an IV infusion line is already in place OR 15-Methyl Prostaglandin; F2 alpha 0.25 mg every 15 minutes, Eight doses (total 2 mg) OR Misoprostol PGE1; Repeat 200–800 mcg, not more than 1600 mcg</li> <li>Tranexamic acid; IV every 30 minutes if bleeding continues 3-4 times daily</li> </ul>
Eclampsia	<ul style="list-style-type: none"> <li>IV infusion and infuse IV fluids 1 L in 8 hours</li> <li>Magnesium sulfate (vary; Intramuscular and intravenous regimen)</li> <li>Intra-muscular Loading dose (IM): <ul style="list-style-type: none"> <li>4 g of 20% magnesium sulfate solution IV over five minutes.</li> </ul> Maintenance dose (IM): <ul style="list-style-type: none"> <li>Give 5 g of 50% magnesium sulfate solution with 1 mL of 2% lidocaine in the same syringe by deep IM injection into alternate buttocks every four hours. Continue treatment for 24 hours after birth or the last convulsion</li> </ul> </li> <li>Intravenous dose (IV) Loading dose: <ul style="list-style-type: none"> <li>Give 4g of 50% magnesium sulfate solution IV.</li> <li>If convulsions recur after 15 minutes, give 2 g of 50% magnesium sulfate solution IV over five minutes.</li> </ul> Maintenance dose (IV): <ul style="list-style-type: none"> <li>Give intravenous infusion 1g/ hour. Continue treatment for 24 hours after childbirth or the last convulsion</li> </ul> </li> </ul>
Manual Removal of Placenta (if needed)	<ul style="list-style-type: none"> <li>Ketamine injection; 50 mg/ml in 10-ml vial (Once)</li> </ul>
Monitoring Blood Transfusion	<ul style="list-style-type: none"> <li>15 minutes after starting the transfusion</li> <li>At least every hour during the transfusion</li> <li>At four-hour intervals after completing the transfusion</li> </ul>

**Supplies:**

- IV set, Blood transfusion set, Delivery Kit

**Equipment:**

- Stethoscope, sphygmomanometer, thermometer, CTG Machine, OT Equipment, Portogramf

**Lab Test:**

- Blood CP , Cross Matching (if needed)

**HMIS Tools:**

- Recording Tool: OPD Ticket, OPD and indoor register, Patient file, Abstract register, Referral, Partograph
- Reporting Tool: Monthly report
- Client/Patient Card: MCH card, Patient transfer record, Discharge slip
- IEC Material:

**Supervision:**

- EDO Health, MS hospital, DHO, THO, AIHS

**Standard Protocol:**

- Vaginal Bleeding in later pregnancy and labor of Section-2: Symptoms
- Manual Removal of Placenta of Section-3: Procedures

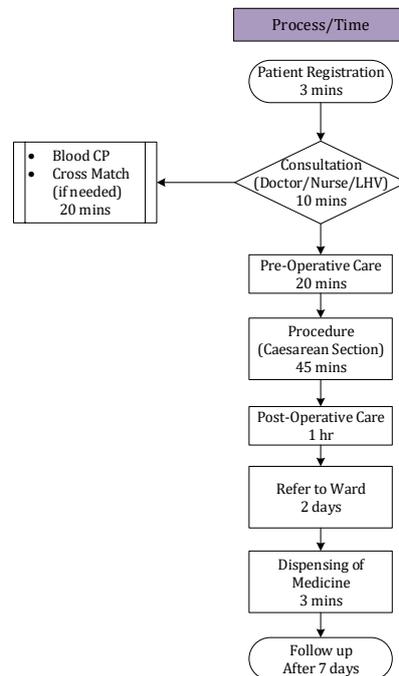
**National Training Curriculum/ Guidelines:**

- Available

**Reference Material:**

- IMPAC Guidelines WHO 2017

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.1. Maternal and New-born Health Package of Services  
A.1.27. Management of labour and delivery in high-risk women, including operative delivery (CEmONC)  
Platform: First level hospital  
• MGH Hospital/ THQ/DHQ/Small Hospital (Pvt.)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.28. Surgery for Ectopic Pregnancy

DCP3 code: FLH9

##### Platform:

First Level Hospital

- MCH Hospital/THQ/DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse)

- History
- Clinical examination
- Counselling and advice for surgery

Laboratory Test (Lab Technician)

- Lab tests/Ultrasound (If needed)

Recommended Method

For Unruptured Ectopic Pregnancy

- Pre-Operative Care (Minor O.T Preparation (Nurse/Technician), arrange blood
- Procedure (Salpingectomy/Salpingostomy)
- Offer other health services if possible
- Post-Operative Care (Nurse/Technician)
- Discharge

For Ruptured Ectopic Pregnancy

- Referral to Tertiary Care Facility

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- After 7 days
- Counselling

If salpingostomy was performed, advise the woman of the risk for another ectopic pregnancy and offer family planning

##### Medicines:

- |                      |  |
|----------------------|--|
| Salpingectomy        | <ul style="list-style-type: none"> <li>• Infuse IV fluids (normal saline or Ringer's lactate) at a rate appropriate for the woman's condition</li> <li>• Ampicillin 2 g IV OR cefazolin 2 g IV (3 days)</li> </ul> |
| Salpingostomy        | <ul style="list-style-type: none"> <li>• Clindamycin phosphate 600 mg IV every eight hours (3 days)</li> <li>• Gentamicin 5 mg/kg body weight IV every 24 hours (3 days), analgesics</li> </ul>                    |
| Post Procedural Care | <ul style="list-style-type: none"> <li>• (If there are signs of infection or the woman currently has a fever) I/V Augmentin 1-2 g 8 hourly (5 days)</li> </ul>   |

##### Supplies:

- IV set including cannula, syringe

##### Equipment:

- Stethoscope, sphygmomanometer, thermometer, Catheter, OT equipment

##### Lab Test:

- Complete Blood Count, B-HCG, Blood grouping , CT/BT (for hemorrhages), Pelvic Ultrasound (as per need)

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD & indoor register, MCH Register, Patient file, Referral
2. Reporting Tool: Monthly
3. Client/Patient Card: Family Planning card, Discharge slip
4. IEC Material: Leaflet, Flipchart

##### Supervision:

- EDO Health, Deputy DHO, THO, AIHS, District Coordinator

##### Standard Protocol:

- Starting an IV Infusion of Section-1 of Clinical Principles
- Salpingectomy for ectopic pregnancy of Section-3 Procedures

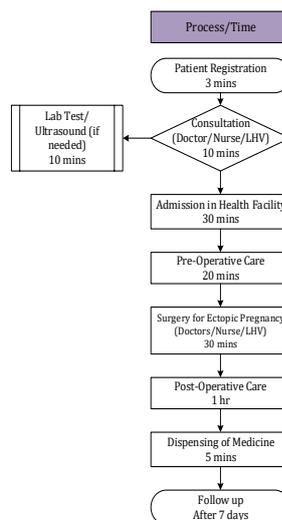
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- IMPAC Guidelines WHO 2017

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.1. Maternal and New-born Health Package of Services  
 A.1.28. Surgery for Ectopic Pregnancy  
 Platform: First Level Hospital  
 • MCH Hospital/ THQ/DHQ/Small Hospital (Pvt.)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.2. Child Health Package of Services

#### A.2.41. Among all individuals who are known to be HIV+, immediate ART initiation with regular monitoring of viral load (Also included in HIV package of services)

DCP3 code: HC13

##### Platform:

PHC Level **First Level Hospital (in selected DHQs)**

- Treatment Center for ART

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse)

- History
- Clinical examination
- Counselling for ART Initiation
- Treatment and Referral

Recommended Method

- Identification of high-risk individuals
- Pre-test counselling to individuals with positive signs
- Testing/Screening
- Provision of treatment
- Post-test counselling

Laboratory Test/Ultrasound (Lab Technician)

Screening for HIV positive status (using 2 different tests ELISA, 2 different rapid tests or Western Blot), Antibody test, HIV Viral Load, CD4 Count

Follow up

- Viral load is recommended as the preferred monitoring approach to diagnose and confirm ART failure

##### Medicines: ARV Regimens

###### 1<sup>st</sup> line:

- Zidovudine (250-300mg OD daily) + Lamivudine 150mg BD daily Or 300mg OD daily + Nevirapine (200 mg OD for 14 days, followed by 200 mg BD daily) (recommended 1st line) **OR**
- Zidovudine (250-300mg BD daily) + Lamivudine (150mg BD daily Or 300mg OD daily + Nevirapine 200 mg OD for 14 days, followed by 200 mg BD daily) + Efavirenz (600 mg OD daily) **OR**
- Stavudine (30 mg BD daily) + Lamivudine (150mg BD daily Or 300mg OD daily + Nevirapine 200 mg OD for 14 days, followed by 200 mg BD daily) **OR**
- Stavudine (30 mg BD daily) + Lamivudine (150mg BD daily Or 300mg OD daily + Nevirapine 200 mg OD for 14 days, followed by 200 mg BD daily) + Efavirenz (600 mg OD daily)

###### Paediatric:

- Zidovudine or Stavudine + Lamivudine + Nevirapine (preferred) or Efavirenz (for children >3 years)

###### 2<sup>nd</sup> line:

- Tenofovir (300 mg once daily) + Didanosine (400mg OD Daily >60kg or 250mg once daily <60kg) + Nelfinavir **OR**
- Tenofovir (300 mg OD daily) + Didanosine (400mg OD daily >60kg or 250mg once daily <60mg) + Saquinavir/ritonavir or Lopinavir/ritonavir

###### Paediatric:

- Abacavir (300mg BD daily+600mg OD daily) + Didanosine + Nelfinavir or Lopinavir/ritonavir or Saquinavir/ritonavir (only for children >25kg)

##### Supplies:

- HIV diagnostic test kits, Laboratory reagents and supplies for ARV treatment

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Abstract register
2. Reporting Tool: Monthly
3. Client/Patient Card:
4. IEC Material: Leaflet

##### Supervision:

- MS hospital, EDO Health, Deputy DHO

##### Standard Protocol:

- Section 2: HIV Testing and Counselling
- Section 3: Antiretroviral therapy

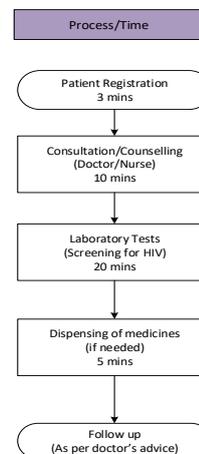
##### National Training Curriculum/Guidelines:

- Available

##### Reference Material:

- Consolidated Guidelines for the Prevention and Treatment of HIV and AIDS in Pakistan 2017

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.2. Child Health Package of Services  
A.2.41. Among all individuals who are known to be HIV+, immediate ART initiation with regular monitoring of viral load (Also included in HIV package of services)  
Platform: First Level Hospital  
• Treatment Centre for ART



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.2. Child Health Package of Services

#### A.2.42. Full supportive care for severe childhood infections with danger signs

DCP3 code: FLH11

##### Platform:

First Level Hospital

- THQ / DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at the reception (Receptionist)

Consultation (Doctor/Nurse)

Triage management

- History
- Clinical examination, look for danger signs
  - Is the child able to drink / breastfeed?
  - Does the child vomit everything?
  - Has the child had convulsions?
  - Is the child lethargic or unconsciousness?
  - Is the child convulsing now?

Laboratory Test (Lab Technician)

- Blood test/Culture (if needed)

Recommendation

- For danger signs
  - Give diazepam if convulsing now
- Quickly complete the assessment
- Give any prereferral treatment immediately
- Treat to prevent low blood sugar
- Keep the child warm
- Severe pneumonia or very severe disease
- Appropriate antibiotic
- Severe persistent Diarrhea
- Treat dehydration and manage Severe persistent Diarrhea
- Very severe febrile disease
- Give artesunate or quinine for severe malaria
- Give an appropriate antibiotic
- Give Paracetamol for high fever (38.50C or above)
- Severe complicated measles
- Give Vitamin A treatment
- Give an appropriate antibiotic
- If clouding of the cornea or pus draining from the eye, apply tetracycline eye ointment
- Severe dengue hemorrhagic fever
- If skin petechiae, persistent abdominal pain, vomiting or positive tourniquet test are the only positive signs, then give ORS
- If any other sign of bleeding is positive, give fluids rapidly and consider for the pack cell
- Do not give Aspirin

Length of stay

- On average 4 days

Discharge

Dispensing of medicines

Follow up

- After 4 to 7 days of discharge

##### Medicines:

Severe Bacterial infection

Ampicillin (IV) at 50 mg/kg every 6 h plus Gentamicin (IV) 7.5 mg/kg once a day for 7–10 days; alternatively, give ceftriaxone at 80–100 mg/kg IV once daily over 30–60 min for 7–10 days

When staphylococcal infection is strongly suspected, give flucloxacillin at 50 mg/kg every 6 h IV plus IV gentamicin at 7.5 mg/kg once a day

Give oxygen if the child is in respiratory distress or shock.

Treat septic shock with rapid IV infusion of 20 ml/kg of normal saline or Ringer's lactate. Reassess. If the child is still in shock, repeat 20 ml/kg of fluid up to 60 ml/kg

Severe Pneumonia

Ampicillin (or benzylpenicillin) and gentamicin intravenous:

– Ampicillin 50 mg/kg or benzylpenicillin 50 000 U/kg IM or IV every 6 h for at least 5 days

– Gentamicin 7.5 mg/kg IM or IV once a day for at least 5 days

**IF**

The child does not show signs of improvement within 48 h and staphylococcal pneumonia is suspected, switch to gentamicin 7.5 mg/kg IM or IV once a day and cloxacillin 50 mg/kg IM or IV every 6h

In cases of failure of first line treatment use Ceftriaxone (80 mg/kg IM or IV once daily)

Critically Ill Baby

GENTAMICIN: 5–7.5 mg/kg/day in once daily injection. In low birth weight infants, give 3–4 mg/kg/day in once daily injection.

Preparation: From a 2 ml vial containing 40 mg/ml, remove 1 ml gentamicin from the vial and add 1 ml distilled water to make the required strength of 20 mg/ml. 7 days AMPICILLIN: Desired dose is 50 mg per kg given twice daily. Preparation: To a vial of 250 mg, add 1.3 ml sterile water = 250 mg/1.5 ml.7 days	
Vitamin A in case of measles	For one year old - 200,000 IU For Children less than 6 months - 50,000 IU
Paracetamol (2 months up to 3 years (4 - <14 kg))	Syrup 160 mg paracetamol / 5 ml
Malaria	Artesunate: Artemether-Lumefantrine tablets (20 mg artemether and 120 mg lumefantrine) Give two times daily for 3 days Artesunate – Sulfadoxine-pyrimethamine tablets (50 mg Artesunate and 500 mg sulphadoxine+25mg pyrimethamine) Give two times daily for 3 days IMNCI guidelines 2017- Chart booklet
Diarrheal Management	IV Fluid: <ul style="list-style-type: none"> <li>Infants under 12 months: 30ml/kg in 1st hour then give 70 ml/kg in 5 hours</li> <li>Children 12months-5 years: First give 30 ml/kg in 30 mins then give 70 ml/kg in 2.5 hours</li> </ul> OR Give ORS (about 5 ml/kg/hr) as soon as the child can drink: usually after 3-4 hours (infants) or 1-2 hours (children).

**Supplies:**

- Oral Rehydrating salt, IV drip sets including cannula and syringes (Dextrose), Normal saline, Bicarbonate, Ringer Lactate

**Equipment:**

- Thermometer, Neonatal/baby nursery, Oxygen cylinder with set ,Pulse oximeter, Nebulizer, X-ray, Nasal cannula, mask, Suction machine

**Lab Tests:**

- Blood CP test (if needed),LFTs, if needed blood culture ,Serum electrolytes PT/PTT/INR, Creatine and BUN

**HMIS Tools:**

1. Recording Tool: OPD Ticket OPD and indoor register, Referral slip, Abstract register
2. Reporting Tool: Monthly Report
3. Client/Patient Card: MCH card, Follow up visit card, Discharge slip
4. IEC material: Flip chart/Audio-Video/Brochure

**Standard Protocol:**

- Assess and Classify the Sick Child Age 2 months to 5 years

**Supervision:**

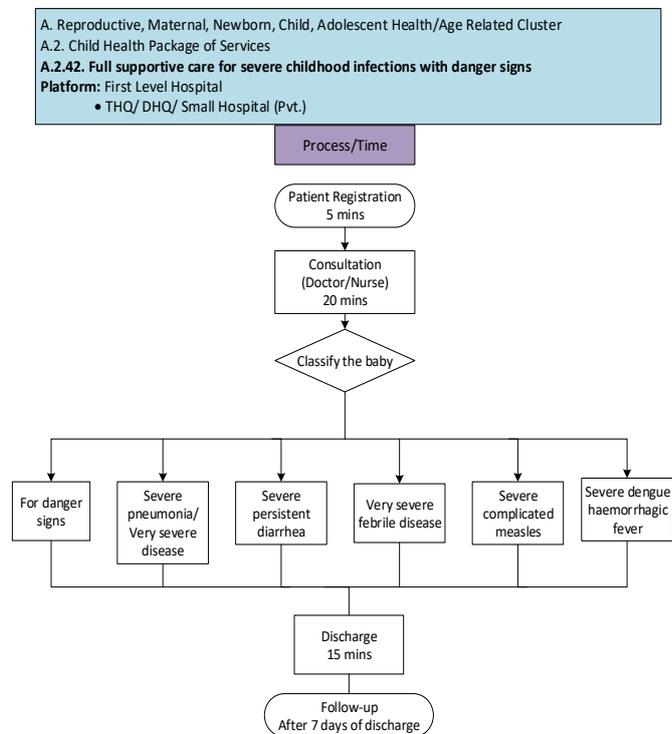
- MS Hospital

**National Training Curriculum/Guidelines:**

- Available

**Reference Material:**

- IMNCI National Guidelines 2019



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.2. Child Health Package of Service

#### A.2.43. Management of severe acute malnutrition associated with serious infections

DCP3 code: FLH12

#### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

#### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse)

- History
- Clinical examination (Bilateral pitting edema, MUAC <115mm, W/H < -3 SD)
- Hospital (Stabilization Centre) Admission

Laboratory Test (Lab Technician)

- Lab tests if needed

Recommended Method (Doctor/Nurse)

- Treat malnutrition and complications of child according to SAM Guidelines

Follow up

- After 14 days of discharge at OTP Centre for regular follow-up

#### Medicines:

##### Routine medicines for acutely malnourished infants (<6 months) in inpatient care

Name of Product	When	Age/Weight	Prescription	Dose
Vitamin A*	On day 1	All infants	50 000 IU	OD
Amoxicillin	At admission	All beneficiaries > 2 kg		tds7 day
Anti Malarial Chloroquine	At admission in malarial areas or if symptoms	All beneficiaries > 2 months old		OD 3 days.
Iron Syrup (Ferrous Fumarate 100 Mg Per 5 Ml)	On week 4	2 months to 4 months 4 months to 6 months	1.0 ml 1.25 ml	Give one dose on day 1
Folic Acid	On day 1	All infants	5 mg	Give one dose on day 1

\* **Vitamin A:** Do not give, if the child has already received Vitamin A in the last one month.

##### **Routine medicines for children with acute malnutrition (>6 months) in inpatient care**

Name of Product	When	Age/Weight	Prescription	Dose
Vitamin A*	Day 1	6 months to < 1 year	100 000 IU	Single dose on day 1. (for treatment of vit A deficiency see 'Additional medicines section')
		≥ 1 year	200 000 IU	
Antibiotic	From day 1	All beneficiaries		1st line: Amoxicillin or Ampicillin
Antimalarial	From day 1 in malarial areas or if symptoms	All beneficiaries > 2 months old		See malaria protocol Give on admission
Albendazole **	On exit	< 1 year	<b>DO NOT GIVE</b>	None
		12-23 months	200 mg	Single dose on exit
		≥ 2 years	400 mg	
Measles Vaccination	On day 1 and on exit	From 9 months	Standard	Once on day 1 and once on day of exit
Folic Acid ***	On day 1 if anaemia	All beneficiaries		5mg Single dose on day 1
Nutritional Products (F75, F100)				
Ready to Use Therapeutic Food (RUTF)				
Low osmolar Oral Rehydrating salt				

\*Vitamin A: Do not give, if the child has already received Vitamin A in the last one month

\*\*Albendazole: can be given again after 3 months if signs of re-infection appear

\*\*\*Folic Acid: Not to be given routinely. Where there is anemia give folic acid on day 1

If child is taking sulfadoxine-pyrimethamine then give once malaria treatment complete

**Supplies:**

- Weight/Height tables (for infants < 6 months), Nutritional products for in-patient care (F75, F100)
- Ready to Use Therapeutic Food (RUTF) Low Osmolar Oral Rehydrating salt

**Equipment:**

- Weighing scales, Infant scales (20g accuracy), Height/length board (for infants < 6 months), MUAC tapes

**Lab tests:**

- Blood CP, Urinalysis, Culture Test, Electrolytes, Stool Test, LFT if needed

**HMIS Tools:**

1. Recording Tool: OPD Ticket, OPD & indoor register, Assessment tool, Patient file, Abstract register
2. Reporting Tool: Monthly Report
3. Client/Patient Card: In Patient Card, MCH Card, Follow-up visit, EPI card
4. IEC Material: Leaflet, Flipchart

**Supervision:**

- MS of Hospital, Pediatrician, Nutritionist

**Standard Protocol:**

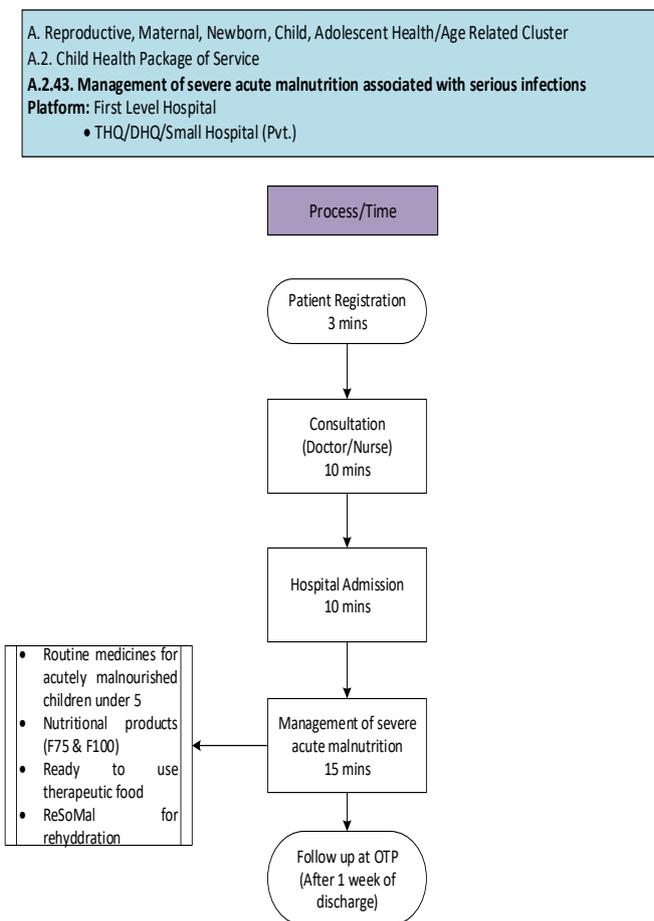
- In Patient Care: Section: 03

**National Training Curriculum/Guidelines:**

- Available

**Reference Material:**

- National Guidelines for the Management of Acute Malnutrition Among Children Under Five and Pregnant and Lactating Women 2009
- SAM and MAM guideline



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.5. Reproductive Health & Contraception Package of Services

#### A.5.60. Early detection and treatment of early stage cervical cancer (Also included in HIV and Cancer packages of services)

DCP3 code: FLH13

##### Platform:

First Level Hospital

- MCH Hospital/ THQ / DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at the reception (Receptionist)  
Consultation (Doctor/Nurse)

- History (Social and Clinical)
- Pelvic examination (visual inspection of external genitalia or speculum examination)
- Information and counselling
- Accurate clinical diagnosis

Laboratory Test (Lab Technician/ Pathologist)

- Screening Test:
  - Sample Collection: Cytology (Pap smear or LBC) OR Visual Inspection with Acetic acid (VIA), Molecular HPV testing
- Sample Collection and Diagnostic Test and Staging: Speculum, Vaginal & Rectal examination, Intravenous pyelogram (IVP), Chest X-ray

Recommended Method

- Treatment Cervical Pre-cancer (Referral to Tertiary hospital)
  - Cryotherapy
  - Loop electrosurgical excision procedure (LEEP)
  - Cold knife conization

Referral for Invasive Cervical Cancer (Surgery, Radiotherapy, Chemotherapy)

Pharmacy If needed (Dispenser)

Follow up

- After 12 months

##### Supplies:

- Colposcope, biopsy forceps, endocervical curette, Stain commodities

##### Equipment:

- Cryoprobe with tank of compressed carbon dioxide (CO2) or nitrous oxide (N2O) gas, LEEP electrosurgical unit

##### Lab Tests:

- Screening Test: Cytology (Pap smear or LBC) and Visual Inspection with Acetic acid (VIA), Molecular HPV testing
- Diagnostic Test and Staging: Speculum, Vaginal & Rectal examination, Intravenous pyelogram (IVP) or Chest X-ray

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Referral slip, Abstract register
2. Reporting Tool: Monthly Report
3. Client/Patient Card:
4. IEC material: Flip chart/Audio-Video/Brochure

##### Supervision:

- MS Hospital, Head of Gynae Obs and Surgery

##### Standard Protocol:

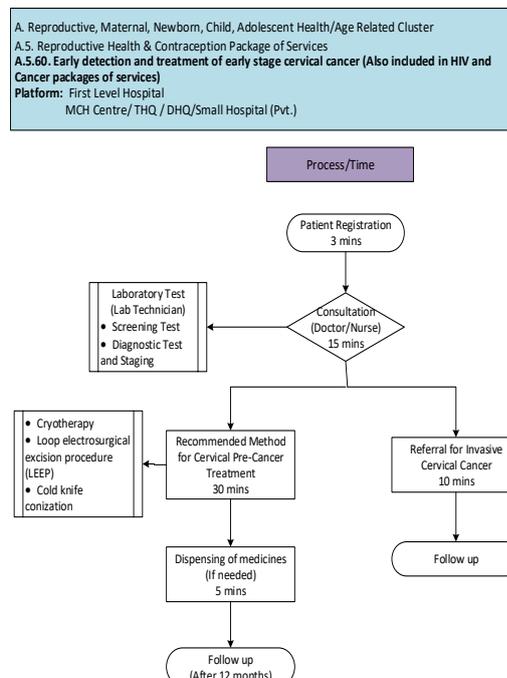
- Comprehensive Cervical Cancer Control

##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Comprehensive Cervical Cancer Control: A Guide to Essential Practice WHO 2014



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.5. Reproductive Health & Contraception Package of Service

#### A.5.61. Insertion and removal of long-lasting contraceptives (IUCDs and Implants) (Also included in Surgery package of services)

DCP3 code: FLH14

##### Platform:

First Level Hospital

- MCH Hospital/ THQ/DHQ/Small Hospital (Pvt.)/  
FWC/ RHSC(A)/ RHS(B)

##### Process:

Patient registration at the reception (Receptionist)

Consultation (Doctor/Nurse/LHV)

- History
- Clinical examination
- Consultation

Recommended Method

- Insertion of IUCD immediately postpartum immediately following expulsion of placenta (including during C-section) or within 48 hours/after the puerperal period is over (Doctors)
- IUCD Removal- Any time throughout the menstrual cycle
- Interval IUCD – Insertion and removal (Doctor/Nurse/LHV) after ensuring pregnancy test is negative
- Implants – Insertion and Removal (Doctors)

Follow up

- In case of coil insertion, the client can come after her first menses and then after 1 year
- In case of any adverse effect can visit any time

##### Medicines:

- 

##### Supplies:

- Implants Insertion and Removal Kit

##### Equipment:

- IUCD Insertion, Removal Kit

##### Lab Tests:

- 

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Abstract register
2. Reporting Tool: Monthly Report
3. Client/Patient Card: MCH card, Follow up visit card
4. IEC material: Leaflet, Flip chart, Brochure

##### Supervision:

- MS Hospital, DPWO

##### Standard Protocol:

- Intrauterine Contraceptive Device (IUCD) Chapter 10

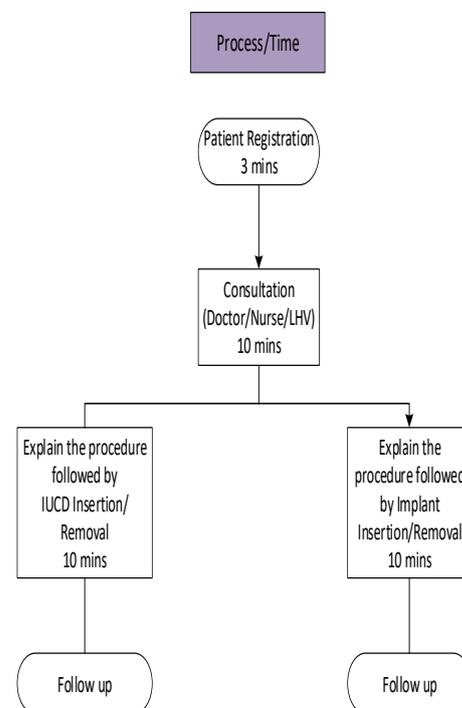
##### National Training Curriculum/Guidelines:

- Available

##### Reference Material:

- Manual of National Standards for Family Planning Services 2009

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.5. Reproductive Health & Contraception Package of Service  
A.5.61. Insertion and removal of long-lasting contraceptives (IUCDs and Implants) (Also included in Surgery package of services)  
Platform: First Level Hospital  
• MCH Hospital/ THQ/DHQ/Small Hospital (Pvt.)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.5. Reproductive Health & Contraception Package of Services

#### A.5.62. Tubal ligation (Also included in Surgery package of services)

**DCP3 code: FLH15**

**Platform:**

First Level Hospital

- MCH Hospital/THQ/DHQ/Small Hospital (Pvt.)/  
RHSC(A)/ RHSC(B)

**Process:**

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse)

- History
- Counselling of both partners
  - Explaining the procedure
  - Ensuring informed consent

**Recommended Method (Doctor only)**

Interval and Post-Partum

- Pre-Operative Care (OT Preparation)
- Surgical Procedure (Mini-laparotomy)
- Post-Operative Care (Recovery)

Post- procedure counselling

Follow up

- After 1 week or in case of any adverse effect

**Medicines:**

- Local anesthetic: Xylocaine 1%
- Tab. Paracetamol or Panadol 500 mg TDS (SOS)
- Cap. Amoxicillin 500 mg 6 hourly x 5 days
- Tab Flagyl 400mg x 5 days

**Supplies:**

- Antiseptic, Gauze , tubal Ligation Kit, Mini Laparotomy Kit, pregnancy test kits

**Equipment:**

- Emergency and Resuscitation Equipment

**Lab Tests:**

- Pregnancy test

**HMIS Tools:**

1. Recording Tool: OPD Ticket, Tubal ligation register
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Materia: Leaflet, Flip chart

**Supervision:**

- District population welfare officer (DPWO), AIHS, DC, ADC

**Standard Protocol:**

- Voluntary Surgical Contraception: Chapter 12

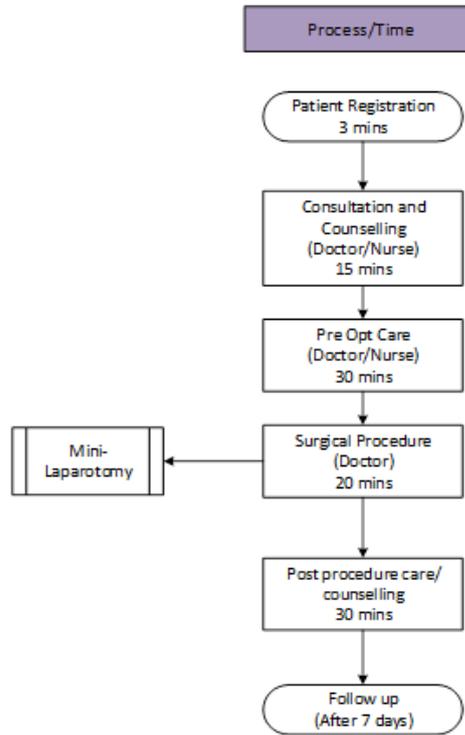
**National Training Curriculum/Guidelines:**

- Available

**Reference Material:**

- Manual of National Standards for Family Planning Services 2009

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.5. Reproductive Health & Contraception Package of Services  
A.5.62. Tubal ligation (Also included in Surgery package of services)  
Platform: First Level Hospital  
• MCH Hospital/ THQ / DHQ/Small Hospital (Pvt.)



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.5. Reproductive Health & Contraception Package of Services

#### A.5.63. Vasectomy (Also included in Surgery package of services)

DCP3 code: FLH16

##### Platform:

First level Hospital

- THQ/DHQ/Small Hospital (Pvt.), RHSC (A), RHSC (B)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse)

- History
- Counselling
  - Explaining the procedure
  - Ensuring informed consent

##### Recommended Method (Doctor only)

- Pre-Operative Care (Minor OT preparation)

- Procedure

- Post-Operative Care (Recovery)

Post- procedure counselling (Use condoms for 3 months)

Follow up

- Semen examination after 3 months till two semen analysis are negative

##### Medicines:

- Ibuprofen (200-400 mg) OR Paracetamol (325-1000mg) (if required)
- Local anesthetic: Xylocaine 1%

##### Supplies:

- Vasectomy surgical kit (Scalpel, suture)
- Condom

##### Equipment:

- Emergency and Resuscitation equipment

##### Lab Tests:

- Semen analysis (sperm count)

##### HMIS Tools:

1. Recording Tool: OPD Ticket, Vasectomy register
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet, Flip chart

##### Supervision:

- District Population Welfare Officer (DPWO), AIHS, DC, ADC

##### Standard Protocol:

- Chapter 12: Vasectomy (National Standards)

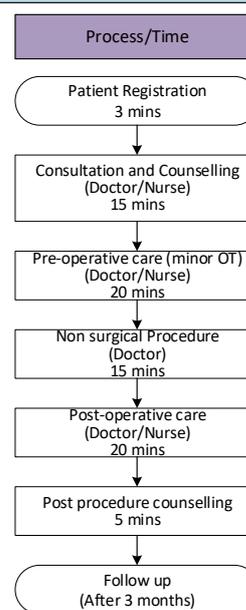
##### National Training Curriculum/Guidelines:

- Available

##### Reference Material:

- Manual of National Standards for Family Planning Services 2009
- Family Planning - A global handbook for providers 2018

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.5. Reproductive Health & Contraception Package of Services  
A.5.63. Vasectomy (Also included in Surgery package of services)  
Platform: First Level Hospital  
• THQ / DHQ/Small Hospital (Pvt.)



**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH SERVICES**

**First Level Hospital Interventions**

**CLUSTER (B)**

***B. Communicable Diseases***



## B. Infectious Diseases Cluster

### B.6. HIV and STIs Package of Services

#### B.6.69. For individuals testing positive for hepatitis B and C, assessment of treatment eligibility by trained providers followed by initiation and monitoring of ART when indicated

DCP3 code: HC19

##### Platform:

First level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor, Trained Medical Officers)

- History
- Eligibility Assessment
- ART Initiation and Monitoring
- Education and Counselling
- Laboratory Test (Lab Technician)
- Lab Test/Ultrasound if needed

##### Recommended Method

- Assessment of the severity of liver disease
- Assessment of the level of viral replication
- Assessment for the presence of comorbidities
- Preventive measures
- Counselling on lifestyle
- Preparation for starting treatment
- Measurement of baseline renal function

Follow up

- Monthly

##### Medicines:

##### Hepatitis B Virus

##### Recommended First Line ART:

In all adults, adolescents and children aged 12 years or older in whom antiviral therapy is indicated

- Nucleos(t)ide analogues (NAs) which have a high barrier to drug resistance (tenofovir or entecavir) are recommended
- NAs with a low barrier to resistance (lamivudine, adefovir or telbivudine) can lead to drug resistance and are not recommended)

Tenofovir: 300 mg once daily for 1 year
Entecavir (adult with compensated liver disease and lamivudine naive): 0.5 mg once daily for 1 year
Entecavir (adult with decompensated liver disease): 1 mg once daily for 1 year

The dose of ART adjusted in renal impairment patients according to their Creatinine Clearance

##### Hepatitis C Virus

- Sofosbuvir 400 mg (one tablet per day) for 12 weeks + Daclatasvir 60 mg/day (one tablet per day) for 12 weeks

##### Supplies:

- Syringe, needle

##### Lab Tests:

Non-invasive tests to assess for stage of liver fibrosis; Ultrasound, APRI (AST-to-platelet ratio index), HCV and HBV serology testing, nucleic acid testing for the detection of HCV and HBV RNA be performed directly following a positive HCV and HBV serological test, liver biopsy, LFTs, CBC

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow-up visit card
4. IEC Materia:

##### Supervision:

- MS Hospital, EDO Health, Deputy DHO, THO

##### Standard Protocol:

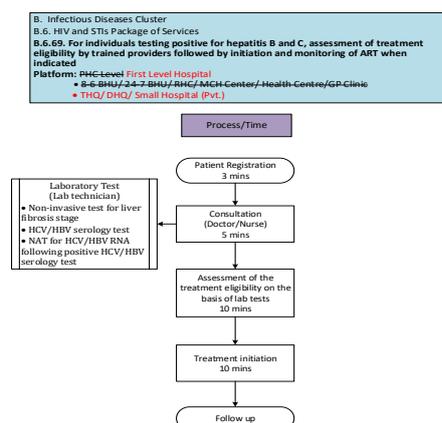
- Section 4: Recommendations: Noninvasive Assessment of Liver Disease Stage at Baseline and During Follow Up (Hepatitis B)
- Section 5: Recommendations: Who to Treat and Who Not to Treat in Persons with Chronic Hepatitis B
- Section 4: Recommendations (Hepatitis C)

##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Guidelines for The Prevention, Care and Treatment of Persons with Chronic Hepatitis B Infection March 2015
- Guidelines for The Care and Treatment of Persons Diagnosed with Chronic Hepatitis C Virus Infection July 2018



## B. Infectious Diseases Cluster

### B.6. HIV and STIs Package of Services

#### B.6.74. Hepatitis B vaccination for high risk populations, including healthcare workers, IDU, MSM, household contacts and partners with multiple sex partners (Also included in Cancer package of services)

DCP3 code: HC24

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse)

- History
- Education and counselling
- Vaccination

##### Recommended Method

- Hepatitis B vaccination schedule

Pharmacy (Dispenser)

- Dispensing of vaccine

Follow up

- According to dose series schedule

##### Medicines:

Active Vaccine: IDU, MSM, household contacts and partners with multiple sex partners

Passive Vaccine: Healthcare workers

IM suspension	
Engerix B	20mcg/mL 3 dose series: 1 mL (20 mcg) IM at 0, 1, and 4 months
OR Recombivax HB	10mcg/mL 3 dose series: 1 mL (10 mcg) IM at 0, 1, and 4 months

##### Supplies:

- Syringe, needle

##### Equipment:

- 

##### Lab Tests:

- 

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow-up visit card, vaccine card
4. IEC Materia:

##### Supervision:

- MS Hospital, EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Vaccination Protocol

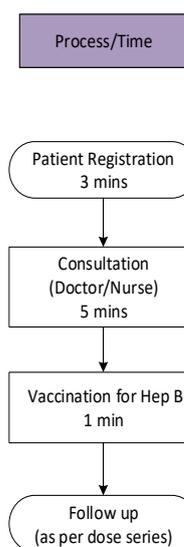
##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Medscape (Hepatitis B vaccine (Rx))

B. Infectious Diseases Cluster
B.6. HIV and STIs Package of Services
B.6.74. Hepatitis B vaccination for high risk populations, including healthcare workers, IDU, MSM, household contacts and partners with multiple sex partners (Also included in Cancer package of services)
Platform: PHC Level First Level Hospital
• THQ/DHQ/Small Hospital (Pvt.)



