



Elizabeth Cuffy, Fundaye Community, New Kru Town, Liberia. Credit: Renata Rendón/Oxfam

NEVER AGAIN

Building resilient health systems and learning from the Ebola crisis

EMBARGOED UNTIL 00:01 HRS GMT DAY 16 APRIL 2015

It took the threat of a global health crisis to illustrate the failings of Africa's health systems. Resilient health systems, free at the point of use, are evidently a global public good. They are essential for the provision of universal health coverage and for a prompt response to outbreaks of disease.

Resilient health systems require long-term investment in the six key elements that are required for a resilient system: an adequate numbers of trained health workers; available medicines; robust health information systems, including surveillance; appropriate infrastructure; sufficient public financing and a strong public sector to deliver equitable, quality services. Global investment in research and development for medical products is also critical.

SUMMARY

It is just over a year since the Ebola virus took hold in West Africa, spreading fear across the region and beyond. By March 2015, the disease had claimed the lives of more than 10,000 people, mainly in Liberia, Sierra Leone and Guinea, and has devastated communities at both an economic and a psychosocial level.¹

The Ebola outbreak has been an exceptionally challenging 'stress test' of the ability of health systems in the affected countries to respond to such an emergency, and also a severe test for the international community.

How did health systems perform in this critical test? What has been learned from the Ebola crisis to ensure that future health systems have the resilience to safeguard the health needs of all populations faced with major threats to public health?

Long before the crisis, access to health services and to safe drinking water and sanitation in West Africa were inadequate. There were marked inequalities between regions, socioeconomic groups and genders.³ The cost to individuals of paying for health services led to increased poverty and greater levels of inequality. Many health centres, if they existed at all, were unable to safely provide the services needed, as they lacked staff, medicines and health information. This situation is reflected in the lack of capacity in these countries to manage childhood infections and deliver safe births.

When Ebola struck, the affected countries had little capacity for surveillance, laboratory testing, contact tracing or infection control. Fear, stigma and a lack of trust in health facilities delayed effective responses.⁵ Health systems were unable to handle the emergency, let alone continue to run existing services. Vaccination programmes, for example, have been suspended, making a million children in the worst affected countries vulnerable to measles.⁶ Affected countries were unable to contain Ebola within their borders.

Chronic low public expenditure on health has diminished the availability, affordability and quality of health services, leading to both a lack of facilities and medicines and the introduction of user fees. As a result, people living in poverty are forced to seek care elsewhere, often from unqualified private providers. People face a choice between suffering ill health and bearing the cost burden of paying for poor-quality healthcare. Such choices drive people further into impoverishment and exacerbate inequality.

It is therefore clear that re-prioritizing investment in healthcare is for a global public good, protecting people's health and preventing the spread of diseases. This requires long-term commitment from national governments and international donors to support resilient health systems and ensure universal coverage of health services that are free at the point of use and have the ability to respond to outbreaks of disease. The

Sierra Leone has the highest under-five mortality rate in the world: one in three children dies, mainly from malaria, diarrhoea or pneumonia.²

Before the Ebola outbreak, out-of-pocket payments reached 35 percent of total health expenditure in Liberia, almost 65 percent in Guinea and 76 percent in Sierra Leone.⁴

Ebola crisis has shown that global action to protect health is essential, since infections do not respect borders.

The Ebola crisis has revealed several critical issues that should be integrated into national planning. For example, community engagement in the protection and promotion of health has been vital in controlling the outbreak. Community health workers (CHWs) and volunteers have played a key role in controlling the spread of infection by disseminating accurate information, undertaking surveillance and contact tracing and promoting hygiene practices and safe burials. Respondents to Oxfam research in the Monserrado district in Liberia, for example, stressed the importance of continued social mobilization and of disseminating hygiene information.⁷

Six foundations for resilient health systems

Resilient systems require six essential elements:

- An adequate number of trained health workers, including non-clinical staff and CHWs;
- Available medical supplies, including medicines, diagnostics and vaccines;
- Robust health information systems (HIS), including surveillance;
- An adequate number of well-equipped health facilities (infrastructure), including access to clean water and sanitation;
- Adequate financing;
- A strong public sector to deliver equitable, quality service.

