

How much donor financing for health is channelled to global versus country-specific aid functions?



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The slow global response to the Ebola crisis in west Africa suggests that important gaps exist in donor financing for key global functions, such as support for health research and development for diseases of poverty and strengthening of outbreak preparedness. In this Health Policy, we use the International Development Statistics databases to quantify donor support for such functions. We classify donor funding for health into aid for global functions (provision of global public goods, management of cross-border externalities, and fostering of leadership and stewardship) versus country-specific aid. We use a new measure of donor funding that combines official development assistance (ODA) for health with additional donor spending on research and development (R&D) for diseases of poverty. Much R&D spending falls outside ODA—ie, the assistance that is conventionally reported through ODA databases of the Organisation for Economic Co-operation and Development. This expanded definition, which we term health ODA plus, provides a more comprehensive picture of donor support for health that could reshape how policy makers will approach their support for global health.

Introduction

Low-income and middle-income countries are on course to experience impressive economic growth in the next 20 years. The *Lancet* Commission on Investing in Health,¹ which presented an investment framework for achievement of a “grand convergence” in health through reducing infectious, maternal, and child deaths to universally low levels by 2035, projected that annual growth in real gross domestic product (GDP) from 2011 to 2035 will be about 4·5% in low-income countries and 4·3% in lower-middle-income countries (LMICs). On the basis of these projections, many of these countries should be able to graduate from donor funding for health, and increasingly be able to fund health goals from domestic sources. However, many of the poorest countries will continue to need aid for health; additionally, pockets of high disease burden in vulnerable or marginalised populations in middle-income countries will require attention irrespective of their country’s income status.² The debate on graduation from health aid will be prominent at the Financing for Development conference in Addis Ababa, Ethiopia, in July, 2015, a precursor to the September, 2015, adoption of the Sustainable Development Goals (SDGs).

If direct financial support from donors to low-income countries, LMICs, and upper-middle-income countries (UMICs) is gradually replaced by domestic spending, what will health aid be used for? The Commission on Investing in Health argued that donor support will remain crucial, but, as low-income countries and LMICs undergo economic growth, donor funding should be increasingly targeted to what Jamison and colleagues called the “core functions” of global health,³ and to what we refer to as global functions. These functions include supporting health research and development (R&D) for diseases of poverty and strengthening of outbreak preparedness. This case was also made by a Chatham House global health working group,⁴ and in several commentaries.^{5–9}

The slow global response to the Ebola crisis in west Africa suggests that important gaps exist in financing of these global functions.⁶ However, the amount of funding for these functions is unclear. Although previous research has tracked donor funding to specific diseases and geographical regions (appendix p 2),^{10–19} no in-depth studies have tracked donor funding for global health functions. Two previous studies,^{20,21} which our team was involved with as co-authors, began to lay the groundwork for consideration of how aid for health could be differentiated between global functions and local country support. We build on these early efforts and develop a way to classify donor funding for health according to its functions, in which we distinguish between global versus country-specific functions. We use our classification to assess the support for these different functions from eight major government donors and extrapolate these estimates to arrive at a global estimate. An understanding of how much health aid is channelled to global versus country-specific functions could help to identify important underfunded areas for future donor investment. Likewise, an improved understanding of the extent to which donors focus their country-specific support on low-income versus middle-income countries will be important to guide aid investments in the post-2015 era.

We also extend the analysis of official development assistance (ODA) for health beyond the support that is conventionally reported through the International Development Statistics databases of the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD DAC). Our analysis includes additional public spending for pharmaceutical R&D for neglected diseases that is not reported to the OECD DAC as ODA. This expanded thinking, which we term health official development assistance plus (ODA+), provides a more comprehensive picture of donor support for health and has the potential to reshape how policy makers approach their support for global health (appendix p 3).

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 See Online for appendix

A new classification of donor aid for health

Our new classification distinguishes between three global functions and one country-specific function (panel). Building on two previous frameworks that also differentiate between global and country-oriented functions of the global health system,^{1,3} we defined global functions as being characterised by their ability to address transnational issues. We divided these issues into provision of global public goods (eg, R&D of new health tools), management of cross-border externalities (eg, outbreak preparedness), and fostering of leadership and stewardship (eg, convening for negotiation).