## B. Infectious Diseases Cluster

### B.7. Tuberculosis Package of Services

#### B.7.83. Referral of cases of treatment failure for drug susceptibility testing; enrolment of those with MDR-TB for treatment per WHO guidelines (either short- or long-term regimen)

**DCP3 code: FLH17**

**Platform:**

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

**Process:**

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse)

- History
- Referral for susceptibility testing for anti-TB agents
- Treatment management of MDR-TB patients based on eligibility criteria (General Surgeon for minor procedures) (TB control programme)
- Laboratory Test/Ultrasound (Lab Technician)

- Lab Test if needed

**Recommended Method**

- Assessment of Patient for treatment failure and referral for drug susceptibility testing
- MDR-TB treatment as per guidelines
- Pharmacy (Dispenser)
- Dispensing of medicines

Follow up

- After 1 Month

**Medicines:**

- 4-6 Months: Amikacin (Am)- Moxifloxacin (Mfx)- Ethionamide (Eto)- Clofazamine (Cfz)- Pyrazinamide (Z)- Isoniazid (H)high-dose- Ethambutol (E)
- 5 Months: Moxifloxacin (Mfx)- Clofazamine (Cfz)- Pyrazinamide (Z)- Ethambutol (E)

Short term Regimen (Adults)			
Drugs	<30 kg	30-50 kg	>50 kg
Moxifloxacin/ Gatifloxacin	400 mg	600 mg	800 mg
Ethionamide/ Prothionamide	250 mg	500mg	750 mg
Clofazamine	50 mg	100 mg	100 mg
Ethambutol	800 mg	800 mg	1200 mg
Pyrazinamide	1000 mg	1500 mg	2000 mg
Isoniazid	300 mg	400 mg	600 mg
*Amikacin/ Kanamycin	15 mg/kg body weight (maximum 1 G)		

\*For >59 years old, the dose will be reduced to 10 mg/kg body weight (maximum 750 mg).

-It is to give 7 days per week dosing without any drug holiday/s for injectable or oral drugs

Short term Regimen (children < 30 kg) 9-12 months WHO guidelines	
Drugs	Daily dosage (mg/kg)
Moxifloxacin	7.5-10 mg (max 400mg)
Ethionamide/ Prothionamide	15-20 mg (split into two doses/day)
Clofazamine	Safety in children with the use of 1 mg/kg has been reported
Ethambutol	15 mg (max 1200mg)
Pyrazinamide	30-40 mg (max 2000 mg)
High dose Isoniazid	16-20 mg (max 600mg)
Amikacin	15-22.5 mg (max 1000 mg)
Kanamycin	15-30 mg (max 1000 mg)
Capreomycin	15-30 mg (max 1000 mg)

**Supplies:**

- Syringe, needle, N95 masks for health workers, surgical masks for patients, sputum cups

**Equipment:**

- UV light, ventilation (ensuring 12 air exchanges per hour)

**Lab Test:**

- Staining of smears for Ziehl-Neelsen or LED fluorescence microscopy, line-probe assays (LPA) for direct detection of resistance mutations in acid-fast bacilli (AFB) smear-positive processed sputum samples, Xpert MTB/RIF for use as the initial diagnostic test in individuals suspected of having MDR-TB, Ultrasound , chest X-ray, fasting/Random blood sugar, CBC, ECG, HIV testing, HCV testing, LFT, Referral to Tertiary level facility for further workup
- Drug Susceptibility Testing
  - Phenotypic DST (conventional DST)
  - Genotypic DST

- CT Scan

**HMIS Tools:**

1. Recording Tool: OPD Ticket, OPD register, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow-up visit card
4. IEC Materia:

**Supervision:**

- TB Coordinator, EDO Health, Deputy DHO, THO

**Standard Protocol:**

- Mycobacteriology laboratory services for drug resistant TB programs

- Shorter treatment regimen as recommended by WHO
- Dosage of anti-TB drugs in short term regimen

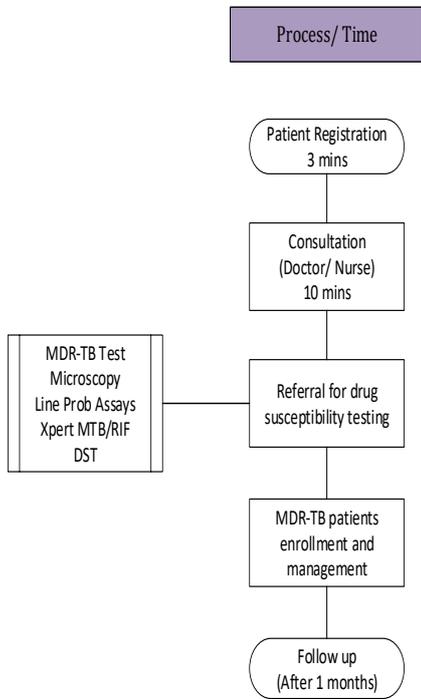
**National Training Curriculum/Guidelines:**

- Available

**Reference Material:**

- Companion handbook to the WHO guidelines for the programmatic management of drug-resistant tuberculosis 2014
- Protocol for Treating MDR-TB/RR-TB with Shorter Treatment Regimen (STR) 2017

B. Infectious Diseases Cluster  
 B.7. Tuberculosis Package of Services  
**B.7.83. Referral of cases of treatment failure for drug susceptibility testing; enrolment of those with MDR-TB for treatment per WHO guidelines (either short- or long-term regimen)**  
 Platform: First Level Hospital  
 • THQ/DHQ/Small Hospital (Pvt.)



## B. Infectious Diseases Cluster B.8. Malaria and Adult Febrile Illness Package of Services

### B.8.98. Evaluation and management of fever in clinically unstable individuals using WHO IMAI guidelines, including empiric parenteral antimicrobials and antimalarial and resuscitative measures for septic shock

DCP3 code: FLH18

#### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

#### Process:

Patient Registration at reception (Receptionist)

Consultation (Nurse)

- Assess the clinically unstable individual

- Management of fever

- Resuscitation for septic shock

#### Recommended Method (Doctor)

Refer to tertiary care when ventilators are required, or complications like renal failure.

Pharmacy (Dispenser)

- Dispensing of medicines

Follow up

#### Medicines:

IV Antipyretics: Paracetamol:

Weight  $\geq 50$  kg: 1000 mg IV every 6 hours OR 650 mg IV

q4h, Max. single Dose: 1000 mg, Min. dosing Interval:

q4h, Max Dose: 4000 mg per 24 hours

In case of the Dengue Shock syndrome:

Fluid management: patients without shock (pulse pressure  $> 20$  mm Hg) normal saline and Ringer's, lactate (Hartmann's solution) or 5% glucose in Ringer's lactate. Start with 6 ml/kg per h for 2 h, and then reduce to 2–3 ml/kg per h max for 24–48 h,

**Fluid management: patients in shock (pulse pressure  $\leq 20$  mm Hg)**

Give 10–20 ml/kg of an isotonic crystalloid solution such as Ringer's lactate (Hartmann's solution) or normal saline over 1 h. IV fluids can be stopped after 36–48 h

For hemorrhagic fever:

Monitor the clinical condition, EVF and, platelet count.

Platelet concentrates

#### IV Fluids (Depending on glucose level)

##### Adolescent or Adult

**50% Glucose Solution:** 25 - 50 ml

**25% Glucose Solution:** 50 - 100 ml

**10% Glucose Solution (5 MI/Kg):** 125 - 250 ml

**Artesunate** is given IM at doses of 2.4mg/kg body weight (maximum of 240 mg) for malaria and complicated malaria (only in coastal areas)

#### IV/IM antibiotics

**First Line Antibiotic:** In case of sepsis without shock:

Piperacillin/Tazobactam Adult : 3.375 g every six hours totaling 13.5 g (12.0 g piperacillin/1.5 g tazobactam) 7-8 days according to body weight

#### Second-line antibiotic:

- Benzylpenicillin powder for injection: 600 mg (= 1 million IU); 3 grams (= 5 million IU) (sodium or potassium salt) in vial+ Gentamicin; injection: 10 mg, 40 mg (as sulfate)/ml in 2-ml vial or Carbapenems (restricted use) Meropenem injection: 500 mg in vial

#### Supplies:

- Syringe, needle, urinary catheter

#### Equipment:

- Cardiac monitor, glucometer, nebulizer, pulse oximeter, vital sign monitor, nebulizer

#### Lab Test:

- CBC, Blood culture, Blood sugar test, Microscopy for malarial parasite, Urine culture, Serum creatinine, LFTs, Serum electrolytes, Ultrasound, Chest x-rays

#### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow-up visit card
4. IEC Materia: Leaflet, Flipchart

#### Supervision:

- MS Hospital, EDO Health, Deputy DHO, THO

#### Standard Protocol:

- Treatment: Instructions for Giving IM/IV Drugs

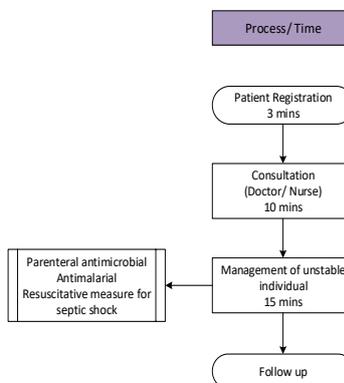
#### National Training Curriculum/Guidelines:

- Not Available

#### Reference Material:

- IMAI Interim Guidelines for First-Level Facility Health Workers 2004

B. Infectious Diseases Cluster  
B.8. Malaria and adult Febrile illness Package of Services  
B.8.98. Evaluation and management of fever in clinically unstable individuals using WHO IMAI guidelines, including empiric parenteral antimicrobials and antimalarial and resuscitative measures for septic shock  
Platform: First level Hospital  
• THQ/DHQ/Small Hospital (Pvt.)



## B.10. Pandemic and Emergency Preparedness Package of Services

### B.10.108. Identify and refer to higher levels of health care patients with signs of progressive illness (AHF, ARI, AWD <5, AWD>5, Diphtheria, Measles, ILI, SARI, Polio)

**DCP3 code: HC33**

#### REFERRAL INTERVENTION FROM PHC

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor and Nurse)

- History
- Clinical examination

Diphtheria - If there is

o Blocking of the airway

o Damage to the heart muscle (myocarditis)

o Nerve damage (polyneuropathy)

o Loss of the ability to move (paralysis)

o Lung infection (respiratory failure or pneumonia)

Measles – Severe Pneumonia

Acute Haemorrhagic Fever-

Acute Respiratory Illness – Severe pneumonia

Severe Acute Respiratory Illness: Exacerbation of

COPD

Acute Watery Diarrhea;

Polio: Respiratory failure secondary to paralysis of respiratory muscles

Recommended Method

- Antibiotics, Bronchodilators, IV infusion
- Prereferral treatment/Symptomatic treatment (According to presenting illness)

- Counselling

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- As per health care provider's advice (according to presenting illness)

Acute Respiratory Illness – Severe pneumonia	Give intravenous ampicillin (or benzylpenicillin) and gentamicin. – Ampicillin 50 mg/kg or benzylpenicillin 50 000 U/kg IM or IV every 6 h for at least 5 days – Gentamicin 7.5 mg/kg IM or IV once a day for at least 5 days. If the child does not show signs of improvement within 48 h and staphylococcal pneumonia is suspected, switch to gentamicin 7.5 mg/kg IM or IV once a day and cloxacillin 50 mg/kg IM or IV every 6 h. Use ceftriaxone (80 mg/kg IM or IV once daily) in cases of failure of firstline treatment
Acute Haemorrhagic Fever-	Give IV fluids for repeated vomiting or a high or rapidly rising EVF. Give only isotonic solutions such as normal saline and Ringer's lactate (Hartmann's solution) or 5% glucose in Ringer's lactate. Start with 6 ml/kg per h for 2 h, and then reduce to 2–3 ml/kg per h as soon as possible, depending on the clinical response
Acute watery Diarrhea	<ul style="list-style-type: none"> <li>• Children with severe dehydration should be given rapid IV rehydration followed by oral rehydration therapy.</li> <li>• Start IV fluids 100ml/Kg immediately. While the drip is being set up, ( Ringer's</li> <li>• lactate solution (called Hartmann's solution for Injection) and normal saline</li> <li>• solution (0.9% NaCl)</li> <li>• Give ORS solution</li> <li>• if the child can drink.</li> <li>• Zinc supplements for 14 days, ORS</li> </ul>
Measles	Give oral vitamin A at 50 000 IU (for a child aged < 6 months), 100 000 IU (6–11 months) or 200 000 IU (1–5 years). Supportive management

**Supplies:** ORS

##### Equipment:

- Stethoscope/thermometer/tongue depressor

##### HMIS Tools:

1. Recording Tool: Indoor register, Patient file, Referral slip,
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow-up visit card
4. IEC Materia: Leaflet, Flipchart

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Assess and Classify the Sick Child Age 2 Months Up To 5 Years
- Give follow-up care for acute condition

##### National Training Curriculum/ Guidelines:

- Available (ARI, AWD)

##### Reference Material:

**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH SERVICES**

**First Level Hospital Interventions**

**CLUSTER (C)**

***C. Non-Communicable Diseases***



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.11. Cardiovascular, Respiratory and Related Disorders Package of Services

#### C.11.121b. Management of albuminuric kidney disease with ACEi or ARBs

DCP3 code: HC39

##### Platform:

First Level Hospital

- THQ/DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor and Nurse)

- History
- Clinical examination

Recommended Method

- Albumin Measurement

Laboratory Test (Lab Technician)

- Lab test if needed

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- Monthly follow up for 3-6 months

##### Medicines:

- ARB or ACE-I be used in diabetic adults with CKD and urine albumin excretion 30–300 mg/ 24 hours

##### Supplies:

- Dipsticks, Jars for Urine collection,

##### Equipment:

- Stethoscope, Thermometer, BP Apparatus

##### Lab Test:

- Albumin specific dipstick, ~~Albumin to creatinine Ratio~~, Serum Potassium, Urine R/E (24 hour urine collection), HbA1c, RFTs (Serum Creatinine, EGFR, urine albumin, Albumin-Creatinine ratio, Blood urea nitrogen test)

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD, patient file, abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up card
4. IEC Material:

##### Supervision:

- EDO Health, Deputy DHO, THO,

##### Standard Protocols:

- Treatment of Diabetic kidney Disease

##### National Training Curriculum/ Guideline:

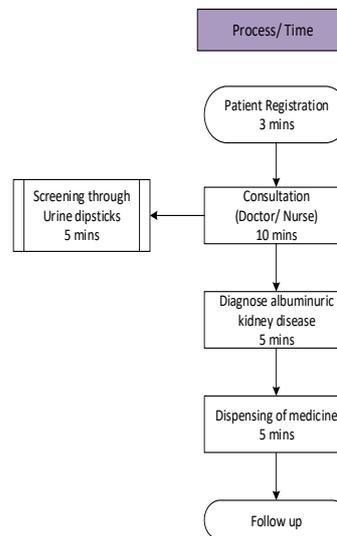
- Not available

##### Reference Material:

- Uptodate.com- Treatment of Kidney disease Disorders
- Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease; KDIGO 2012

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.11. Cardiovascular, Respiratory and related Disorders Package of Services  
C.11.121b. Management of albuminuric kidney disease with ACEi or ARBs

Platform: First Level  
• THQ/ DHQ/ Small Hospital (Pvt.)



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.11. Cardiovascular, Respiratory and Related Disorders Package of Services

#### C.11.129. Management of acute coronary syndromes with aspirin, unfractionated heparin and generic thrombolytic (when indicated)

DCP3 code: FLH20

##### Platform:

First level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor, Nurse)

- History
- Clinical assessment
- Early risk stratification to decide need for hospitalization
  - A 12-lead ECG should be performed
  - Measure serial cardiac troponin I or T and 3–6 h after symptom onset in all patients

Recommended Method

##### Early Hospital Care

- Management of NSTEMI-ACS: Definite or likely Ischemia Guided Strategy / Early Invasive Strategy
- Management of STEMI-ACS
- Initial antiplatelet therapy: Aspirin at an initial oral loading dose of 150–300 mg (in aspirin-naïve patients) and a maintenance dose of 75–100 mg/day long-term
- Anticoagulant Therapy: Unfractionated Heparin provided for 48 hours or Clopidogrel loading dose followed by daily maintenance dose
- P2Y12 inhibitor, in addition to aspirin, for up to 12 months for patients treated initially with either an early invasive or initial ischemia
  - Clopidogrel
  - Ticagrelor

##### Late Hospital Care (3 days at least)

- Aspirin should be continued indefinitely
- Before hospital discharge, patients with NSTEMI-ACS should be informed about symptoms of worsening myocardial ischemia
- Patients should be educated about modification of cardiovascular risk factors

Laboratory Test (Lab Technician)

- Lab test if needed

Pharmacy (Dispenser)

- Dispensing of medicines

Follow up

##### Medicines:

First Line Therapy:	
Aspirin	Initial oral loading dose: 150–300 mg Subsequent maintenance dose: 75–100 mg/day
Statin	80mg ( Single dose)
Streptokinase	IV 1,500,000 IU within 60 minute
Unfractionated Heparin (for 48 hrs or until PCI is performed)	IV UFH Initial loading dose 60 IU/kg (max 4000 IU) with initial infusion 12 IU/kg/h (max 1000 IU/ h)
P2Y12 inhibitors	Clopidogrel: 300-mg or 600-mg loading dose, then 75 mg/d OR Ticagrelor: 180-mg loading dose, then 90 mg BID

Sublingual Nitroglycerine	0.4mg after every 5 minutes – 3 doses
Beta Blockers	Metoprolol 12.5mg q12 hour
ACE Inhibitor	Captopril 6.5mg q8 hour

##### Supplies:

- IV Set, Cannula, Syringes, oxygen

##### Equipment:

- 12 lead ECG, Cardiac Monitor, Ultrasound machine, Echo Machine. Oxygen cylinder

##### Lab Tests:

- ECG, Trop T , Chest X-ray, Echo

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow-up visit card
4. IEC Materia: Leaflet, Flipchart

##### Supervision:

- MS Hospital, EDO Health, Deputy DHO, THO

##### Standard Protocol:

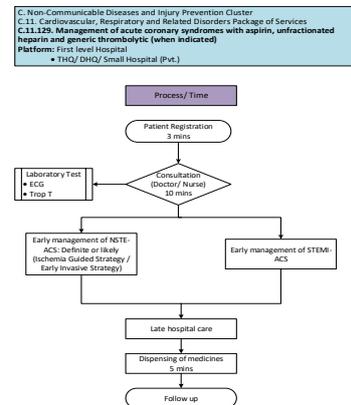
- AHA/ACC Guideline

##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Update.com- Rapid Overview – Management of ST Elevation
- 2014 AHA/ACC Guideline for the Management of Patients with Non–ST-Elevation Acute Coronary Syndromes A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines
- 2015 ESC Guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation



## C. Non-Communicable Disease and Injury Prevention Cluster

### C.11. Cardiovascular, Respiratory and Related Disorders Package of Services

#### C.11.131. Management of acute coronary exacerbations of asthma and COPD using systemic steroids, inhaled beta-agonists and if indicated oral antibiotics and oxygen therapy

DCP3 code: FLH22

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse)

- History
- Clinical examination -Respiratory Count > 30 breath per minute Pco2 >60 mmHg PH level < 7.25

Laboratory Test (Lab Technician)

- Lab Test/Ultrasound if needed

Recommended Method

- Acute Exacerbation
  - Short acting inhaled B2 agonist with or without inhaled Anticholinergic
  - Systemic Steroids
  - Oral Antibiotics
  - Non-Invasive Mechanical Ventilation (Oxygen therapy)
- Discharge
  - After 24 hours of delivery

Follow up

- Early Follow-up after one month of discharge

##### Medicines:

<b>Inhaled B2 Agonist With or Without Anticholinergics</b>	Salbutamol 5mg/4h AND/OR Ipratropium 500µg/6h
<b>Systemic Steroids</b>	IV hydrocortisone 250 mg OR oral prednisolone 30mg OD (continue for 7–14d)
<b>Antibiotics</b>	Amoxicillin 500mg/8h PO, alternatively clarithromycin 250–500mg/12h PO

##### Supplies:

- IV set including cannula, syringe,

##### Equipment:

- 12 lead ECG, Cardiac Monitor, Echo Machine. Oxygen cylinder Stethoscope, sphygmomanometer

##### Lab Tests:

- CBC, Blood Culture, Sputum Culture, CXR, ABG, Electrolytes, Blood Urea Nitrogen test (BUN)

##### HMIS Tools:

- Recording Tool: OPD ticket, OPD and indoor register, Patient file, Referral
- Reporting Tool: Monthly report
- Client/Patient Card: Discharge slip
- IEC Material:

##### Supervision:

- MS Hospital, EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Protocols for Acute Exacerbation of COPD and Asthma

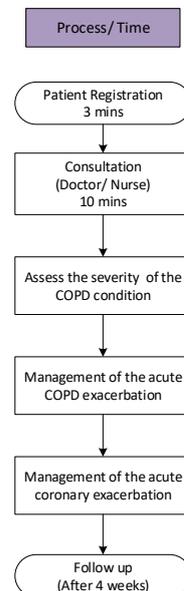
##### National Training Curriculum/ Guidelines:

- Not available

##### Reference Material:

- Global Initiative for Chronic Obstructive Lung Disease

C. Non-Communicable Disease and Injury Prevention Cluster  
C.11. Cardiovascular, respiratory and related disorders Package of Services  
C.11.131. Management of acute coronary exacerbations of asthma and COPD using systemic steroids, inhaled beta-agonists and if indicated oral antibiotics and oxygen therapy  
Platform: First Level Hospital  
• THQ/ DHQ/ Small Hospital (Pvt.)



## C. Non-Communicable Disease and Injury Prevention Cluster

### C.11. Cardiovascular, Respiratory and Related Disorders Package of Services

#### C.11.132. Medical management of acute heart failure

DCP3 code: FLH23

##### Platform:

First Level Hospital

- THQ / DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at the reception (Receptionist)  
Consultation (Doctor/ Nurse)

- Accurate clinical evaluation
  - Cardiogenic shock, Respiratory distress, Congestion

- Symptomatic treatment

Laboratory Test (Lab Technician)

- Lab test

Recommended Method

- Regular Monitoring of Orthostatic Blood Pressure
- Inotropes, vasopressors, Oxygen therapy and ventilatory support, Diuretics ± vasodilators

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- After 1 week

**Medicines:** Continue Medications until patient is recovered from CCU 5-7 days

Oxygen	CPAP
Dobutamine (continuous infusion) OR Dopamine	1-10ug/kg/min 2.5-10ug/kg/min IVI Aim is mean arterial BO should be 70mmHg 10ug/kg/min
Diamorphine	1.25–5mg IV slowly
Furosemide	400mg stat & 20-80 mg IV slowly till patient is out of the heart failure
Glyceryl trinitrate if Systolic BP is > 90 mmHg Isosorbide dinitrate if Systolic BP is > 100 mmHg: 2 x .3 mg SL, 2–10mg/h IVI	
Anti-arrhythmic Ventricular Tachycardia	Oral therapy: amiodarone loading dose (200mg/8h PO for 7d, then 200mg/12h for 7d) followed by maintenance therapy (200mg/24h).
Supra ventricular tachycardia	Adenosine Give 6mg IV bolus (2s) into a big vein; follow by saline fl ush, while recording a rhythm strip; if unsuccessful, after 1–2min, give 12mg, then 12mg again, verapamil 5mg IV over 2min, or over 3min if elderly, Alternatives, atenolol 2.5mg IV at 1mg/min repeated at 5min intervals to a maximum of 10mg
Acute Atrial fibrillation	1st-line verapamil (40–120mg/8h PO) or bisoprolol (2.5–5.0mg/d PO).
Atrial flutter	<ul style="list-style-type: none"> <li>• Carotid sinus massage and IV adenosine (dose given above)</li> <li>• Amiodarone IVI (5mg/kg over 1h then ~900mg over 24h via a central line) or PO (200mg/8h for 1wk, 200mg/12h for 1wk, 100–200mg/24h maintenance).</li> </ul>
Cardioversion	<ul style="list-style-type: none"> <li>• often preferred: amiodarone IVI (5mg/kg over 1h then ~900mg over 24h via a central line) or PO (200mg/8h for 1wk, 200mg/12h for 1wk, 100–200mg/24h maintenance).</li> </ul>

ACE Inhibitor	<ul style="list-style-type: none"> <li>• Captopril 6.5mg q8 hour 12.5-25 mg PO OD OR</li> <li>• lisinopril 10mg/d PO,</li> </ul>
Beta Blockers	<ul style="list-style-type: none"> <li>Metoprolol 12.5mg q12 hour</li> <li>carvedilol 3.125mg/12h, 25–50mg/12h</li> </ul>

##### Supplies:

- IV set including cannula, syringe, oxygen , mask

##### Equipment:

- 12 lead ECG, Cardiac Monitor, Ultrasound machine, Echo Machine. Oxygen cylinder Stethoscope, sphygmomanometer, X-ray machine, Defibrillator

##### Lab test

- Blood Complete picture, Blood Glucose, Cardiac Troponin - T test, Serum Electrolytes, Serum Creatinine, Blood Urea Nitrogen, Serum Potassium, Serum Magnesium, LFTs, Urine Analysis, Additional test (ECG, Imaging), ABGs

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD and indoor register, MCH Register, Patient file
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up visit card
4. IEC material: Leaflet, Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

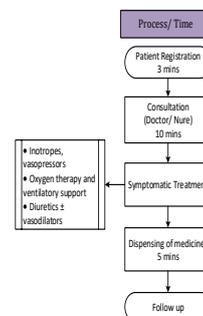
##### National Training Curriculum/ Guidelines:

- Not Available

##### Reference Material:

- Acute Heart Failure Management (Kamilé Čerlinskaitė, MD,1,2,3 Tuija Javanainen, MD,1,2,4 Raphaël Cinotti, MD, PhD,1,2,5 Alexandre Mebazaa, MD, PhD,corresponding author1,2,6 and on behalf of the Global Research on Acute Conditions Team (GREAT) Network)

C. Non-Communicable Disease and Injury Prevention Cluster  
C.11. Cardiovascular, Respiratory and Related Disorders Package of Services  
C.11.132. Medical management of acute heart failure  
Platform: First Level Hospital  
• THQ / DHQ/Small Hospital (Pvt.)



## C. Non-Communicable Disease and Injury Prevention Cluster

### C.12. Cancer Package of Services

#### C.12.138. Management of bowel obstruction (Also included in Surgery package of services)

DCP3 code: FLH24

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient Registration at reception (Receptionist)

Consultation (Doctor/Nurse)

- History
- Clinical examination (abdominal pain, nausea, distention, flatus)

Laboratory Test (Lab Technician)

- Lab Test/Ultrasound if needed

Recommended Method

- Relieve the obstruction (NG tube)
- Antibiotics if needed (Given According to the cause of the Bowel obstruction)
- Surgery (exploratory laparotomy) If there is no relief

Discharge

Follow up

##### Medicines:

Tramadol	100mg q8 hrs PRN
Cefuroxime	750mg q8hrs one week
Metronidazole	500mg q8 hrs one week
Paracetamol	500mg tab q4hrs PRN
Azithromycin	50mg tab OD
Simvastatin	40m tab QHS
IV fluids	100ml 0.9%N/S

##### Supplies:

- IV set including cannula, syringe
- Foley, Balloon Catheter

##### Equipment:

- Stethoscope, Sphygmomanometer,
- OT Equipment

##### Lab Tests:

- Complete Blood Picture
- Electrolytes
- X-ray Abdomen erect
- Ultrasound
- CT scan with contrast

- Hepatitis B and C profile (in case of surgery)

- RFTs

##### HMIS Tools:

9. Recording Tool: OPD Ticket, OPD and indoor register, Patient file, Referral, Abstract register

10. Reporting Tool: Monthly report

11. Client/Patient Card: Discharge slip

12. IEC Material:

##### Supervision:

- MS hospital

##### Standard Protocol:

- Management of the Bowel obstruction

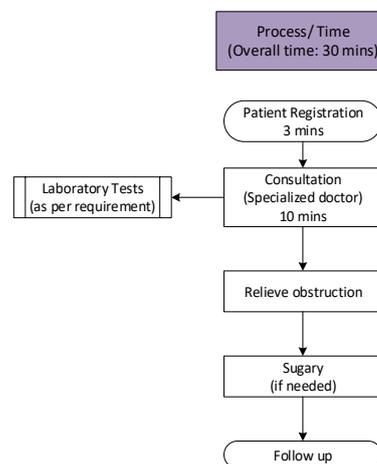
##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

- Evaluation and Management of Intestinal Obstruction; PATRICK G. JACKSON, MD, and MANISH RAIJI, MD

<p>C. Non-Communicable Diseases and Injury Prevention Cluster            C.12. Cancer Package of Services  <b>C.12.138. Management of bowel obstruction (Also included in Surgery package of services)</b>  <b>Platform:</b> First Level Hospital            • THQ/DHQ/Small Hospital (Pvt.)</p>
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## C. Non-Communicable Disease and Injury Prevention Cluster

### C.14. Musculoskeletal Disorders Package of Services

#### C.14. 151. Calcium and vitamin D supplementation for secondary prevention of osteoporosis

DCP3 code: FLH25

##### Platform:

Tertiary Level Hospital

- Referral and Specialized Hospitals

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nu)

- History
- Clinical examination

Laboratory Test (Lab Technician)

Recommended Method (Doctor/Nurse)

- Assess the patient
- Recommendations for the DEXA scan
- Secondary prevention treatment from the fracture in Postmenopausal woman

Follow up

- If needed

##### Medicines:

<b>Bisphosphonates</b>	• Alendronate (10 mg daily or 70 mg weekly) 90-day cycles
<b>Supplementation</b>	• Calcium (800–1000 mg) and vitamin D supplements (400–800 IU) for remaining 76 days.
<b>HRT</b>	• If needed

##### Supplies:

- 

##### Equipment:

- 

##### Lab Tests:

- Plain X-ray
- Bone mineral density (DEXA scanning)
- Blood Calcium and Phosphates and vitamin D levels

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD and inpatient register, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Discharge slip
4. IEC Material:

##### Supervision:

- MS Hospital

##### Standard Protocol:

- Prevention of Secondary Osteoporosis

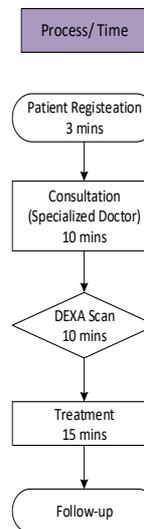
##### National Training Curriculum/ Guidelines:

- Not available

##### Reference Material:

- National Institute for Health and Clinical Excellence Final Appraisal Determination

C. Non-Communicable Diseases and Injury Prevention Cluster  
 C.14. Musculoskeletal Disorders Package of Services  
**C.14. 151. Calcium and vitamin D supplementation for secondary prevention of osteoporosis**  
**Platform:** First Tertiary Level Hospital  
 • THQ/DHQ/Small Hospital (Pvt.) Referral and Specialized Hospitals



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.14. Musculoskeletal Disorders Package of Services

#### C.14.152. Combination therapy, including low dose corticosteroids and generic disease modifying anti-rheumatic drugs (including methotrexate) for individuals with moderate to severe rheumatoid arthritis

DCP3 code: FLH26

#### Platform:

First Level Hospital

- THQ/DHQ/Small Hospital (Pvt.)

#### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse)

- History
- Clinical examination
- Treatment

Recommended Method

- Pharmacological treatment of moderate to severe rheumatoid arthritis with Disease Modifying Anti-Rheumatic Drugs (DMARD)

Laboratory Test (Lab Technician)

- Lab tests

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- As per doctor's advise

#### Medicines:

Needed for whole year, medication is altered according to the disease conditions and patient compliance

Drug Name	Dose
Hydroxychloroquine	400 mg daily
Leflunomide	10 mg daily
	20 mg daily
Methotrexate	7.5 mg once weekly
	15 mg once weekly
	20 mg once weekly
Sulfasalazine	500 mg bid
	1,000 mg bid
	1,500 mg bid
	1,000 mg daily
	2,000 mg daily
Prednisolone (suspension) OR	3,000 mg daily
	5 mg daily
	7.5 mg daily
Prednisone	10 mg daily
	5 mg daily
	7.5 mg daily
	10 mg daily

#### Supplies:

#### Equipment:

#### Lab Test:

- Anti-cyclic citrullinated peptide (anti-CCP)
- Antinuclear antibody (ANA)
- C-reactive protein (CRP)
- Erythrocyte sedimentation rate (ESR)
- Rheumatoid factor (RF)
- Uric acid

#### HMIS Tools:

1. Recording Tool: OPD ticket, OPD register, Patient file
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up visit card
4. IEC material: Leaflet, Flip chart

#### Supervision:

- EDO health, Deputy DHO, THO, MS Hospital

#### Standard Protocol:

- Referral, diagnosis, treatment

#### National Training Curriculum/ Guidelines:

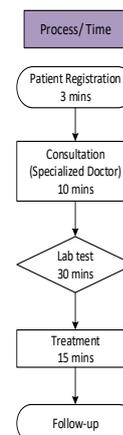
- Not available

#### Reference Material:

- Rheumatoid Arthritis NICE guideline 2018

C. Non-Communicable Diseases and Injury Prevention Cluster  
 C.14. Musculoskeletal Disorders Package of Services  
 C.14.152. Combination therapy, including low dose corticosteroids and generic disease modifying anti-rheumatic drugs (including methotrexate) for individuals with moderate to severe rheumatoid arthritis

Platform: First Level Hospital  
 • THQ/DHQ/Small Hospital (Pvt.)



## C. Non-Communicable Disease and Injury Prevention Cluster

### C.15. Congenital and Genetic Disorders Package of Services

#### C.15.156. In settings where sickle cell disease is a public health concern, universal new born screening followed by standard prophylaxis against bacterial infections and malaria

DCP3 code: FLH27

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation

- History
- Clinical examination

Laboratory Test (Lab Technician)

Recommended Method

- Screening of the new born for the detection of the sickle cell disease
- Penicillin Prophylaxis therapy in children

Follow up

##### Medicines:

Antibiotics	<ul style="list-style-type: none"><li>• Penicillin V potassium 125 mg twice daily &lt; 5-year children (Prophylaxis is used for longer periods in under 5 so consider for the year)</li><li>• Penicillin V potassium 250 mg twice daily &gt; 5-year Children (14% of the children with sickle cell disease)</li></ul>
-------------	---

##### Supplies:

- 

##### Equipment:

- 

##### Lab Tests:

- Blood test for sickle cell disease
- Electrophoresis

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD and indoor register, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Discharge slip
4. IEC Material:

##### Supervision:

- MS Hospital, EDO Health

##### Standard Protocol:

- Screening and preventive management of the sickle cell disease

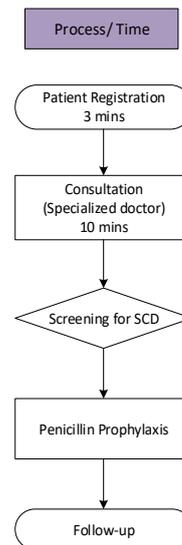
##### National Training Curriculum/ Guidelines:

- Not available

##### Reference Material:

- Pharmacotherapy of Sickle Cell Disease Kathleen A. Neville, M.D., M.S.1, and Julie A. Panepinto, M.D., M.S.P.H.2

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.15. Congenital and Genetic Disorders Package of Services  
C.15.156. In settings where sickle cell disease is a public health concern, universal new born screening followed by standard prophylaxis against bacterial infections and malaria  
Platform: First Level Hospital  
• THQ/ DHQ/ Small Hospital (Pvt.)



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.15. Congenital and Genetic Disorders Package of Services

**C.15.157. In setting where specific single-gene disorders are a public health concern (for example thalassemia), retrospective identification of carriers plus prospective (premarital) screening and counselling to reduce rates of conception**

DCP3 code: FLH28

#### Platform:

First Level Hospital

- MCH Hospital / THQ / DHQ / Small Hospital (Pvt.)

#### Process:

##### Screening

Registration at the reception to screen for (Receptionist)

- Retrospective identification of carrier status
- Prospective/ premarital screening

Consultation (Doctor/Nurse)

##### Counselling

- Genetic counseling
- Reduce rates of conception

Laboratory Test (Lab Technician)

- Lab test

Pharmacy (Dispenser)

- Dispensing of medicines

Follow up

#### Medicines:

- 

#### Supplies:

- 

#### Equipment:

- 

#### Lab Test:

- DNA testing (thalassemia specific)
- (Serum iron or Serum ferritin) (thalassemia specific)

#### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up visit card
4. IEC material: Leaflet, Flip chart

#### Supervision:

- EDO Health, Deputy DHO, THO

#### Standard Protocol:

- 

#### National Training Curriculum/ Guidelines:

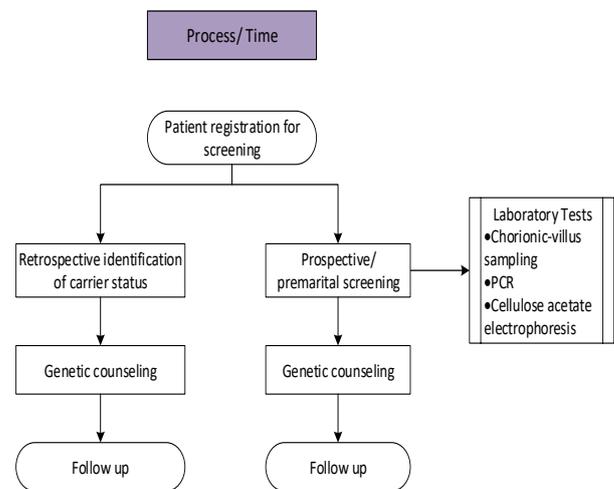
- Not available

#### Reference Material:

- Screening Extended Families for Genetic Hemoglobin Disorders in Pakistan- Suhaib Ahmed, Ph.D., Mohammed Saleem, M.B., B.S.,

D.C.P., Bernadette Modell, Ph.D., and Mary Petrou, Ph.D.

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.15. Congenital and Genetic Disorders Package of Services  
**C.15.157. In setting where specific single-gene disorders are a public health concern (for example thalassemia), retrospective identification of carriers plus prospective (premarital) screening and counselling to reduce rates of conception**  
Platform: First Level Hospital  
• MCH Hospital / THQ / DHQ / Small Hospital (Pvt.)