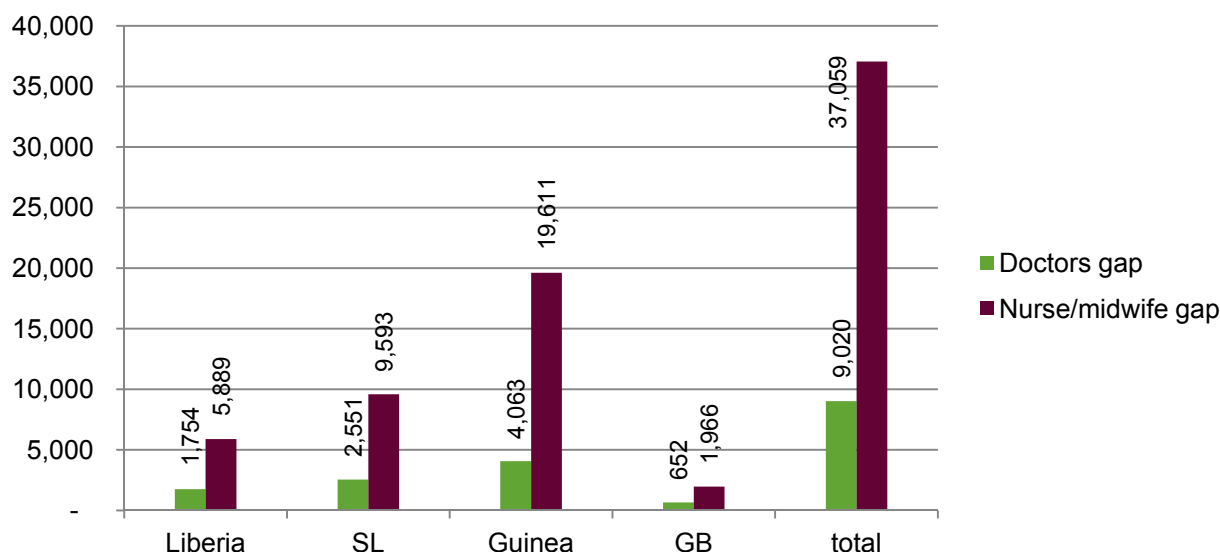
Liberia, Sierra Leone, Guinea and Guinea-Bissau require \$420m to train 9,020 medical doctors and 37,059 nurses and midwives.

Once they were trained, a total of \$297m annually would be needed to pay their salaries for 10 years.

An adequate number of trained health workers: Based on the WHO standard of a minimum of 2.3 doctors, nurses and midwives per 1,000 people, Oxfam has calculated the health workforce gaps in the worst affected countries and the costs of training the missing clinical staff and paying their salaries over 10 and 20 years (see Annex 1 in main paper). Liberia, Sierra Leone, Guinea and neighbouring Guinea-Bissau require \$420m to train the 9,020 medical doctors and 37,059 nurses and midwives needed to fill the gaps in their workforce. Once they are trained, a total of \$297m annually would be needed to pay their salaries for 10 years.

The health workers gap is not unique to these countries. Africa has the highest disease burden in the world, but has only 3 percent of the global health workforce.⁸

Figure 1: Estimated gap in numbers of doctors, nurses and midwives in Liberia, Sierra Leone, Guinea and Guinea-Bissau



Note: Estimates by Oxfam, based on the WHO minimum standard of 2.3 doctors, nurses and midwives per 1,000 persons. See Annex 1 in main paper for calculations.

Access to sufficient medical supplies, including medicines, diagnostics and vaccines: The Ebola crisis highlighted the failure of the global research and development (R&D) system. The system depends on monopolies of intellectual property (IP), and therefore commercial interest, to incentivize pharmaceutical companies to conduct research into new products. Clearly there is no commercial interest in R&D for Ebola. In the meantime, these IP monopolies enable companies to dictate high prices for new products. The Ebola crisis illustrates the need to change this system so that public health needs dictate the global research agenda and prices of new products are affordable. The current vaccines and medicines being tested for Ebola have been developed using public financing, but it is unclear how the pharmaceutical companies will set the prices of these potential products.