We used Jamison and colleagues' 1998 definition of supportive functions to classify country-specific functions. These functions aim to tackle "time-limited problems within individual countries that justify international collective action because of highly constrained national capacity."³ Within these global and country-specific functions, we identified further subfunctions (panel). Additionally, we examined country-specific funding by country income-groups.

Sources of data for ODA+

Our analysis covers eight of the ten largest government donors to health ODA: Australia, France, Germany, the Netherlands, Norway, Sweden, the UK, and the USA. We assessed the bilateral and multilateral health ODA of these donors in 2013. Overall, these donors accounted

for 83% of all health ODA provided by Development Assistance Committee (DAC) member countries in 2013, a total of US\$17.0 billion of \$20.5 billion. We extrapolated from the results of these eight donors to obtain a global estimate of the distribution of aid between global and country-specific functions for all DAC member countries. The key data source for our analysis was the Creditor Reporting System, part of the International Development Statistics, which provides data for ODA flows. We tracked bilateral health disbursements to all recipient countries from the eight donors with Creditor Reporting System sector codes for health (120) and population and reproductive health (130). We also tracked the unspecified support to health—ie, funding that donors were unable to allocate to a recipient or region, such as funding to global programmes (eg, WHO special programmes) and unearmarked contributions to non-governmental organisations (eg, International Planned Parenthood Foundation). We assessed 80% of the total bilateral health disbursements for each donor (absolute amounts), with analysis of more than 1200 projects in total. Because of the large number of aid projects in the Creditor Reporting System, we extrapolated the averages from 80% of each donor's disbursements to estimate the remaining 20% of each portfolio and account for 100% for each donor. In recognition that this extrapolation could bias our estimates, we did a sensitivity analysis to estimate an uncertainty interval and a lower-bound and upper-bound estimate (appendix pp 3, 4).

To operationalise our framework and undertake a systematic assessment, we developed a codebook that defines and includes keywords for each subfunction (appendix p 5). With this codebook, we analysed each donor's projects and assessed what proportion of the donor funding went to global versus country-specific functions. Descriptions in a language other than English or French were translated with Google Translate. Each project was reviewed to identify relevant subfunctions and categorised accordingly. For projects with more than one relevant subfunction, disbursements were divided across subfunctions by a proportion suggested from the available data. When the project description in the Creditor Reporting System was too brief to identify our categorisation, we obtained additional information, including project activities, logframes, budgets, and expenditures, from the websites of donors and project implementers. We regularly reviewed the project allocations to ensure consistency. To support replicability, we noted the sources and rationale for each project's allocations. Our datasets are available online.

For donor funding channelled through multilateral agencies and global health partnerships (including product development partnerships), we developed a breakdown for each agency and partnership of the proportion of its support directed towards global versus country-specific functions. In addition to the Creditor

For the **datasets** see
[http://globalhealth2035.org/
lancet-donor-financing-data](http://globalhealth2035.org/lancet-donor-financing-data)

Panel: Classification of donor aid for health global and country-specific functions and subfunctions

Global

Supplying global public goods

- Research and development for health tools
- Development and harmonisation of international health regulations
- Knowledge generation and sharing
- Intellectual property sharing
- Market-shaping activities

Management of cross-border externalities

- Outbreak preparedness and response
- Responses to antimicrobial resistance
- Responses to marketing of unhealthful products
- Control of cross-border disease movement

Exercising leadership and stewardship

- Health advocacy and priority setting (convening of policy makers for negotiation and consensus building for strategy and policy)
- Promotion of aid effectiveness and accountability

Country-specific

Providing support to low-income, lower-middle-income, and upper-middle-income countries for country-specific purposes

- Achieving convergence—ie, for control of infectious diseases and to provide reproductive, maternal, newborn, and child health interventions and services
- Controlling non-communicable diseases and injuries
- Health-systems strengthening