## C. Non-Communicable Disease and Injury Prevention Cluster

### C.16. Injury Prevention Package of Services

#### C.16.162. Parent training of high-risk families, including nurse home visitation for child maltreatment

DCP3 code: C50

##### Platform:

- Community level/ First Level Hospital
- MCH Hospital/ THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

- Patient registration at reception (Receptionist)
- Consultation (Doctor/Nurse)
- History
- Clinical examination

##### Recommended Method

Parent and caregiver support to teach parents about child development and healthy positive strategies for raising children

Promote norms and values that support pro-social, non-violent behaviour

Education and life skills training to improve children's knowledge of abusive situations and teach them social skills to protect themselves and to interact in positive ways

Implementation and enforcement of laws, such as laws banning violent punishment of children by parents, teachers or other caregivers

##### Pharmacy (Dispenser)

Dispensing of medicine

##### Follow up

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Patient file, Referral
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material:

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Working with parents and carers

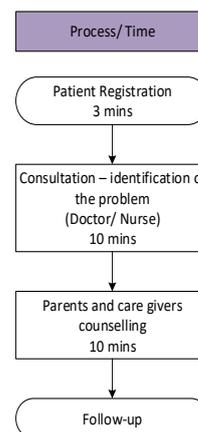
##### National Training Curriculum:

- Not available

##### Reference Material:

- [https://www.who.int/violence\\_injury\\_prevention/violence/child/Child\\_maltreatment\\_infographic\\_EN.pdf?ua](https://www.who.int/violence_injury_prevention/violence/child/Child_maltreatment_infographic_EN.pdf?ua)

C. Non-Communicable Disease Cluster  
C.16. Injury prevention Package of Services  
C.16.162. Parent training of high-risk families, including nurse home visitation for child maltreatment  
Platform: Community Level/First Level Hospital  
• MCH Hospital/ THQ/ DHQ/ Small Hospital (Pvt.)



## C. Non-communicable Diseases and Injury Prevention Cluster

### C.16. Injury prevention Package of Services

#### C.16.163. Management of intoxication/ poisoning syndromes using widely available agents e.g. charcoal, naloxone, bicarbonate, antivenin

DCP3 code: FLH30

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

##### Consultation (Doctor/ Nurse)

- History
- Resuscitation
- Physical examination
- Management of intoxication

##### Laboratory Test (Lab Technician)

- Lab tests if needed

##### Recommended Method

- General approach to toxicological cases in emergency medicine
  - Initial screening examination to find out immediate abnormal measures, starting with vital signs, conscious level and pupil size, skin temperature, pulse oximetry, and electrocardiogram
  - Continuous cardiac monitoring. For patients who are hemodynamically unstable
  - Provide IV infusion and check blood glucose if the patients have a decreased level of consciousness
  - Management of poisoning

##### Pharmacy (Dispenser)

- Dispensing of medicines

Activated Charcoal	<b>Children 1 to 12 years of age:</b> 25 to 50 g or 0.5 to 1.0 g/kg (maximum dose 50 g) <b>Adults:</b> 25 to 100 g (with 50 g representing the usual adult dose).
Naloxone	0.1–2.0 mg (I.V)
Bicarbonate	Start with 1 to 2 mEq/kg IV sodium bicarbonate bolus <b>then</b> , infuse 100 mEq of sodium bicarbonate mixed with 1 L of D5W at 250 mL/h
Antivenin	<b>Initial dose:</b> 4 to 6 vials, IV, over 60 minutes: at 25 to 50 mL/hour the first 10 minutes - if no allergic reaction, may increase rate to 250 mL/hour <b>Continue administering</b> 4 to 6 vials, IV, over 60 minutes, every 6 hours for up to 18 hours, until initial control of envenomation is achieved <b>Maintenance dose</b> (after initial envenomation control is achieved): 2 vials, IV, every 6 hours for up to 18 hours (3 doses); additional 2 vial doses may be given as deemed necessary based on the patient's clinical course

##### Follow up

- Follow up according to healthcare provider advice

##### Medicines:

##### Supplies:

- IV set with catheter

##### Lab Tests:

- CBC, LFTs
- RFTs
- Electrolytes
- Gastric Lavage

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD and indoor register, Patient file, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow-up visit card
4. IEC Materia: Leaflet, Flipchart

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- General approach to toxicological cases in emergency medicine

##### National Training Curriculum/Guidelines:

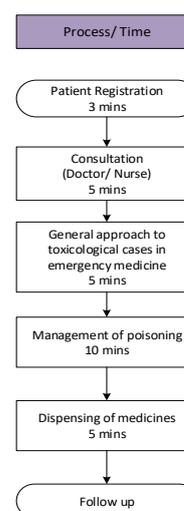
- Not Available

##### Reference Material:

- General Approach to Poisoned Patient, Open access peer-reviewed chapter 2019

<https://www.intechopen.com/books/poisoning-in-the-modern-world-new-tricks-for-an-old-dog-/general-approach-to-poisoned-patient>

C. Non-communicable Diseases and Injury Prevention Cluster  
C.16. Injury prevention Package of Services  
C.16.163. Management of intoxication/ poisoning syndromes using widely available agents e.g. charcoal, naloxone, bicarbonate, antivenin  
Platform: First Level Hospital  
• THQ/ DHQ/ Small Hospital (Pvt.)





**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH SERVICES**

**First Level Hospital Interventions**

**CLUSTER (D)**

***D. Health Services / Surgery***



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.165b. Dental Extraction

DCP3 code: HC57

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at the reception (Receptionist)

Consultation (Dental surgeon)

- History
- Clinical examination
- Diagnostic Criteria
  - Trauma
  - Infected tooth with associated pain and inflammation
  - Decayed tooth
  - Tooth causing crowding in the dental arch
  - Impacted tooth
  - Deciduous
- Counselling
  - Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
  - Obtain informed consent

##### Laboratory Tests (Lab Technician)

- Laboratory tests if required

##### Recommended Method

- Give prophylactic antibiotics
- Local Anaesthesia (2 % Lidocaine)
- Surgical Tooth Extraction
- Post-operative care
  - Ice pack for 10 minutes
  - Take prescribed medications
  - After 24 hours, use warm saline water for rinsing the mouth
  - Take soft diet for 24 hours

##### Follow-up:

- After 1 week

##### Medicines:

Pre-operative: Prophylactic antibiotics in patients with cardiovascular disease or prosthetic implants

- Adults: 2g of Amoxicillin orally an hour prior to the procedure
- Children: Amoxicillin 50 mg/kg orally

##### Intra-operative

Local Anaesthesia: 2% Lidocaine and Epinephrine 1: 80 000

##### Post-operative

- Adults: Paracetamol 1000 mg every 6 hours for pain control.
- Children: Paracetamol 10-15mg/kg/dose every 6 hours
- Patients with Diabetes/Cardiovascular disease/Stents/Prosthetic joints: 500mg of Amoxicillin orally three times a day for 5 days

##### Supplies

- Sterile Gloves
- Gauze

##### Equipment:

- Dental chair
- Syringe for local Anaesthesia
- Dental elevator and forceps

##### Lab Test:

- Blood glucose level (In patients with history of diabetes)
- Hepatitis B and C test (In patients with history of liver diseases)
- Prothrombin time test (In patients with cardiovascular diseases)
- Radiological Investigations
  - Peri-apical radiograph
  - Orthopantomogram (In case of third molar extraction)

##### HMIS Tools:

5. Recording Tool: OPD Ticket, OPD, Patient file, Referral, Abstract register

6. Reporting Tool: Monthly report

7. Client/Patient Card:

8. IEC Material:

##### Supervision:

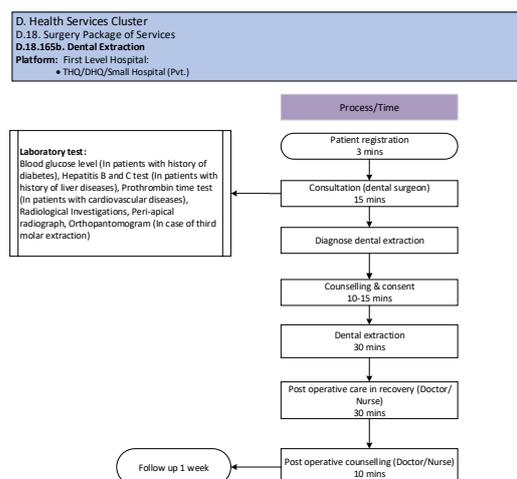
- EDO Health, Deputy DHO, THO

##### Standard Protocol:

##### National Training Curriculum/Guidelines:

- Not available

##### • Reference Material



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.166b. Drainage of Dental Abscess

DCP3 code: HC58

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at the reception (Receptionist)

Consultation (Dentist)

- History
- Clinical examination
- Diagnostic Criteria
  - Throbbing pain
  - Sensitivity to hot and cold
  - Referred pain to the ear, neck and jaw
  - Fever
  - Pus filled swelling
- Counselling
  - Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
  - Obtain informed consent

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

- Give prophylactic antibiotics
- Local Anaesthesia (2 % Lidocaine)
- Drainage of the pus
- Root canal treatment
- In case the tooth is severely infected and cannot be saved, extraction of the tooth is recommended
- Post-operative care

Follow up

##### Medicines:

##### Supplies:

- Sterile gloves
- Gauze

##### Equipment:

- Dental chair, X-ra unit
- Syringe for local Anaesthesia

##### Lab test:

- Blood glucose level (In patients with history of Diabetes)
- Hepatitis B and C test (In patients with history of liver diseases)
- Prothrombin time test (In patients with cardiovascular diseases)
- Radiological Investigations
  - Peri-apical radiograph
  - Orthopantomogram
  - CT scan (If infection has spread to neck and other areas)

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD and Indoor register, Patient file, Referral, abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Discharge slip
4. IEC Material:

##### Supervision:

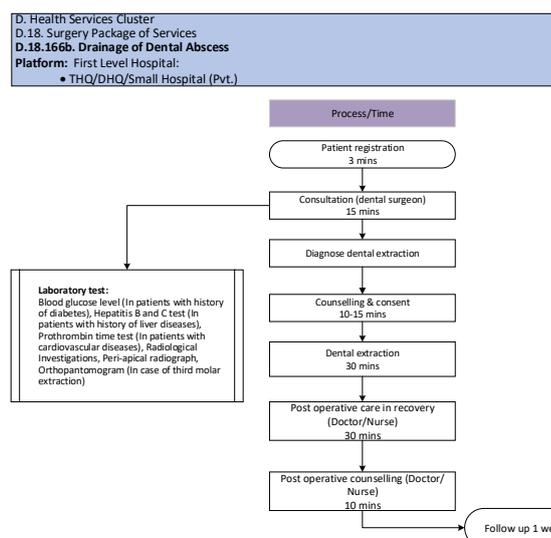
- EDO Health, Deputy DHO

##### National Training Curriculum/Guidelines:

- Not available

##### Reference Material:

<p>Pre-operative (Prophylactic antibiotics in patients with cardiovascular diseases or prosthetic implants)</p> <ul style="list-style-type: none"> <li>• Adults: 2g of Amoxicillin orally an hour prior to the procedure</li> <li>• Children: Amoxicillin 50 mg/kg orally</li> </ul>
<p>Intra-operative</p> <ul style="list-style-type: none"> <li>• Local Anaesthesia for incision: 2% Lidocaine and Epinephrine</li> </ul>
<p>Postoperative</p> <ul style="list-style-type: none"> <li>• Adults: Paracetamol 1000 mg every 6 hours for pain control.</li> <li>• Children: Paracetamol 10-15mg/kg/dose every 6 hours</li> <li>• Adults:                     <ul style="list-style-type: none"> <li>○ 500mg of Amoxicillin orally three times a day for 5 days</li> <li>○ 400mg of Metronidazole orally twice a day for 5 days</li> </ul> </li> <li>• Children: 250mg Amoxicillin orally three times a day for 5 days</li> </ul> <ul style="list-style-type: none"> <li>• After 1 week</li> </ul>



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.171b. Treatment of Caries

DCP3 code: HC63

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at the reception (Receptionist)

Consultation (Dentist)

- History
- Clinical examination
- Diagnostic Criteria
  - Decayed tooth (Black/white spots on the tooth)
  - Visible hole (cavity) in the tooth
    - Enamel lesion, no cavity
    - Enamel lesion, cavity
    - Dentin lesion, cavity
    - Dentin lesion, cavity involving the pulp/root
  - Pain and sensitivity to hot and cold
- Counselling
  - Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
  - Obtain informed consent

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

- Prophylactic antibiotics
- Local Anaesthesia (2 % Lidocaine)
- Caries not involving the pulp/root, Removal of the decayed tooth using ultrasonic bur/drill and filling with composite resin
- Caries involving the root, Removal of the decayed tooth using small root canal, and filled with gutta-percha
- Final restoration of the tooth is done by placing a ceramic crown on the affected tooth
- Post-operative care

Follow up:

- After 1 week

##### Medicines:

##### Supplies:

- Filling material
- Gauze
- Sterile gloves
- Syringe for local anaesthesia

##### Equipment:

- Dental chair
- Rubber dam
- Ultrasonic bur/drill
- Root canal files

##### Lab Test:

- Blood glucose level (In patients with history of Diabetes)
- Hepatitis B and C test (In patients with history of liver diseases)
- Prothrombin time test (In patients with cardiovascular diseases)
- Peri-apical radiograph

##### HMIS Tools:

5. Recording Tool: Outdoor and indoor register, Referral Slip
6. Reporting Tool: Monthly Report
7. Client/Patient Card:
8. IEC material:

##### Supervision:

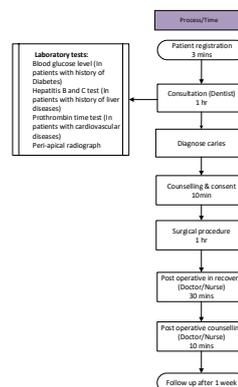
- Senior Dental Surgeon at the private clinic or dental hospital, EDO Health, Deputy DHO

##### National Training Curriculum/Guidelines:

- Not available

##### Reference Material:

D. Health Services Cluster  
D.18: Surgery Package of Services  
D.18.171b. Treatment of Caries  
Platform: First Level Hospital  
• THQ/DHQ/Small Hospital (Pvt.)



<p>Pre-operative: Prophylactic antibiotics in patients with Cardiovascular disease or prosthetic implants</p> <ul style="list-style-type: none"> <li>• Adults: 2g of Amoxicillin orally an hour prior to the procedure</li> <li>• Children: Amoxicillin 50 mg/kg orally</li> </ul>
<p>Intra-operative</p> <ul style="list-style-type: none"> <li>• Local Anaesthesia: 2% Lidocaine and Epinephrine</li> </ul>
<p>Post-operative</p> <ul style="list-style-type: none"> <li>• Adults: Paracetamol 1000 mg every 6 hours for pain control</li> <li>• Children: Paracetamol 10-15mg/kg/dose every 6 hours</li> <li>• Patients with Diabetes/Cardiovascular disease/Stents/Prosthetic joints: 500mg of Amoxicillin orally three times a day for 5 days</li> </ul>

## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.172. Appendectomy

DCP3 code: FLH31

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor)

- History
- Clinical examination
- Diagnosis
- Counselling
- Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
- Obtain informed consent

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

##### Open Appendectomy

- Administer General Anaesthesia
- Perform open appendectomy without unnecessary delay to avoid perforation
- Send specimen for histopathology
- Post-operative and pre-discharge counselling

Note: The preferred initial treatment for an appendicular abscess is ultrasound-guided drainage and for an appendicular phlegmon/lump is IV antibiotics and bowel rest.

Length of Stay: 2 days

Follow up

- After 1 to 2 weeks

##### Medicines:

Pre-operative
<ul style="list-style-type: none"> <li>• Adults: Cefoxitin 2g IV/ Ceftriaxone 2g IV/Cefazolin 2g IV &amp; Metronidazole 500 mg IV</li> <li>[Clindamycin (900mg) &amp; Aminoglycoside (e.g. Gentamicin: 5mg/kg based on dosing weight) in case of Penicillin allergy]</li> <li>• Children:</li> <li>○ Ampicillin: 50 mg/kg/dose IV,</li> <li>○ Metronidazole: 15mg/kg IV (neonates weighing &lt;1200g should receive a single 7.5mg/kg dose), and</li> <li>○ Amikacin: 15mg/kg/dose IV (not given always), or</li> <li>○ Ceftriaxone: 50-75mg/kg IV &amp; Metronidazole</li> </ul>
Intra-operative
<ul style="list-style-type: none"> <li>• Local Anaesthesia for incision: 2% Lidocaine and Epinephrine</li> </ul> <p><b>Anaesthesia type at surgeon's discretion</b></p> <ul style="list-style-type: none"> <li>• General Anaesthesia with intubation (Adults)– Isoflurane Gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN)</li> <li>• General Anaesthesia with intubation (Paeds)– Isoflurane Gas and Suxamethonium (1-2 mg/kg IV loading dose, 0.3-0.6 mg/kg IV PRN)</li> <li>• General Anaesthesia without intubation (Adults and Paeds)– Inj. Ketamine (1-4.5mg/kg IV for induction)</li> </ul>
Post-operative
<ul style="list-style-type: none"> <li>• Adults: Paracetamol 1000 mg PO q6-8hr PRN for pain control</li> </ul>

- Children: Paracetamol 10-15mg/kg/dose PO q4-6hr (maximum 2.6g/24 hrs.) for pain control
- Non-complicated appendicitis: No post-operative antibiotics
- Perforated appendicitis/Peritonitis: IV Antibiotics for 3 to 5 days based on fever, WBC count, clinical exam. findings, clinician judgement.

##### Supplies:

- Sterile gloves and gowns
- Drapes
- Suturing material
- Gauze
- Pyodine/Alcohol swab
- Medical tape

##### Equipment:

- General Anaesthesia machine
- Endotracheal tube and ventilation equipment
- Emergency resuscitation equipment
- Open appendectomy kit

Items	Qty
SCALPEL HANDLE B.P # 3 (CAT # 04-150-03)	2
SCALPEL HANDLE #7	1
DISSECTING FORCEP McINDOE NON TOOTH 6^	1
DISSECTING FORCEP DEBAKEY 6^	2
DISSECTING FORCEP ADSON TOOTH (06-270-12)	1
DISSECTING FORCEP GILLIES TEETH 6^ (06-320-15)	2
DISSECTING FORCEP LANE TOOTH (06-324-17)	1
SCISSOR MAYO ST 6^ G-041 (CAT # 05-180-17)	1
SCISSOR MAYO CURVED 6^ (CAT # 05-171-17)	1
SCISSOR METZENBAUM CVD 7.5^	1
SCISSOR METZENBAUM CVD 4.2^	1
MET SCISSOR CVD 6^ (BC605R)	1
NEEDLE HOLDER MAYO 6" (11-552-16)	1
NEEDLE HOLDER MAYO 7^	1
NEEDLE HOLDER DEBAKAY 5^	1
ARTERY FORCEP MOSQUITO STRAIGHT 4.5^ (07-190-12)	5
ARTERY FORCEP MOSQUITO CURVED 4.5^ (CAT #07-191-12)	5
ARTERY FORCEP CRILE CVD 5.5^ (CAT # 07-241-14)	5
ARTERY FORCEP SPENCER WELL ST 8^ (CAT #07-176-18)	2
TISSUE FORCEP BABCOCK 6^	2
TISSUE FORCEP LITTLE WOOD 7^	2
TISSUE FORCEP LISTER SINUS	1
TISSUE FORCEP ALLIS 6^	2
TOWEL CLIP 3.5^ (CAT # 07-697-10)	6
RETRACTOR TRAVERS (09-668-21)	1
RETRACTOR LANGENBACK MEDIUM	2
RETRACTOR WEST SELF 5^	1
RETRACTOR LENGENBACK SMALL	2
RETRACTOR KILNER SKIN SHARP	2
SUCTION TUBE AMERICAN	1
SUCTION TUBE YANKAUR	1
DISSECTOR WATSON CHYNE	1
HOOK GILLIES SKIN	2
SCOOP VOLKMAN	1
PROBE WITH EYE (10-120-18)	1
STAINLESS STEEL GALILOT 3^	1
KIDNEY DISH 10" STAINLESS STEEL	1
DIATHERMY QUIVER	1
TRAY KIDNEY PLASTIC 200mmx70mm KD10# 10"	1
GALLILOT 80MM (3.5^) CAPACITY:280ML (GP80)	1

CONTAINER BOTTOM (JK-440)	1
PRIMELINE LID TOP (JP-103)	1
PERF BASKET TRAY LARGE (JF 212R)	1
<b>Total</b>	<b>71</b>

**Lab Test:**

- Complete Blood Count (CBC)
- Urinalysis
- Beta-hcG
- Hepatitis B and C
- Ultrasound abdomen and pelvis

**HMIS Tools:**

1. Recording tool: Emergency department token, In-patient admission file/database
2. Reporting tool:
3. Client/Patient card: Patient medical record card
4. IEC material:

**Supervision:**

- Senior General Surgeon at the DHQ/THQ/Small Hospital

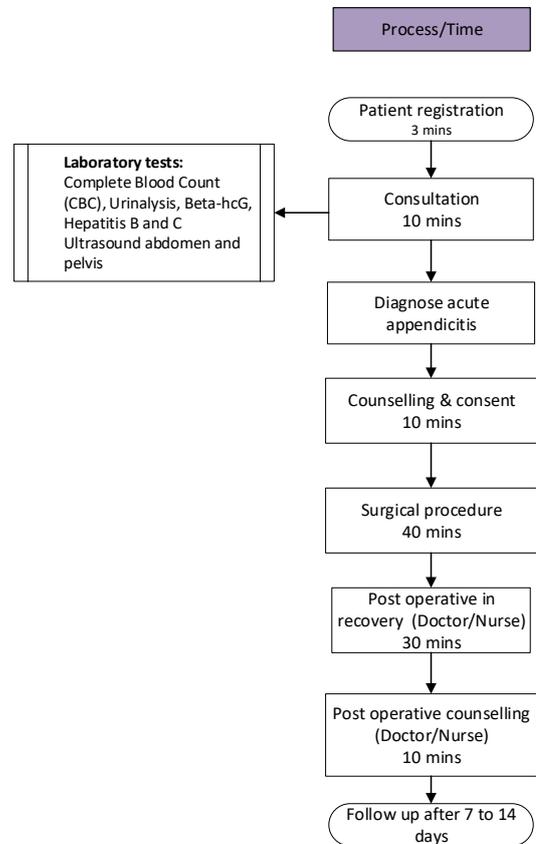
**Standard Protocol:**

- None for Pakistan

**National Training Curriculum/Guidelines:**

- Not available

D. Health Services Cluster  
D.18. Surgery Package of Services  
**D.18.172. Appendectomy**  
Platform: First-level Hospital  
• THQ/DHQ/Small Hospital (Pvt.)



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.173. Assisted Vaginal Delivery using Vacuum Extraction or Forceps

DCP3 code: FLH32

##### Platform:

First Level Hospital

- THQ / DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor)

- History
- Clinical examination
- Indications
  - Presumed fetal compromise during second stage of labor
  - Inadequate progress of second stage of labor 3 hours (nulliparous) or 1 hour (multiparous)
  - Vacuum extraction not recommended if pregnancy less than 34 weeks or mother has bleeding disorder
- Counselling
  - Explain the procedure, risks, possible side effects, complications, and alternatives
  - Provide emotional support
  - Bladder should be empty
  - Obtain informed consent
- Diagnostic Criteria/ Conditions required
  - Forceps delivery
    - Vertex presentation or “face presentation with chin anterior or entrapped after coming head in breech vaginal delivery”
    - Cervix fully dilated
    - Fetal head at +2 or +3 station and 0/5 palpable above the symphysis pubis
    - Sagittal suture should be in the midline and straight, guaranteeing an occiput anterior or occiput posterior position
  - Vacuum delivery
    - Vertex presentation only
    - Term fetus
    - Cervix fully dilated
    - Fetal head at least at +1 or below station or no more than 0/5 palpable above symphysis pubis
- Laboratory Tests (Lab Technician)
  - Laboratory tests if required
- Recommended Method:
  - Forceps delivery
    - Perform PV examination with sterile gloves for size/position of uterus

- Assemble the forceps before application. Ensure that parts fit together and lock well
- Lubricate the blades of the forceps
  - Insert two fingers of the right hand into the vagina on the side of the fetal head. Slide the blade gently between the head and fingers to rest on the side of the head
  - Repeat the same maneuver for the right blade
  - Depress the handles, lock the forceps
  - After locking, apply steady traction inferiorly and posteriorly with each contraction
  - Between contractions check:
    - Fetal heart rate
    - Application of forceps
  - When the head crowns, make an episiotomy, if necessary
  - Lift the head slowly out of the vagina between contractions
- Vacuum delivery
  - Check connections and test vacuum on gloved hand
  - Use a pudendal block if available
  - Assess the position of the fetal head by feeling the sagittal suture line and the fontanelles
  - Identify the landmarks of posterior fontanelle, the flexion point 3 cm anterior to the posterior fontanelle
  - Apply the largest cup that will fit with the centre of the cup over the flexion point. Edge of the cup should be placed anterior to the posterior fontanelle
  - Consider episiotomy
  - Create a vacuum of 0.2 kg/cm<sup>2</sup> negative pressure and check the application. Then increase to 0.8 kg/cm<sup>2</sup> and check the application.
  - Start traction in the line of the pelvic axis and perpendicular to the cup
  - Apply traction at the onset of each contraction and maintain throughout the contraction
  - Deliver head slowly and protect perineum. Remove vacuum and cup after delivery of the baby
  - Between contractions check:

- Fetal heart rate
  - Application of forceps
    - When the head crowns, remove the cup
    - If failure of forceps/vacuum, perform C-section
- Post-operative Counselling
- Perform active management of third stage of labor
  - Repair episiotomy
  - Keep the baby dry and warm
  - Examine the baby's scalp and note any injuries. Repair any lacerations. Explain the parents and provide reassurance for mild swellings

Length of Stay: 2 days

Follow-up

At the PHC facility

- First visit on 3rd day after birth
- Second visit between day 7 and day 14 after birth
- Third visit at 6 weeks after birth

**Medicines:**

ivacaine (single 3 ml vial) or 2% Lidocaine (10 ml vial) for pudendal block (if preferred by obstetrician)

**Supplies:**

- Gloves and gown (utility and sterile)
- Hand washing supplies (clean water, soap)
- Suture material for tear or episiotomy repair
- Alcohol solution
- Swabs
- Disposable delivery kits (Plastic sheet to place under mother, Sterile cord ties, Sterile blade, chlorhexidine for umbilical cord care)
- Clean towel for drying and wrapping the baby
- Blanket for the baby
- Sanitary pads for the mother
- Alcohol based hand-rub

**Equipment:**

- Blood pressure machine and stethoscope
- Fetal stethoscope
- Delivery instruments (Scissors, needle holder, artery forceps or clamps, dissecting forceps, sponge forceps, vaginal speculum)
- Forceps equipment
- Vacuum equipment
- Vacuum cups of different sizes (at least 5)

**HMIS Tools:**

1. Recording Tool: OPD Ticket OPD and indoor register, Referral slip, Abstract register
2. Reporting Tool: Monthly Report
3. Client/Patient Card: Follow up visit card, Discharge slip

4. IEC material:

**Supervision:**

- MS hospital, Trained Doctor / Nurse

**Standard Protocol:**

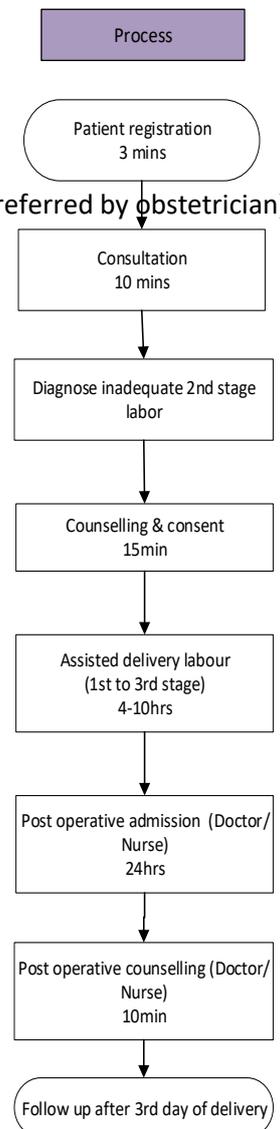
- WHO, UNFPA and UNICEF "Integrated Management of Pregnancy and Childbirth" protocols (2015)

**National Training Curriculum/Guidelines:**

- None

**Reference Material:**

D. Health Services Cluster  
 D.18. Surgery Package of Services  
**D.18.173. Assisted Vaginal Delivery Using Vacuum Extraction or Forceps**  
**Platform:** First Level Hospital  
 • THQ / DHQ/Small Hospital (Pvt.)



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.174. Burr hole to relieve acute elevated intracranial pressure Craniotomy for Trauma

DCP3 code: FLH33

##### Platform:

Tertiary Care Hospital

##### Process:

Patient registration at the reception (Receptionist)  
Consultation (Neurosurgeon)

- History
- Clinical examination
- Laboratory test (lab Technician)
- Management
- Counselling
- Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
- Obtain informed consent

Recommended Method

##### Craniotomy

- Medicine (Mannitol) to reduce swelling
- Draining extra cerebrospinal fluid or bleeding around the brain
- Single dose of pre-operative IV antibiotics. Antibiotics need to be initiated within 1 hour of surgery
- Administer General Anaesthesia
- Perform craniotomy
- Complete sign-out
- Post-operative care (recovery)

Length of stay: 8 days

Follow-up

- After 1 to 2 weeks

##### Medicines:

Pre-operative
<ul style="list-style-type: none"> <li>• Cefoxitin 1g IV/ Ceftriaxone 1g IV/Cefazolin 1g IV</li> <li>• Leviteracetam 500 mg IV</li> <li>• 1.5-2 g/kg IV infused over 30-60 minutes</li> </ul>
Intra-operative
<p>General Anaesthesia</p> <ul style="list-style-type: none"> <li>• Local Anaesthesia for incision: 2% Lidocaine with 1:100,000 Epinephrine</li> <li>• Anaesthesia type at surgeon's discretion:</li> <li>• General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN)</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• General Anaesthesia without intubation – Inj. Ketamine (1-4.5mg/kg IV for induction)</li> <li>• Foley catheterization</li> </ul>
Post-operative
<ul style="list-style-type: none"> <li>• Adults: Tramadol 50 IV/IM q6-8hrs PRN</li> <li>• Paracetamol 1000 mg PO q6-8hr PRN for pain control</li> <li>• Continue Leviteracetam 500 mg IV q12hr and continue after discharge as oral medication</li> </ul>
No contamination: antibiotics for 24 hrs.
Contamination during surgery: antibiotics for 4 days

##### Supplies:

- Sterile gloves and gowns
  - Drapes
  - Suturing material
  - Gauze
  - Pyodine/Alcohol swab
  - Medical tape

##### Equipment:

- General Anaesthesia machine
- Endotracheal tube and ventilation equipment
- Emergency resuscitation equipment
- Craniotomy set including high speed drill with perforators (for burr hole) and cutter (for craniotomy)
  - 2 Jansen Retractor Blunt 3x3 Blades 4"
  - 2 Weitlaner Retractor Blunt 3x4 Teeth 6-1/2"
  - 1 Scalpel Handle #3, 1 Scalpel Handle #4
  - 1 Scalpel Handle #7, 4 Solid Bar Handle For Gigli Saw Pack of 2, 2 Adson (Ewald) Dressing Forceps Serrated 4-3/4", 2 Adson Tissue Forceps 1x2 Teeth 4-3/4", 12 Backhaus Towel Clamp 5-1/4"
  - 2 Cushing Brain Forceps Delicate Serrated 7"
  - 2 Cushing Brain Forceps Delicate 1x2 Teeth 7"
  - 6 Ruskin Rongeur Straight 7-1/4"
  - 6 Foerster Sponge Forceps Serrated 9-1/2"
  - 18 Halsted Mosquito Forceps Straight 5"
  - 18 Halsted Mosquito Forceps Curved 5"
  - 1 Luer Bone Rongeur Curved 8mm x 10mm Bite 7"
  - 1 Stille-Liston Bone Forceps Curved Double Action 10-1/2"
  - 2 Mayo-Hegar Nh Serrated 7"
  - 1 Gigli Saw Wire 12"
  - 1 Gigli Saw Wire 20"
  - 1 Operating Scissors Straight Sharp/Blunt 6"
  - 1 Mayo-Stille Dissecting Scissors Straight 6-3/4"
  - 1 Mayo-Stille Dissecting Scissors Curved 6-3/4";
  - 1 Metzenbaum Dissecting Scissors Curved 7"
  - 1 Taylor Dural Scissors w/ Probe Tip 5-1/2"
  - 1 Cover for Instrument Tray

##### Lab Test:

- Complete Blood Count (CBC), Electrolytes, Urea, Creatinine, Hepatitis B and C, Coagulation profile (PT, APTT), Urine pregnancy test (only done in women of child-bearing age), CT scan brain (essential), Lumbar puncture

**HMIS Tools:**

1. Recording tool: Indoor register and outdoor register, In-patient admission file/database
2. Reporting tool:
3. Client/Patient card: Patient medical record card
4. IEC material:

**Supervision:**

- Senior Neurosurgeon

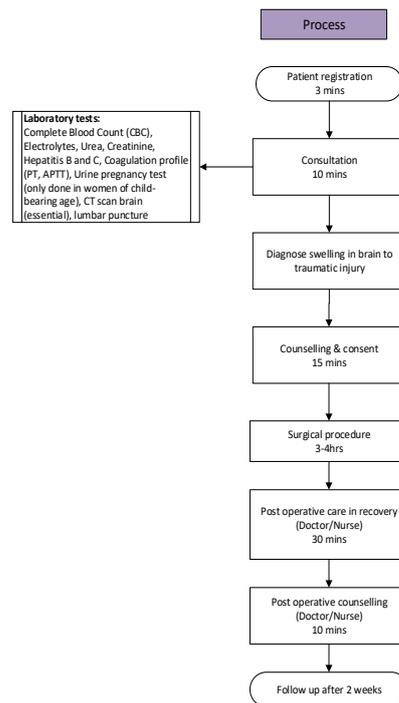
**Standard Protocol:****National Training Curriculum/Guidelines:**

- Not available

**References Material:**

- <https://www.hopkinsmedicine.org/health/conditions-and-diseases/headache/increased-intracranial-pressure-icp-heada>

D. Health Services Cluster  
 D.18. Surgery Package of Services  
 D.18.174. Burr-hole-to-relieve-acute-elevated-intracranial-pressure-Craniotomy for Trauma  
 Platform: Tertiary Care Hospital



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.175. Colostomy (Adult and Paediatrics)

DCP3 code: FLH34

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at the reception (Receptionist)

Consultation (Doctor)

- History
- Clinical examination
- Laboratory tests (Pathologist/Lab technician)
- Management
- Elective procedure
- Stoma marking, placing stoma in the rectus muscle, away from bony prominences and skin folds, by checking in the supine, sitting, and standing position
- Prepare for surgery
- Counselling
- Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
- Obtain informed consent
- Length of stay: 3 days

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

- Administer single dose of pre-operative IV antibiotics.
- Administer General Anaesthesia
- Perform Exploratory laparotomy
- Creation of stoma
- Temporary Colostomy
- Permanent Colostomy
- Complete sign-out and save/send any specimen for histopathology
- Post-operative care and pre-discharge Counselling
- Stoma care teaching and provision of stoma appliance at Home
- Provide clear instructions for return to health facility if complications occur

Follow-up

- After 1 to 2 weeks

##### Medicines:

<p>Pre-operative</p> <p>Adults:</p> <p>Cefoxitin 2g IV/ Ceftriaxone 2g IV/Cefazolin 2g IV &amp; Metronidazole 500 mg IV [Clindamycin (900mg) &amp; Aminoglycoside (e.g. Gentamicin: 5mg/kg based on dosing weight) in case of Penicillin allergy]</p> <p>Paediatrics:</p> <ul style="list-style-type: none"> <li>• Ampicillin: 30 mg/kg/dose IV 8 hourly</li> <li>• Metronidazole: 15mg/kg IV 8 hourly</li> <li>• Amikacin: 15mg/kg/dose IV once daily or Ceftriaxone: 50-75mg/kg IV &amp; Metronidazole</li> </ul>
<p>Intra-operative</p> <p>Local Anaesthesia for incision: 2% Lidocaine and Epinephrine</p> <p>General Anaesthesia with intubation (Adults)– Isoflurane Gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN)</p> <p>General Anaesthesia with intubation (Paeds)– Isoflurane Gas and Suxamethonium (1-2 mg/kg IV loading dose, 0.3-0.6 mg/kg IV PRN)</p> <p>Foley catheterization</p>

<p>Post-operative</p> <p>(Adults):</p> <ul style="list-style-type: none"> <li>• Tramadol 50 IV/IM q6-8hrs PRN</li> <li>• Paracetamol 1000 mg PO q6-8hr PRN for pain control</li> <li>• No contamination: antibiotics for 24 hrs</li> <li>• Contamination during surgery: antibiotics for 4 days</li> <li>• Intra-abdominal abscess/phlegmon: treat based on clinical judgement</li> </ul> <p>(Paediatrics):</p> <ul style="list-style-type: none"> <li>• Kinz 0.1mg/kg/dose 3 times a day</li> <li>• Paracetamol 15mg/kg/dose 4 to 6 times a day</li> <li>• Post-operative antibiotics based on clinical judgement</li> </ul>
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##### Supplies:

- Sterile gloves and gowns
  - Drapes
  - Suturing material
  - Gauze
  - Pyodine/Alcohol swab
  - Medical tape
  - Stoma appliance
- ##### Equipment:
- General Anaesthesia machine
  - Endotracheal tube and ventilation equipment
  - Emergency resuscitation equipment
  - Laparotomy set including

Items	Qty
SCALPEL HANDLE B.P # 3 (CAT # 04-150-03)	1
SCALPEL HANDLE #4	1
SCALPEL HANDLE #7	1
DISSECTING FORCEP BICFORD NON TOOTH 9^	1
DISSECTING FORCEP McINDOE NON TOOTH 6^	1
DISSECTING FORCEP SYME NON TOOTH 11.5 INCH	1
DISSECTING FORCEP GILLIES TEETH 6^ (06-320-15)	2
DISSECTING FORCEP DEBAKEY 8^	2
DISSECTING FORCEP WAUGH NON TOOTH 7.5^	1
DISSECTING FORCEP WAUGH TOOTH 7.5^	2
DISSECTING FORCEP LANE TOOTH (06-324-17)	1
SCISSOR MET CVD GOLDEN 9"(BC277R)	1
SCISSOR MAYO ST 6^ G-041 (CAT # 05-180-17)	2
SCISSOR MAYO CVD GOLDEN 6"	1
SCISSOR METz CURVED GOLDEN 9"	1
SCISSOR METz CURVED 7"	1
NEEDLE HOLDER MAYO GOLDEN 8^ (11-552-20)	1
NEEDLE HOLDER DEBAKEY GOLDEN 7^	1
NEEDLE HOLDER 9" BM 036R	1
NEEDLE HOLDER GOLDEN 10"	1
NEEDLE HOLDER GOLDEN FINE 7"	1
ARTERY FORCEP MOSQUITO STRAIGHT 4.5^ (07-190-12)	5
ARTERY FORCEP MOSQUITO CURVED 4.5^ (CAT # 07-191-12)	5
ARTERY FORCEP ROBERT CVD 9^	5
ARTERY FORCEP CRILE CVD 5.5^ (CAT # 07-241-14)	10
ARTERY FORCEP MOYNIHAN CVD	2
ARTERY FORCEP LAHEY CURVED 7.5^	2
ARTERY FORCEP SPENCER WELL STRAIGHT 6^ (CAT # 07-176-15)	3
ARTERY FORCEP SPENCER WELL ST 8^ (CAT # 07-176-18)	3
TISSUE FORCEP BABCOCK 6^	2
TISSUE FORCEP BABCOCK 9^	2
TISSUE FORCEP LITTLE WOOD 7^	2
TISSUE FORCEP ALLIS 6^	4
HOLDING FORCEP SPONG(RAMP) 9^ (08-236-23)	2
RETRACTOR DEAVER BROAD MEDIUM	2
RETRACTOR DEAVER NARROW	2
RETRACTOR MORRIS MEDIUM	2
RETRACTOR LANGENBACK MEDIUM	2
RETRACTOR FARABEUF	2
RETRACTOR KELLY SMALL	1
SUCTION TUBE YANKAUR	1
SUCTION TUBE WHEELER	1
TOWEL CLIP 3.5^ (CAT # 07-697-10)	10
DISSECTOR WATSON CHYNE	1
TROCAR	1
NEEDLE ANEURYSM	1
STAINLESS STEEL GALIPOT 3^	1
KIDNEY DISH 10" STAINLESS STEEL	1
DIATHERMY QUIVER	1
TRAY KIDNEY PLASTIC 200mmx70mm KD10# 10"	1
GALLIPOT 80MM (3.5^) CAPACITY:280ML (GP80)	1
CONTAINER BOTTOM (JK-442)	1
PRIMELINE TOP (JP007)	1
PERF BASKET RACK (JF-222R)	1

### Lab tests

- Complete Blood Count (CBC)
- Electrolytes, Urea, Creatinine
- Hepatitis B and C
- Coagulation profile (PT, APTT)
- Urine pregnancy test (only done in women of child-bearing age)
- Abdominal X-rays erect and supine

### HMIS Tools:

1. Recording tool: Outdoor and Indoor register, Patient file, Referral
2. Reporting tool: Monthly Report
3. Client/Patient card: Patient medical record card
4. IEC material:

### Supervision:

- Senior general surgeon at the DHQ/THQ/Small Hospital

### Standard Protocol:

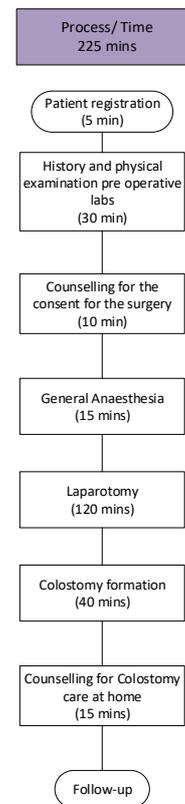
- Not available

### National Training Curriculum/Guidelines:

- Not available

### Reference Material:

D. Health Services Cluster  
D.18. Surgery Package of Services  
D.18.175. Colostomy  
Platform: First-level Hospital  
THQ/DHQ/Small Hospital (Pvt.)