There are 0.8 hospital beds per 10,000 people in Liberia and 0.3 in Guinea. This is compared with an average of 50 beds per 10,000 people in OECD countries.⁹

Robust HIS: Weak surveillance capacity, coupled with community fear and lack of trust in health services, made it difficult to obtain accurate data during the Ebola crisis. Data collection depends on trained and motivated health workers and on community engagement in the process. Effective surveillance must be an integral part of information systems. Robust HIS are essential for decision making on policies and resource allocation

An adequate number of well-equipped health facilities

(infrastructure): Statistics on hospital bed ratios illustrate the low coverage of health infrastructure in the Ebola-affected countries. There are 0.8 hospital beds per 10,000 people in Liberia and 0.3 in Guinea. This is compared with an average of 50 beds per 10,000 people in OECD countries.¹⁰ Building resilient health systems means scaling up the number of well-equipped health posts and district hospitals to provide appropriate coverage of community health needs. Clean water, sanitation and hygiene promotion must be explicitly included within infrastructure plans.

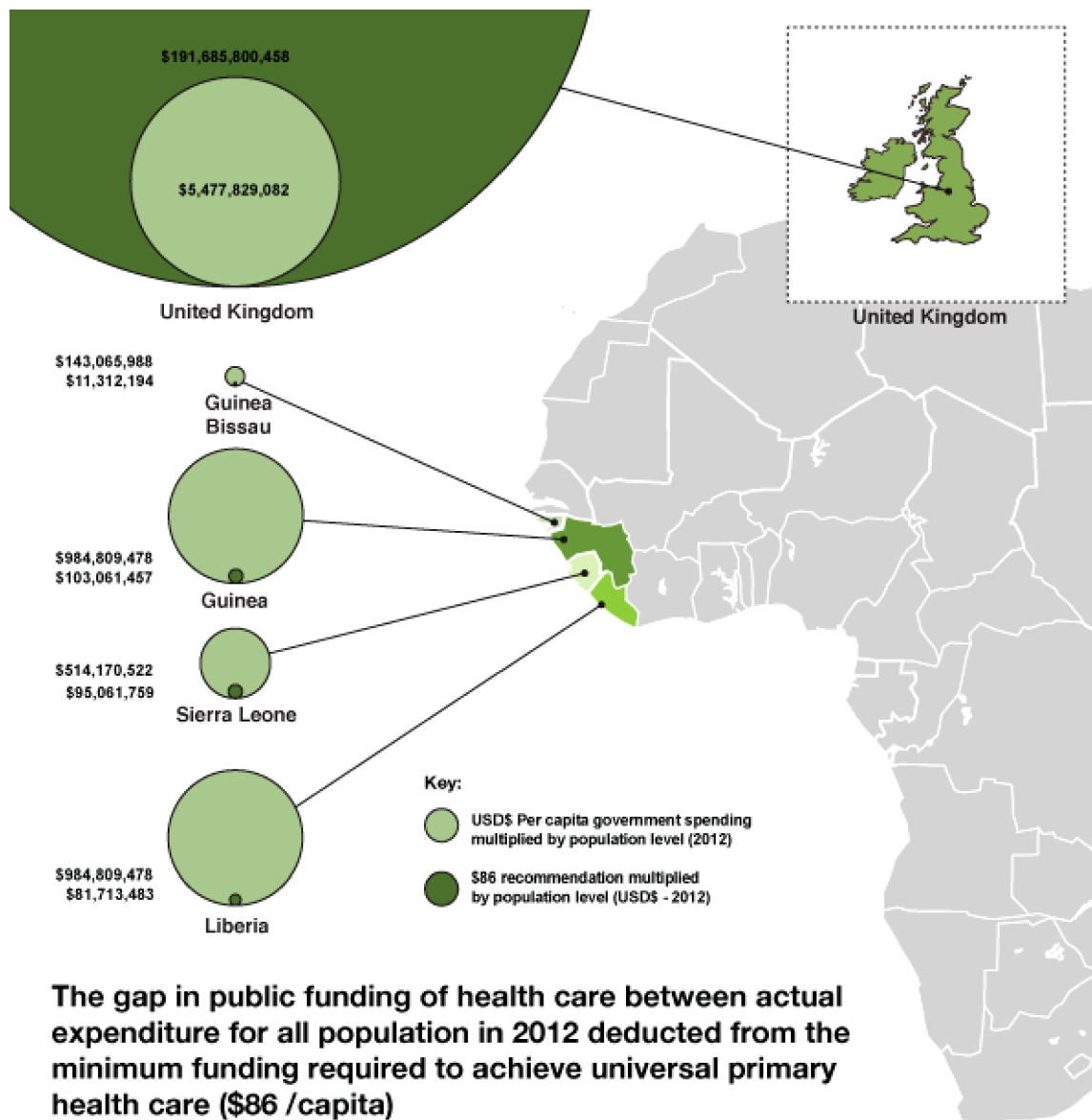
Adequate financing: Current levels of funding, although higher since the end of civil wars in Liberia and Sierra Leone, are still insufficient. Based on a figure of \$86 per capita – the latest estimate of the minimum funding needed to provide universal primary healthcare¹¹ – Oxfam has estimated the total funding gap by country (see Figure 2 on the next page).