Reporting System, which includes funding to product development partnerships and earmarked funding to multilateral agencies, we also included core contributions to multilaterals and partnerships in accordance with the OECD DAC estimates for the health sector. We applied this framework across all donors. To estimate the proportion devoted to each function, we reviewed the objectives and portfolios of each multilateral organisation to find evidence of the breakdown of its disbursements to global versus country-specific functions and respective subfunctions (appendix p 6). Appendix pp 7–11 detail rationales for apportioning of multilateral funding. In view of the uncertainty around these estimates, we did a sensitivity analysis to create uncertainty ranges (appendix pp 3, 4).

In addition to reviewing 2013 International Development Statistics datasets and further project information, we assessed the survey data for 2013, published by the Global Funding for Innovation for Neglected Diseases (G-FINDER) project (appendix p 12).²² This project tracks R&D spending (eg, for research of drugs, vaccines, and diagnostics) for 34 neglected diseases. A proportion of the funding in the G-FINDER database is also reported by donors to the OECD DAC and is thus included in the Creditor Reporting System database. To remove double-counting, we did a close review of the publicly financed funding lines from the G-FINDER database for the eight corresponding donors against the Creditor Reporting System database. To better estimate financing for R&D globally, we expanded our analysis to include the 27 other countries that also report public spending for R&D to the G-FINDER.

We combined these datasets to optimise our calculation of R&D financing and provide a more comprehensive picture of donor support for global health. Because some of the funding tracked by G-FINDER is not counted as ODA, we established a new concept of health aid that includes two elements: all health ODA and funding for neglected disease R&D as reported by the G-FINDER, which donors have not reported to OECD DAC. We term this concept health ODA plus (ODA+; appendix p 3). We developed the concept of ODA+ to provide a more complete picture of public donor flows to global health. We argue that all funding for R&D for neglected diseases is a valuable addition to ODA because these diseases disproportionately affect people in developing countries, and because there is an urgent need for new ways to control these diseases. The well known challenge is that there is little commercial incentive for private pharmaceutical investment in R&D for poverty-related diseases.

ODA+ for health in 2013: global versus country-specific support

Donor spending for ODA+ was \$22.0 billion in 2013. This figure is the sum of the total health ODA figure of \$20.5 billion (appendix p 13) and the \$1.5 billion in

R&D funding in 2013 from the G-FINDER database, after deduction of the overlap between the Creditor Reporting System and G-FINDER (appendix p 12). Of the \$22.0 billion in ODA+ disbursements in 2013, 79% (\$17.3 billion) was for country-specific functions and 21% (\$4.7 billion) for global functions (figure). 14% of ODA+ was directed towards provision of global public goods, 4% towards management of cross-border externalities, and 3% towards fostering of global health leadership and stewardship (figure).

Of the donors included in our analysis, the UK and Norway devoted the largest proportion of their funding to global functions (appendix p 13). About 35% of the UK's total ODA+ funding, and 31% of Norway's total ODA+, went to global functions. Both countries are substantial supporters of R&D, and the UK is also one of the largest supporters of global polio eradication. The mean proportion of financing for global functions that was devoted to global public goods was 64% (table). All but one of the eight donors (Germany) provided most of their support for global functions to global public goods. The USA's large contribution to global public goods (79%) was largely attributable to its financing of research for HIV. An average of 20% of financing for global functions was targeted towards management of externalities and 16% was spent on leadership and stewardship. Germany was a major contributor to management of cross-border externalities in 2013, through its disbursements for global polio eradication. The Netherlands was a major contributor to support of leadership on the basis of its contributions to several WHO initiatives.

Our analysis of country-specific funding shows that 47% of this funding in 2013 was allocated to low-income countries, 22% to LMICs, and 9% to UMICs (appendix p 14). About a quarter (22%) was not allocated to a specific country or region. The donors that channelled the largest proportion of their country-specific funding to LMICs and UMICs combined were Australia (50%) and France (45%).