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.176. Escharotomy or Fasciotomy (Adults)

DCP3 code: FLH35

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor)

- History
- Clinical examination
- Laboratory tests
- Indications
  - Fasciotomy
  - Clinical presentation consistent with compartment syndrome, Compartment pressures within 30 mm Hg of diastolic blood pressure (delta p), Escharotomy – only burn patients
- Impending or established vascular compromise of the extremities or digits, Impending or established respiratory compromise due to circumferential torso burns

- Arrange blood, Length of stay: 3 days

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

- Administer General Anaesthesia
- Escharotomy: Use electrocautery to incise eschar up till level of subcutaneous tissue releasing tissue pressure and extend 1 cm proximal and distal to the extent of the burn
- Fasciotomy: Place incisions along the relevant fascia to release the compartments in the affected extremity
- Test adequacy of Fasciotomy and/or Escharotomy by checking capillary filling pressures and compartment pressure using handheld Doppler

- Caomplete sign out, Post-operative care (recovery)

Follow-up

Initial 1-2 weeks after discharge, then after 4-6 weeks

##### Medicines:

Pre-operative: Antibiotics: Cefazolin 2g (IV q8hr) OR [Clindamycin 900mg (IV) OR Vancomycin 15mg/kg (IV q12hr) in case of allergies]

Intra-operative: General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN)

Post-operative: Analgesia (Adults): Paracetamol 1000 mg PO q6-8hr PRN for pain control; I.M Diclofenac or IV Nalbuphine/Opioids, Paracetamol/Tramadol combination.

**Supplies:** Sterile gloves and gowns, Drapes

- Suturing material, Gauze
- Pyodine /Alcohol swab, Medical tape

##### Equipment:

- General Anaesthesia machine, Endotracheal tube and ventilation equipment, Laryngoscope, Airway adjuncts, Monitors (ECG, blood pressure, heart rate, pulse oxymetry and temperature)

- Emergency resuscitation kit (Pediatric Ambu bag, oxygen cylinder, IV kit, IV fluid bag, Epinephrine, Atropine), Emergency resuscitation equipment
- Soft tissue retractors, Dissecting scissors
- Suction and irrigation machine
- Electrocautery (to remove eschar and prevent blood loss)

##### Lab Test:

- Complete Blood Count (CBC), Blood Gases, Creatinine, Blood Urea Nitrogen, Electrolytes, Urinalysis, Hepatitis B and C, Urine Myoglobin, Creatinine Phosphokinase, Serum Lactate
- Radiograph of affected limb (to rule out fracture)
- Measurement of the compartment pressure (if Tonometer or Doppler Ultrasound available)

##### HMIS Tools:

1. Recording tool OPD Ticket, OPD and indoor register, Patient file, Referral, Abstract register
2. Reporting tool: Monthly report
3. Client/Patient card: Patient medical record card
4. IEC material:

##### Supervision:

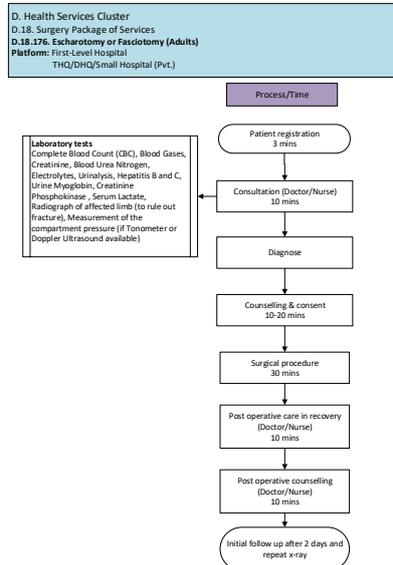
General Surgeon/Orthopaedic Surgeon

##### Standard Protocol:

##### National Training Curriculum/Guidelines:

- Not available

##### Reference Materia



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.177. Fracture Reduction

DCP3 code: FLH36

##### Platform:

First Level Hospital

- THQ/DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at the ER (Receptionist)

Consultation (Doctor)

- History
- Clinical examination

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

- Oral or IV Analgesia to achieve pain relief
- Tetanus prophylaxis if indicated
- Use of traction pulley to reduce closed fractures
- Apply POP Cast or Slab: Extent of the cast should be a joint above and below the fracture
- Post-procedure care and pre-discharge Counselling

Length of Stay: 2 days

Follow-up

- After 2 weeks with follow up X- rays, then after 4-6 weeks

##### Medicines:

Tetanus prophylaxis (if indicated)

Pre-operative

- Paracetamol 1000 mg PO q6-8hr PRN for pain control; I.M Diclofenac or IV Nalbuphine/Opioids
- Intra-operative
- General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN)
- General Anaesthesia without intubation – Inj. Ketamine (1-4.5mg/kg IV for induction)
- Post-operative
- Paracetamol 1000 mg PO q6-8hr PRN for pain control; I.M Diclofenac or IV Nalbuphine/Opioids, Paracetamol/Tramadol combination

##### Supplies:

- Stockinette
- Padding (cotton wool)
- Plaster of Paris Cast and slab
- Water
- Oxygen Gas

##### Equipment:

- General Anaesthesia machine
- Laryngoscope

- Endotracheal tube and ventilation equipment
- Airway adjuncts
- Monitors (ECG, blood pressure, heart rate, pulse oximetry and temperature)
- Emergency resuscitation kit (Ambu bag, oxygen cylinder, IV kit, IV fluid bag, Epinephrine, Atropine)
- Basic *Ortho Set*

##### HMIS Tools:

1. Recording tool: Indoor and outdoor register
2. Reporting tool: Monthly report
3. Client/Patient card: Patient medical record card
4. IEC material:

##### Lab tests:

- X-rays of the affected limb

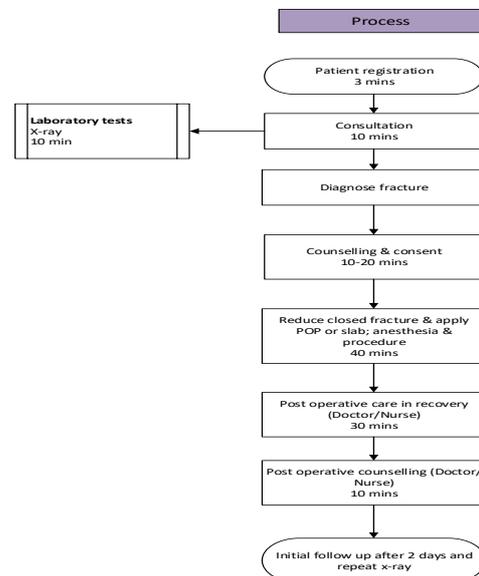
##### Supervision:

- Senior Orthopedic Surgeon at the DHQ/THQ/Small Hospital

##### Standard Protocol:

- None for Pakistan

D. Health Services Cluster  
D.18. Surgery Package of Services  
D.18.177. Fracture Reduction  
Platform: First Level Hospital  
THQ/DHQ/Small Hospital (Pvt.)



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.178a. Hernia Repair Including Emergency Surgery

DCP3 code: FLH37

##### Platform:

- First Level Hospital
- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at the reception (Receptionist)  
Consultation (Doctor)

- History
- Clinical examination
- Counselling
  - Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
  - Obtain informed consent

##### Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

##### Open Hernia Repair

- Administer General or Spinal or Local Anaesthesia
  - Open hernia repair according to the site and type of the hernia
  - Send specimen for histopathology
  - Post-operative care (recovery)
- Post-operative and pre-discharge Counselling  
Length of stay: 2 days

##### Follow-up

- After 1 to 2 weeks

##### Medicines:

##### Pre-operative

Elective procedure: Cefazolin 1g IV

If incarcerated/strangulated: Ceftriaxone 2g IV & Metronidazole 500 mg IV, Clindamycin (900mg) & Aminoglycoside (e.g. Gentamicin: 5mg/kg based on dosing weight) in case of Penicillin allergy.

##### Intra-operative, Adults

Anaesthesia type at surgeon's discretion:

General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN) OR Spinal/Regional Anaesthesia - Bupivacaine (3ml vial) or 2% Lidocaine (10 ml vial)

##### Post-operative

- Paracetamol 1000 mg PO q6-8hr PRN for pain control
- Elective procedure or no contamination: No post-operative antibiotics
- Contamination: IV Antibiotics for 3 to 5 days based on fever, WBC count, clinical exam's findings and clinician judgment

##### Supplies:

- Sterile gloves and gowns
  - Drapes
  - Non-absorbable mesh
  - Suturing material
  - Gauze
  - Pyodine/Alcohol swab

- Medical tape

##### Equipment:

- General Anaesthesia machine
- Endotracheal tube and ventilation equipment
- Emergency resuscitation equipment
- Laparotomy kit

##### Lab Test:

##### HMIS Tools:

1. Recording tool: Indoor and outdoor register, In-patient admission file/database
2. Reporting tool: Monthly Register
3. Client/Patient card: Patient medical record card
4. IEC material:

##### Supervision:

- MS hospital, Senior General Surgeon at the DHQ/THQ/Small Hospital

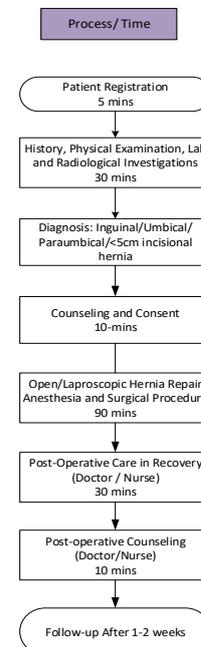
##### Standard Protocol:

- None for Pakistan

##### National Training Curriculum/Guidelines:

- Not available

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.178a. Hernia Repair Including Emergency Surgery  
Platform: First-Level Hospital  
THQ/DHQ/Small Hospital



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.178b. Hernia Repair Including Emergency Surgery for neonates and infants

DCP3 code: FLH37

##### Platform:

Tertiary Care Hospital for neonates and infants

- Emergency resuscitation equipment
- Paediatric set

##### Process:

Patient registration at the reception (Receptionist)  
Consultation (Doctor)

- History
- Clinical examination
- Counselling
  - Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
  - Obtain informed consent

Length of stay: 2 days

Laboratory Tests (Lab Technician)

- Laboratory tests if required

##### Recommended Method

- Administer General Anaesthesia
- Perform open or laparoscopic hernia repair
- Send any specimen for histopathology
- Post-operative care (recovery)

##### Follow-up

- After 1 to 2 weeks

##### Medicines:

###### Pre-operative

- Augmentin 30mg/kg/dose IV 8h or Clindamycin 10 mg/kg bd IV if Penicillin allergy

###### Intra-operative

- Local Anaesthesia for incision: Lidocaine and Epinephrine
- General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (1-2 mg/kg IV loading dose, 0.3-0.6 mg/kg IV PRN)

###### Post-operative

- Paracetamol 10-15mg/kg/dose PO q4-6hr for pain control
- Elective procedure or no contamination: No post-operative antibiotics
- Contamination: IV Antibiotics for 3 to 5 days based on fever, WBC count, clinical exam's findings and clinician judgment

##### Supplies:

- Sterile gloves and gowns
- Drapes
- Non-absorbable mesh
- Suturing material
- Gauze
- Pyodine/Alcohol swab
- Medical tape

##### Equipment:

- General Anaesthesia machine
- Endotracheal tube and ventilation equipment

##### HMIS Tools:

1. Recording tool: Indoor outdoor register
2. Reporting tool: Monthly report
3. Client/Patient card: Patient medical record card
4. IEC material:

##### Supervision:

- Paediatric Surgeon at a Tertiary Care Hospital with appropriate Anaesthesia and NICU support for neonates and infants
- General Surgeon at a First-level Hospital for older children

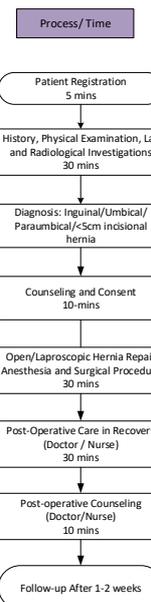
##### Standard Protocol:

- None for Pakistan

##### National Training Curriculum/Guidelines:

- Not available

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.178b. Hernia Repair Including Emergency Surgery for neonates and infants  
Platform: Tertiary Care Hospital for neonates and infants



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.179. Hysterectomy for Uterine Rupture or Intractable Postpartum Haemorrhage

DCP3 code: FLH38

##### Platform:

First Level Hospital

- THQ / DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at the reception (Receptionist)

Consultation (Doctor)

- History
- Clinical examination
- Laboratory test (Lab technician)
- Indications (Postpartum Hysterectomy)
  - Rupture of uterus
  - Postpartum hemorrhage not controlled with maneuvers, medical treatment or balloon tamponade/uterine compression sutures

##### Counselling

- Explain the procedure, risks, possible side effects, complications, and alternatives

- Obtain informed consent, Arrange blood and blood products

##### Laboratory Tests (Lab Technician)

- Laboratory tests if required

##### Recommended Method

##### Supra cervical hysterectomy

- Midline vertical incision, use fingers or scissor to separate rectus muscle, make an opening in the peritoneum and enter the peritoneal cavity
- Identify ureter before closing the uterine vessels. Doubly clamp across the uterine vessels at a 90-degree angle. Cut and ligate with 0 chromic catgut
- Amputate the uterus above the level of the uterine vessels ligated
- Close the cervical stump with 2-0 or 3-0 catgut interrupted sutures. If bleeding still seen. Place a drain
- Close the abdomen. Close the fascia with 0 catgut suture. Use Nylon for skin closure

- Post-operative care

Length of stay: 4 days

##### Follow-up:

- After 7days

##### Medicines:

<b>Pre-operative:</b> <ul style="list-style-type: none"><li>• Cefazolin 2g IV, Flagyl 500 mg IV</li></ul>
<b>Intra-operative:</b> Anaesthesia type at surgeon's discretion <ul style="list-style-type: none"><li>○ Regional Anaesthesia: Bupivacaine (3 ml vial) or 2% Lidocaine (10 ml vial)</li><li>○ General Anaesthesia with intubation: Isoflurane gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN)</li><li>○ General Anaesthesia without intubation: Inj. Ketamine 1-4.5mg/kg IV for induction, Transamine 1 g IV</li></ul>
<b>Post-operative</b> <ul style="list-style-type: none"><li>• Nalbuphine 10-20mg IV – 8-12 hourly, Blood products (Packed RBCs, Fresh frozen Plasma units), General Medicines</li></ul>

○ Paracetamol 1g every 6 hours, Diclofenac suppository 100 mg BD, Normal Saline 0.9%, Glucose 50 % solution, Ringer's lactate, Water for injection

##### Supplies:

- Gloves (utility and sterile), Sterile gowns,
- Hand washing supplies (clean water, soap)
- Urinary catheter, Oxygen supply
- IV kit, Suture material (Catgut 0, 2-0, 3-0), (Nylon 3-0)
- Alcohol solution, Pyodine solution, Swabs

##### Equipment:

- General Anaesthesia machine, Laryngoscope
- Endotracheal tube and ventilation equipment
- Airway adjuncts, Monitors (ECG, blood pressure, heart rate, pulse oximetry and temperature)
- Emergency resuscitation kit (Ambu bag, oxygen cylinder, IV kit, IV fluid bag, Epinephrine, Atropine)
- Suction and irrigation machine
- PPH tray (Balloon tamponade) Condom on Foleys catheter filled with water from drip set, Set for Laparotomy

##### Lab Test:

- Complete Blood Count (CBC), Hepatitis B and C
- Blood for group and cross match, PT, APTT, INR
- Pelvic ultrasound (in case of ruptured uterus)

##### HMIS Tools:

1. Recording Tool: OPD Ticket OPD and indoor register, Referral slip, Abstract register
2. Reporting Tool: Monthly Report
3. Client/Patient Card: MCH card, Follow up visit card, Discharge slip
4. IEC material:

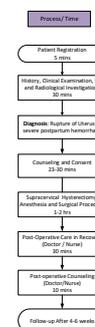
##### Supervision:

- MS Hospital

##### Standard Protocol:

- WHO, UNFPA and UNICEF "Integrated Management of Pregnancy and Childbirth" protocols (2015)

D. Health Services Cluster  
D.18. Surgery Package of Services  
D.18.179. Hysterectomy for Uterine Rupture or Intractable Postpartum Hemorrhage  
Platform: First Level Hospital  
THQ / DHQ/Small Hospital (Pvt.)



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.180. Irrigation and Debridement of Open Fracture

DCP3 code: FLH39

**Platform:**

First Level Hospital  
THQ/ DHQ/ Small Hospital (Pvt.)

**Process:**

Patient registration at the ER (Receptionist)  
Consultation (Doctor)

- History
- Clinical examination
- Length of stay: 7 days
- Arrange blood

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

- Gustillo Classification of Open fractures
  - Type 1: wound <1 cm, minimal contamination
  - Type 2: wound 1-10 cm, moderate soft tissue injury
  - Type 3: wound more >10 cm, extensive soft tissue damage (3A) Or extensive periosteal stripping (3B) Or vascular injury requiring immediate referral to Tertiary Care Hospital
- Initial management
  - Antibiotics and tetanus prophylaxis if indicated
  - Clean the gross debris from the wound, apply sterile saline soaked dressing and initial stabilization with slab/splint
- Fracture management
  - Oral or IV analgesia to achieve pain relief
  - Administer General Anaesthesia
  - Perform urgent Irrigation and drainage within 6 hours of the fracture
  - Debridement, removal of free bone fragments, devitalized tissue, trimming of the skin edges
  - Stabilize fracture with well-padded posterior plaster slab, a complete plaster cast split to prevent compartment syndrome, traction or, if available, an external fixator
- Post-operative care (recovery)

**Follow-up**

- After 4-6 weeks

**Medicines:**

<p>Pre-operative</p> <ul style="list-style-type: none"> <li>•Antibiotics: <b>Gustilo type I and II:</b> Cefazolin 2g (IV q8hr) or [Clindamycin 900mg (IV) or Vancomycin 15mg/kg (IV q12hr) in case of allergies]</li> <li><b>Gustilo type III:</b> Cefazolin 2g (IV q8hr) + Gentamicin 5mg/kg (IV q24hr) or Ceftriaxone 2g (IV q24hr)</li> <li><b>Farm injury:</b> Add Penicillin G 4million units (IV q4hr) or Metronidazole 500mg (IV q8hr)</li> <li>•Tetanus vaccine – 0.5 ml IM</li> <li>•Tetanus immunoglobulin – 250 units IM</li> </ul> <p>Intra-operative: General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN)</p> <p>Post-operative: Antibiotics:</p>
---

**Gustilo type I and II:** Continue above antibiotic regimen for 24 hours after injury, **Gustilo type III:** Continue pre-op antibiotic for 24-72 hours after surgery

- Analgesia: Paracetamol 1000 mg PO q6-8hr PRN for pain control; I.M Diclofenac or IV Nalbuphine/Opioids

**Supplies:**

- Sterile gloves and gowns, Drapes
- Suturing material, Gauze, Pyodine/Alcohol swab
- Medical tape, Oxygen Gas

**Equipment:**

- General Anaesthesia machine, Laryngoscope
- Endotracheal tube and ventilation equipment
- Airway adjuncts
- Monitors (ECG, blood pressure, heart rate, pulse oximetry and temperature)
- Emergency resuscitation kit (Ambu bag, oxygen cylinder, IV kit, IV fluid bag, Epinephrine, Atropine)
- Small basic orthopedic set (including small size nibblers, bone cutters, osteotomes, toffee hammer, forceps, retractors, needle holders)
- Fine instrument soft tissue set (including small forceps, needle holders, etc., suitable for hand surgery and similar), Suction and irrigation machine

**HMIS Tools:**

1. Recording tool: Indoor and outdoor register
2. Reporting tool: Monthly register
3. Client/Patient card: Patient medical record card
4. IEC material:

**Lab Test:**

- X-rays of the affected limb, Hepatitis B and C

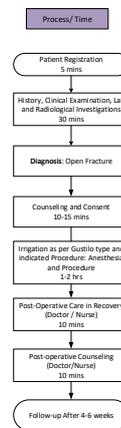
**Supervision:**

- MS hospital, Senior Orthopedic Surgeon at the DHQ/THQ/Small Hospital

**Standard Protocol:**

- None for Pakistan

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.180. Irrigation and Debridement of Open Fracture  
Platform: First Level Hospital  
THQ / DHQ/Small Hospital (Pvt.)



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.181. Management of Osteomyelitis, Including Surgical Debridement

DCP3 code: FLH40

##### Platform:

First Level Hospital Tertiary Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.) Referral Level Hospital

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor)

- History
- Clinical examination
- Diagnostic Criteria
  - Clinical and radiographic findings of Osteomyelitis and positive blood cultures with a likely pathogen (such as *S. aureus*) – no requirement of bone biopsy
  - Bone histopathology consistent with Osteomyelitis in the absence of negative blood culture
  - High clinical suspicion with typical radiographic findings and persistently elevated inflammatory markers in the absence of positive blood culture and biopsy not feasible
- Classification based on location
  - Vertebral Osteomyelitis (most common)
  - Sternoclavicular and pelvic Osteomyelitis (second most common)
  - Long bone Osteomyelitis (least common)
- Special Considerations (requiring additional specialty input)
  - Vertebral Osteomyelitis, Osteomyelitis with trauma
  - Pelvic and sacral Osteomyelitis, Prosthetic joint infections
- Counselling
  - Surgical debridement is essential and is required along with antimicrobial therapy, Surgical debridement is required to remove necrotic material and to obtain biopsy for culture
  - Local antimicrobials can be placed during debridement
  - Explain the procedure, risks, possible complications, implications of no surgery, and alternatives, Obtain informed consent
- Length of stay: 7 days

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method (Open Drainage)

- Administer single dose of pre-operative IV antibiotics (Ideally after taking cultures), Administer Local Anaesthesia
- Perform irrigation and debridement
  - Remove all devitalized and necrotic tissue, sequestra until punctuate bleeding is seen (paprika sign)
  - Remove any non-essential hardware, Placement of antibiotic laden beads, Fill empty space with free flaps or bone grafts
- Send specimen for culture and sensitivity
- Post-procedure care

Follow-up

- Initial 1-2 weeks after discharge, then after 4-6 weeks

##### Medicines:

Pre-operative: Vancomycin (15-20mg/kg/dose every 12 to 8 hours), Ceftriaxone (2g once a day in adults), Ceftriaxone (70m/kg/dose once a day in children)

Intra-operative: Local Anaesthesia for incision: 2% Lidocaine with 1:100,000 Epinephrine, Antibiotic beads

Post-operative: Paracetamol 1000mg PO q6-8 hr PRN for pain control, Vancomycin (15-20mg/kg/dose every 12 to 8 hours), Ceftriaxone (2g once a day in adults), Ceftriaxone (70m/kg/dose once a day in children)

##### Supplies:

- Sterile gloves and gowns, Drapes
- Several liters of Normal Saline, Suturing material
- Gauze, Pyodine/Alcohol swab, Medical tape

##### Equipment:

- Monitors (ECG, blood pressure, heart rate, pulse oximetry and temperature)
- Emergency resuscitation kit (Ambu bag, oxygen cylinder, IV kit, IV fluid bag, Epinephrine, Atropine)
- Large basic orthopedic set (including large size nibblers, bone cutters, osteotomes, mallet, forceps, retractors, needle holders)
- Small basic orthopedic set (including small size nibblers, bone cutters, osteotomes, toffee hammer, forceps, retractors, needle holders)
- Fine instrument soft tissue set (including small forceps, needle holders, etc, suitable for hand surgery and similar)
- Orthopedic power tools like drills and High-speed burrs
- Suction and irrigation machine

##### Lab Test:

- CBC, ESR, CRP, Hepatitis B and C, Blood culture
- Bone Biopsy (open or percutaneous) If needed

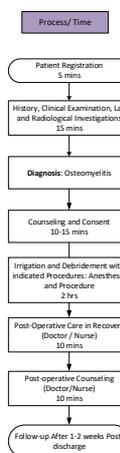
##### HMIS Tools:

1. Recording Tool: OPD Ticket OPD and indoor register, Referral slip, Abstract register
2. Reporting Tool: Monthly Report
3. Client/Patient Card: Follow up visit card, Discharge slip
4. IEC material:

##### Supervision:

- MS hospital, Senior Orthopedic Surgeon

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.181. Management of Osteomyelitis, Including Surgical Debridement  
Platform: First Level Hospital  
THQ/ DHQ/Small Hospital (Pvt.)



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.182a. Management of Septic Arthritis

DCP3 code: FLH41

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor)

- History, Clinical examination
- Diagnostic criteria
  - Cloudy or purulent joint aspirate
  - Aspirate cell count with WBC more than 50,000, however lower cell counts may still indicate infection (normal WBC count < 250)
  - Aspirate glucose less than 60% of serum level
- Counselling
  - Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
  - Drainage will be followed by IV antibiotics
  - Obtain informed consent
- Length of stay: 7 days

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method (Arthroscopy/Open Drainage)

- General Anaesthesia
- Drainage of the joint is the main treatment
  - Drainage can be by Needle Aspiration, Arthroscopy or Open Drainage based on the following
  - Needle aspiration (knee, elbow, ankle, or wrist) - only for patients who can't receive Anaesthesia
  - Arthroscopy or Open drainage (hip, shoulder, or difficult to access joints)
  - Open drainage (persistent drainage, penetrating trauma with residual body)
- Complete sign-out and +/- send any specimen for culture and sensitivity
- Post-procedure care
- Post-operative and pre-discharge Counselling
  - Postoperative admission for the administration of parenteral antibiotic for at least 7-14 days:
    - Vancomycin (15-20mg/kg/dose every 12 to 8 hours)
    - Ceftriaxone (2g once a day)
  - Serial synovial fluid analysis and monitoring of fever, joint swelling, pain and WBC count
  - Discharge on oral antibiotics to complete antibiotic course for 14- 21 days
  - Immediate movement of joint to avoid stiffness

##### Follow-up

- After 1 to 2 weeks - will need repeat labs to monitor progress

##### Medicines:

<b>Pre-operative</b> <ul style="list-style-type: none"> <li>• Penicillin group or 2nd gen Cephalosporin</li> <li>• Vancomycin (15-20mg/kg/dose every 12 to 8 hours)</li> <li>• Ceftriaxone (2g once a day)</li> </ul>
<b>Intra-operative: Adults:</b> General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN). <b>Children:</b> General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (1-2 mg/kg IV loading dose, 0.3-0.6 mg/kg IV PRN)
<b>Post-operative: Adult:</b> Paracetamol 1000mg PO q6-8 hr PRN for pain control <ul style="list-style-type: none"> <li>• Vancomycin (15-20mg/kg/dose every 12 to 8 hours)</li> <li>• Ceftriaxone (2g once a day)</li> </ul> Children: Paracetamol 15mg/kg/dose PO q6-8 hr PRN for pain control <ul style="list-style-type: none"> <li>• Vancomycin (15mg/kg/dose every 6 to 8 hours)</li> <li>• Ceftriaxone 75mg/kg once daily</li> </ul> Note: Pain medication and oral antibiotics are provisional until final culture reported

##### Supplies:

- Sterile gloves and gowns, Drapes
- 20- or 21-gauge needle (for joint aspiration or needle drainage), Scalpels and scalpel blades
- Several liters of normal saline, Suturing material, Gauze
- Pyodine/Alcohol swab, Oxygen supply, Medical tape

##### Equipment:

- General Anaesthesia machine, Laryngoscope
- Endotracheal tube and ventilation equipment,
- Airway adjuncts, Monitors (ECG, blood pressure, heart rate, pulse oximetry and temperature)
- Emergency resuscitation kit (Ambu bag, oxygen cylinder, IV kit, IV fluid bag, Epinephrine, Atropine)
- Arthroscopy equipment
- Large basic orthopedic set (including large size nibblers, bone cutters, osteotomes, mallet, forceps, retractors, needle holders)
- Small basic orthopedic set (including small size nibblers, bone cutters, osteotomes, hammer or mallet, forceps, retractors, needle holders)
- Incision and drainage small procedure kit

##### HMIS Tools:

1. Recording Tool: OPD Ticket OPD and indoor register, Referral slip, Abstract register,
2. Reporting Tool: Monthly Report
3. Client/Patient Card: Follow up visit card, Discharge slip
4. IEC material:

##### Lab Test:

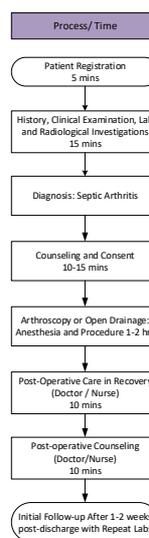
- CBC, ESR, CRP, Hepatitis B and C, Glucose
- X ray Anterior Posterior and Lateral, Ultrasound
- Other investigations

- Joint fluid aspirate, Fluid aspirate gram stain and culture, Blood culture
- MS hospital, Senior Pediatric or Plastic Surgeon (if Ortho not available) at the DHQ/THQ/Small Hospital

##### Standard Protocol:

- None for Pakistan

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.182a. Management of Septic Arthritis  
Platform: First-Level Hospital  
THQ/DHQ/Small Hospital (Pvt.)



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.182b. Placement of External Fixation and Use of Traction for Fractures

**DCP3 Code: FLH41**

**Platform:**

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

**Process:**

Patient admission at the ER (Receptionist)

Consultation (Doctor)

- History
- Clinical examination

Length of stay: 5 days

Arrange blood

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

External Fixation with Traction

- Oral or IV analgesia to achieve pain relief
- Administer General Anaesthesia
- Perform external fixation
- Post-operative care (recovery)

Follow-up

- 1-2 weeks after discharge, then after 4-6 weeks

**Medicines:**

Pre-operative
• Antibiotics: Cefazolin 2g (IV q8hr) OR [Clindamycin 900mg (IV) OR Vancomycin 15mg/kg (IV q12hr) in case of allergies]
Intra-operative
• General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN)
Post-operative
• Analgesia: Paracetamol 1000 mg PO q6-8hr PRN for pain control; I.M Diclofenac or IV Nalbuphine/Opioid. Paracetamol/Tramadol combination.

**Supplies:**

- Sterile gloves and gowns, Drapes, Scalpel handle and blades
- Suturing material, Gauze, Pyodine /Alcohol swab
- Medical tape, Oxygen gas
- Stockinette
- Padding (cotton wool)
- Water

**Equipment:**

- General Anaesthesia machine
- Laryngoscope
- Endotracheal tube and ventilation equipment
- Airway adjuncts
- Monitors (ECG, blood pressure, heart rate, pulse oximetry and temperature)
- Emergency resuscitation kit (Ambu bag, oxygen cylinder, IV kit, IV fluid bag, Epinephrine, Atropine)
  - Large basic orthopedic set (including large size nibblers, bone cutters, osteotomes, mallet, forceps, retractors, needle holders)

- Small basic orthopedic set (including small size nibblers, bone cutters, osteotomes, hammer, forceps, retractors, needle holders)
- Fine instrument soft tissue set (including small forceps, needle holders, etc, suitable for hand surgery and similar)
- Suction and irrigation machine
- Large external fixator set (lower limb)
- Small external fixator set (upper limb)
- Electric plaster cast saw
- Power drill—fully sterilizable Or Power drill—handyman type (hardware store) with sterile cover

**HMIS Tools:**

1. Recording Tool: OPD Ticket OPD and indoor register, Referral slip, Abstract register
2. Reporting Tool: Monthly Report
3. Client/Patient Card: Follow up visit card, Discharge slip
4. IEC material:

**Lab Test:**

- X-rays of the affected limb
- Hepatitis B and C

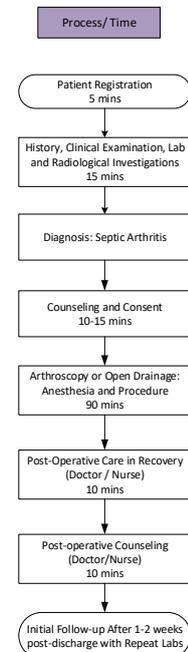
**Supervision:**

- Senior Orthopedic Surgeon at the DHQ/THQ/Small Hospital

**National Training Curriculum/Guidelines:**

- Not available

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.182b. Placement of External Fixation and Use of Traction for Fractures  
Platform: First-Level Hospital  
THQ/DHQ/Small Hospital



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.182c. Placement of external fixator and use of traction for fractures of children

DCP3 code: FLH41

**Platform:**

Tertiary Care Hospital with Orthopedic Surgeon

**Process:**

Patient registration at the ER (Receptionist)

Consultation (Doctor)

- History
- Clinical examination
- Indications
  - Stabilization of severe open fractures
  - Initial stabilization of soft tissue and bony disruptions in poly trauma

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

- Oral or IV Analgesia to achieve pain relief
- Administer General Anaesthesia
- Perform external fixation
- Post-operative care (recovery)

Length of stay: 5 days

Follow-up

- 1-2 weeks after discharge, then after 4-6 weeks

**Medicines:**

Pre-operative Antibiotics: Cefazolin 30mg/kg/day OR [Clindamycin 10mg/kg 12h (IV) OR Vancomycin 15mg/kg (IV q16hr) in case of allergies]	•
Intra-operative: General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (1-2 mg/kg IV loading dose, 0.3-0.6 mg/kg IV PRN)	•
Post-operative	•
• Analgesia: Paracetamol 15mg/kg/dose 6 to 8h PO PRN for pain control; IV Kinz 0.1mg/kg/dose 8h	•

**Supplies:**

- Sterile gloves and gowns, Drapes, Scalpel handle and blades
- Suturing material, Gauze, Pyodine /Alcohol Swab
- Medical tape, Stockinette
- Padding (cotton wool)
- Water, Oxygen gas

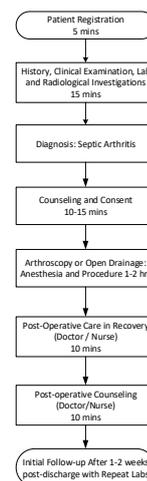
**Equipment:**

- General Anaesthesia machine
- Pediatric Laryngoscope
- Pediatric Endotracheal tube and ventilation equipment
- Pediatric Airway adjuncts
- Monitors (ECG, blood pressure, heart rate, pulse oximetry and temperature)
- Emergency resuscitation kit (Pediatric Ambu bag, oxygen cylinder, IV kit, IV fluid bag, Epinephrine, Atropine)
- Large basic orthopedic set (including large size nibblers, bone cutters, osteotomes, mallet, forceps, retractors, needle holders)

- Small basic orthopedic set (including small size nibblers, bone cutters, osteotomes, hammer, forceps, retractors, needle holders)
- Fine instrument soft tissue set (including small forceps, needle holders, etc. suitable for hand surgery and similar)
- Suction and irrigation machine
- Large external fixator set (lower limb)
- Small external fixator set (upper limb)
- Electric plaster cast saw
- Power drill—fully sterilizable OR Power drill—handyman type (hardware store) with sterile cover
- C-arm image intensifier
- Lab Test:
- X-rays of the affected limb
- HMIS Tools:
- Recording tool: Indoor and outdoor register
- Reporting tool: Monthly register
- Client/Patient card: Patient medical record card
- IEC material: Urdu and English brochures and pamphlets
- Supervision:
- Senior Orthopedic Surgeon at Tertiary Care Hospital
- Standard Protocol:
- None for Pakistan
- National Training Curriculum/Guidelines:
- Not available

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.182c. Placement of external fixator and use of traction for fractures of children  
Platform: Tertiary Care Hospital with Orthopedic Surgeon

Process/Time



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.183. Relief of Urinary Obstruction by Catheterization for Fractures

DCP3 code: FLH42

##### Platform:

- First Level Hospital
- THQ/ DHQ/ Small Hospitals (Pvt.)

##### Process:

Patient registration at the reception in an outpatient treatment centre (Receptionist)

Consultation (Doctor, Nurse, Technician)

- History
- Clinical examination
- Indications

- Acute urinary retention in which a urethral catheter cannot be passed
- Urethral trauma
- Management of a complicated lower genitourinary tract infection
- Requirement for long-term urinary diversion (in case of neurogenic bladder)
- Counselling
  - Obtain informed consent

Length of stay: 1 day

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

Urethral catheterization should be attempted. If urethral catheterization is not possible, then following methods for suprapubic catheterization may be considered.