Assuming that for each country the level of funding given to healthcare remains the same as it was in 2012, the annual funding gap that must be covered in order to achieve universal primary healthcare is approximately \$419m for Sierra Leone, \$279m for Liberia, \$882m for Guinea and \$132m for Guinea-Bissau. Although the gap seems large, it is feasible to fund it via tax revenues, supported by contributions from donors. Tax financing is the most equitable and sustainable system for raising and distributing funding for healthcare. User fees, on the other hand, are recognized as ‘the most inequitable method for financing healthcare services’ and one that ‘punishes the poor’.¹² Given the negative impact of Ebola on household economies, especially female-headed households, if user fees are introduced it would be a regressive act that would drive more people into poverty.

A strong public sector to deliver an equitable, quality service: This is essential to providing universal health coverage (UHC) as the weak public sector in Ebola-affected countries demonstrated when it was unable to maintain normal health services, let alone deal with the outbreak. Private provision risks creating two tiered systems, where people living in poverty pay for dubious quality services like drug peddlers, while people who are wealthy can afford five-star hospitals.

The annual funding gap that must be covered in order to achieve universal primary healthcare is approximately \$419m for Sierra Leone, \$279m for Liberia, \$882m for Guinea and \$132m for Guinea-Bissau.

Figure 2: Map of financial gap in Liberia, Sierra Leone, Guinea and Guinea-Bissau compared to the UK.



Note: Calculation is based on public spending and population number in 2012 and estimated spending for the same population if per capita spending is raised to \$85/capita.

Experience from other countries

Experience from previous Ebola outbreaks in other countries highlight a number of factors that can contribute to the control of the disease. These include effective health systems, rapid government action and community participation, the use of media to disseminate information and rapid coordinated international response. Demographic factors, such as the mobility of a population, can also increase the risk of spread of the disease. However, in-depth research is needed to understand the relative importance and combination of factors within specific contexts.

Effective health systems: In Uganda, health services acted quickly to set up effective surveillance, clinical case management systems and strict enforcement of infection control measures, as well as training of health workers.¹³ The Democratic Republic of Congo (DRC) has developed expertise due to six previous Ebola outbreaks and was able to rapidly deploy a team of experts to control the 2014 outbreak.¹⁴

Community participation and rapid national action: In West Africa, a lack of community trust delayed reporting and thus control of the Ebola outbreak. Mistrust reached a terrible level in one case in southern Guinea, where villagers killed a group of health workers.¹⁵ However, intensive work in communities has in some cases resulted in people changing centuries-old burial practices. In Nigeria, a rapid response by the authorities saw a quick redeployment of resources from the country's polio eradication campaign to control of Ebola.¹⁶

In previous outbreak in Uganda and DRC, the authorities engaged with communities through traditional community groups and NGOs.¹⁷

Using media: Nigeria used mobile phone technology to disseminate messages while the Ugandan Ministry of Health trained journalists to report safely on the disease. Both resulted in dissemination of valuable information to the population.¹⁸

The demographics of infected populations affect outcomes: Infections in remote rural areas, as in DRC and Uganda, decreased opportunities for contact.¹⁹ However, people in remote areas do not have access to information or services, which makes contact tracing difficult. In West Africa, a highly mobile population has helped to spread the infection across countries.²⁰

Timely international response: Quick, coordinated and efficient international support has been critical to national work for the containment of previous outbreaks.