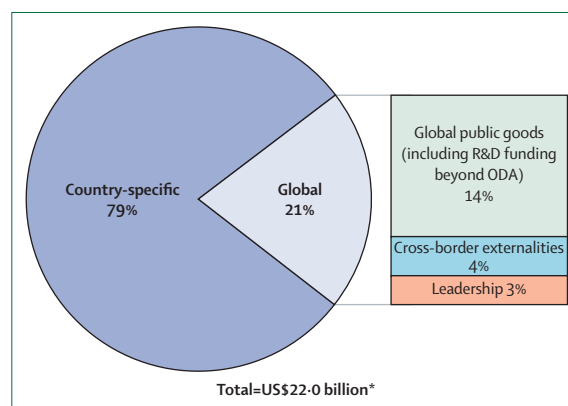


Figure: ODA+—global versus country-specific functions
Breakdown of total ODA+ for health, 2013. R&D=research and development. ODA=official development assistance. *Current prices.

	Proportion of ODA+ devoted to global functions (%)	Amount devoted to global functions (US\$ millions*)	Breakdown of global functions (%)		
			Global public goods	Management of externalities	Leadership and stewardship
Australia	15%	91	60%	15%	25%
France	15%	156	49%	37%	15%
Germany	20%	222	41%	46%	13%
Netherlands	21%	126	46%	9%	45%
Norway	31%	226	67%	6%	27%
Sweden	19%	118	57%	12%	31%
UK	35%	1100	53%	24%	23%
USA	18%	1840	79%	16%	5%
Other donors	22%	825	61%	18%	21%
Total	21%	4700	64%	20%	16%

All data have been rounded to a maximum of three significant figures. Percentages might not add up to 100% because of rounding. ODA+=health official development assistance plus. *Current prices.

Table: Breakdown of ODA+ by eight donors for global functions, 2013

Policy implications

The Global Health 2035 report argued that “to meet the challenges of the next generation”, international collective action must increasingly focus on global functions: “provision of GPGs [global public goods] (especially R&D), management of externalities, and leadership and stewardship”.¹ To our knowledge, our study is the first analysis of how much health aid is devoted to supporting these global functions. The results provide a baseline of current support for global versus country-specific functions that could help inform discussions on the optimum levels of such funding. The findings have three key policy implications, which are reviewed below.

Insufficient attention to global functions

The first implication is that funding for global functions should be strengthened. Although our baseline analysis cannot prove that global functions are being neglected, it does provide suggestive evidence. We recorded that only about a fifth of ODA+ for health in 2013 (\$4.7 billion of \$22 billion) was for the three global functions that comprise “the core of international health cooperation”.³ Even our upper-bound estimate of \$5.4 billion (appendix pp 3, 4) is far less than what is needed to support the three functions. WHO’s Consultative Expert Working Group on R&D estimates that \$6 billion annually is needed to support R&D for neglected diseases, which would still represent only 2–4% of total health R&D. Our analysis suggests that there is still a long way to go to reach the \$6 billion target.⁹

For management of cross-border externalities, donors invested less than \$1 billion in 2013, yet the World Bank estimates that the annual cost of building a pandemic preparedness system across all low-income and middle-income countries would be about \$3.4 billion.²³ In the

years before the Ebola outbreak in west Africa, WHO’s budget for outbreak and crisis response was reduced from \$469 million in 2012–13, to \$241 million in 2014–15,²⁴ suggesting that the actions of the global health system are not commensurate with the size and nature of pandemic threats.²³ The approval of a \$100 million emergency fund at WHO shows that world leaders have started to recognise the need for more funding for this function.²⁵

Donors spent only \$0.7 billion in 2013 on leadership and stewardship. WHO remains a central actor for delivery of this role, but its core budget continues to shrink.²⁶ These funding shortages also had some role in its weak response to the Ebola outbreak.^{6,27}

Graduation of countries from health aid

The second implication is that the nature of donor funding for health is likely to change in the next two decades. Although 31% of country-specific aid is presently directed towards middle-income countries, donors are increasingly instituting graduation rules, in which they end their assistance to countries that have reached a particular GDP per capita threshold. One of the most contentious issues discussed is whether health aid still has a role in supporting countries that have reached this threshold.^{2,28} There is widespread agreement that low-income countries and LMICs have a duty to ensure that their future economic growth is accompanied by increased domestic financing to provide routine health services—such provision is a national responsibility. However, donors will still have two important ways by which they can support public health improvements in middle-income countries.