- Seldinger technique (5 minutes)
  - Pass a Foley catheter of appropriate size through the indwelling Peel-Away sheath and into the bladder. Aspirate urine to confirm proper placement. Inflate the Foley balloon with 10 ml of sterile water
  - Gently withdraw the Peel-Away Sheath from the bladder and slit the sheath into two parts, leaving the catheter in place
- Rutner technique (5 minutes)
  - No guidewire inserted (vs. Seldinger). Use a scalpel with a No. 11 blade to make a stab incision through the skin and subcutaneous tissue at the needle insertion site
  - Insert the needle obturator inside the balloon catheter and advance through the incision site till bladder is reached
  - Inflate the catheter balloon and remove the needle obturator

- Post-operative care

Follow-up

- After 4-6 weeks

##### Medicines:

Pre-operative: Single-dose antibiotic prophylaxis with gram-negative coverage <ul style="list-style-type: none"> <li>○ 1<sup>st</sup>/2<sup>nd</sup> generation Cephalosporin</li> <li>○ Aminoglycoside + Metronidazole, Clindamycin</li> </ul>
Intra-operative <ul style="list-style-type: none"> <li>• Local Anaesthesia: 2% Lidocaine and Bupivacaine</li> <li>• Parenteral analgesia or sedation (e.g. Midazolam) as needed</li> </ul>
Post-operative <ul style="list-style-type: none"> <li>• Analgesics for pain control (as needed)</li> </ul>

Supplies Sterile gloves, Face mask with protective shield

- Clippers/shaver, Sterile towels or drapes
- Antiseptic solution/applicators (e.g. 3 ChlorPreps; CareFusion, Leawood, KS),
- Marking pen, 1% Lidocaine (5 ml) and 0.25% Bupivacaine (5 ml) in a Luer-Lok syringe
- 22-gauge, 7.75-cm spinal needle tip (some use 18- and 25-gauge needles)
- 10 ml of sterile water in a Luer-Lok syringe (to inflate the catheter balloon)
- Skin tape or 3-0 nylon suture on a curved needle (to secure the catheter loosely to the skin)
- 4x4-inch drain gauze (2) or drain sponges
- Catheter drainage bag, Suprapubic catheter kit

##### Equipment:

- Minor procedure kit, Suprapubic catheter kit

##### Lab Test:

- Urinalysis (if possible), Ultrasonography

##### HMIS Tools:

1. Recording tool: indoor and outdoor register, In-patient admission file/database
2. Reporting too: Monthly report
3. Client/Patient card: Patient medical record card
4. IEC material:

##### Supervision:

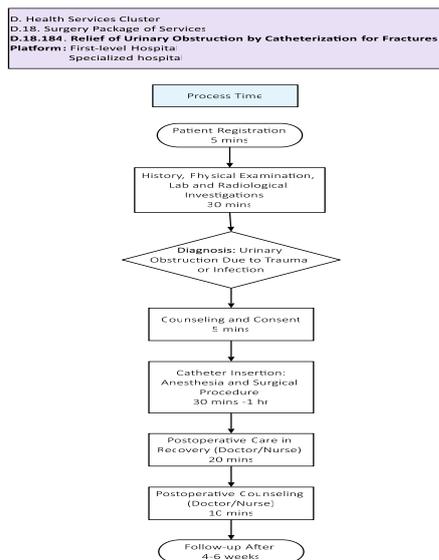
- MS hospital, Senior Pediatric or Plastic Surgeon at the DHQ/THQ/Small Hospital

##### Standard Protocol:

- None for Pakistan

##### National Training Curriculum/Guidelines:

- Not available



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.184. Removal of Gallbladder, Including Emergency Surgery

DCP3 code: FLH43

##### Platform:

First Level Hospital

- THQ/DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at the reception (Receptionist)  
Consultation (Surgeon, Nurse)

- History
- Clinical examination
- Counselling
  - Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
  - Obtain informed consent

Length of stay: 3 days

Laboratory Tests (Lab Technician)

- Laboratory tests if required

Recommended Method

- General Anaesthesia, perform open cholecystectomy without unnecessary delay to avoid perforation
- Send specimen for histopathology
- Post-operative care (recovery)

**Note:** In case of phlegmon formation, consider management with antibiotics +/- ultrasound-guided drainage or sub-total cholecystectomy.

Post-operative and pre-discharge Counselling

- Resume diet after recovery from Anaesthesia
- Assess patient for resumption of home medications
- Wound care as appropriate
- Explain weight restrictions (avoid heavy lifting, pushing, pulling, and straining for 6 weeks (open surgery)/4 weeks (laparoscopic))
- Explain possible post-op complications, including fever, nausea, vomiting, diarrhea, and redness/swelling/drainage from wound
- Provide clear instructions for return to health facility if complications occur

Follow-up

- After 1 to 2 weeks

##### Medicines:

<p><b>Pre-operative</b></p> <ul style="list-style-type: none"> <li>• Cefoxitin 2g IV/ Ceftriaxone 2g IV/Cefazolin 2g IV &amp; Metronidazole 500 mg IV [Clindamycin (900mg) &amp; Aminoglycoside (e.g. Gentamicin: 5mg/kg based on dosing weight) in case of Penicillin allergy]</li> </ul>
<p><b>Intra-operative</b></p> <ul style="list-style-type: none"> <li>• Local Anaesthesia for incision: 2% Lidocaine and Epinephrine</li> <li>• General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN)</li> </ul>
<p><b>Post-operative</b></p> <ul style="list-style-type: none"> <li>• Paracetamol 1000 mg PO q6-8hr PRN for pain control</li> <li>• Elective procedure or non-complicated cholecystitis: No post-operative antibiotics</li> <li>• Complicated Cholecystitis/Empyema/Peritonitis: IV Antibiotics for 3 to 5 days based on fever, WBC count, clinical exam findings and clinician's judgement</li> </ul>

##### Supplies:

- Sterile gloves and gowns
- Drapes
- Endoscopic clips (laparoscopic cholecystectomy)
- Suturing material
- Gauze, Pyodine/Alcohol swab
- Medical tape

##### Equipment:

- General Anaesthesia Machine
- Endotracheal tube and ventilation equipment
- Emergency resuscitation equipment
- Open cholecystectomy kit

##### HMIS Tools:

1. Recording tool: Emergency department token, In-patient admission file/database
2. Reporting tool
3. Client/Patient card: Patient medical record card
4. IEC material:

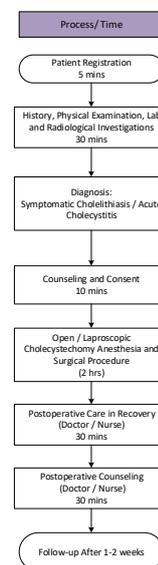
##### Lab Test:

- Ultrasound liver, gall bladder, Hepatitis B and C
- Random/Fasting blood sugar

##### Supervision:

- Senior General Surgeon at the DHQ/THQ/Small Hospital

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.184. Removal of Gallbladder, Including Emergency Surgery  
Platform: First Level Hospital  
THQ/ DHQ/ Small Hospitals (Pvt.)





## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.186. Resuscitation with Advanced Life Support Measures, Including Surgical Airway

DCP3 code: FLH45

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital

##### Process:

Identification of collapsed patient

Initiate ACLS protocol

- Attach monitor / defibrillator
- Identify Specific arrhythmia (Sudden Cardiac Arrest, Bradycardia, or Tachycardia)
- Arrhythmia specific management
- Cardiac Arrest management, Bradycardia management, Tachycardia management
- Endotracheal intubation (as needed/per protocol). If endotracheal intubation is not possible then consider surgical airway component (Tracheostomy or Cricothyroidotomy)
- Termination of resuscitative care
- Return of spontaneous circulation, Duration of resuscitative effort >30 minutes without a sustained perfusing rhythm
- Initial electrocardiographic rhythm of asystole
- Prolonged interval between estimated time of arrest and initiation of resuscitation, Patient age and severity of comorbid disease, Absent brainstem reflexes, Normothermia
- Post resuscitation care

Length of stay: 2 days

Arrange blood

##### Medicines:

- Cardiac Arrest Specific : Epinephrine IV/IO dose - 1 mg every 3-5 mins, Amiodarone IV/IO dose - First dose: 300 mg bolus, Second dose: 150 mg OR Lidocaine IV/IO dose - First dose: 1-1.5 mg/kg, Second dose: 0.5-0.75 mg/kg
- Bradycardia specific: Atropine IV dose - First dose: 0.5 mg bolus. Repeat every 3-5 mins. Maximum: 3 mg
- Dopamine IV infusion - Usual infusion rate is 2-20 mcg/kg per min. Titrate to patient response; taper slowly
- Epinephrine IV infusion - 2-10 mg per min infusion. Titrate to patient response
- Tachycardia specific
- Adenosine IV dose - First dose: 6 mg rapid IV push; follow with NS flush, second dose: 12 mg if required
- Procainamide IV dose - 20-50 mg/min until arrhythmia suppressed, hypotension ensues, QRS duration increases > 50% or maximum dose 17mg/kg given. Maintenance infusion: 1-4 mg/min. Avoid if prolonged QT or CHF
- Amiodarone IV dose - First dose: 150 mg over 10 mins. Repeat as needed if VT recurs. Follow by maintenance infusion of 1 mg/min for first 6 hours
- Sotalol IV dose - 100 mg (1.5 mg/kg) over 5 mins. Avoid if prolonged QT

- Other important medicines (antidotes and stabilization medicines)
  - Aspirin for Acute coronary syndrome 81mg tablets
  - Nitroglycerin 0.4mg tablets
  - Diltiazem for Atrial fibrillation/flutter or PSVT 0.25 mg/kg (usual adult dose, 20 mg) direct IV over 2 minutes
  - Dextrose 50%, 25%
  - Magnesium sulphate for Torsades or Cardiac arrest 1-2g slow IV (diluted in 50-100 ml D5W), Naloxone
  - Sodium Bicarbonate: (for severe acidosis 1 mEq/kg/dose) (for hyperkalemia 20 mEq give over 5 min
  - Calcium Gluconate (for hyperkalemia/ hypermagnesemia) - 1.5-3 g IV infused over 2-5 minutes

##### Supplies:

- Oxygen tank, Oxygen mask, Injection, IV line, Normal Saline Boluses

##### Equipment:

- Defibrillator with cardiac monitor, Electrocardiograph, Sphygmomanometer, Portable suction apparatus, Endotracheal tube, Capnometer, Automated external defibrillator, tracheostomy tube, surgical cutdown set
- Guedels airways

##### HMIS Tools:

1. Recording Tool: OPD Ticket OPD and indoor register, Referral slip, Abstract register
2. Reporting Tool: Monthly Report
3. Client/Patient Card: Follow up visit card, Discharge slip
4. IEC material:

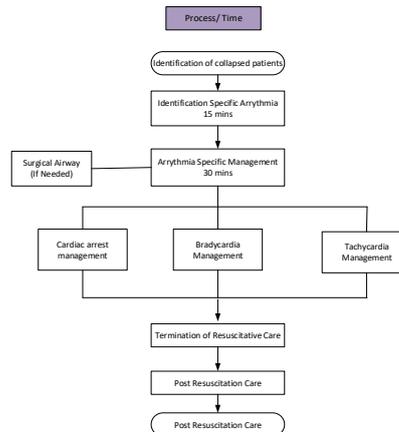
##### Supervision:

- Doctor at First-level Hospital, Emergency response activation system

##### Standard Protocol:

- American Heart Association 2015 Update

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.186. Resuscitation with Advanced life support measures including surgical airway  
Platform: First level Hospital  
THQ/ DHQ/ Small Hospitals (Pvt.)



## D.18. Surgery Package of Services

### D.18.187. Basic Skin grafting

DCP3 code: FLH46

#### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

#### Process:

Patient registration at the reception (Receptionist)

Patient admission

Consultation (Doctor)

- History
- Clinical examination
- Indications
- Skin defect due to burns, Skin defect due to trauma
- Skin defect due to tumor excision
- Counselling
- Explain the procedure, risks, possible complications, implications of no surgery, and alternatives, Obtain informed consent

Length of stay: 2 days

Laboratory Tests (Lab Technician)

- Laboratory tests if required

#### Recommended Method

- Split-thickness grafts
- Full-thickness grafts
- General Anaesthesia or (Local Anaesthesia for partial thickness), Tumescant infiltration and harvest graft from appropriate donor site
- Do meshing to elongate graft
- Debride recipient site followed by graft placement and fixation, Send specimen for histopathology
- Post-operative and pre-discharge Counselling

Follow-up

- After 1 to 2 weeks

#### Medicines:

Pre-operative: **Adults:** Cefoxitin 2g IV/ Ceftriaxone 2g IV/ Cefazolin 2g IV & Metronidazole 500 mg IV [Clindamycin (900mg) & Aminoglycoside (e.g. Gentamicin: 5mg/kg based on dosing weight) in case of Penicillin allergy]

**Children:** Ampicillin: 50 mg/kg/dose IV, Metronidazole: 15mg/kg IV (neonates weighing <1200g should receive a single 7.5mg/kg dose), and

- Amikacin: 15mg/kg/dose IV (not given always), or
- Ceftriaxone: 50-75mg/kg IV & Metronidazole

#### Intra-operative

- Local Anaesthesia for incision: 1% Lidocaine and Epinephrine (Partial thickness), General Anaesthesia with intubation (**Adults**) – Isoflurane Gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN)
- General Anaesthesia with intubation (**Paeds**) – Isoflurane Gas and Suxamethonium (1-2 mg/kg IV loading dose, 0.3-0.6 mg/kg IV PRN), Tumescant Infiltration: 1litre Normal Saline + Ampule of 1:1000 Epinephrine + 1% Lidocaine + 0.25% Bupivacaine

#### Post-operative

- **Adults:** Paracetamol 1000 mg PO q6-8hr PRN for pain control, **Children:** Paracetamol 10-15mg/kg/dose PO q4-6hr (maximum 2.6g/24 hrs.) for pain control

#### Supplies:

- Sterile gloves and gowns
- Drapes
- Scalpel and dermatome (for graft harvestation)
- Meshing equipment (for graft expansion)
- Staples or suturing material (for graft fixation)
- Gauze, Pyodine/Alcohol swab
- Medical tape

#### Laboratory test:

- Complete Blood Count (CBC), Hepatitis
- Urinalysis, Urea Creatinine Electrolytes

#### Equipment:

- General Anaesthesia machine
- Endotracheal tube and ventilation equipment
- Emergency resuscitation equipment

#### HMIS Tools:

1. Recording tool: Indoor and outdoor register In-patient admission file/database
2. Reporting tool: Monthly report
3. Client/Patient card: Patient medical record card
4. IEC material:

#### Supervision:

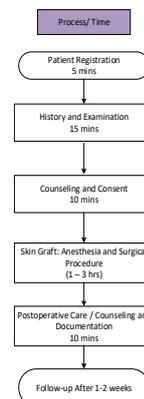
- Senior General Surgeon at the DHQ/THQ/Small Hospital

#### Standard Protocol:

#### National Training Curriculum/Guidelines:

- Not available

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.187. Basic Skin grafting  
Platform: First level Hospital  
THQ/ DHQ/ Small Hospitals (Pvt.)



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.188. Surgery for filarial hydrocele

DCP3 code: FLH47

##### Platform:

First Level Hospital

- THQ/DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at the reception (Receptionist)

Admission

Consultation (Doctor)

- History
- Clinical examination
- Counselling
- Explain the procedure, risks, possible side effects, complications, and alternatives
- Obtain informed consent

Laboratory Tests (Lab Technician)

- Laboratory tests if required

##### Recommended Method

Hydrocelectomy by vaginectomy and simple closure of scrotum in adults and Patent Processus Vaginalis (PPV) ligation in childhood

Post-operative care

Length of stay: Day care

Follow-up:

- After 2-4 weeks

##### Medicines:

**Pre-operative:** Paracetamol 1g every 6 hours, Oral Amoxicillin 500mg every 12 hours

**Intra-operative:** Anaesthesia type at surgeon's discretion

- General Anaesthesia with intubation: Isoflurane gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN)

Post-operative

- Oral Amoxicillin 500mg every 12 hours

##### Supplies:

- Gloves (utility and sterile)
- Sterile gowns
- Hand washing supplies (clean water, soap)
- Urinary Catheter
- Oxygen supply
- IV kit
- Suture material (Nylon 3-0)
- Alcohol solution
- Pyodine solution
- Swabs

##### Equipment:

- General Anaesthesia machine
- Laryngoscope
- Endotracheal tube and ventilation equipment

- Airway adjuncts
- Monitors (ECG, blood pressure, heart rate, pulse oximetry and temperature)

- Emergency resuscitation kit (Ambu bag, oxygen cylinder, IV kit, IV fluid bag, Epinephrine, Atropine)

- Suction and irrigation machine

- Electrocautery machine

- Set for Hydrocelectomy and Hernia

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD and Indoor register, Patient file, Referral, abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Discharge slip
4. IEC Material:

##### Labs Test:

- CBC, RBS

##### Supervision:

- Trained Doctor

##### Standard Protocol:

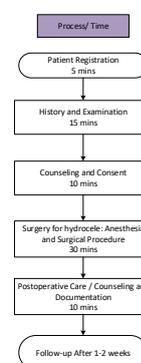
- Capuano, G.P. and Capuano, C. Surgical management of morbidity due to lymphatic filariasis: The usefulness of a standardized international clinical classification of hydroceles. *Tropical Biomedicine* 29(1): 24–38 (2012)
- Global programme for the elimination of lymphatic filariasis. "Surgical approaches to the urogenital manifestations of lymphatic filariasis. *Who/cds/cpe/cee/2002.33*

##### National Training Curriculum/Guidelines:

- None

##### Reference Material:

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.188. Surgery for filarial hydrocele  
Platform: First level Hospital  
THQ/DHQ/ Small Hospitals (Pvt.)



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.189a. Trauma Laparotomy

DCP3 code: FLH48

##### Platform:

First-level Hospital

- THQ/DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at the reception (Receptionist)

Patient Admission

Consultation (Doctor)

- History
- Clinical examination
- Management
- IV resuscitation with isotonic fluids and blood products
- Foley catheterization after excluding urethral injury
- Nasogastric tube placement
- Prepare patient for surgery
  - Counselling
- Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
- Obtain informed consent

Recommended Method

- General Anaesthesia
- Perform exploratory laparotomy and necessary procedures e.g. abdominal packing for control of hemorrhage, control contamination
- If injuries require care at a higher-level facility, temporary closure of abdomen and expeditious transfer
- Post-operative care (recovery)
- Post-operative and pre-discharge Counselling

Length of stay: 5 days

Arrange blood

Follow-up

- After 1 to 2 weeks

##### Medicines:

Pre-operative
<ul style="list-style-type: none"> <li>• Cefoxitin 2g IV/ Ceftriaxone 2g IV/Cefazolin 2g IV &amp; Metronidazole 500 mg IV [Clindamycin (900mg) &amp; Aminoglycoside (e.g. Gentamicin: 5mg/kg based on dosing weight) in case of penicillin allergy]</li> </ul>
Intra-operative
<ul style="list-style-type: none"> <li>• Local Anaesthesia for incision: 2% Lidocaine with 1:100,000 epinephrine</li> <li>• General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN)</li> </ul>
Post-operative
<ul style="list-style-type: none"> <li>• Tramadol 50 IV/IM q6-8hrs PRN</li> <li>• Paracetamol 1000 mg PO q6-8hr PRN for pain control</li> </ul>
<ul style="list-style-type: none"> <li>• No contamination: antibiotics for 24 hrs</li> <li>• Contamination during surgery: antibiotics for 5-7 days</li> </ul>

##### Supplies:

- Sterile gloves and gowns

- Drapes
- Suturing material
- Gauze
- Pyodine/Alcohol swab
- Medical tape
- Stoma/colostomy bag

##### Equipment:

- General Anaesthesia machine
- Endotracheal tube and ventilation equipment
- Emergency resuscitation equipment
- Laparotomy kit

##### Lab Test:

- Complete Blood Count (CBC)
- Electrolytes, Urea, Creatinine
- Urine pregnancy test (Only done in women of child-bearing age), CXR
- Hepatitis B and C screening, Abdominal X-ray supine, Ultrasound (FAST scan)
- C-spine X-ray if blunt trauma

##### HMIS Tools:

1. Recording Tool: Indoor and outdoor register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Patient Medical Record Card
4. IEC material:

##### Supervision:

- Senior General Surgeon at the DHQ/THQ/Small Hospital

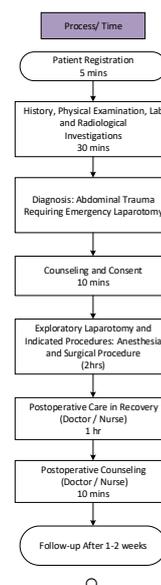
##### Standard Protocol:

- None for Pakistan

##### National Training Curriculum/Guidelines:

- Not available

D. Health Services Cluster D.18. Surgery Package of Services: D.18.189a. Trauma Laparotomy Platform: First level Hospital THQ/ DHQ/ Small Hospitals (Pvt.)
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## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.189b. Trauma Laparotomy in Children

DCP3 code: FLH48

##### Platform:

Tertiary Care Hospital

- Setup with Pediatric Surgeon and PICU/HDU set up

##### Process:

Patient registration at the reception (Receptionist)

Consultation (Doctor)

- History
- Clinical examination
- Management
- IV resuscitation with isotonic fluids and blood products
- Foley catheterization after excluding urethral injury
- Nasogastric tube placement
- Prepare patient for surgery
- Counselling
- Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
- Obtain informed consent  
Recommended Method
- General Anaesthesia
- Perform exploratory laparotomy and necessary procedures e.g. abdominal packing for control of hemorrhage, control contamination
- If injuries require care at a higher-level facility, temporary closure of abdomen with Bogota and expeditious transfer
- Send any specimen for histopathology
- Post-operative care (recovery)  
Length of stay: 4 days  
Arrange blood  
Follow-up
- After 1 to 2 weeks and the 3 months and once annually for 3 years

##### Medicines:

**Pre-operative:** Ampicillin: 30 mg/kg/dose IV 8h  
Metronidazole: 15mg/kg IV 8h (neonates weighing <1200g should receive a single 7.5mg/kg dose), and Amikacin: 15mg/kg/dose IV once daily (not given always), or Ceftriaxone: 75mg/kg IV & Metronidazole

**Intra-operative:** Local Anesthesia for incision: 2% Lidocaine with 1:100,000 epinephrine General Anesthesia with intubation – Isoflurane Gas and Suxamethonium (1-2 mg/kg IV loading dose, 0.3-0.6 mg/kg IV PRN)

**Post-operative:** Paracetamol 15mg/kg/ dose 6 to 8h PO PRN for pain control, No contamination:

antibiotics for 24 hrs, Contamination during surgery: antibiotics for 4 days

##### Supplies:

- Sterile gloves and gowns, Drapes
- Suturing material, Gauze, Pyodine/Alcohol swab, Medical tape

##### Equipment:

- General Anaesthesia machine
- Endotracheal tube and ventilation equipment, Emergency resuscitation equipment, Laparotomy kit

##### Lab tests

- Complete Blood Count (CBC)
- Electrolytes, Urea, Creatinine
- CXR, Abdominal X-ray supine
- Ultrasound (FAST scan)
- C-spine X-ray if blunt trauma

##### HMIS Tools:

1. Recording Tool: Indoor and outdoor register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Patient Medical Record Card
4. IEC material:

##### Supervision:

- Pediatric Surgeon at tertiary care hospital

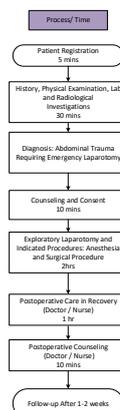
##### Standard Protocol:

- None for Pakistan

##### National Training Curriculum/Guidelines:

- Not available

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.189b. Trauma Laparotomy in Children  
Platform: Tertiary Care Hospital  
Set up with Pediatric Surgeon and PICU/HDU set up



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.190. Trauma Related Amputations

DCP3 code: FLH49

##### Platform:

First-Level Hospital

- THQ/DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at the ER (Receptionist)

Patient admission

Consultation (Doctor)

- History
- Clinical examination
- Indications
  - Irreparable loss of blood supply
  - Severe soft tissue compromise
- Types of amputations
  - Upper extremity amputation at level of radius or wrist, Upper extremity amputation at humeral or elbow level, Trans-femoral amputation, Through knee amputation, Below Knee amputation
  - Ankle/foot amputation
    - Recommended Method
- Oral or IV Analgesia to achieve pain relief
- Antibiotics and tetanus prophylaxis if indicated
- Administer General Anaesthesia
- Perform amputation
- Post-operative care (recovery)
- Post-procedure care and pre-discharge Counselling

Length of stay: 5 days

Arrange blood

Follow-up

- 1-2 weeks after discharge, then after 4-6 weeks
- Referral for artificial limb fitting if appropriate

##### Medicines:

Pre-operative
<p><b>Adults: Antibiotics:</b> Cefazolin 2g (IV q8hr) or [Clindamycin 900mg (IV) or Vancomycin 15mg/kg (IV q12hr) in case of allergies]</p> <p><b>Children:</b> Cefazolin 30mg/kg/day or [Clindamycin 10mg/kg 12h (IV) or Vancomycin 15mg/kg (IV q16hr) in case of allergies]</p>
Intra-operative
<p><b>Adults:</b> General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN)</p> <p><b>Children:</b> General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (1-2 mg/kg IV loading dose, 0.3-0.6 mg/kg IV PRN)</p>
Post-operative
<p><b>Adults:</b> Analgesia: Paracetamol 1000 mg PO q6-8hr PRN for pain control; I.M Diclofenac or IV Nalbuphine/Opioids, Paracetamol/ Tramadol combination</p> <p><b>Children:</b> Analgesia: Paracetamol 15mg/kg/dose 6 to 8h PO PRN for pain control; IV Kinz 0.1mg/kg/dose 8h</p>

##### Supplies:

- Sterile gloves and gowns, Drapes
- Scalpel handle and scalpel blades, Suturing material, Gauze, Pyodine /Alcohol swab, Medical tape, Oxygen gas, Padding (cotton wool), Saline for irrigation, pneumatic tourniquet

##### Equipment:

- General Anaesthesia machine, Laryngoscope
- Endotracheal tube and ventilation equipment, Airway adjuncts
- Monitors (ECG, blood pressure, heart rate, pulse oximetry and temperature)
- Redivac drain and suction bottle
- Emergency resuscitation kit (Ambu bag, oxygen cylinder, IV kit, IV fluid bag, Epinephrine, Atropine)
- Amputation set

##### HMIS Tools:

1. Recording tool: Indoor and Outdoor register
2. Reporting tool: Monthly register
3. Client/Patient card: Patient medical record card
4. IEC material:

##### Lab Test:

- Radiological Investigations

##### Supervision:

- Senior Orthopedic Surgeon at the DHQ/THQ/Small Hospital

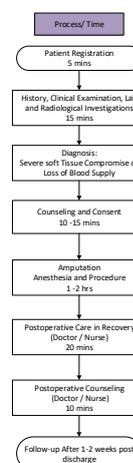
##### Standard Protocol:

- None for Pakistan

##### National Training Curriculum/Guidelines:

- Not available

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.190. Trauma Related Amputations  
Platform: First-Level Hospital  
THQ/DHQ/Small Hospital (Pvt.)



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.191. Tube Thoracostomy

DCP3 code: FLH50

##### Platform:

First-Level Hospital

- THQ/DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at the reception (Receptionist)

Admission

Consultation (Doctor)

- History
- Clinical examination
- Counselling
  - Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
  - Obtain informed consent
- Recommended Method
  - Local Anesthesia
  - Placement of chest tube under sterile conditions, with attachment to appropriate drainage system
  - Send any specimen for culture and sensitivity
  - Post-procedure care
  - Post-operative and pre-discharge Counselling
- Length of stay: 3 days
- Follow-up: After 3-7 days

##### Medicines:

Pre-operative
Adults <ul style="list-style-type: none"><li>• Cefazolin 2g IV or Augmentin 1 gm IV or Clindamycin 900mg IV if Penicillin allergy</li></ul> Children <ul style="list-style-type: none"><li>• Augmentin 30mg/kg/dose IV 8h or Clindamycin 10 mg/kg bd IV if Penicillin allergy</li></ul>
Intra-operative
<ul style="list-style-type: none"><li>• Local Anaesthesia for incision: 2% Lidocaine and 1:100,000 Epinephrine</li></ul>
Post-operative
Adults <ul style="list-style-type: none"><li>• Paracetamol 1000 mg PO q6-8hr PRN for pain control If indicated:</li><li>• Cefazolin 2g IV or Augmentin 1 gm IV or Clindamycin 900mg IV if Penicillin allergy. Modify according to cultures, if indicated</li></ul> Children <ul style="list-style-type: none"><li>• Paracetamol 10-15mg/kg/dose PO q4-6hr for pain control</li></ul>

##### Supplies:

- Sterile gloves and gown
- Drapes, Gauze Medical tape
- Pyodine/Alcohol swab

##### Equipment:

- Scalpel and blade
- Suture kit

- Suture (stout and non-absorbable /1.0 - 2.0 silk or prolene)
- Instrument for blunt dissection if required (curved clamp)
- Guide wire and dilators for Seldinger technique
- Chest tube
- Connecting tube
- Closed drainage system (including sterile water if UWSD is being used)
- Dressing equipment may also be available in a kit form
- Chest tube clamps (required for small or large bore catheters in the absence of 3way tap)

##### HMIS Tools:

1. Recording Tool: Indoor and outdoor register, Referral register
2. Reporting Tool: Monthly register
3. Client/Patient Card: Patient medical record card
4. IEC material:

##### Lab Test:

- +/- Complete Blood Count (CBC)
- CXR

##### Supervision:

- Surgeon

##### Standard Protocol:

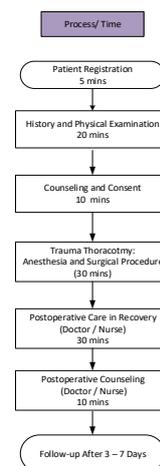
- None for Pakistan

##### National Training Curriculum/Guidelines:

- Not available

##### Reference Material:

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.191. Trauma Thoracotomy  
Platform: First-Level Hospital  
• THQ/DHQ/Small Hospital (Pvt.)



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.192. Cataract Extraction and Insertion of Intraocular Lens

DCP3 code: RH14

##### Platform:

- First Level Hospital (DHQ)

##### Process:

Patient registration at the reception (Receptionist)

Admission

Consultation (Doctor)

- History
- Clinical examination and investigations
- Ophthalmic exam (visual acuity, pupil exam, external eye exam, measurement of Intraocular pressure, full slit lamp exam, biometry, examination of cataract and fundus)
- Counselling
  - Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
  - Stop blood thinners and prostate medications one week before surgery
  - Obtain informed consent
- Recommended Method (Phacoemulsification with IOL Implantation):
  - Administer Local Anaesthesia using topical anesthetic and/or intracameral injection of lidocaine
  - Place a small limbal incision in the cornea
  - Introduce the phaco probe and begin emulsification and aspiration of the lens cortex
  - Use the irrigation-aspiration probe to remove the remaining cortical material
  - Place the IOL into the remaining lens capsule
  - Place a protective shield over the eye to help with healing
  - Post-operative care (15-30 min in recovery)
  - Post-operative and pre-discharge Counselling
- Length of stay: Day care
- Follow-up: Next day of surgery, after 1 week and then 1month after surgery

##### Medicines:

<b>Pre-operative:</b> 1 Drop after every 15 minutes, 2 hours before surgery
Short acting mydiatric (Tropicamide 1%w/v Eye Drops)
<b>Intra-operative</b>
Proparacaine (HCL) 0.5%w/v eye Drops OR 4% Lidocaine eye gel OD 1% Lidocaine for Intracameral injection OD
<b>Post-operative:</b> 1 drop 4 times a day
Eye Drops (Chloramphenicol:1%W/v + Hydrocortisone:0.5%w/v) OR (tobramycin 0.3%w/v + Dexamethasone 0.1%w/v) Eye Ointment (Chloramphenicol:1%W/v + Hydrocortisone:0.5%w/v) 7 days

##### Supplies:

- Sterile drapes, gloves & gowns
- Pyodine solution, Surgical dressing tape
- Sutures, Gauze bandage
- Eye pad for dressing
- Normal saline (for drainage)
- Intraocular lens (foldable)
- Viscoelastic gel

##### Equipment:

- Phacoemulsification surgical device
- 3.2mm stab knife
- Cataract surgery set (lid retractor, mosquito forceps, iris forceps, knife handle, iris scissors, eye speculum, castroviejo Needle Holder, castroviejo suturing forceps etc.)

##### Lab test:

- Blood glucose level, Blood CP
- Hep B and C
- PT, APTT/IHR

##### HMIS Tools:

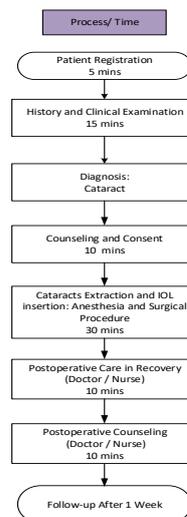
1. Recording Tool: OPD Ticket OPD and indoor register, Referral slip, Abstract register
2. Reporting Tool: Monthly Report
3. Client/Patient Card: Follow up visit card, Discharge slip
4. IEC material:

**Standard Protocol:** None for Pakistan

**National Training Curriculum/Guidelines:** Not available

##### Reference Material:

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.192. Cataract Extraction and Insertion of Intraocular Lens  
Platform: Tertiary Level Hospital



## D. Health Services Cluster

### D.19. Rehabilitation Package of Services

#### D.19.208. Compression therapy for amputations, burns, and vascular or lymphatic disorders

DCP3 code: FLH52

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Physiotherapist/Nurse)

- History
- Eligibility assessment
- Provision of compression therapy
- Education and counselling
- Recommended Method (20-30 minutes)
  - Assess skin condition
  - Assess shape of the limb
  - Assess presence of neuropathy
  - Assess presence of cardiac failure
- Follow up: Follow up according to healthcare provider advice

##### Medicines:

- 

##### Supplies:

- Compression bandages/Compression dressings

##### Equipment:

- 

##### Lab Tests:

- 

##### HMIS Tools

1. Recording Tool: OPD ticket, OPD register, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow-up visit card
4. IEC Material: Leaflet, Flipchart

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- 

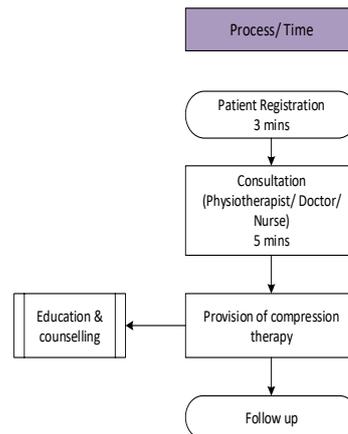
##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Understanding Compression Therapy, Position Document, European Wound Management Association, 2003
- Improving Amputee Surgery Recovery and Quality of Life
- Wound Care & Scar Management after Burn Injury, Model Systems Knowledge Translation Center (MSKTC) 2011

D. Health Services Cluster  
D.19. Rehabilitation Package of Services  
D.19.208. Compression therapy for amputations, burns, and vascular or lymphatic disorders  
Platform: First Level Hospital  
• THQ/ DHQ/ Small Hospital (Pvt.)



## D. Health Services Cluster

### D.19. Rehabilitation Package of Services

#### D.19.209. Evaluation and acute management of swallowing dysfunction

DCP3 code: FLH53

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)  
Consultation (Doctor/Nurse)

- History
- Clinical examination
- Laboratory Test (Lab Technician)

- If required
- Recommended Methods

Based on the underlying cause followings methods are used

- Nasogastric Tube: In severe cases of dysphagia, you may need a feeding tube to bypass the part of your swallowing mechanism that isn't working normally.
- Medication for the GERDS
- Esophageal dilation
- Endoscopic Surgery (Refer if complicated surgery is required)

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

##### Medicines:

• Omeprazole	Solid oral dosage form: 10 mg, 20 mg, 40 mg. As per required
--------------	--

##### Supplies:

- Reagents
- Contrast for the Barium enema
- X-rays and Scan machine

##### Equipment:

- Endoscope
- Stents for the relieve of the dysphagia
- Nasogastric tube

##### Lab Test:

- Routine Blood tests
- X-ray with a contrast material (barium X-ray)
- Dynamic swallowing study
- Endoscopy
- Fiber-optic endoscopic swallowing evaluation
- Manometry, Imaging scans

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD and Indoor register, Patient file, Referral, abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Discharge slip
4. IEC Material:

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- 

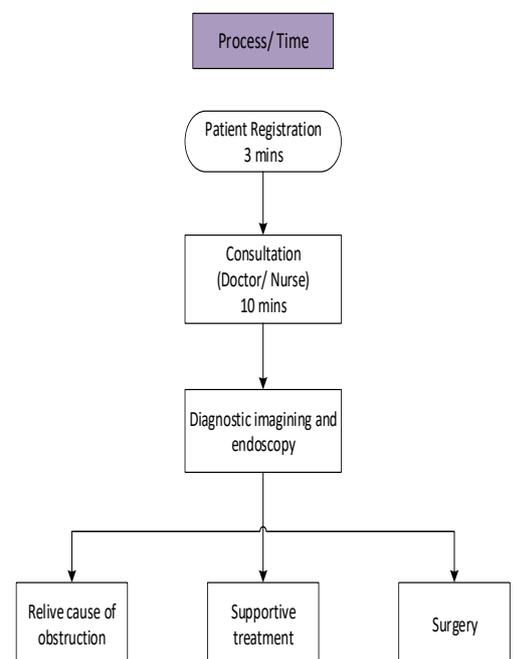
##### National Training Curriculum:

- Not available

##### Reference Material:

- <https://www.mayoclinic.org/diseases/conditions/dysphagia/diagnosis-treatment/drc-20372033>

D. Health Services Cluster  
D.19. Rehabilitation Package of Services  
D.19.209. Evaluation and acute management of swallowing dysfunction  
Platform: First Level Hospital  
• THQ/ DHQ/ Small Hospital (Pvt.)



## D. Health Services Cluster

### D.20. Palliative and Pain Control Package of Services

#### D.20.213. Expanded palliative care and pain control measures, including prevention and relief of all physical and psychological symptoms of suffering

DCP3 code: HC67

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse)

- History
- Acute pain assessment
  - Pain screening
  - Pain rating scale and assessment
  - Recommended Method
- Palliative Care Assessment
  - Identify patients with palliative care needs specific to the population(s) served
  - Patient status, patient and family needs, treatment options, and symptom management
  - Provides patient and family with anticipatory guidance regarding disease progression and management strategies to maximize quality of life
- Counselling
- Referral if required
- Pharmacy (Dispenser)
  - Dispensing of medicine
- Follow up: As per health care provider's advice

##### Medicines:

- NSAIDs, Opioid analgesics (SOS)
- Cap Tramol 50mg (SOS)
- Tab Dicloran 50mg (SOS)

##### Supplies:

- 

##### Equipment:

- 

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Patient file, Referral
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up visit card
4. IEC material: Leaflet, Flip chart

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- 

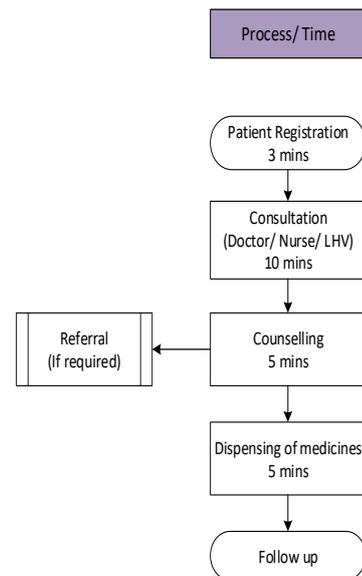
##### National Training Curriculum/ Guidelines:

- Not Available

##### Reference Material:

- Pain Management Guideline, Best Practice Committee of the Health Care Association of New Jersey (Revised in 2017)
- Clinical Practice Guidelines for Quality Palliative Care, 4th Edition 2018

D. Health Services Cluster  
D.20. Palliative and Pain Control Package of Services  
D.20.213. Expanded palliative care and pain control measures, including prevention and relief of all physical and psychological symptoms of suffering  
Platform: First Level Hospital  
• THQ/ DHQ/ Small Hospital (Pvt.)