Conclusion and recommendations

It is time that decision makers recognize that resilient health systems are a global public good to which everyone should have access. These systems²¹ provide universal coverage of health services that are free at the point of use and have the capacity to respond to potential outbreaks. Free health services remove the financial barriers that hinder people who

are living in poverty from accessing services. Investment in resilient health systems challenges traditional donor/recipient relations which usually focus on short-term programme funding rather than long-term comprehensive health service financing. Aid must be considered as a financial contribution that mutually benefits all populations. National health systems become part of a globally coherent vision for health, one in which local and international efforts are mutually reinforced through principles held in common: this is the vision that universal health coverage offers. As affected countries develop their recovery plans, both the countries and donors must take a long-term view to developing resilient health systems.

Countries, especially those affected by the Ebola outbreak, need to:

- Invest in comprehensive public health systems as a central part of national plans to achieve UHC and to ensure future outbreaks can be dealt with. Governments must develop long-term costed plans to build resilient health systems that can serve health needs and health security. These should include health worker training and retention, including of CHWs; access to medicines and health technologies; HIS, including surveillance; and infrastructure, including water and sanitation;
- Progressively increase public resources in order to fill the annual health financing gap. Use progressive tax systems to finance resilient health systems in order to provide effective, efficient and equitable services free at the point of use;
- Foster trust amongst communities by ensuring participation in decision making and integration of the CHWs and volunteers that were trained during the Ebola outbreak into the health workforce.

Donors and international agencies should:

- Support governments' plans for post-Ebola recovery through building resilient health systems as a global public good that extends universal health coverage, free at the point of use, and responds to outbreaks. Donors should rethink traditional donor/recipient relationships that in the past have skewed the provision of health services towards specific projects and policies, at the expense of comprehensive free health care;
- Commit to longer-term funding for health systems, making annual allocations for financing the development of health services over a 10 year period, providing that plans are well implemented;
- Support countries to introduce effective measures to enable them to raise domestic resources via fair taxation;
- Contribute to creating a global tax system that is based on fairness and transparency.

Governments and international health agencies should:

- Endorse a R&D treaty which promotes public funding for R&D and is focused on the needs of public health so as to provide vaccines, diagnostics and medicines for diseases such as Ebola. Financing of R&D must be unlinked from the price of products that result from it;
- Enable civil society organizations to play their role in ensuring accountability and transparency by all stakeholders and in enabling communities to engage in decision making at the highest political levels, as well as in monitoring policies and financing for pro-poor health systems.

NOTES

All URLs last accessed March 2015.