First, as countries graduate from donor support, shifting of aid towards the three global functions would benefit countries in all income categories. Supporting global functions is one way donors can help solve the so-called middle-income dilemma. The dilemma is that although most of the poor now live in pockets of poverty in middle-income countries and face high mortality rates, these countries are regarded as too rich to qualify for aid. Poor individuals in middle-income countries will benefit from donor support for global functions, such as R&D, knowledge sharing, market shaping, and management of cross-border externalities. For example, countries such as China and India would substantially benefit from collective purchasing of commodities, market shaping to reduce drug prices, and increased international efforts to control multidrug-resistant tuberculosis (61% of global cases of multidrug resistant tuberculosis are in LMICs, with India alone accounting for 22% of global cases). Furthermore, Lu and colleagues²⁹ reported that with the increase in health aid in the past decades, domestic funding for health has been reduced in some countries, especially in sub-Saharan Africa, and shifted away to other sectors. By contrast with country-specific aid, aid to global functions is

non-fungible, and might therefore be a more efficient way for donors to assure results for poor individuals within middle-income countries.

Second, there is a strong argument for donors to provide targeted health aid to vulnerable populations in middle-income countries (eg, ethnic groups that suffer discrimination, refugees, and people who inject drugs) or to services that some governments find politically challenging to provide (eg, family planning, comprehensive abortion care). Even if countries have achieved sufficient fiscal space for increased health spending, they might not have the institutional arrangements or political will to support these populations or services. Such arrangements and political realities are changeable and will vary between countries, and so would need to be considered on a case-by-case basis.

Ongoing support to the poorest countries

The third implication is that funding will need to continue to target low-income countries, which will need international support for health-service delivery in the coming decades. Estimates suggest that there will still be 22 low-income countries in 2035, compared with 36 in 2012 (appendix p 14). Many of these countries are fragile and conflict-affected.

Strengths, limitations, and next steps

An important debate is underway about how the SDGs will be financed and the role of development assistance. Aid has been classified in several valuable ways (appendix p 2); however, we believe that our work so far has a major strength: we have broken down aid flows through a policy lens that tells us what functions aid is serving. This novel policy-oriented approach has highlighted potential financing gaps in the global health system and so might help to guide future discussions about targeting of aid by function.

Nevertheless, our approach has at least three important limitations. First, our assessment focused on 2013 disbursements alone, so we are unable to make inferences about time trends. Second, we acknowledge that the assessment of multilateral funding was at times difficult, especially for the Global Fund and Gavi, the Vaccine Alliance, and our decisions are open to debate. We provide our rationale so that other researchers can replicate and improve on our approach. Last, as other researchers have also noted, the project descriptions in the Creditor Reporting System database are sometimes imprecise, which creates challenges in determination of expenditures and in matching of projects with the G-FINDER database.

A future study should have a longer timeframe—such as a time series since 2000. Moreover, inclusion of other major government donors in addition to the Bill & Melinda Gates Foundation would be valuable for the next iterations of this analysis.

Contributors

DTJ and MS led the study design and conceptualisation of the framework, with contribution from all other authors. MS and GY wrote the first draft. MS, SF, JK, ER, GY, and DTJ wrote and edited subsequent drafts and the conclusions. LHS and JS reviewed drafts and provided comments. MS and ER led data gathering. MS, SF, JK, and ER did data analysis. All authors approved the final version of the manuscript.