## D. Health Services Cluster

### D.20. Palliative and Pain Control Package of Services

#### D.20.214. Prevention and relief of refractory suffering and acute pain related to surgery, serious injury or other serious, complex or life-limiting health problems

DCPE3 code: FLH57

##### Platform:

First Level Hospital

- THQ/ DHQ/ Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse)

- History
- Acute pain assessment
  - Pain screening
  - Pain rating scale and assessment
- Palliative Care Assessment
  - Identify patients with palliative care needs specific to the population(s) served
  - Patient status, patient and family needs, treatment options, and symptom management
  - Provides patient and family with anticipatory guidance regarding disease progression and management strategies to maximize quality of life
- Counselling
- Recommended Method
  - Pain management
  - Comprehensive palliative care management
- Pharmacy (Dispense)  
Dispensing of medicines
- Follow up
- 

##### Medicines:

- NSAIDs, Opioid analgesics (SOS)
- Injection Tramol 50mg TDS (immediate after surgery or serious injury or other serious, complex or life-limiting health problems) for 3 days
- Cap Tramol 50 mg (SOS) after discharge
- Injection Dicloran 50mg BD (immediate after surgery or serious injury or other serious, complex or life-limiting health problems) for 3 days
- Tab Dicloran 50mg (SOS) after discharge

##### Supplies:

- 

##### Equipment:

- 

##### Lab Tests:

- 

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register and indoor register, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly report

3. Client/Patient Card: Follow-up visit card

4. IEC Material: Leaflet, Flipchart

##### Supervision:

- EDO Health, Deputy DHO, THO

##### Standard Protocol:

- 

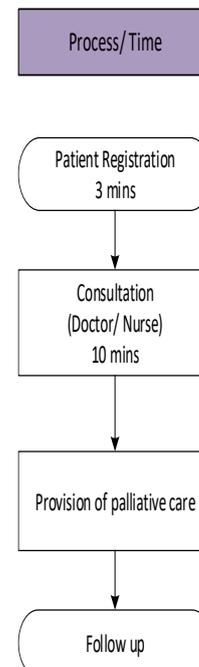
##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Pain Management Guideline, Best Practice Committee of the Health Care Association of New Jersey (Revised in 2017)
- Clinical Practice Guidelines for Quality Palliative Care, 4th Edition 2018

D. Health Services Cluster  
D.20. Palliative and Pain Control Package of Services  
D.20.214. Prevention and relief of refractory suffering and acute pain related to surgery, serious injury or other serious, complex or life-limiting health problems  
Platform: First Level Hospital  
• THQ/ DHQ/ Small Hospital (Pvt.)



## D. Health Services Cluster

### D.21 Pathology Package of Services

#### D.21.216. First level hospital pathology services

DCP3 code: FLH58

##### Platform:

First Level Hospital

- MCH Hospital/ THQ/DHQ/Small Hospital (Pvt.)

##### Process:

Laboratory Test (Pathologist, Lab Technician, Laboratory Assistant)

##### Lab Test

- Hematology
  - Simple coagulation studies and thalassemia tests
  - Blood typing and cross matching
  - Erythrocyte Sedimentation Rate (ESR)
  - Full blood count
  - Haematocrit
- Microbiology culture:
  - Blood/urine/cerebrospinal fluid/sputum
  - Simple antimicrobial susceptibility testing
- Clinical Chemistry
  - Hepatitis B & C Serology
  - Blood glucose
  - CD4 testing
  - Clinical chemistry panels (Automated analyser)
  - Culture and sensitivity testing
  - HIV rapid testing
  - Proteinuria and Glucosuria
  - Rapid pregnancy testing
  - RPR test for Syphilis
  - liver, renal, bone, and lipid profiles
- Anatomic pathology:
  - FNAC
  - Tissue biopsies
  - Surgical excisions—processing,
  - H&E stain,
  - Interpretation; hospital autopsy

##### Supplies:

- Test specific reagent

##### Equipment

- Haematocrit centrifuge
- Hemoglobinometer

- Incubators
- Laboratory scale and weights
- Lancet and other supplies
- Measuring jars
- Beakers, test tubes
- Micropipette and Tips
- Microscope slides and cover slips
- Pipettes and stand
- Protective gloves
- stains and test kits as appropriate
- Refrigerator
- Safety Equipment (eyewash, fire extinguisher etc.)
  - Slide rack
  - Specimen collection cups, tubes and capillary tubes
  - Spirit lamp
  - Stain jars
  - Test Kits (RPR, HIV, Para check etc)
  - Timer Yes
  - Vortex Mixer
  - Water Distiller
  - White cell differential counter

##### HMIS Tools:

5. Recording Tool: Laboratory Test Record
6. Reporting Tool:
7. Client/Patient Card:
8. IEC material:

##### Supervision:

- Pathologist

##### Standard Protocol:

- 

##### National Training Curriculum:

- Not available

##### Reference Material:

- An Essential Pathology Package for Low- and Middle-Income Countries

## D. Health Services Cluster

### D.21. Pathology Package of Services

#### D.21.217. Referral level hospital pathology services

DCP3 code: RH19

**Platform:**

Tertiary Level Hospital

- Referral and Specialized Hospitals

**Process:**

Laboratory Test (Lab Technician (Mono-specialty pathologists, clinical scientists, specialized laboratory technicians, laboratory assistants, dedicated laboratory manager, possibly laboratory information systems coordinator, quality care manager)

**Medicines:**

- 

**Supplies:**

- 

**Equipment:**

- 

**Lab Tests:**

- Point of care test and single-use tests
  - Malaria
  - TB
  - Urine analysis
  - Pregnancy test
  - Blood glucose
  - Haemoglobin/ haematocrit
  - ESR
  - Blood typing
  - Slide microscopy (e.g. malaria, wet preparation, stool, parasites)
- Haematology
  - Routine haematology
  - Bone marrow pathology
  - Blood transfusion and related services
  - Coagulation
  - Cytogenetics
  - Tissue typing
  - Haemolytic anaemia
  - Megaloblastic anaemia
  - CBCs, CD4 count, Simple coagulation studies
  - Thalassemia tests, Support for whole blood transfusion
  - Advanced blood analysis (eg, component therapy, hemolysis, myeloma)
  - Bone marrow studies
  - Hematologic malignancies
  - Immunologic studies
- Chemical pathology
  - Therapeutic drug monitoring
  - Endocrinology
  - Protein investigations
  - Metabolic markers (eg, thyroid)
  - Neonatal and antenatal screening
  - Toxicology

- Trace elements
- Routine biochemistry
  - Tumour markers (eg, AFP, Ca-125)
  - Blood gases, Urea & electrolytes
  - Hemoglobin A1c, Liver function tests
  - Renal function test, Bone & lipid profiles
  - Cardiac markers (eg, troponin)
  - Brain natriuretic peptide
  - Dynamic function tests (eg, GTT)
  - Serum and urine electrophoresis
- Anatomic pathology
  - Fine Needle Aspiration Cytology (FNAC)
  - Tissue biopsies
  - Surgical excision
  - Haematoxylin and Eosin stain (H&E) & interpretation
  - Hospital autopsy
  - Special stains, including immunohistochemistry (eg, ER, PR for breast cancer)
  - Specialized Autopsy
- Microbiology
  - Bacteriology
  - Mycobacteriology
  - Molecular microbiology
  - Serology for hepatitis A/B/C & common infections
  - Virology (Viral load)
  - Cerebrospinal fluid /sputum
  - Fungal Cultures
- Immunology
  - Allergy testing
  - Autoimmune investigations
  - Primary Immunodeficiency investigation
  - Immunochemistry
  - Flow cytometry
  - Tissue typing

**HMIS Tools:**

1. Recording Tool: Laboratory Test Record
2. Reporting Tool:
3. Client/Patient Card:
4. IEC material:

**Supervision:** MS Hospital

**Standard Protocol:**

**National Training Curriculum/ Guidelines:** Not available

**Reference Material:**

- Clinical Services Capability Framework- Pathology Services
- An Essential Pathology Package for Low- and Middle-Income Countries
- (Kenneth A. Fleming, MBChB,1,2 Mahendra Naidoo, MBChB,1 Michael Wilson, MD,4,5 John Flanigan, MD,1 Susan Horton, PhD,6 Modupe Kuti, MBBS,7 Lai Meng Looi, MBBS,8 Chris Price, PhD,3 Kun Ru, MD,9 Abdul Ghafur, MD,11 Jianxiang Wang, MD,10 and Nestor Lago, MD12)

## D. Health Services Cluster

### D.21. Pathology Package of Services

#### D.21.218. Specialty pathology services

DCP3 code: RH20

##### Platform:

Tertiary Level Hospital

- Referral and Specialized Hospitals

##### Process:

Laboratory Test (Mono-specialty pathologists, clinical scientists, specialized laboratory technicians, laboratory assistants, dedicated laboratory manager, possibly laboratory information systems coordinator, quality care manager.)

##### Medicines:

- 

##### Supplies:

- 

##### Equipment:

- Automated tissue processor,
- Equipment for full laboratory
- Autopsy
- Immunohistochemistry station

##### Lab Tests:

- Point of care test and single-use tests
  - Malaria
  - TB
  - Blood typing
  - Slide microscopy (e.g, malaria, wet preparation, stool, parasites)
  - Clinical biochemistry
  - Urea & electrolytes
  - Hemoglobin A1C
  - Bone & lipid profiles
  - Endocrine tests (eg, thyroid)
  - Cardiac markers (eg, troponin)
  - Brain natriuretic peptide
  - Dynamic function tests (eg, GTT)
  - Tumor markers (eg, AFP, Ca-125)
  - Blood gases
  - Therapeutic drug monitoring (eg, cyclosporine levels)
  - Serum and urine electrophoresis
  - Toxicology
  - Microbiology
  - Bacteriology
  - Mycobacteriology
  - Molecular microbiology
  - Serology for hepatitis A/B/C & common infections
  - Virology (Viral load)
  - Cerebrospinal fluid /sputum
  - Fungal Cultures
  - Anatomic pathology
- Fine Needle Aspiration Cytology (FNAC)

- Tissue biopsies
- Surgical excision
- Hematoxylin and Eosin stain (H&E) & interpretation
- Hospital autopsy
- Special stains, including immunohistochemistry (eg, ER, PR for breast cancer)
- Specialized Autopsy
- Hematology
  - Routine haematology and Hematologic malignancies
  - Bone marrow pathology
  - Blood transfusion and related services
  - Coagulation, Cytogenetics
  - Tissue typing, Haemolytic anaemia
  - Megaloblastic anaemia
  - CD4 count
  - Simple coagulation studies
  - Thalassemia tests
  - Advanced blood analysis (e.g, component therapy, haemolysis, myeloma)
- Immunology
  - Allergy testing
  - Autoimmune investigations
  - Primary Immunodeficiency investigation
  - Immunochemistry
  - Flow cytometry
  - Tissue typing

##### HMIS Tools:

1. Recording Tool:
2. Reporting Tool:
3. Client/Patient Card:
4. IEC material:

##### Supervision:

- MS Hospital

##### Standard Protocol:

- 

##### National Training Curriculum/ Guidelines:

- Not available

##### Reference Material:

- Clinical Services Capability Framework- Pathology Services
- An Essential Pathology Package for Low- and Middle-Income Countries
- (Kenneth A. Fleming, MBChB,1,2 Mahendra Naidoo, MBChB,1 Michael Wilson, MD,4,5 John Flanigan, MD,1 Susan Horton, PhD,6 Modupe Kuti, MBBS,7 Lai Meng Looi, MBBS,8 Chris Price, PhD,3 Kun Ru, MD,9 Abdul Ghafur, MD,11 Jianxiang Wang, MD,10 and Nestor Lago, MD12)



# Referral Hospital level

## EPHS Interventions Description



**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH SERVICES**

**Referral Hospital (Tertiary) Level Interventions**

**CLUSTER (A)**

***A. Reproductive, Maternal, New-born, Child, Adolescent Health Age Related Cluster***



## A. Reproductive, Maternal, New-born, Child, Adolescent Health/Age Related Cluster

### A.1. Maternal and New-born Health Package of Services

#### A.1.29. Full supportive care for preterm newborns

DCP3 code: RH1

##### Platform:

First Level Hospital

- THQ/ DHQ/Small Hospital (Pvt.)

##### Process:

Patient registration at reception (Receptionist)

Consultation (Neonatologist/pediatrician/Nurse)

- History
- Clinical examination (Check for; Birth weight→ <1500 g→ 1500 g to <2500 g. Preterm→ <32 weeks → 33-36 weeks
- If CPAP available, then manage pre-term >32 weeks; If < 32 weeks refer to tertiary care hospital)

Laboratory Test (Lab Technician)

- Lab tests/Ultrasound (if needed)

Recommended Method

- Look for the Danger sign and manage
- Antenatal corticosteroids to improve newborn outcomes
- Tocolytics for inhibiting preterm labor

##### • Antibiotics for Mother:

Oral Erythromycin 250 mg every six hours for 10 days (or until birth)

OR Ampicillin 2 g IV every six hours for premature rupture of membranes

##### • Antibiotics for Newborn:

Drug	Dosage	From	Weight of Infant in kg						
			1-<1.5	1.5-<2	2-2.5	2.5-<3	3-3.5	3.5-<4	4-<4.5
<b>Ampicillin</b>	IM/IV: 50 mg/ kg First week of life: every 12 h Weeks 2-4 of life: every 8 h	Vial of 250 mg mixed with 1.3 ml sterile water to 250 mg/1.5 ml	3-0.6 ml	0.6-0.9 ml	0.9-1.2 ml	1.2-1.5 ml	1.5-2.0 ml	2.0-2.5 ml	2.5-3.0 ml
<b>Gentamicin</b>	Preferably calculate exact dose based on the infant's weight								
	First week of life: Low-birth-weight infants: IM /IV: 3 mg/kg once a day Normal birth weight: IM/IV: 5 mg/kg per dose once a day	Vial 20 mg/2 ml Vial 80 mg/2 ml Dilute to 8 ml with sterile water to 10 mg/ml	0.3-0.5 ml	0.5-0.6 ml	0.6-0.75 ml	1.25-1.5 ml	1.5-1.75 ml	1.75-2 ml	2-2.25 ml
	Weeks 2-4 of life: IM/IV: 7.5 mg/kg once a day		0.75-1.1 ml	1.1-1.5 ml	1.5-1.8 ml	1.8-2.2 ml	2.2-2.6 ml	2.6-3.0 ml	

- Surfactant: Suspension for intratracheal instillation: 25 mg/ml or 80 mg/ml (2 doses)

##### Supplies:

- IV cannula, capnograph,

##### Equipment:

- Stethoscope, sphygmomanometer, thermometer, Equipped Neonatal Nursery

- Magnesium sulphate for fetal protection against neurological complications
- Antibiotics for preterm labor
- Optimal mode of delivery
- Thermal care for preterm newborns
- Continuous positive airway pressure for newborns with respiratory distress syndrome
- Surfactant administration for newborns with respiratory distress syndrome
- Oxygen therapy and concentration for preterm newborns- ( During ventilation of preterm babies born at or before 32 weeks of gestation, it is recommended to start oxygen therapy with 30% oxygen or air (if blended oxygen is not available), rather than with 100% oxygen)

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- Post-natal follow up after discharge from the baby nursery

**Medicines:**

, Ventilator, CPAP machine ,Incubator, Oxygen cylinder with supply, Ambu bag, Capnograph monitor, Laryngoscope, Endotracheal Tube

**Lab Test:**

- Ultrasound, Blood test, CXR, Blood gasses, Ambulatory X-ray (Portable)

**HMIS Tools:**

1. Recording Tool: OPD Ticket, OPD register, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Vaccination card, Follow up Visit Card
4. Client/Patient Card: Vaccination card, Follow-up Visit card

5. IEC Material: Leaflets, Flipchart

**Supervision:**

- EDO Health, Deputy DHO, THO, AIHS,

**Standard Protocol:**

- Care of preterm newborn – WHO

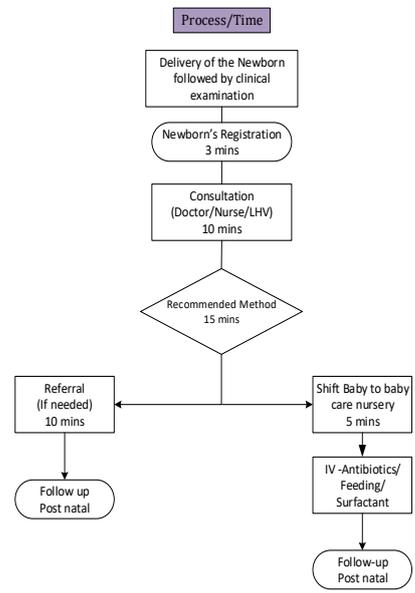
**National Training Curriculum/ Guidelines:**

- Available

**Reference Material:**

- IMPAC Guidelines WHO 2017
- WHO Recommendations on Interventions to Improve Preterm Birth Outcomes 2015
- WHO Guidelines for Oxygen Therapy
- Guidelines for the care of Preterm Newborn WHO

Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
 A.1. Maternal and New-born Health Package of Services  
**A.1.29. Full supportive care for preterm new-borns**  
**Platform:** First Level Hospital  
 • MCH Hospital/ THQ/DHQ/Small Hospital (Pvt.)



**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH SERVICES**

**Referral Hospital (Tertiary) Level Interventions**

**CLUSTER (B)**

***B. Communicable Disease***



## B. Infectious Diseases Cluster

### B.7. Tuberculosis Package of Services

#### B.7.84. Specialized TB services, including management of MDR- and XDR-TB treatment failure and surgery for TB

DCP3 code: RH2

**Platform:**

Tertiary Level Hospital

- Department/ Unit of TB/ Surgical Unit

**Process:**

Patient registration at reception (Receptionist)  
 Consultation (Pulmonologist)

- History
- Clinical examination
- Assessment for medical and/or surgical treatment
- Laboratory Test (Lab Technician)
  - Culture, DST, Chest Radiograph, CBC, S. Creatinine, Electrolytes, TSH, Liver Enzymes, HIV, Visual Test, ECG, Hearing test

**Recommended Method**

- DOT & treatment supporter assessment
- Surgery based on site of infection and complication (Lobectomy)
- Chemotherapy
- Follow-up
  - Assess patient as following monthly for 11 months and follow up after 2 years;
    - Fully evaluate the patient clinically
    - Exclude other illnesses
    - Review the DOT and performance of treatment supporter
    - Educate the patient and inform about current status of response to treatment

**Medicines:** Medication should be considered for a period of 12 to 18 months

<b>Group A:</b> Fluoroquinolones in longer MDRTB regimens tablet 250 mg/500 mg/750 mg moxifloxacin and gatifloxacin
<b>Group B:</b> Amikacin powder for injection: 100 mg, 500 mg, 1 gram (as sulfate) in vial Capreomycin powder for injection: 1 gram (as sulfate) in vial Kanamycin (Streptomycin) powder for injection: 1 gram (as sulfate) in vial
<b>Group C:</b> Other core second-line agents; Ethionamide tablet 125 mg, 250 mg Prothionamide, 15-20mg/kg (max. 1g) once daily (oral). Cycloserine solid oral dosage form: 250 mg; Terizidone, Linezolid injection for intravenous administration: 2 mg/ml in 300 ml bag, Clofazimine 100 mg orally once a day
<b>Group D: D1</b> (Pyrazinamide tablet: 400 mg, Ethambutol tablet 100 mg to 400 mg (hydrochloride), High-dose isoniazid), <b>D2</b> (Bedaquiline, Week 1 and Week 2: 400 mg orally once a day. -Week 3 to Week 24: 200 mg orally 3 times per week, with at least 48 hours between doses. -Duration of therapy: 24 weeks Delamanid), <b>D3</b> (p-aminosalicylic acid Imipenemcilastatin powder for injection : 250 mg (as monohydrate) + 250 mg (as sodium salt); 500 mg (as monohydrate) + 500 mg (as sodium salt) in vial Meropenem injection: 500 mg in vial Amoxicillin clavulanate oral liquid: 125 mg amoxicillin + 31.25 mg clavulanic acid/5 ml and

250 mg amoxicillin + 62.5 mg clavulanic acid/5 ml (Thioacetazone) For detail dosage please refer to <b>Treatment Guideline for MDR-TB 2016</b> <u><b>In case of Surgery Lung Lobectomy</b></u> Preop Injection: Ceftriaxone 1gm IV Single dose Injection: Augmentin 1 gm IV BD Post Op: Ceftriaxone 1gm IV 5 days Augmentin :1 gm IV 5 days Injection Tramol: 50mg IV TDS 3 days Injection Maxolone: 10mg IV 3 days TDS Injection Dicloran :50mg SOS Injection Paracetamol: IV BD 3 days
--

**Supplies:**

- N95 masks, Surgical masks, sputum cups

**Equipment:**

- Equipment for chemotherapy, lobectomy and Segmental Lung Resection Set, UV lights, CT scan, Ultrasound machine, X-ray machine, Ventilation (ensuring 12 air exchanges per hour)

**Lab Test:**

In case of Lobectomy: CXR, CT Scan, PET Scan, CBC, ECG, Spirometry OR pulmonary function test, sputum analysis

Culture	Monthly during intensive phase, then every other month during continuation phase or as decided by the DR TB physician
ECG	Baseline and based on clinical judgement
DST	At baseline, then for patients who remain culture positive at month 4-6 or if reverted to positive culture any time during continuation phase
Chest Radiograph	Baseline, then every 3-6 months or earlier
CBC	At baseline or later
S. Creatinine	Baseline then monthly
Electrolytes	Baseline, then monthly while patient is on injectables
TSH	At baseline then every 3-6 months,
Liver Enzymes	At Baseline then periodically in patient taking PZA for extended period
HIV	At baseline and repeat if indicated
Visual Test	At baseline and Monthly if indicated
HBV and HCV	At baseline
Blood Sugar	At baseline
Audiometry	

**HMIS Tools:**

1. Recording Tool: Indoor register, Patient file, Abstract register
2. Reporting Tool: Monthly report

3. Recording Tool: Indoor register, Patient file, Abstract register
4. Reporting Tool: Monthly report

**Supervision**

- MS hospital, TB control Program Manager

**Standard Protocol:**

- WHO treatment guidelines for drug resistant tuberculosis 2016

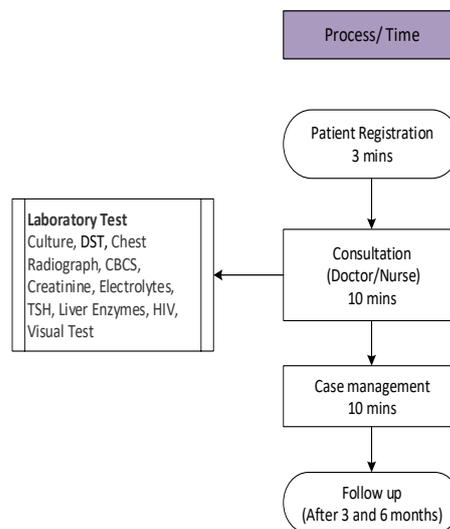
**National Training Curriculum:**

- Available

**Reference Material:**

- Handbook of DR- TB practice, National TB Control Program (MNHSRC)
- WHO treatment guidelines for drug resistant tuberculosis 2016

B. Infectious Diseases Cluster  
 B.7. Tuberculosis Package of Services  
**B.7.84. Specialized TB services, including management of MDR- and XDR-TB treatment failure and surgery for TB**  
**Platform:** Tertiary Level Hospital  
 • Department/ Unit of TB/ Surgical Unit



## B. Infectious Diseases Cluster

### B.8. Malaria and Adult Febrile Illness Package of Services

#### B.8.100. Management of refractory febrile illness including etiologic diagnosis at reference microbial laboratory

DCP3 code: RH3

##### Platform:

- Tertiary Level Hospitals
- Specialist Doctors/ Pathologist

##### Process:

Patient registration at reception (Receptionist)  
Consultation (Doctor/ Nurse)

- History: > 38.3°C for > 3wks
- Clinical examination
- Detailed patient workup to identify the cause (Infectious -Bacterial, Viral, Fungal, Neoplastic etc.)  
Malaria, Dengue, Influenza, Salmonella typhi

##### Recommended Method

- Investigation and diagnosis
- Management of the cause identified as per the etiological diagnosis

##### Laboratory Test (Lab technician)

- If needed
- Pharmacy (Dispenser)
- Dispensing of medicine

Length of stay: 6 days

##### Follow up

- As per the condition

##### Medicines:

**Malaria:** Artesunate IM at doses of 2.4mg/kg body weight (maximum of 240 mg)

Dengue: Normal 0-9% saline or Ringer's lactate 2 weeks

Acetaminophen 500mg 2 weeks

Influenza: Acetaminophen 500mg 7 days, naproxen 500 mg 7 days

##### Salmonella Typhi :

Based upon susceptibility, following antibiotics would be prescribed

Susceptibility	Antibiotic	Dose mg/kg /Duration
Fully Sensitive	Fluoroquinolone OR Ciprofloxacin OR Ofloxacin	15 mg- 15 days
Multi drug resistance	Fluoroquinolone OR Cefixime	15mg ( 5-7 days) 15mg (7-14 days)
Quinolone Resistance	Azithromycin OR Ceftriaxone	10mg ( 7 days) 75mg )14 days)

##### Supplies:

- Lab supplies

##### Equipment

- Lab equipment, Invasive and non-invasive ventilation, haemodialysis, central line, ICU

##### Lab Tests:

- Complete Blood Picture, Blood Culture, Urine Test-Culture, Microscopy for malarial parasite, X-PERT MTB/RIF Assay, liver function tests, Ultrasound , MRI/CT Scan , Chest X-ray, HBV, HCV, HIV, PET CT, Thyroid Function Tests, Echocardiography , Relevant serological testing, Typhidot test

##### HMIS Tools:

- Recording Tool: OPD Ticket, OPD register, Patient file
- Reporting Tool: Monthly report
- Client/Patient Card: Discharge slip
- IEC Material:

##### Supervision:

- MS Hospital

##### Standard Protocol:

- 

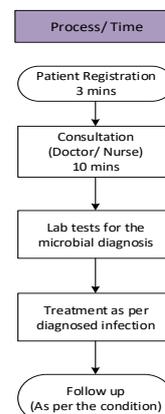
##### National Training Curriculum:

- Not available

##### Reference Material:

- Pyrexia of Unknown Origin: causes, investigation and management R. W. Beresford 1 and I.B. Gosbell

B. Infectious Diseases Cluster  
B.8. Malaria and adult Febrile illness Package of Services  
B.8.100. Management of refractory febrile illness including etiologic diagnosis at reference microbial laboratory  
Platform: Tertiary Level Hospitals  
Specialist Doctors/ Pathologist





**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH SERVICES**

**Referral Hospital (Tertiary) Level Interventions**

**CLUSTER (C)**

***C. Non-Communicable Disease***



## C. Non-Communicable Disease and Injury Prevention Cluster

### C.11. Cardiovascular, Respiratory and Related Disorders Package of Services

#### C.11.133. Management of acute ventilator failure due to acute exacerbations of asthma and COPD

DCP3 code: RH4

##### Platform:

Tertiary Level Hospital

- Referral and Specialized Hospital

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor, Nurse, Ventilator technician)

- Clinical examination
  - Identification of the underlying aetiology
  - Performing blood gases to determine arterial pH in addition to PaO<sub>2</sub> and PaCO<sub>2</sub>
- Treatment of any precipitant factors
- Optimization of oxygen therapy (specifying dose, method of delivery, and adequate monitoring of arterial blood gas pressures)
- Appropriate medical management reflecting the underlying aetiology, for example, bronchodilators, corticosteroids
- Consideration for ventilatory support (non-invasive ventilation/invasive positive pressure ventilation) and determining the “ceiling of treatment”

Recommended Method

- Management of acute respiratory failure according to guidelines

Pharmacy (Dispenser)

- Dispensing of Medicines

Follow up

- According to provider’s advice

##### Medicines:

- Initiation and titration of therapy

a) **Initial settings for bi-level positive airway pressure (BPAP):** inspiratory positive airway pressure (IPAP) of 10cmH<sub>2</sub> O and expiratory positive airway pressure (EPAP) of 4-5cmH<sub>2</sub> O= pressure support (PS) level of 5-6cm H<sub>2</sub> O.

b) **Initial settings for continuous positive airway pressure (CPAP):** 5cm H<sub>2</sub> O

Increases to IPAP of 2-5cmH<sub>2</sub> O can be undertaken every 10 minutes or as clinically indicated until therapeutic response is achieved. The maximum IPAP should not exceed 20 – 23 cmH<sub>2</sub> O

The target tidal volume of 6-8mls/kg (ideal body weight) is the target for all adult patients

Optimal non-invasive positive pressure ventilation (NIV) is the lowest pressure and lowest FiO<sub>2</sub> that achieve SaO<sub>2</sub> of 90% or PaO<sub>2</sub> of 60mmHg without further clinical deterioration

Albuterol	
Inhaled B2 Agonist	Salbutamol 5mg/4h
Systemic Steroids	IV hydrocortisone 200mg and oral prednisolone 30mg OD (continue for 7–14d)

##### Supplies:

- Oxygen , Mask, IV set including cannula, syringe, oxygen

##### Equipment:

- Oxygen cylinder, Stethoscope, sphygmomanometer, non-invasive ventilator

##### Lab Tests:

- Blood Complete picture, Serum Electrolytes, Serum Creatinine, Blood Urea Nitrogen, Serum Potassium, Serum Magnesium, urine Analysis, ABGs, CXR

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Patient file, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet, Flipchart

##### Supervision:

- MS Hospital/Medical Director, EDO Health, Deputy DHO, THO,

##### Standard Protocol:

- Non-invasive ventilation therapy

##### National Training Curriculum/Guidelines:

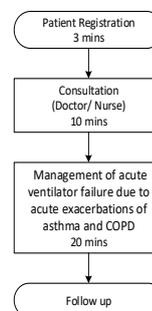
- Not Available

##### Reference Material:

- Non-invasive Ventilation Guidelines for Adult Patients with Acute Respiratory Failure 2014

C. Non-Communicable Disease and Injury Prevention Cluster  
 C.11. Cardiovascular, Respiratory and Related Disorders Package of Services  
 B.11.133. Management of acute ventilator failure due to acute exacerbations of asthma and COPD  
 Platform: Tertiary Level hospital  
 • Referral and Specialized Hospitals

Process/Time



## C. Non-Communicable Disease and Injury Prevention Cluster

### C.11. Cardiovascular, Respiratory and Related Disorders Package of Services

#### C.11.134. Retinopathy screening via telemedicine, followed by treatment using laser photocoagulation

DCP3 code: RH5

**Platform:**

Tertiary Level Hospital/Mobile Health Units/ PHC

- Referral and Specialized Hospitals

**Process:**

Patient registration at reception (Receptionist)

Consultation (Diabetologist/

ophthalmologist/Nurse/LHV)

- History
- Clinical examination

Laboratory test (Lab Technician)

Recommended Method

- Telemedicine based retinal screening of the diabetics
- If required refer to tertiary level facility for the Laser Photocoagulation to prevent and treat the Diabetic Retinopathy

Pharmacy (Dispenser)

- Dispensing of medicine

Follow up

- 

**Medicines:**

- 

**Supplies:**

- 

**Equipment:**

- Telemedicine systems (Computer, cameras and other peripherals) plus photocoagulation

**HMIS Tools:**

1. Recording Tool: OPD Ticket, OPD register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up card
4. IEC Material:

**Supervision:**

- MS Hospital

**Standard Protocol:**

- Telemedicine
- Laser photo coagulation

**National Training Curriculum/ Guidelines:**

- Not available

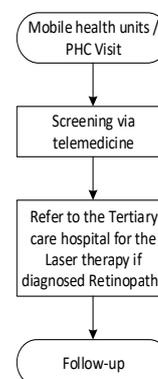
**Reference Material:**

- <https://nei.nih.gov/learn-about-eye-health/eye-conditions-and-diseases/diabetic-retinopathy>

<https://nei.nih.gov/learn-about-eye-health/eye-conditions-and-diseases/diabetic-retinopathy/laser-treatment-diabetic-retinopathy>

C. Non-Communicable Disease and Injury Prevention Cluster  
C.11. Cardiovascular, respiratory and related disorders Package of Services  
**C.11.134. Retinopathy screening via telemedicine, followed by treatment using laser photocoagulation**  
**Platform:** Tertiary Level Hospital/Mobile Health Units/ PHC  
• Referral and Specialized Hospitals

Process/ Time  
Telemedicine: 15 mins  
Laser Photocoagulation: 30 mins



## C. Non-Communicable Disease and Injury Prevention Cluster

### C.11. Cardiovascular, Respiratory and Related Disorders Package of Services

#### C.11.135. Use of percutaneous coronary intervention for acute myocardial infarction

where resources permit

DCP3 code: RH6

#### Platform:

Tertiary Level Hospital

- Referral and Specialized Hospitals

#### Process:

Patient registration at reception (Receptionist)  
Consultation (Doctor/Nurse, Cath lab technician)

- History
- Clinical examination
- Laboratory Test/Ultrasound (Lab Technician)
- Lab Test if needed
- Recommended Method
- Use of percutaneous coronary intervention according to guidelines
- Pharmacy (Dispenser)
- Dispensing of Medicines
- Length of stay: 3 days
- Follow up
- After one week

#### Medicines:

Aspirin	• 81 mg to 325 mg (OD)
Clopidogrel	• 600 mg 75 mg OD
Enoxaparin	• 1 mg per kg of body weight injected every 12 hours while you're in the hospital

#### Supplies:

- Stents, sheets, wires, guide wires, 12 lead ECG, IV set, cannula, syringes, Foley's catheter, oxygen

#### Equipment:

- Cardiac Monitor, oxygen cylinder, Resuscitation stuff

#### Lab Tests:

- Blood complete picture
- Serum electrolytes
- Lipid Profile
- PTT
- ECG
- Chest X-ray

#### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Patient file, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card:
4. IEC Material: Leaflet, Flipchart

#### Supervision:

- EDO Health, Deputy DHO, THO

#### Standard Protocol:

- Guideline for Percutaneous Coronary Intervention

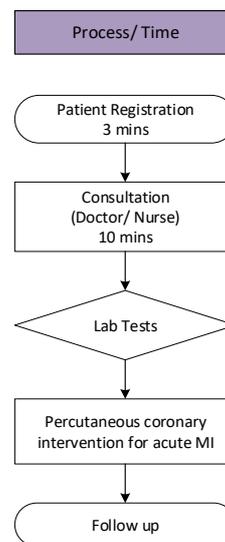
#### National Training Curriculum/Guidelines:

- Not Available

#### Reference Material:

- ACCF/AHA/SCAI Guideline for Percutaneous Coronary Intervention 2011

C. Non-Communicable Disease and Injury Prevention Cluster  
C.11. Cardiovascular, Respiratory and Related Disorders Package of Services  
**B.11.135. Use of percutaneous coronary intervention for acute myocardial infarction where resources permit**  
Platform: Tertiary Level Hospital  
• Referral and Specialized Hospitals



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.12. Cancer Package of Services

#### C.12.139. Treatment of early stage breast cancer with appropriate multimodal approaches (including generic chemotherapy) with curative intent for cases detected by clinical examination at health centres and first level hospitals

DCP3 code: RH7

##### Platform:

Tertiary Level Hospital

- Referral and Specialized

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse, , Technician

- History
- Clinical examination
- Decision of Chemotherapy Board (oncologist, pathologist, surgeon, radiologist, radiation oncologist & genetic specialist
- Advice for New adjuvant Therapy or surgery or Adjuvant Therapy (on the basis of decision of Chemo board)

##### Recommended Method

- Breast Conservation Therapy
- Simple Mastectomy
- Modified Rectified Mastectomy (MRM)
- Sentinel Lymph node Biopsies

##### Surgery

- Pre-operative care (O.T Preparation) (Nurse/Technician)
- Procedure
- Post-operative care (Nurse/Technician)
- Counselling
- Discharge
- Radiation therapy
- Chemotherapy

##### Pharmacy (Dispenser)

- Dispensing of medicines

##### Follow up

- Regularly scheduled follow-up care as per doctor's advice

##### Medicines:

Cytophosphane	• 60mg/m <sup>2</sup> 4 cycles
• Anthrocycline	
• AND cyclophoxamine	• 600mg/m <sup>2</sup> 3 weeks
Taxanes	•
• Paclitaxel	• 80mg/m <sup>2</sup> weekly
• docetaxel	• 100mg/m <sup>2</sup> weekly (single agent)
Herceptin Anti HER-2 Trastuzumab	• 8mg/m <sup>2</sup> every 3 weeks IV first dose then 6mg /kg 3 weekly OR
	• Salboulzenam fixed dose 600mg

Filgrastim	• G-CSF INJ
Aromatase inhibitors	• 7 years
Metoclopramide	• 10mg TID
Ondansetron	• 8mg BID
Dexamathasone	• 4mg BID
Olanzapine	• 10mg daily
Aprepitant	• 125mgD1, 80 mg D2+D3
Omeprazole OR Esmoprazole	• 40mg daily
Mouth Washes Nystatin	• 500.000 units TID
Magic Mouth wash	• 10ml TID
Analgesic Morphine IV	•
Tramadol	• 50mg BID
Antibiotics Augmentin	• 500-mg every 12 hour
Vancomycin	• 500 mg q6hr
Piperacillin and tazobactam injection	• 3.375 g (IV) q6hr; total of 13.5 g (piperacillin [12 g] per tazobactam [1.5 g]) for 7-10 days; administer over 30 min
Levofloxacin	• oral levofloxacin once daily for 7 consecutive days of each chemotherapy course.

##### Supplies:

- IV set, Catheter, cannula, gloves, tape,

##### Equipment:

- Mastectomy set

##### Lab Tests:

- CBC, Cross match, LFTs, serum Creatinine, Echo cardiogram (before every cycle)
- Mammography
- Sonography
- Computed tomography (CT)/Magnetic resonance imaging (MRI)
- Image-guided breast biopsy
- Measure hormone receptor of tumor

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD register, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow-up visit card

4. IEC Materia: Leaflet, Flipchart

**Supervision:**

- MS Hospital

**Standard Protocol:**

- Treatment Guidelines

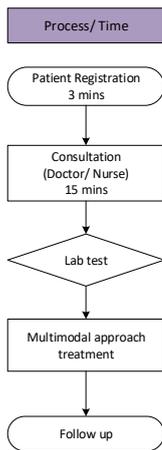
**National Training Curriculum/Guidelines:**

- Not Available

**Reference Material:**

- NCCN Guidelines
- A Multimodal Approach to Breast Imaging 2013
- Breast Cancer Treatment Guidelines for Patients 2006
- WHO List of Priority Medical Devices for Cancer Management, WHO Medical Device Technical Series 2017

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.12. Cancer Package of Services  
C.12.139. Treatment of early stage breast cancer with appropriate multimodal approaches (including generic chemotherapy) with curative intent for cases detected by clinical examination at health centres and first level hospitals  
Platform: Tertiary Level Hospital  
• Referral and Specialized Hospitals



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.12. Cancer Package of Services

#### C.12.140. Treatment of early stage colorectal cancer with appropriate multimodal approaches (including generic chemotherapy) with curative intent for cases detected by clinical examination at health centers and first level hospitals

DCP3 code: RH8

**Platform:**

Tertiary level:

- Referral and Specialized Hospitals

**Process:**

Patient registration at reception (Receptionist)

Consultation (Doctor)

- History
- Clinical examination
- Advice for surgery

Laboratory Test (Lab Technician)

- Lab tests/Ultrasound

Recommended Method

- Surgery
  - Multimodal approaches (surgery, radiation therapy and chemotherapy)
  - Pre-operative care (O.T preparation) (Nurse/technician)
  - Procedure (1-4 hours)
  - Post-operative care (Nurse/Technician)
  - Counselling
  - Discharge
- Radiation therapy, Chemotherapy
- Health education

Pharmacy (Dispenser)

- Dispensing of medicine

Length of stay: 5 days

Arrange blood

Follow up

Regularly scheduled follow-up care as per doctor's advice

**Medicines:**

Chemotherapy Drugs	<ul style="list-style-type: none"> <li>• 5-Fluorouracil (5-Fu) 4-6 months</li> <li>• Oxaliplatin 4-6 months</li> </ul>
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**Supplies:**

- IV set, Catheter

**Equipment:**

- Colorectal Kit
  - One square disposable retractor ring, 14.1 cm x 14.1 cm Model# 3307G
  - One eight-pack of 5 mm sharp hook stays – Model# 3311-8G
- Rigid sigmoidoscope
- Proctoscope
- Floor scale with stadiometer
- Lubricating jelly (K-Y), Endoscopic hemoclip
- Polypectomy snare

- Sclerotherapy
- endoscopic needles
- Wire oval snare
- Biopsy forceps

**Lab Tests:**

- CBC, Cross match
- Hep B and C
- Computed tomography (CT)
- Magnetic resonance imaging (MRI)
- Endorectal ultrasound

**HMIS Tools:**

1. Recording Tool: OPD Ticket, OPD and indoor register, Patient file
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up visit card
4. IEC material: Leaflet, Flip chart

**Supervision:**

- MS Hospital

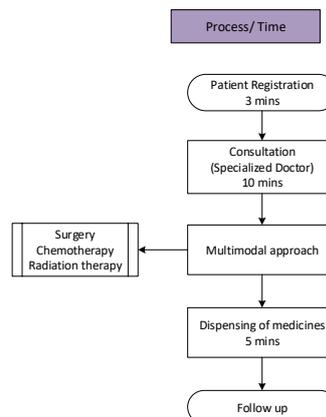
**National Training Curriculum/ Guidelines:**

- Not available

**Reference Material:**

- Rectal Cancer: Multimodal Treatment Approach (A. Cervantes<sup>1</sup>, I. Chirivella<sup>1</sup>, E. Rodriguez-Braun<sup>1</sup>, S. Campos<sup>2</sup>, S. Navarro<sup>3</sup> & E. Garcí'a Granero<sup>4</sup>)

C. Non-communicable Diseases and Injury Prevention Cluster  
 C.12. Cancer Package of Services  
 C.12.140. Treatment of early stage colorectal cancer with appropriate multimodal approaches (including generic chemotherapy) with curative intent for cases detected by clinical examination at health centers and first level hospitals  
 Platform: Tertiary Level Hospital  
 • Referral and Specialized Hospitals



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.12. Cancer Package of Services

#### C.12.141. Treatment of early stage childhood cancers (such as Burkitt and Hodgkin lymphoma, acute lymphoblastic leukaemia, retinoblastoma and Wilms tumour) with curative intent in paediatric cancer units or hospitals

DCP3 code: RH9

##### Platform:

Tertiary Level Hospitals

- Referral and Specialized Hospitals

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor)

- History
- Clinical examination
- Advice for surgery/ chemotherapy/ radiation therapy based on the cancer condition
- Burkitt (Non-Hodgkin) Lymphoma
  - Chemotherapy
  - Immunotherapy
  - Radiation (External-beam) therapy: Only in emergency or life-threatening situations
- Hodgkin lymphoma
  - Chemotherapy via oral pills or IV
  - Radiation therapy
  - Surgery: Only recommended for localized nodular lymphocyte predominant Hodgkin lymphoma
- Retinoblastoma
  - Surgery: Enucleation followed by prosthesis
  - Radiation therapy: Proton beam radiation therapy or Radioactive plaque therapy (brachytherapy)
  - Cryotherapy: Cryoablation uses liquid nitrogen to freeze and kill cells
  - Laser therapy: Transpupillary thermotherapy (TTT) or Photocoagulation
  - Chemotherapy: Oral pills, IV or Intravitreal injection
- Wilms tumor
  - Surgery: Radical nephrectomy or Partial nephrectomy
  - Chemotherapy (OR adjuvant chemotherapy): Intravenous (IV) drugs
  - Radiation Therapy: For children with a stage III or IV Wilms tumor and for all who have a tumor with an anaplastic histology

Recommended Method

- Pre-operational care (O.T Preparation) (Nurse/Technician)
- Procedure
- Post operational care (Nurse/Technician)
- Counselling
- Discharge

Pharmacy (Dispenser)

- Dispensing of Medicines

Length of stay: 3 days

Arrange blood

Follow up

- Regularly scheduled follow-up care as per doctor's advice

##### Medicines:

Burkitt (Non-Hodgkin) Lymphoma	• Doxorubicin (Doxil), Vincristine, Prednisone, 6-mercaptopurine, methotrexate, cytarabine (Cytosar-U), etoposide (Toposar)
Hodgkin Lymphoma	<b>MOPP:</b> • Cyclophosphamide (Neosar), prednisone, etoposide (Toposar, VePesid), and vincristine (Vincasar) <b>ABVD:</b> • Bleomycin (Blenoxane), dacarbazine (DTIC-Dome), doxorubicin (Adriamycin), and vinblastine (Velban)
Acute Lymphoblastic Leukemia	• L-asparaginase or, vincristine and prednisone
Retinoblastoma	• Vincristine (Oncovin, Vincasar PFS), Carboplatin (Paraplatin) and Etoposide (Toposar, VePesid)
Wilms Tumor	• <b>IV:</b> Dactinomycin (Cosmegen), Doxorubicin (Adriamycin), and/or Vincristine (Vincasar PFS, Oncovin)

##### Supplies:

- IV set, catheter

##### Equipment

- Surgery kit
- Lab equipment

##### Lab Test:

General Tests Required:	<ul style="list-style-type: none"> <li>• X-ray</li> <li>• Bone marrow aspiration and biopsy</li> <li>• Computed tomography (CT or CAT) scan</li> <li>• Magnetic resonance imaging (MRI)</li> </ul>
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	<ul style="list-style-type: none"> <li>• Measure hormone receptor of tumor</li> </ul>
Specific tests as per condition:	
Burkitt (Non-Hodgkin) Lymphoma	<ul style="list-style-type: none"> <li>• Lumbar puncture (spinal tap)</li> <li>• Cytogenetic analysis</li> <li>• Bone scan</li> <li>• Positron emission tomography (PET) or PET-CT scan</li> </ul>
Hodgkin Lymphoma	<ul style="list-style-type: none"> <li>•</li> </ul>
Acute Lymphoblastic Leukemia	<ul style="list-style-type: none"> <li>• Complete blood count</li> <li>• Cytochemistry and immunocytochemistry</li> <li>• Immunophenotyping</li> <li>• Molecular testing, including polymerase chain reaction testing</li> </ul>
Retinoblastoma	<ul style="list-style-type: none"> <li>• Blood CP tests</li> <li>• Lumbar puncture (spinal tap)</li> <li>• Hearing test</li> </ul>
Wilms Tumor	<ul style="list-style-type: none"> <li>• Bone x-ray and bone scan</li> <li>• Chromosome tests</li> </ul>

- [www.cancer.net/cancer-types/lymphoma-hodgkin-childhood/types-treatment](http://www.cancer.net/cancer-types/lymphoma-hodgkin-childhood/types-treatment)
- [www.leukemiabmtprogram.org/healthcare\\_professionals/cancer\\_management\\_guidelines/ALL.html](http://www.leukemiabmtprogram.org/healthcare_professionals/cancer_management_guidelines/ALL.html)
- [www.cancer.net/cancer-types/retinoblastoma-childhood/types-treatment](http://www.cancer.net/cancer-types/retinoblastoma-childhood/types-treatment)
- [www.cancer.net/cancer-types/wilms-tumor-childhood/types-treatment](http://www.cancer.net/cancer-types/wilms-tumor-childhood/types-treatment)

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.12. Cancer Package of Services  
**C.12.141. Treatment of early stage childhood cancers (such as Burkett and Hodgkin lymphoma, acute lymphoblastic leukaemia, retinoblastoma and Wilms tumour) with curative intent in paediatric cancer units or hospitals**  
Platform: Tertiary Level Hospital  

- Referral and Specialized Hospitals

**HMIS Tools:**

1. Recording Tool: OPD Ticket, OPD and indoor register, Patient file
2. Reporting Tool: Monthly report
3. Client/Patient Card: Discharge slip
4. IEC Material:

**Supervision:**

- MS Hospital

**Standard Protocol:**

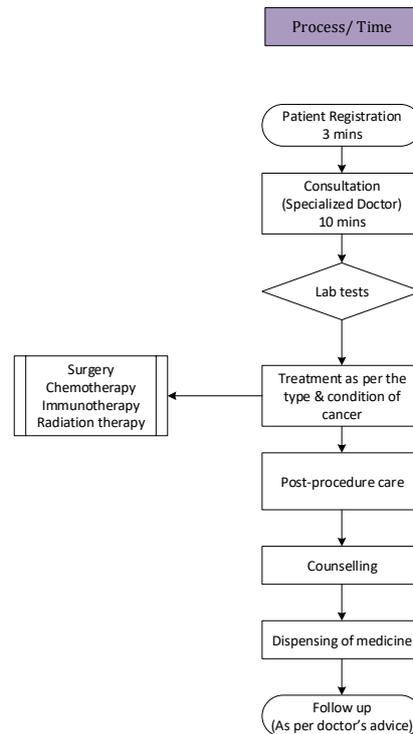
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**National Training Curriculum:**

- Not available

**Reference Material:**

- [www.cancer.net/cancer-types/lymphoma-non-hodgkin-childhood/types-treatment](http://www.cancer.net/cancer-types/lymphoma-non-hodgkin-childhood/types-treatment)



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.14. Musculoskeletal Disorders Package of Services

#### C.14.153. Elective surgical repair of common orthopedic injuries (for example meniscal and ligamentous tears) in individuals with severe functional limitation

DCP3 code: RH10

##### Platform:

Tertiary Level Hospital

- Referral and Specialized Hospitals

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor)

- History
- Clinical examination
- Admission of the patient

Recommended Method

- Elective surgical repair

○ Pre-operational care (O.T Preparation) (Nurse/Technician)

○ Procedure, Post operational care (Nurse/Technician)

○ Counselling

- Discharge

Laboratory Test (Lab Technician)

- Lab tests

Pharmacy (Dispenser)

- Dispensing of medicine

Length of stay: 3 days

Follow up

- As per doctor's advise

##### Medicines:

Open Fractures	
Grade I: cefazolin(perioperative) powder for injection: 1 g (as sodium salt) in vial x 3 doses Grade II and III: ceftriaxone 1g IV x 5 days OD	Daily until wound is closed
Facial Fractures	
Augmentin mg IV	8h pre-op, continue for 24 hrs post-op
Pre-medication Agents	
Lidocaine OR Opioid (fentanyl)	1.5mg/kg 3-6mcg/kg
Induction Agents	
Midazolam OR Ketamine	0.2-0.3 mg/kg 1-2 mg/kg
Paralytic Agents	
Succinylcholine OR Vecuronium	1.5-2 mg/kg 0.1 mg/kg

##### Supplies:

- Disposable gowns and drapes, masks

##### Equipment:

- Specialized implants, instruments, supplementary stock

##### Lab Test:

- CBC, cross match
- X-rays (according to presenting injury)
- MRI or musculoskeletal imaging

##### HMIS Tools:

1. Recording Tool: OPD ticket, OPD and indoor register, Patient file
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up visit card
4. IEC material: Leaflet, Flip chart

##### Supervision:

- MS Hospital

##### Standard Protocol:

- Planned orthopedic surgery

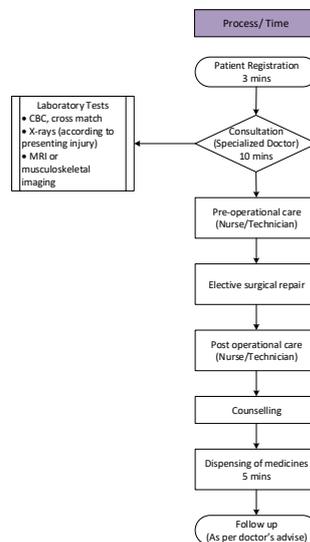
##### National Training Curriculum/ Guidelines:

- Not available

##### Reference Material:

- Model of care for trauma and orthopedic surgery 2015

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.14. Musculoskeletal Disorders Package of Services  
C.14.153. Elective surgical repair of common orthopedic injuries (for example meniscal and ligamentous tears) in individuals with severe functional limitation  
Platform: Tertiary Level Hospital  
• Referral and Specialized Health Facility



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.14. Musculoskeletal Disorders Package of Services

#### B.14.154. Urgent, definitive surgical management of orthopaedic injuries (for example open reduction and internal fixation)

DCP3 code: RH11

##### Platform:

Tertiary Level Hospital

- Referral or Specialized Hospitals

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/Nurse)

- History
- Clinical examination
- Admission of patient
- Surgery
  - Pre-operative care (O.T Preparation) (Nurse/Technician)
  - Procedure
  - Post-operative care (Nurse/Technician)
  - Counselling

- Discharge

Laboratory Test (Lab Technician)

- Lab tests

Recommended Method

- Definitive surgical repair
- Discharge

Pharmacy (Dispenser)

- Dispensing of Medicines

Length of stay: 3 days

Arrange blood

Follow up

- As per doctor's advice

##### Medicines:

Grade I: Cefazolin (perioperative)	
Grade II and III: Ceftriaxone 1g IV	Daily until wound is closed
Lidocaine OR Opioid (fentanyl)	1.5mg/kg 3-6mcg/kg
Ketamine	1-2 mg/kg
Succinylcholine OR Vecuronium	1.5-2 mg/kg 0.1 mg/kg

##### Supplies:

- Disposable gowns and drapes, masks, oxygen

##### Equipment:

- Instruments (fixators), supplementary stock

##### Lab Test:

- CBC
- X-rays (according to presenting injury)

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD and indoor register, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow-up visit card
4. IEC Materia: Leaflet, Flipchart

##### Supervision:

- MS Hospital

##### Standard Protocol:

- 

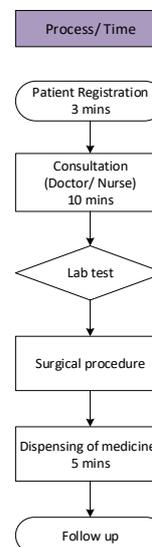
##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Trauma Guidelines, Stanford Hospital and Clinics, Lucile Packard Children's Hospital Stanford Training Programs 2018

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.14. Cardiovascular, Respiratory and Related disorders Package of Services  
B.14.154. Urgent, definitive surgical management of orthopaedic injuries (for example open reduction and internal fixation)  
Platform: Tertiary Level Hospital  
• Referral or Specialized Health Facility



## C. Non-Communicable Diseases and Injury Prevention Cluster

### C.15. Congenital and Genetic Disorders Package of Services

#### B.15.159. Repair of cleft lip and cleft palate

DCP3 code: RH12

##### Platform:

Tertiary Level Hospital

- Referral and Specialized Hospitals

##### Process:

Patient registration at reception (Receptionist)

Consultation (Doctor/ Nurse)

- History
- Clinical examination
  - Surgery
  - Pre-operative care (O.T Preparation) (Nurse/Technician)
  - Procedure
  - Post-operative care (Nurse/Technician)
  - Counselling
- Discharge

Recommended Method

- Repair of cleft lip and cleft palate according to guidelines

Pharmacy (Dispenser)

- Dispensing of medicines

Length of stay: 2 days

Arrange blood

Follow up

- Follow-up care as per doctor's advice

##### Medicines:

Acetaminophen	• 325mg OR 500mg SOS
Cefuroxime	• 30 mg/kg (intra-operation)
Cefazolin	• 30 mg/kg IV (maximum 3,000 mg/dose) (peri-operative)

##### Supplies:

- IV set, Catheter

##### Equipment:

- Surgical kit

##### Lab Tests:

- CBC
- Cross match
- Hepatitis B and C screening

##### HMIS Tools:

1. Recording Tool: OPD Ticket, OPD and indoor register, Patient file, Referral, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow-up visit card
4. IEC Materia: Leaflet, Flipchart

##### Supervision:

- MS Hospital, EDO Health, Deputy DHO, THO

##### Standard Protocol:

- Treatment Guidelines

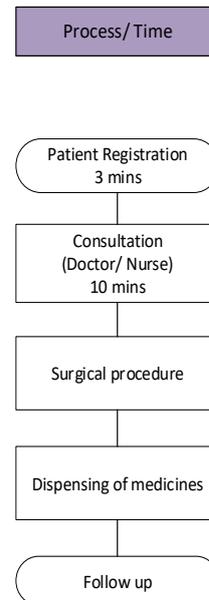
##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Repair of Cleft Lip and Palate, A Parent's Guide
- Cleft Lip and Palate, A Guide for Families

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.15. Congenital and Genetic Disorders Package of Services  
**B.15.159. Repair of cleft lip and cleft palate**  
Platform: Tertiary Level Hospital  
• Referral and Specialized Hospitals



## C. Non-Communicable Disease and Injury Prevention Cluster

### C.15. Congenital and Genetic Disorders Package of Services

#### C.15.160. Repair of club foot (Also included in Surgery package of services)

DCP3 code: RH13

##### Platform:

Tertiary Level Hospital

- Referral and Specialized Hospitals

##### Process:

Patient registration at reception (Receptionist)

Consultation

- History
- Clinical examination

Recommended Method

- Non-Surgical
  - Stretching and casting (Ponseti method)
  - Achilles tenotomy
  - Bracing
- Surgery

Pharmacy (Dispenser)

- Dispensing of medicine

Length of stay: 1 day

Follow up

- Stretching and casting (Ponseti method) 6week
- Achilles tenotomy 3months
- Bracing 3 months to 4-5 year

##### Medicines:

- 

##### Supplies:

- Casts

##### Equipment:

- Ponseti casts
- Boots and Bar

##### Lab Test:

- X-ray Foot

##### HMIS Tools:

1. Recording Tool: OPD Ticket, Indoor and OPD register, Abstract register
2. Reporting Tool: Monthly report
3. Client/Patient Card: Follow up card
4. IEC Material: Flip chart

##### Supervision:

- MS Hospital

##### Standard Protocol:

- Management of the Club foot

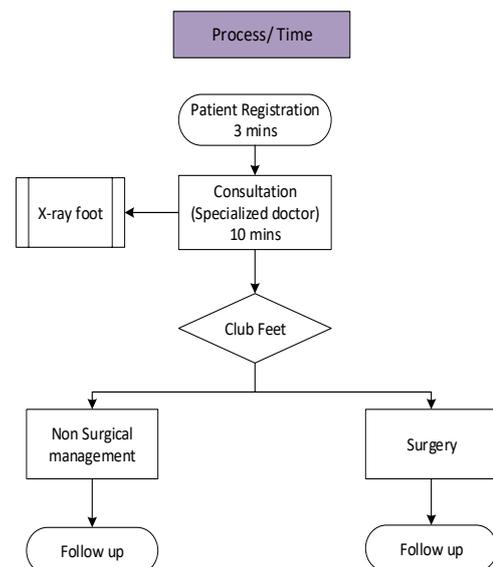
##### National Training Curriculum/ Guidelines:

- Not available

##### Reference Material:

- <https://orthoinfo.aaos.org/en/diseases--conditions/clubfoot/>

C. Non-Communicable Diseases and Injury Prevention Cluster  
C.15. Congenital and Genetic Disorders Package of Services  
C.15.160. Repair of club foot (Also included in Surgery package of services)  
Platform: Tertiary Level Hospital  
• Referral and Specialized Hospitals



**Preliminary Prioritized Interventions for the  
ESSENTIAL PACKAGE OF HEALTH SERVICES**

**Referral Hospital (Tertiary) Level Interventions**

**CLUSTER (D)**

*D. Health Services / Surgery*



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.192. Cataract Extraction and Insertion of Intraocular Lens

DCP3 code: RH14

##### Platform:

- First Level Hospital (DHQ)

##### Process:

Patient registration at the reception (Receptionist)

Admission

Consultation (Doctor)

- History
- Clinical examination and investigations
- Ophthalmic exam (visual acuity, pupil exam, external eye exam, measurement of Intraocular pressure, full slit lamp exam, biometry, examination of cataract and fundus)
- Counselling
  - Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
  - Stop blood thinners and prostate medications one week before surgery
  - Obtain informed consent
- Recommended Method (Phacoemulsification with IOL Implantation):
  - Administer Local Anaesthesia using topical anesthetic and/or intracameral injection of lidocaine
  - Place a small limbal incision in the cornea
  - Introduce the phaco probe and begin emulsification and aspiration of the lens cortex
  - Use the irrigation-aspiration probe to remove the remaining cortical material
  - Place the IOL into the remaining lens capsule
  - Place a protective shield over the eye to help with healing
  - Post-operative care (15-30 min in recovery)
  - Post-operative and pre-discharge Counselling
- Length of stay: Day care
- Follow-up: Next day of surgery, after 1 week and then 1month after surgery

##### Medicines:

<b>Pre-operative:</b> 1 Drop after every 15 minutes, 2 hour before surgery
Short acting mydiatric (Tropicamide 1%w/v Eye Drops)
<b>Intra-operative</b>
Proparacaine (HCL) 0.5%w/v eye Drops OR 4% Lidocaine eye gel OD 1% Lidocaine for Intracameral injection OD
<b>Post-operative:</b> 1 drop 4 times a day
Eye Drops (Chloramphenicol:1%W/v + Hydrocortisone:0.5%w/v) OR (tobramycin 0.3%w/v + Dexamethasone 0.1%w/v) Eye Ointment (Chloramphenicol:1%W/v + Hydrocortisone:0.5%w/v) 7 days

##### Supplies:

- Sterile drapes, gloves & gowns
- Pyodine solution, Surgical dressing tape
- Sutures, Gauze bandage
- Eye pad for dressing
- Normal saline (for drainage)
- Intraocular lens (foldable)
- Viscoelastic gel

##### Equipment:

- Phacoemulsification surgical device
- 3.2mm stab knife
- Cataract surgery set (lid retractor, mosquito forceps, iris forceps, knife handle, iris scissors, eye speculum, castroviejo Needle Holder, castroviejo suturing forceps etc.)

##### Lab test:

- Blood glucose level, Blood CP
- Hep B and C
- PT, APTT/IHR

##### HMIS Tools:

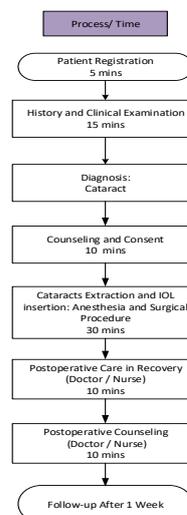
5. Recording Tool: OPD Ticket OPD and indoor register, Referral slip, Abstract register
6. Reporting Tool: Monthly Report
7. Client/Patient Card: Follow up visit card, Discharge slip
8. IEC material:

**Standard Protocol:** None for Pakistan

**National Training Curriculum/Guidelines:** Not available

##### Reference Material:

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.192. Cataract Extraction and Insertion of Intraocular Lens  
Platform: Tertiary Level Hospital



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.193. Repair of Anorectal Malformations and Hirschsprung's disease

DCP3 code: RH15

##### Platform:

- Tertiary Level Hospital

##### Process:

- Patient registration at the reception (Receptionist)
- Consultation (Paediatric surgeon, anaesthesiologist, Nurse)
- Detailed history from mother/ father or attendant
- Clinical examination by a consultant/resident pediatric surgeon
- Admit patient in NICU if neonate, else in paediatric ward
- Counselling
- Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
- Obtain informed consent
- Recommended Methods (Stage 1)

##### Anorectal Anomalies:

##### 2 or 3 stage procedure

##### • Primary surgery / Stoma formation

- In absence of venting fistula, stoma formation within 24 hrs of first presentation
- In presence of venting fistula, stoma- early after first presentation (within 2 weeks of presentation)

##### • Distal Colostogram

(to be done in outpatient clinic)

- At 3 weeks of stoma formation, for those with no external fistulae
- **Definitive surgery: Posterior Sagittal Anorectoplasty (PSARP)**
  - Within 4 to 6 weeks of stoma formation
- Post-operative instructions
  - Length of stay (4 to 5 days)
  - Antibiotics for a total of 5 days, including day of surgery

##### Stage 2

##### Dilatation

- Evaluation by doing Digital Rectal Examination (Anal stenosis) then with a small dilator
- Dilatation 2 times a day
- Continue dilatation from 15th post-operative day up to 3 to 4 months

##### Reversal of stoma

- At least 3 months of dilatation have been completed, plan reversal of stoma
- Post-operative instructions
  - Length of stay (4 to 5 days),
  - Antibiotics for a total of 5 days, including day of surgery
- Length of stay: 4 days (3 admissions)
- Follow-up:
  - 1 week to 10 days after discharge in colorectal clinic
  - Follow-up after every 2 weeks for first 2 months of surgery
  - Then every 3 months for the first year
  - Then at least once a year till 7 years of age (or 5 years post-operatively in older children)

##### Medicines:

Half or Full dextrose saline, dextrose water- as per weight 3-5 days
Inj. Amikacin- 15mg/kg/day as a single dose (pre-op)
Inj. Flagyl- 30mg/kg/day as three divided doses 3-5 days
Inj. Augmentin- 90mg/kg/day as three divided doses 3-5 days
Inj. Clafron- 200mg/kg/day as two divided doses 3-5 days
Inj. Paracetamol- 60mg/kg/day as four divided doses 3 days

Inj. Kinz/ Morphine- 0.3mg/kg/day as three divided doses 3 days
Inj. Omeprazole- 1mg/kg/day as a single dose OD
Polyfax skin ointment- 1 single tube

##### Supplies:

- Surgical gloves, Drapes, Cannula, Blades
- Catheter with bag, Drip sets, Suturing material, Sterile Gauze
- Mefix or fixing tape, Pyodine 10% 450 ml

##### Equipment:

- Pediatric Laparotomy set

##### Lab Tests:

- Complete Blood Count (CBC), Electrolytes, Urea, Creatinine
- Coagulation profile (PT/APTT/ INR in neonates)
- KUB Ultrasound, Echocardiogram
- Babygram/ Lumbosacral X-ray
- Invertogram (where applicable)

##### HMIS Tools:

1. Recording Tool: Emergency department token, In-patient admission file/database
2. Reporting Tool:
3. Client/Patient card: Patient Follow up card
4. IEC material: Urdu and English brochures and pamphlets

##### Supervision:

- Pediatric surgeon at the Tertiary Level Hospital, an anesthesiologist a NICU

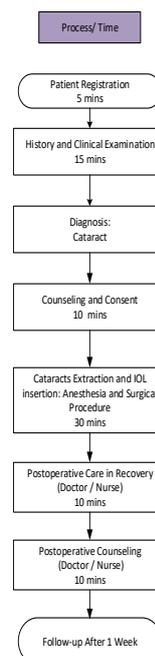
##### Standard Protocol:

##### National Training Curriculum/Guidelines:

- Not available

##### Reference Material:

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.193. Repair of Anorectal Malformations and Hirschsprung's disease  
Platform: Tertiary Level Hospital



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.194. Repair of Obstetric Fistula

DCP3 code: RH16

##### Platform:

Tertiary Level Hospital

##### Process:

Patient registration at the reception (Receptionist)

Patient admission

Consultation (Doctor)

- History
- Clinical examination (digital and with a speculum; Dye test for vesico-vaginal fistula (VVF))
- Counselling
  - Assess psychosocial status
  - Recommend time and method of surgical repair
  - Explain the procedure, risks, possible side effects, complications, and alternatives
  - Obtain informed consent
- Recommended Method
- Treat infection (if present) before surgery for improved post-operative outcomes
- spinal or general Anaesthesia
- Repair obstetric fistula using one of the following techniques:
  - Vaginal approach, Abdominal approach
  - Abdomino-perineal approach, Laparoscopic approach
  - Using interposition flaps or grafts
  - For Recto Vaginal Fistula (RVF) repair colostomy if required with involvement of General surgeon, preferably colorectal surgeon if available
- Post-procedural care
  - For VVF repair ensure continuous bladder drainage
  - If colostomy done for RVF repair, then colostomy care
- Post-procedural and pre-discharge Counselling
- Length of stay: 7 days
- Follow-up: Regular follow-ups to assess continence and psychosocial status (2 weekly for three months)
  - Remove urinary catheter after 2-4 weeks post-repair; Assess fistula closure using the dye test or cystogram after negative urine culture
  - If the dye test is positive, the catheterization may be continued for another two weeks

##### Supplies:

- Sterile gloves and gown, Sterile towels or drapes
- Face mask with protective shield, sterile gauze
- Antiseptic solution/applicators, marking pen

##### Equipment:

- Posterior weighted vaginal speculum
- Self-retaining vaginal retractor, Scalpel, Skin tape
- Foley's catheter kit, Suprapubic catheter kit, Metallic catheter
- 2-0 or 3-0 absorbable or delayed absorbable sutures
- Skin sutures, Bowel clamps, cystoscopy equipment
- Pediatric size feeding tubes, Drain tubing
- 10 ml of sterile water in a Luer-Lok syringe
- Laparoscopy equipment for laparoscopic procedures

##### Medicines:

**Pre-operative:** Cefazolin 2g IV [Clindamycin (900mg) & Aminoglycoside (e.g. Gentamicin: 5mg/kg based on dosing weight) in case of Penicillin allergy], Bowel prep for RVF repair with Kleen enemas or colonoscopy solution, Midazolam preoperatively

**Intra-operative:** Spinal Anaesthesia - Bupivacaine (single 3 ml vial) or 2% Lidocaine (10 ml vial), General Anaesthesia

**Post-operative:** Paracetamol 1000 mg PO q6-8hr PRN for pain control; I.M Diclofenac or IV Nalbuphine/Opioids, Paracetamol/Tramadol combination, No per rectal medications in RVF repairs, Perineal wash with Normal saline once daily

##### HMIS Tools:

1. Recording tool: In-patient admission file/database
2. Reporting tool:
3. Client/Patient card: Patient medical record card
4. IEC material:

##### Lab Test:

- Creatinine level of vaginal secretions/pooled fluid
- Urinalysis and urine culture, Electrolyte panel
- Complete Blood Cell (CBC) count
- Transvaginal ultrasonography, Double Dye test
- Intravenous pyelography or CT urography or cystography, Cystoscopy +/- retrograde pyelography

**Supervision:** MS hospital, Urogynecologist or Senior Obstetrician/Gynecologist or Urologist /general surgeon if colostomy required in RVF at the Tertiary Care Hospital

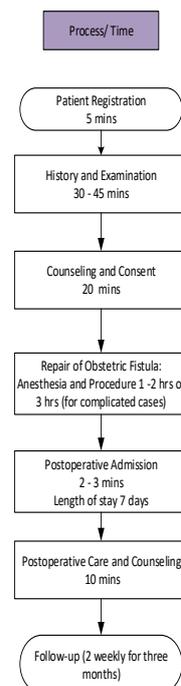
##### Standard Protocol:

**National Training Curriculum/Guidelines:** Not available

##### International Training Curriculum/Guidelines:

- International Federation of Gynecology and Obstetrics (FIGO) Global Competency-based Fistula Surgery Training Manual

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.194. Repair of Obstetric Fistula  
Platform: Tertiary Level Hospital



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18.195. Insertion of shunt for hydrocephalus Ventriculoperitoneal Shunt

DCP3 code: RH17

##### Platform:

Tertiary Care Hospital

##### Process:

Patient registration at the reception (Receptionist)

Patient Admission

Consultation (Doctor)

- History
- Clinical examination
- Management
- Counselling
  - Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
  - Obtain informed consent

Laboratory Tests (Lab Technician)

- Laboratory tests if required
- Recommended Method
  - Administer General Anaesthesia
  - Perform VP shunt insertion
  - Endoscopic third ventriculostomy (do not include in costing)

Post-operative and pre-discharge Counselling

- Explain possible post-op complications, including fever, nausea, vomiting, diarrhea, and redness/swelling/drainage from wound
- Provide clear instructions for return to health facility if complications occur
- Length of stay: 4 days
- Follow-up: After 1 to 2 weeks

##### Supplies:

- Sterile gloves and gowns
- Drapes, Gauze, Medical Tape
- Suturing material, Foley catheterization
- Pyodine/Alcohol swab
- Medium pressure burr hole type VP shunt

##### Equipment:

- General Anaesthesia machine
- Endotracheal tube and ventilation equipment
- Emergency resuscitation equipment
- High speed drill for burr hole
- Shunt passer for subcutaneous tunneling

##### Lab test:

- Complete Blood Count (CBC), Ultrasound
- CT scan brain (Essential), Magnetic resonance imaging (MRI)

##### HMIS Tools:

1. Recording tool: Outdoor register and Indoor register, Patient admission file/database
2. Reporting tool: Monthly report
3. Client/Patient card: Patient medical record card
4. IEC material:

##### Medicines:

###### Pre-operative

Adults: Cefoxitin 1g IV/ Ceftriaxone 1g IV/Cefazolin 1g IV Children Cefazolin 30mg/kg/day OR [Clindamycin 10mg/kg 12h (IV) OR Vancomycin 15mg/kg (IV q16hr) in case of allergies]

###### Intra-operative

Adults: Local Anaesthesia for incision: 2% Lidocaine with 1:100,000 Epinephrine

Anaesthesia type at surgeon's discretion:

General Anaesthesia with intubation – Isoflurane Gas and Suxamethonium (0.3-1.1 mg/kg IV loading dose, 0.04-0.07 mg/kg IV PRN) OR

General Anaesthesia without intubation – Inj. Ketamine (1-4.5mg/kg IV for induction), Foley catheterization

Children: Local Anaesthesia for incision: Bupivacaine and Epinephrine

Anaesthesia type at surgeon's discretion:

General Anaesthesia with intubation – Isoflurane Gas and (1-2 mg/kg IV loading dose, 0.3-0.6 mg/kg IV PRN) OR

General Anaesthesia without intubation – Inj. Ketamine (1-4.5mg/kg IV for induction), Foley catheterization

###### Post-operative

Adults: Tramadol 50 IV/IM q6-8hrs PRN

Paracetamol 10-15mg/kg/dose PO q4-6hr for pain control

No contamination: antibiotics for 24 hrs

Contamination during surgery: antibiotics for 4 days

Children: Analgesia (pediatrics) Paracetamol 15mg/kg/dose 6 to 8h PO PRN for pain control; IV Kinz 0.1mg/kg/dose 8h

No contamination: antibiotics for 24 hrs

Contamination during surgery: antibiotics for 4 days

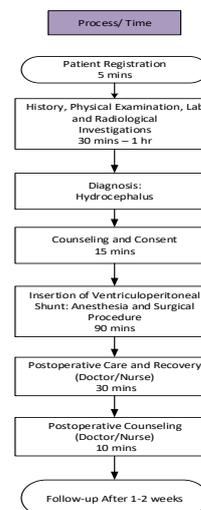
**Supervision:** Neurosurgeon at Tertiary Care

**Standard Protocol:**

**National Training Curriculum/Guidelines:** Not available

**Reference Material:**

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.195. Insertion of shunt for hydrocephalus-Ventriculoperitoneal Shunt  
Platform: Tertiary Level Hospital



## D. Health Services Cluster

### D.18. Surgery Package of Services

#### D.18. 196. Surgery for Trachomatous Trichiasis

DCP3 code: RH18

##### Platform:

Tertiary Level Hospital

##### Process:

Patient registration at the reception (Receptionist)

Patient Admission

Consultation (Doctor):

- History
- Clinical examination
  - Examine eyelid and cornea thoroughly from multiple angles in the shade
  - Examine patient for defective eyelid closure
- Counselling
  - Explain the procedure, risks, possible complications, implications of no surgery, and alternatives
  - Obtain informed consent
- Laboratory Tests (Lab Technician): Laboratory tests if required
- Recommended Method (Bilamellar tarsal rotation operation or Trabut):
  - Numb the eye using two drops of topical anesthetic eye drops
  - Administer Local Anaesthesia in the eyelid
  - Perform Bilamellar tarsal rotation operation or Trabut
  - Post-operative care (15-30 min in recovery)
  - Post-operative and pre-discharge Counselling
- Length of stay: Day care
- Follow-up: Next day of surgery, then after 8-14 days for suture removal

##### Medicines:

###### Pre-operative:

Two drops of local anesthetic in the eye

###### Intra-operative

Local Anaesthesia: 2% Lidocaine with 1:100000 Epinephrine

###### Post-operative

- 1% Tetracycline eye ointment or topical Azithromycin for wound
- Single 1gm dose of Azithromycin
- Paracetamol 500 mg PO q6-8hr PRN for pain control

##### Supplies:

- Sterile distilled water or normal saline
- 10% Povidone iodine skin preparation, aqueous solution without alcohol or detergents
- 70% Alcohol, 21G disposable needles
- 5 ml disposable syringes, No. 15 blades
- Surgical gloves, Gauze/patches
- Zinc strapping 1/2 inch
- A sterile drape, Mask and cap, Sterile gown
- 4.0 silk on a reel or pre-packaged single arm needles with suture material

##### Equipment:

- Autoclave or pressure cooker
- Large metal bowl or plastic bucket
- Kidney dish

- Galley pot
- Scalpel handle for a No. 15 blade
- Needle holder (with or without catch)
- Toothed forceps
- Tying forceps Scissors (straight with tapered ends)
- Small hemostat forceps ("mosquitos") and Lid plate Or TT/Waddel clamp/ Trabut Plate
- Package of spring eye cutting needles

##### HMIS Tools:

1. Recording Tool: OPD Ticket OPD and indoor register, Referral slip, Abstract register
2. Reporting Tool: Monthly Report
3. Client/Patient Card: Follow up visit card, Discharge slip
4. IEC material:

##### Supervision:

- Ophthalmologist at Tertiary- level Hospital

##### Standard Protocol:

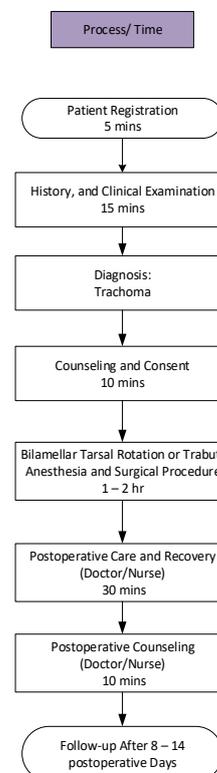
- None for Pakistan

##### National Training Curriculum/Guidelines:

- WHO

##### Reference Material:

D. Health Services Cluster  
D.18. Surgery Package of Services:  
D.18.196. Surgery for Trachomatous Trichiasis  
Platform: Tertiary Level Hospital



## D. Health Services Cluster

### D.21. Pathology Package of Services

#### D.21.217. Referral level hospital pathology services

DCP3 code: RH19

**Platform:**

Tertiary Level Hospital

- Referral and Specialized Hospitals

**Process:**

Laboratory Test (Lab Technician (Mono-specialty pathologists, clinical scientists, specialized laboratory technicians, laboratory assistants, dedicated laboratory manager, possibly laboratory information systems coordinator, quality care manager)

**Medicines:**

- 

**Supplies:**

- 

**Equipment:**

- 

**Lab Tests:**

- Point of care test and single-use tests
  - Malaria
  - TB
  - Urine analysis
  - Pregnancy test
  - Blood glucose
  - Haemoglobin/ haematocrit
  - ESR
  - Blood typing
  - Slide microscopy (e.g. malaria, wet preparation, stool, parasites)
- Haematology
  - Routine haematology
  - Bone marrow pathology
  - Blood transfusion and related services
  - Coagulation
  - Cytogenetics
  - Tissue typing
  - Haemolytic anaemia
  - Megaloblastic anaemia
  - CBCs, CD4 count, Simple coagulation studies
  - Thalassemia tests, Support for whole blood transfusion
  - Advanced blood analysis (eg, component therapy, hemolysis, myeloma)
  - Bone marrow studies
  - Hematologic malignancies
  - Immunologic studies
- Chemical pathology
  - Therapeutic drug monitoring
  - Endocrinology
  - Protein investigations
  - Metabolic markers (eg, thyroid)
  - Neonatal and antenatal screening
  - Toxicology

- Trace elements
- Routine biochemistry
  - Tumour markers (eg, AFP, Ca-125)
  - Blood gases, Urea & electrolytes
  - Hemoglobin A1c, Liver function tests
  - Renal function test, Bone & lipid profiles
  - Cardiac markers (eg, troponin)
  - Brain natriuretic peptide
  - Dynamic function tests (eg, GTT)
  - Serum and urine electrophoresis
- Anatomic pathology
  - Fine Needle Aspiration Cytology (FNAC)
  - Tissue biopsies
  - Surgical excision
  - Haematoxylin and Eosin stain (H&E) & interpretation
  - Hospital autopsy
  - Special stains, including immunohistochemistry (eg, ER, PR for breast cancer)
  - Specialized Autopsy
- Microbiology
  - Bacteriology
  - Mycobacteriology
  - Molecular microbiology
  - Serology for hepatitis A/B/C & common infections
  - Virology (Viral load)
  - Cerebrospinal fluid /sputum
  - Fungal Cultures
- Immunology
  - Allergy testing
  - Autoimmune investigations
  - Primary Immunodeficiency investigation
  - Immunochemistry
  - Flow cytometry
  - Tissue typing

**HMIS Tools:**

5. Recording Tool: Laboratory Test Record
6. Reporting Tool:
7. Client/Patient Card:
8. IEC material:

**Supervision:** MS Hospital

**Standard Protocol:**

**National Training Curriculum/ Guidelines:** Not available

**Reference Material:**

- Clinical Services Capability Framework- Pathology Services
- An Essential Pathology Package for Low- and Middle-Income Countries
- (Kenneth A. Fleming, MBChB,1,2 Mahendra Naidoo, MBChB,1 Michael Wilson, MD,4,5 John Flanigan, MD,1 Susan Horton, PhD,6 Modupe Kuti, MBBS,7 Lai Meng Looi, MBBS,8 Chris Price, PhD,3 Kun Ru, MD,9 Abdul Ghafur, MD,11 Jianxiang Wang, MD,10 and Nestor Lago, MD12)

## D. Health Services Cluster

### D.21. Pathology Package of Services

#### D.21.218. Specialty pathology services

DCP3 code: RH20

##### Platform:

Tertiary Level Hospital

- Referral and Specialized Hospitals

##### Process:

Laboratory Test (Mono-specialty pathologists, clinical scientists, specialized laboratory technicians, laboratory assistants, dedicated laboratory manager, possibly laboratory information systems coordinator, quality care manager.)