Declaration of interests

MS has received personal fees from the Global Fund to Fight AIDS, Tuberculosis and Malaria; the Partnership for Maternal Newborn and Child Health (PMNCH); the Norwegian Agency for Development Cooperation (NORAD); the Swedish Government (foreign ministry); the Swedish Expert Group for Aid Studies; the German Agency for International Cooperation (GIZ); the Bill & Melinda Gates Foundation; and UNAIDS, outside the submitted work. JK has received personal fees from PMNCH; the Swedish Government (foreign ministry); the Swedish Expert Group for Aid Studies; the Bill & Melinda Gates Foundation; NORAD; and Population Services International (PSI), outside the submitted work. ER has received personal fees from PMNCH; the Swedish Government (foreign ministry); the Swedish Expert Group for Aid Studies; and the Bill & Melinda Gates Foundation, outside the submitted work. JS is employed by the Swedish Expert Group for Aid Studies, a Government committee that operates independently of Sida, and the Swedish Ministry for Foreign Affairs with the mandate to study, analyse, and evaluate Swedish development assistance. GY has received grants from the Bill & Melinda Gates Foundation, during the conduct of the study; and from the UK Department for International Development (DFID), NORAD, the Swedish Expert Group for Aid Studies, the Global Fund to Fight AIDS, Tuberculosis and Malaria, UNITAID, and the Bill & Melinda Gates Foundation, outside the submitted work. DTJ has received grants outside the submitted work from the Bill & Melinda Gates Foundation, during the conduct of the study; and personal fees from the Swedish Expert Group of Aid Studies. SF has received personal fees from WHO and the Bill & Melinda Gates Foundation, outside the submitted work. LHS declares no competing interests.

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References

- Jamison DT, Summers LH, Alleyne G, et al. Global health 2035: a world converging within a generation. *Lancet* 2013; **382**: 1898–955.
- Glassman A, Duran D, Sumner A. Global health and the new bottom billion: how funders should respond to shifts in global poverty and disease burden. Washington, DC: Center for Global Development, 2011. http://www.cgdev.org/doc/full_text/BottomBillion/Glassman_Bottom_Billion.html#_ftn2 (accessed May 9, 2015).
- Jamison DT, Frenk J, Knaul F. International collective action in health: objectives, functions, and rationale. *Lancet* 1998; **351**: 514–17.
- Röttingen JA, Ottersen T, Ablo A, et al. Shared responsibilities for health: a coherent global framework for health financing. The Royal Institute of International Affairs. Final report of the Centre for Global Health Security Working Group on Health Financing, 2014. <http://www.chathamhouse.org/publication/shared-responsibilities-health-coherent-global-framework-health-financing> (accessed May 22, 2015).
- Frenk J, Moon S. Governance challenges in global health. *N Engl J Med* 2013; **368**: 936–42.
- Gostin LO, Friedman EA. Ebola: a crisis in global health leadership. *Lancet* 2014; **384**: 1323–25.
- Summers L. We play with fire if we skip on public health. Nov 9, 2014. <http://www.ft.com/intl/cms/s/2/2591b4e8-6529-11e4-ab2d-00144feabdc0.html> (accessed March 10, 2015).
- Gates B. The next epidemic—lessons from Ebola. *N Engl J Med* 2015; **372**: 1381–84.