##### Medicines:

- 

##### Supplies:

- 

##### Equipment:

- Automated tissue processor,
- Equipment for full laboratory
- Autopsy
- Immunohistochemistry station

##### Lab Tests:

- Point of care test and single-use tests
- Malaria
- TB
- Blood typing
- Slide microscopy (e.g. malaria, wet preparation, stool, parasites)
- Clinical biochemistry
- Urea & electrolytes
- Hemoglobin A1C
- Bone & lipid profiles
- Endocrine tests (eg, thyroid)
- Cardiac markers (eg, troponin)
- Brain natriuretic peptide
- Dynamic function tests (eg, GTT)
- Tumor markers (eg, AFP, Ca-125)
- Blood gases
- Therapeutic drug monitoring (eg, cyclosporine levels)
- Serum and urine electrophoresis
- Toxicology
- Microbiology
- Bacteriology
- Mycobacteriology
- Molecular microbiology
- Serology for hepatitis A/B/C & common infections
- Virology (Viral load)
- Cerebrospinal fluid /sputum
- Fungal Cultures
- Anatomic pathology

- Fine Needle Aspiration Cytology (FNAC)
  - Tissue biopsies
  - Surgical excision
  - Hematoxylin and Eosin stain (H&E) & interpretation
  - Hospital autopsy
  - Special stains, including immunohistochemistry (eg, ER, PR for breast cancer)
  - Specialized Autopsy
- Hematology
  - Routine haematology and Hematologic malignancies
  - Bone marrow pathology
  - Blood transfusion and related services
  - Coagulation, Cytogenetics
  - Tissue typing, Haemolytic anaemia
  - Megaloblastic anaemia
  - CD4 count
  - Simple coagulation studies
  - Thalassemia tests
  - Advanced blood analysis (e.g. component therapy, haemolysis, myeloma)
- Immunology
  - Allergy testing
  - Autoimmune investigations
  - Primary Immunodeficiency investigation
  - Immunochemistry
  - Flow cytometry
  - Tissue typing

##### HMIS Tools:

5. Recording Tool:
6. Reporting Tool:
7. Client/Patient Card:
8. IEC material:

##### Supervision:

- MS Hospital

##### Standard Protocol:

- 

##### National Training Curriculum/ Guidelines:

- Not available

##### Reference Material:

- Clinical Services Capability Framework- Pathology Services
- An Essential Pathology Package for Low- and Middle-Income Countries
- (Kenneth A. Fleming, MBChB,1,2 Mahendra Naidoo, MBChB,1 Michael Wilson, MD,4,5 John Flanigan, MD,1 Susan Horton, PhD,6 Modupe Kuti, MBBS,7 Lai Meng Looi, MBBS,8 Chris Price, PhD,3 Kun Ru, MD,9 Abdul Ghafur, MD,11 Jianxiang Wang, MD,10 and Nestor Lago, MD12)



# Population level

## EPHS Interventions Description



## A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster

### A.4. Adolescent Health & Development Package of Services

#### A.4.52. Mass media messages concerning sexual and reproductive health and mental health for adolescents (Also included in HIV and Mental health packages of services)

DCP3 code: P1

##### Platform:

Population Level

##### Process:

Development of communication plan and messages

Identify the target population (aged 10-19 years)

Identify the most used communication platform by the target population

- Individual
- Family & household/Community mobilization
- Institutional
- Electronic/Print/ Social media
- Advocacy
- KAP survey to assess impact of mass media communication

Communication campaign

Recommended Method

- Awareness regarding promotion of sexual and reproductive health and mental health

##### Supplies:

- 

##### Equipment:

- 

##### HMIS Tools:

1. Recording Tool:
2. Reporting Tool:
3. Client/Patient Card:
4. IEC Material: Leaflet, Flipchart, Brochures, Banners, Billboards, Audio-Video, Advertisements, Digital signage if appropriate

##### Supervision:

- BCC team

##### Standard Protocol:

- 

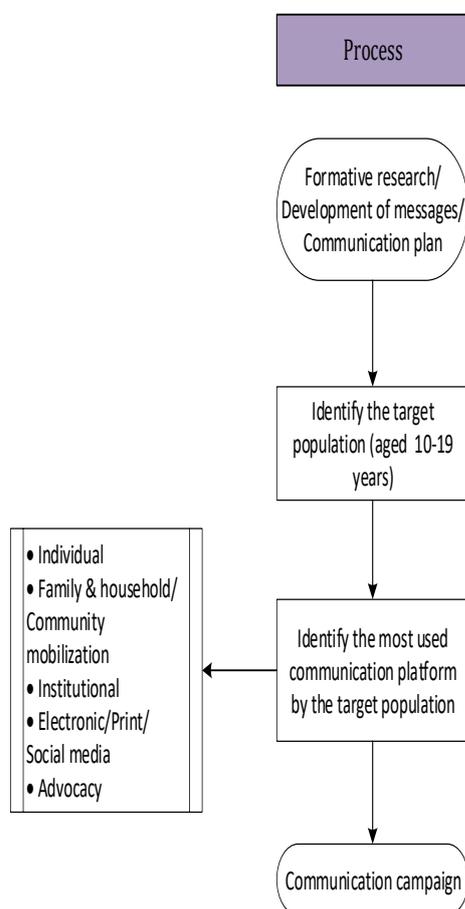
##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Preventing suicide; A community engagement toolkit WHO 2018

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.4. Adolescent Health & Development Package of Services  
A.4.52. Mass media messages concerning sexual and reproductive health and mental health for adolescents (Also included in HIV and Mental health packages of services)  
Platform: Population Level



## A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster

### A.4. Adolescent Health & Development Package of Services

#### A.4.53. Mass media messages concerning healthy eating or physical activity (Also included in CVD and Musculoskeletal packages of services)

DCP3 code: P2

##### Platform:

Population Level

##### Process:

Development of communication plan and messages

Identify the target population

Identify the most used communication platform by the target population

- Individual
- Family & household/Community mobilization
- Institutional
- Electronic/Print/ Social media
- Advocacy
- KAP survey to assess impact of mass media communication

Communication campaign

Recommended Method

- Awareness regarding harms of unhealthy eating and lack of physical activity

##### Supplies:

- 

##### Equipment:

- 

##### HMIS Tools:

5. Recording Tool:
6. Reporting Tool: Implementation status report
7. Client/Patient Card:
8. IEC Material: Leaflet, Flipchart, Brochures, Banners, Billboards, Audio-Video, Advertisements, Digital signage

##### Supervision:

- BCC team

##### Standard Protocol:

- 

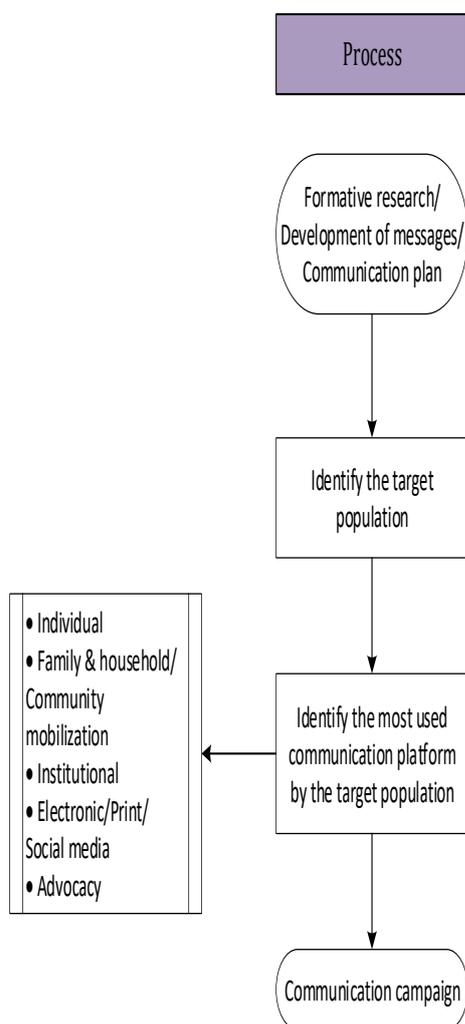
##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Global Action Plan on Physical activity 2018-30  
WHO

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.4. Adolescent Health & Development Package of Services  
A.4.53. Mass media messages concerning healthy eating or physical activity (Also included in CVD and Musculoskeletal packages of services)  
Platform: Population Level



## A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster

### A.4. Adolescent Health & Development Package of Services

#### A.4.54. Mass media messages concerning use of tobacco and alcohol (Also included in CVD and Musculoskeletal packages of services)

DCP3 code: P3

##### Platform:

Population Level

##### Process:

Development of communication plan and messages

Identify the target population (aged >15 years)

Identify the most used communication platform by the target population

- Individual
- Family & household/Community mobilization
- Institutional
- Electronic/Print/ Social media
- Advocacy
- KAP survey to assess impact of mass media communication

Communication campaign

Recommended Method

- Awareness regarding harms of tobacco and alcohol and benefits of quitting

##### Supplies:

- 

##### Equipment:

- 

##### HMIS Tools:

1. Recording Tool:
2. Reporting Tool:
3. Client/Patient Card:
4. IEC Material: Leaflet, Flipchart, Brochures, Banners, Billboards, Audio-Video, Advertisements, Digital signage

##### Supervision:

- BCC team

##### Standard Protocol:

- 

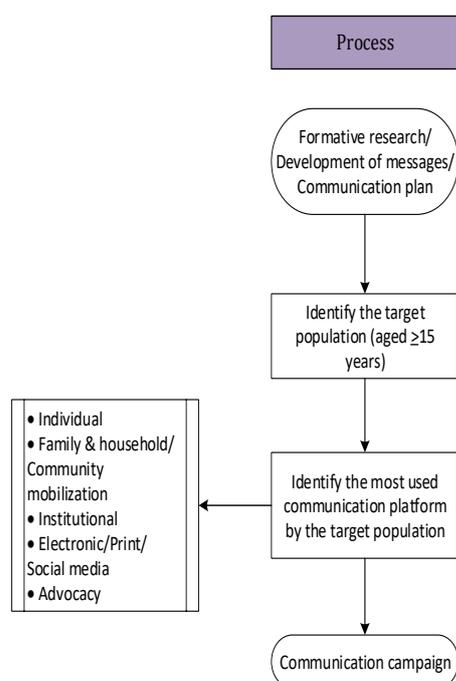
##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Communication strategy for tobacco control in South-East Asia WHO 2009

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.4. Adolescent Health & Development Package of Services  
A.4.54. Mass media messages concerning use of tobacco and alcohol (Also included in CVD and Musculoskeletal packages of services)  
Platform: Population Level



## A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster

### A.5. Reproductive Health & Contraception Package of Services

#### A.5.64. Education campaign for the prevention of gender-based violence

DCP3 code: C25

##### Platform:

Population Level

##### Process:

Development of communication plan and messages

Identify the target population

Identify the most used communication platform by the target population

- Individual
- Family & household/Community mobilization
- Institutional
- Electronic/Print/ Social media
- Advocacy

Communication campaign

Recommended Method

- Awareness regarding gender-based violence

Follow-up

##### Supplies:

- 

##### Equipment:

- 

##### HMIS Tools:

1. Recording Tool:
2. Reporting Tool:
3. Client/Patient Card:
4. IEC Material: Banner, Chart, Flip chart, Social media, Audio/Video, Digital signage

##### Supervision:

- 

##### Standard Protocol:

- Identify and mobilize appropriate existing resources in the community, such as TBAs, women's groups, religious leaders, and community services programs
- At all health and community services, listen and provide emotional support whenever a survivor discloses or implies that she has experienced sexual violence. Give information, and refer as needed and agreed by the survivor
- Regarding psychotropic therapy for adult victims/survivors, provide medication only in exceptional cases
- Organize psychological and social support including social reintegration activities

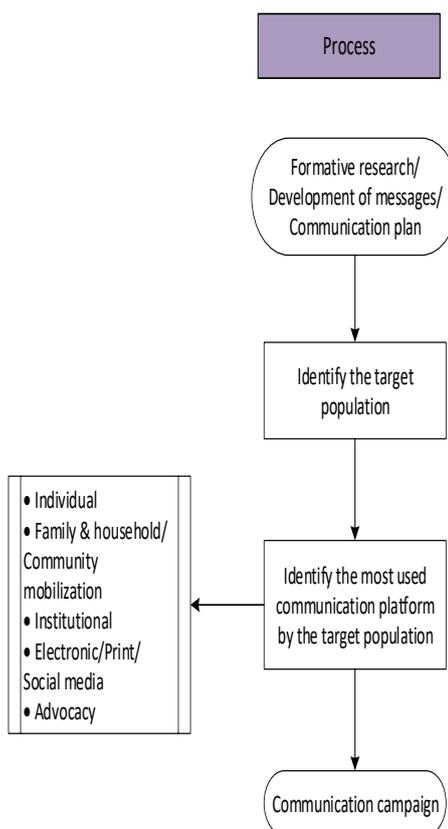
##### National Training Curriculum/Guidelines:

- Not available

##### Reference Material:

- Guidelines for Gender-based Violence Interventions in Humanitarian Settings

A. Reproductive, Maternal, Newborn, Child, Adolescent Health/Age Related Cluster  
A.5. Reproductive Health & Contraception Package of Services  
A.5.64. Education campaign for the prevention of gender based violence  
Platform: Population Level



## B. Infectious Diseases Cluster

### B.6. HIV and STIs Package of Services

#### B.6.77. Mass media encouraging use of condoms, voluntary medical male circumcision and STI testing

DCP3 code: P4

##### Platform:

Population Level

##### Process:

Development of communication plan and messages

Identify the target population (sexually active population, sex workers and their clients, transgenders people, and people with an existing sexually transmitted infection, including people living with HIV) /target audience

Identify the most used communication platform by the target population

- Individual
- Family & household/Community mobilization
- Institutional
- Electronic/Print/ Social media
- Advocacy

Communication campaign

Recommended Method

- Formative research, development of messages (condoms, voluntary medical male circumcision and STI testing)
- Advocacy to mobilize the political will

##### Supplies:

- 

##### Equipment:

- 

##### HMIS Tools:

5. Recording Tool: Media campaign evaluation
6. Reporting Tool:
7. Client/Patient Card:
8. IEC Material: Leaflet, Flipchart, Brochures, Banners, Billboards, Audio-Video, Advertisements, Digital signage

##### Supervision:

- BCC team

##### Standard Protocol:

- 

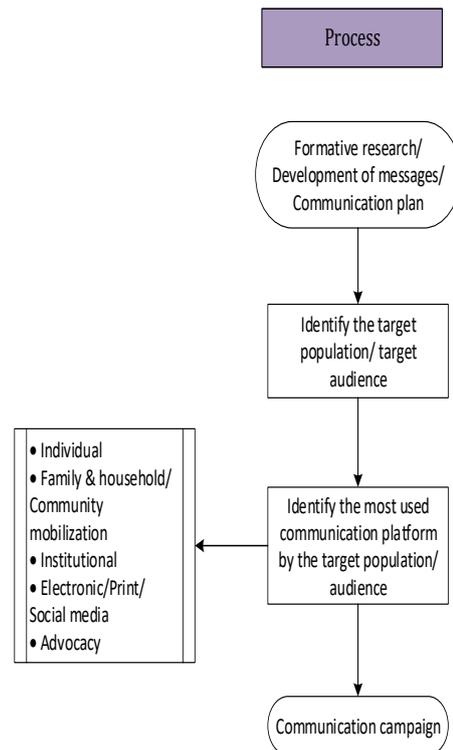
##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Global Strategy for the Prevention and Control of Sexually Transmitted Infections 2006 – 2015
- PC-1 of National Preventive Program

B. Infectious Diseases Cluster  
B.6. HIV and STIs Package of Services  
B.6.77. Mass media encouraging use of condoms, voluntary medical male circumcision and STI testing  
Platform: Population Level



## B. Infectious Diseases Cluster

### B.8. Malaria and Adult Febrile Illness Package of Services

#### B.8.101. Sustained integrated vector management for effective control of Chagas disease, visceral Leishmaniasis, dengue, chikungunya, CCHF and other nationally important causes of non-malarial fever vector borne NTDs

DCP3 code: P6

##### Platform:

Population Level

##### Process:

Identify the target population and the most used communication platform

Implementation of the vector management activities

##### Recommended Method

- Development of plan and messages for effective community engagement and mobilization in vector control
- Targeting the vectors that transmit disease-causing pathogens
- Widespread scaling up of insecticide-treated mosquito nets and Indoor Residual Spraying (IRS)
- Large-scale use of larvicides aimed at reducing vector populations
- 5. Enhancing vector surveillance, monitoring and evaluation of intervention
- Strong political commitment

##### Supplies:

- 

##### Equipment:

- 

##### HMIS Tools:

1. Recording Tool: Reporting and recording tool (IRS, LLINs, Larviciding activities)
2. Reporting Tool: Reporting and recording tool (IRS, LLINs, Larviciding activities)
3. Client/Patient Card:
4. IEC Material: Leaflet, Flipchart, Brochures, Banners, Billboards, Audio-Video, Advertisements, Digital signage

##### Supervision:

- Monitoring officer, DHO, ADHO

##### Standard Protocol:

- 

##### National Training Curriculum/Guidelines:

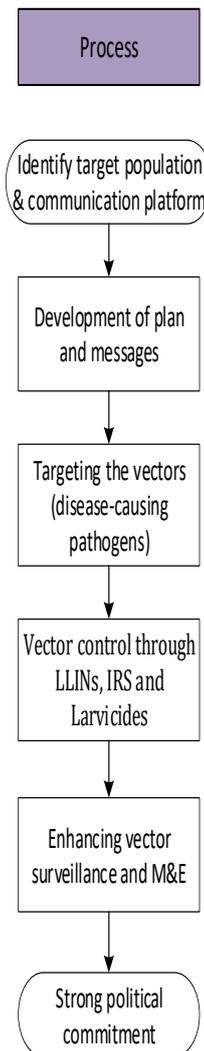
- Not Available

##### Reference Material:

- Global Vector Control 2017-2030

B.8. Malaria and adult Febrile illness Package of Services  
B.8.101. Sustained integrated vector management for effective control of Chagas disease, visceral Leishmaniasis, dengue, chikungunya, CCHF and other nationally important causes of non-malarial fever vector borne NTDs

Platform: Population Level



## B. Infectious Diseases Cluster

### B.10. Pandemic and Emergency Preparedness Package of Services

#### B.10.110a. Conduct a comprehensive assessment of International Health Regulations (IHR) competencies using the Joint External Evaluation (JEE) tool

DCP3 code: P7

##### Platform:

Population Level

##### Process:

###### Recommended Method

- The JEE is based on completely collaborative, multisectoral discussions with country experts at both the national and provincial level
- Completion of a self-assessment using the JEE tool following four weeks of rigorous preparatory work at national and provincial level to compile data and information on all 19 technical areas in the JEE tool, prior to arrival of external team
- Conduct orientation sessions
- Present results of the self-assessment for all technical areas to external evaluation team
- Follow-up meetings and site visits
- JEE Assessment needs 2 months duration for its completion

##### Supplies:

- 

##### Equipment:

- 

##### HMIS Tools:

1. Recording Tool:
2. Reporting Tool:
3. Client/Patient Card:
4. IEC Material:

##### Supervision:

- 

##### Standard Protocol:

- 

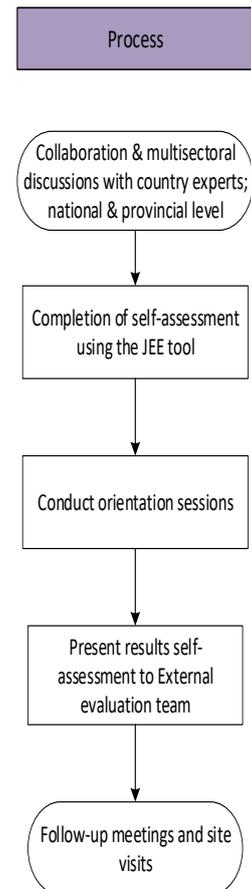
##### National Training Curriculum/Guidelines:

- Available

##### Reference Material:

- Joint External Evaluation of IHR Core Capacities of Pakistan Mission Report 2016

B. Infectious Diseases Cluster  
B.10. Pandemic and Emergency preparedness Package of Services  
**B.10.110a. Conduct a comprehensive assessment of International Health Regulations (IHR) competencies using the Joint External Evaluation (JEE) tool**  
Platform: Population Level



## B. Infectious Diseases Cluster

### B.10. Pandemic and Emergency Preparedness Package of Services

#### **B.10.110b. Develop cost, finance, and implement an action plan to address gaps in preparedness and response**

**DCP3 code: P7**

**Platform:**

Population Level

**Process:**

Recommended Method

- Developing of 5 Year National Action Plan for Health Security based on Joint External Evaluation (JEE) results and recommended priorities
- Formulation of a technical working group (TWG) by the M/o NHR&C
- Consultative workshops involving relevant technical experts and focal persons from health and non-health sector at the Federal & Provincial/ Federating Areas
- Require 5-6 months for developing action plan

**Supplies:**

- 

**Equipment:**

- 

**HMIS Tools:**

1. Recording Tool:
2. Reporting Tool:
3. Client/Patient Card:
4. IEC Material:

**Supervision:**

- 

**Standard Protocol:**

- 

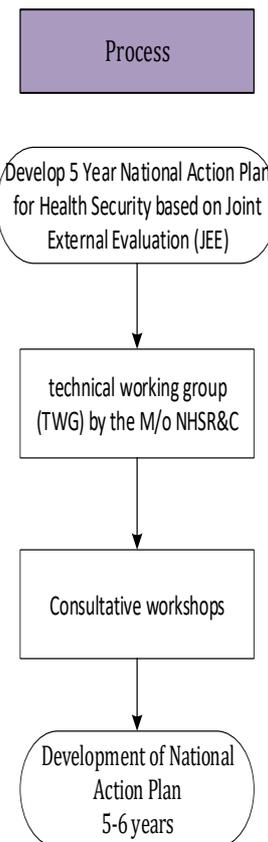
**National Training Curriculum/Guidelines:**

- Available

**Reference Material:**

- Pakistan National Action Plan for Health Security (NAPHS), A shared opportunity for sustainable implementation of IHR (2005)

B. Infectious Diseases Cluster  
B.10. Pandemic and Emergency preparedness Package of Services  
**B.10.110b. Develop cost, finance and implement an action plan to address gaps in preparedness and response**  
Platform: Population Level



## B. Infectious Diseases Cluster

### B.8. Pandemic and Emergency Preparedness Package of Services

#### B.10.111. Conduct simulation exercises and health worker training for outbreak events including outbreak investigation, contact tracing and emergency response

DCP3 code: P8

**Platform:**

Population Level

**Process:**

Development of training material  
Conduction of training and simulation exercise for outbreak events including outbreak tracing and emergency response  
Interactive training sessions with simulation exercises

**Supplies:**

- 

**Equipment:**

- 

**HMIS Tools:**

1. Recording Tool: Participant list
2. Reporting Tool: Training report
3. Client/Patient Card:
4. IEC Material: Social media, audio/video, digital signage

**Standard Protocol:**

- Pre-exercise planning, material development and set-up
- Conducting exercise
- Post-exercise reporting and handover phase

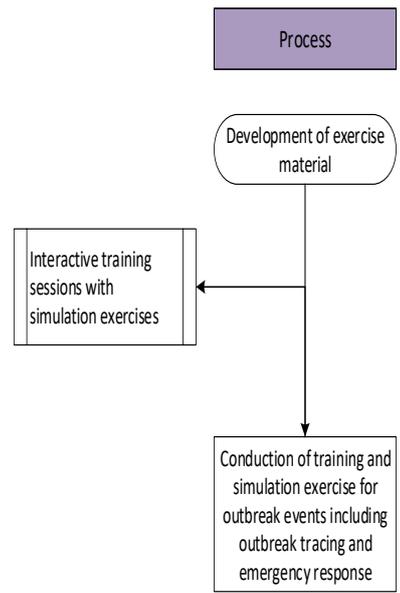
**National Training Curriculum/Guidelines:**

- Not available

**Reference material**

- WHO Simulation Exercise Manual 2017

B. Infectious Diseases Cluster  
B.8. Pandemic and Emergency preparedness Package of Services  
B.10.111. Conduct simulation exercises and health worker training for outbreak events including outbreak investigation, contact tracing and emergency response  
Platform: Population Level



## B. Infectious Diseases Cluster

### B.10. Pandemic and Emergency Preparedness Package of Services

#### B.10.112. Decentralize stocks of antiviral medications in order to reach at risk groups and disadvantaged populations

DCP3 code: P9

**Platform:**

Population Level

**Process:**

To ensure the logistic support during health emergencies, the Health departments should consider making advance arrangements for transport and Stock pile of the Antiviral medication for the notifiable diseases

Practice of maintaining one-month reserves of medicine and supplies as contingency stock at every level

**Supplies:**

- 

**Equipment:**

- 

**HMIS Tools:**

1. Recording Tool: Stock Register
2. Reporting Tool: Monthly consumption report
3. Client/Patient Card:
4. IEC Material:

**Supervision:**

- Federal and Provincial Health Departments

**Standard Protocol:**

- Emergency preparedness and response

**National Training Curriculum/ Guidelines:**

- Not available

**Reference Material:**

- Joint External Evaluation of IHR Core Capacities 2016

B. Infectious Diseases Cluster

B.10. Pandemic and Emergency preparedness Package of Services

**B.10.112. Decentralize stocks of antiviral medications in order to reach at risk groups and disadvantaged populations**

Platform: Population level



## B. Infectious Diseases Cluster

### B.10. Pandemic and Emergency Preparedness Package of Services

#### B.10.113. Develop and implement a plan to ensure surge capacity in hospital beds, stockpiles of disinfectants, equipment for supportive care and personal protective equipment

DCP3 code: P10

##### Platform:

Population Level

##### Process:

Development of contingency surge plan

Patient care delivery plan

- Emergency medical services (Initial triage and treatment)
- Hospital care
- Out of hospital health care (Clinics, nursing homes, rehabilitation facilities)
- Assets that are not health or medical but provide operational support (Communications, power, wastes, security and transportation)

Patient care areas repurposed

Staff Extension

- Brief deferrals of non-emergency services
- Supervision of broader group of patients
- Change in responsibilities, documentation etc.

Conservation, adaptation and substitution of supplies with occasional reuse of elected supplies

##### Supplies:

- 

##### Equipment:

- 

##### HMIS Tools:

1. Recording Tool:
2. Reporting Tool:
3. Client/Patient Card:
4. IEC Material:

##### Supervision:

- DHO, ADHO

##### Standard Protocol:

- Surge capacity and scarce resource allocation  
Chapter 3

##### National Training Curriculum/Guidelines:

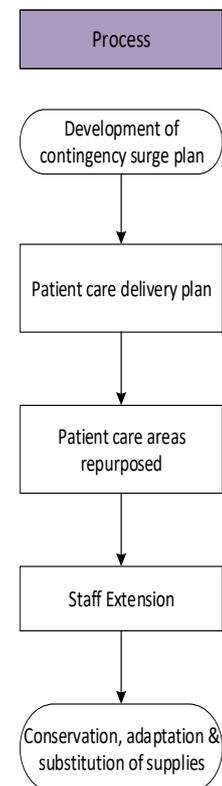
- Not Available

##### Reference Material:

- Disaster Medicine Guiding principles and practices -American College of emergency physicians 2016 (<https://books.google.com.pk/books?hl=en&lr=&id=zffUCwAAQBAJ&oi=fnd&pg=PA38&dq=hospital+surge+capac>)

[ity+pakistan&ots=Oh9lZZDQhb&sig=kob1BDcomG\\_d7cqO4zvSmF2Nzw&redir\\_esc=y#v=onepage&q=hospital%20surge%20capacity%20pakistan&f=false](https://www.who.int/pakistan&ots=Oh9lZZDQhb&sig=kob1BDcomG_d7cqO4zvSmF2Nzw&redir_esc=y#v=onepage&q=hospital%20surge%20capacity%20pakistan&f=false)

B. Infectious Diseases Cluster  
B.10. Pandemic and Emergency preparedness Package of Services  
B.10.113. Develop and implement a plan to ensure surge capacity in hospital beds, stockpiles of disinfectants, equipment for supportive care and personal protective equipment  
Platform: Population Level



## B. Infectious Diseases Cluster

### B.10. Pandemic and Emergency Preparedness Package of Services

#### B.10.114. Develop plans and **legal authority** for curtaining interactions between infected persons and un-infected population and implement and evaluate infection control measures in health facilities

DCP3 code: P11

##### Platform:

Population Level

##### Process:

Development plans for standard and transmission-based precautions

##### Standard Precautions

- Hand hygiene
- Personal protective equipment
- Respiratory hygiene and cough etiquette
- Injection safety
- Medication storage and handling
- Cleaning and disinfection of devices and environmental surfaces

##### Transmission-Based Precautions

- Identifying potentially infectious patients
- Contact precautions
- Droplet precautions
- Airborne precautions

Plans for environmental management practices

Implementation and evaluation of infection control measures in healthcare facilities

##### Supplies:

- 

##### Equipment:

- 

##### HMIS Tools:

1. Recording Tool:
2. Reporting Tool:
3. Client/Patient Card:
4. IEC Material: Leaflet, Flipchart, Brochures

##### Supervision:

- 

##### Standard Protocol:

- 

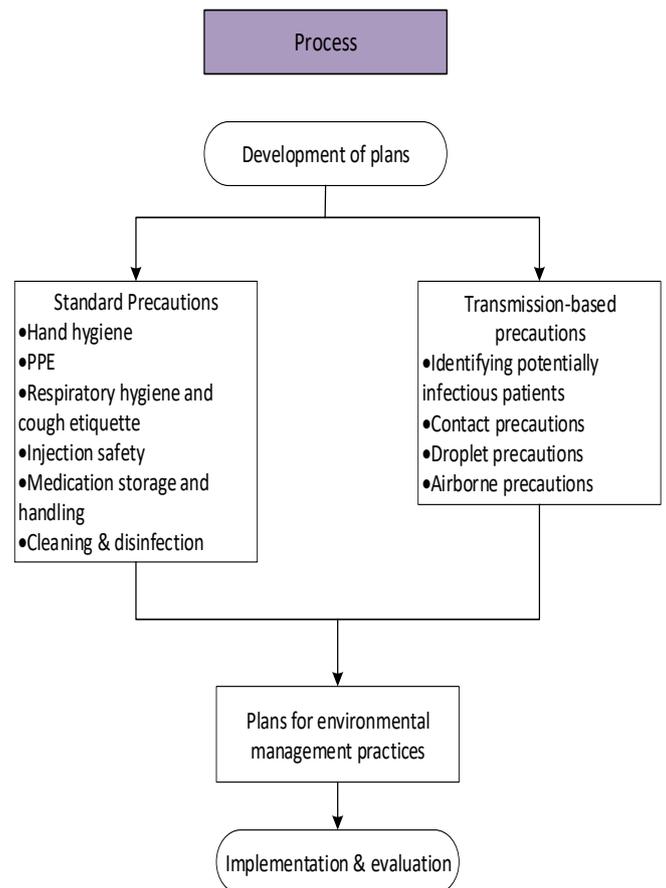
##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Basic Infection Control and Prevention Plan for Outpatient Oncology Settings 2011
- Infection Prevention Guidelines for Healthcare Facilities with Limited Resources

B. Infectious Diseases Cluster  
B.10. Pandemic and Emergency preparedness Package of Services  
**B.10.114. Develop plans and **legal authority** for curtaining interactions between infected persons and un-infected population and implement and evaluate infection control measures in health facilities**  
Platform: Population Level



## B. Infectious Diseases Cluster

### B.10. Pandemic and Emergency Preparedness Package of Services

#### B.10.115. Ensure influenza vaccine security at national & subnational level

DCP3 code: P12

##### Platform:

Population Level

##### Process:

Federal EPI Cell to ensure effective communication and coordination between the federal and provincial/area EPI cells  
Implementation of immunization policy (EPI includes influenza vaccine) for improved coverage

##### Recommended Method

- Expand immunization service delivery and enhance capabilities for mobile and outreach vaccination
- Strengthen the human resource infrastructure
- Federal and Provincial consensus on vaccine procurement and effective vaccine management across the country through vaccine Logistics Management Information System (vLMIS)
- VPD surveillance and capacity for data management for evidence-based corrective actions
- Robust mechanism for program monitoring and accountability
- Adequate finance allocation to EPI to ensure population wide vaccination coverage
- Advocacy to mobilize the political will

##### Supplies:

- Vaccine

##### Equipment:

- Vaccine storage equipment

##### HMIS Tools:

1. Recording Tool: vLMIS
2. Reporting Tool: vLMIS
3. Client/Patient Card:
4. IEC Material: Advocacy material (Policy brief)

##### Supervision:

- EPI Manager, EPI Coordinator

##### Standard Protocol:

- 

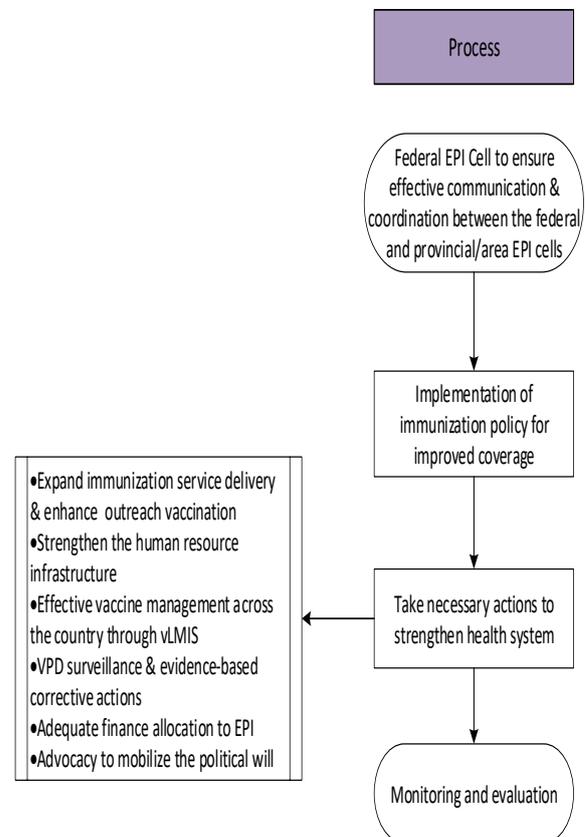
##### National Training Curriculum/Guidelines:

- Not Available

##### Reference Material:

- Joint External Evaluation of IHR Core Capacities Islamic Republic of Pakistan: Mission Report 2016
- National EPI Policy and Strategic Guidelines Pakistan 2015

B. Infectious Diseases Cluster  
B.10. Pandemic and Emergency preparedness Package of Services  
B.10.115. Ensure vaccine security at national & subnational level  
Platform: Population Level



## B. Infectious Diseases Cluster

### B.10. Pandemic and Emergency Preparedness Package of Services

#### B.10.116. Mass media messages concerning awareness on handwashing and health effects of household air pollution

DCP3 code: P13

##### Platform:

Population Level

##### Process:

Identify the target population

Identify the most used communication platform by the target population

- Individual
- Family & household/Community mobilization
- Institutional
- Electronic/Print/ Social media
- Advocacy

Development of communication plan and messages

Communication campaign

Recommended Method

- Awareness regarding handwashing and household air pollution

##### Supplies:

- 

##### Equipment:

- 

##### HMIS Tools:

1. Recording Tool:
2. Reporting Tool:
3. Client/Patient Card:
4. IEC Material: Leaflet, Flipchart, Brochures, Banners, Billboards, Audio-Video, Advertisements, Digital signage

##### Supervision:

- BCC team

##### Standard Protocol:

- Protocols for the WASH

##### National Training Curriculum/ Guidelines:

- Available

##### Reference Material:

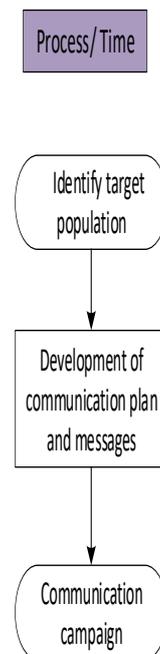
- Guidelines on sanitation and health-WHO

B. Infectious Diseases Cluster

B.10. Pandemic and Emergency preparedness Package of Services

B.10.116. Mass media messages concerning awareness on handwashing and health effects of household air pollution

Platform: Population level







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