- 9 Consultative Expert Working Group on Research and Development. Research and development to meet health needs in developing countries: Strengthening global financing and coordination. Italy: World Health Organization, 2012.
- 10 Institute for Health Metrics and Evaluation. Financing global health 2013: transition in an age of austerity. Seattle: IHME, 2014. http://www.healthdata.org/sites/default/files/files/policy_report/2014/FGH2013/IHME_FGH2013_Full_Report.pdf (accessed May 22, 2015).
- 11 Arregoces L, Daly F, Pitt C, et al. Countdown to 2015: changes in official development assistance to reproductive, maternal, newborn, and child health, and assessment of progress between 2003 and 2012. *Lancet Glob Health* 2015; 3: e410–21.
- 12 The Partnership for Maternal, Newborn, and Child Health. The PMNCH 2014 accountability report: tracking financial commitments to the Global Strategy for Women's and Children's Health. 2014. http://www.who.int/pmnch/knowledge/publications/2014_pmnch_report/en/ (accessed May 10, 2015).
- 13 McCoy D, Chand S, Sridhar D. Global health funding: how much, where it comes from and where it goes. *Health Policy Plan* 2009; 24: 407–17.
- 14 Piva P, Dodd R. Where did all the aid go? An in-depth analysis of increased health aid flows over the past 10 years. *Bull World Health Organ* 2009; 87: 930–39.
- 15 Lane C, Glassman A. Smooth and predictable aid for health: a role for innovative financing? Brookings Global Economy and Development: Global Health Financing Initiative Working Paper 1, Aug 2008. http://www.brookings.edu/~media/research/files/papers/2008/8/global-health-glassman/08_global_health_glassman.pdf (accessed May 22, 2015).
- 16 Vassall A, Shotton J, Reshetnyk OK, et al. Tracking aid flows for development assistance for health. *Glob Health Action* 2014; 7: 23510.
- 17 Grépin KA. International donations to the Ebola virus outbreak: too little, too late? *BMJ* 2015; 350: h376.
- 18 Nugent RA, Feigl AB. Where have all the donors gone? Scarce donor funding for non-communicable diseases. Washington, DC: Center for Global Development, 2010. http://www.cgdev.org/sites/default/files/1424546_file_Nugent_Feigl_NCD_FINAL.pdf (accessed June 19, 2015).
- 19 Gilbert BJ, Patel V, Farmer PE, Lu C. Assessing development assistance for mental health in developing countries: 2007–2013. *PLoS Med* 2015; 12: e1001834.
- 20 Yamey G, Saxenian H, Hecht R, Sundewall J, Jamison D. Sweden's development assistance for health: policy options to support the Global Health 2035 goals. Stockholm: EBA, 2014. http://eba.se/wp-content/uploads/2014/11/891866_EBA_WEB_LR.pdf (accessed May 22, 2015).
- 21 Blanchet N, Thomas M, Atun R, Knaul F, Jamison D, Hecht R. Global collective action in health: The WDR+20 landscape of core and supportive functions. Commission on Investing in Health Working Paper, 2013. <http://globalhealth2035.org/sites/default/files/working-papers/global-collective-action-in-health.pdf> (accessed May 22, 2015).
- 22 G-FINDER. Policy cures. Neglected disease research and development: emerging trends. 2014. <http://www.policycures.org/downloads/Y7%20GFINDER%20full%20report%20web%20.pdf> (accessed May 22, 2015).
- 23 World Bank Brief. Pandemic risk and One Health, October 2013. <http://www.worldbank.org/en/topic/health/brief/pandemic-risk-one-health> (accessed May 22, 2015).
- 24 WHO. Proposed programme budget 2014–2015. Geneva: World Health Organization, 2013. http://www.who.int/about/resources_planning/A66_7-en.pdf (accessed June 8, 2015).
- 25 WHO. World Health Assembly gives WHO green light to reform emergency and response programme. May, 2015. <http://www.who.int/mediacentre/news/releases/2015/wha-23-may-2015/en/> (accessed June 8, 2015).
- 26 WHO. WHO's Budget: What's behind the numbers and how is it financed? 2014. <http://www.who.int/about/funding/WHO-Budget-Financing.pdf> (accessed June 8, 2015).
- 27 Sridhar D, Clinton C. Overseeing global health. December, 2014. <http://www.imf.org/external/pubs/ft/fandd/2014/12/sridhar.htm> (accessed June 8, 2015).
- 28 Sumner A, Glassman A. Aid cuts to middle-income countries worsen global poverty and ill-health. Jan 2, 2012. <http://www.theguardian.com/global-development/poverty-matters/2012/jan/02/aid-cuts-middle-income-countries> (accessed June 8, 2015).
- 29 Lu C, Schneider MT, Gubbins P, Leach-Kemon K, Jamison D, Murray CJL. Public financing of health in developing countries: a cross-national systematic analysis. *Lancet* 2010; 375: 1375–87.