- 1 WHO (2015) 'Situation summary'. Latest available situation summary, 20 March 2015. <http://apps.who.int/gho/data/view Ebola-sitrep Ebola-summary-20150325?lang=en>
- 2 WHO Africa (2014) 'Sierra Leone: Analytical Summary – Health Status and Trends'. World Health Organization African Health Observatory. http://www.who.int/profiles_information/images/b/b2/Sierra_Leone-Statistical_Overview.pdf
- 3 UN Women (2014) 'Ebola outbreak takes its toll on women'. <http://www.unwomen.org/en/news/stories/2014/9/ebola-outbreak-takes-its-toll-on-women>
- 4 IHME (2009) 'Liberia National Health Accounts 2007–2008', Institute for Health Metrics and Evaluation. <http://ghdx.healthdata.org/record/liberia-national-health-accounts-2007-2008>
- 5 M. Milland and H.A. Bolkan (2015) 'Enhancing access to emergency obstetric care through surgical task shifting in Sierra Leone: confrontation with Ebola during recovery from civil war', *Acta Obstetrica et Gynecologica Scandinavica* 94(1): 5-7.
- 6 S. Takahashi et al. (2015) 'Reduced vaccination and the risk of measles and other childhood infections post-Ebola', *Science*, Vol. 347 no. 6227 pp1240-2. <https://www.sciencemag.org/content/347/6227/1240.abstract>
- 7 Oxfam (2015) 'Ebola is Still Here: Voices from Liberia and Sierra Leone on response and recovery'. <http://policy-practice.oxfam.org.uk/publications/ebola-is-still-here-voices-from-liberia-and-sierra-leone-on-response-and-recovery-345644>
- 8 WHO (2006) World Health Report: Working Together for Health, <http://www.who.int/whr/2006/en/> [accessed 24 March 2015]
- 9 WHO (2015) 'World Health Statistics', http://apps.who.int/iris/bitstream/10665/112738/1/9789240692671_eng.pdf?ua=1 and OECD Library, 'Health at a Glance, 4.3. Hospital beds'. http://www.oecd-ilibrary.org/sites/health_glance-2013-en/04/03/index.html?itemId=/content/chapter/health_glance-2013-34-en&mimeType=text/html
- 10 *Ibid.*
- 11 D. McIntyre and F. Meheus (2014) 'Fiscal Space for Domestic Funding of Health and Other Social Services', Chatham House. http://www.chathamhouse.org/sites/files/chathamhouse/home/chatham/public_html/sites/default/files/20140300DomesticFundingHealthMcIntyreMeheus.pdf
- 12 WHO (2008) 'World Health Report: Primary health care now more than ever', Geneva: World Health Organization, p.28.
- 13 J. Lane and A. Nicoll (2001) 'Outbreak of Ebola fever in Uganda officially over', *Euro Surveillance* 5(10): 1793; M. Borchert, I. Mutyaba et al. (2011) 'Ebola haemorrhagic fever outbreak in Masindi District, Uganda: outbreak description and lessons learned', *BMC Infectious Diseases* 11: 357. <http://www.biomedcentral.com/1471-2334/11/357>
- 14 A.S. Khan, F.K. Tshioko et al. (1999) 'The reemergence of Ebola hemorrhagic fever, Democratic Republic of the Congo, 1995. Commission de Lutte contre les Épidémies à Kikwit', *Journal of Infectious Diseases* 179 Suppl 1: S76-86.
- 15 BBC News (2014) 'Ebola outbreak: Guinea health team killed'. <http://www.bbc.co.uk/news/world-africa-29256443>
- 16 WHO (2015) 'Nigeria is now free of Ebola virus'. transmission <http://www.who.int/mediacentre/news/ebola/20-october-2014/en/index1.html>
- 17 S.I. Okware, F.G. Omaswa et al. (2002) 'An outbreak of Ebola in Uganda', *Tropical Medicine & International Health* 7(12): 1068-1075; J. Kinsman (2012) "'A time of fear": local, national, and international responses to a large Ebola outbreak in Uganda', *Globalization and Health*, Vol. 8. <http://www.globalizationandhealth.com/content/8/1/15>
WHO (2014) 'WHO declares end of Ebola outbreak in the Democratic Republic of Congo'. <http://www.who.int/mediacentre/news/statements/2014/drc-ends-ebola/en/>

- 18 WHO (2014) 'Nigeria is now free' *op. cit.*
- 19 M.-T. Lintak (1977) 'The surveillance of viral haemorrhagic fever in Zaire'. In S.R. Pattyn (ed.) (1977) 'Ebola Virus Hemorrhagic Fever. Proceedings of an international colloquium on Ebola virus infections and other haemorrhagic fevers held in Antwerp, Belgium, 6–8 December 1977', Institute of Tropical Medicine. <http://www.itg.be/internet/ebola/pdf/EbolaVirusHaemorrhagicFever-SPattyn.pdf>
G.D. Maganga, J. Kapetshi et al. (2014) 'Ebola virus disease in the Democratic Republic of Congo', *New England Journal of Medicine* 371(22): 2083-2091. <http://www.nejm.org/doi/full/10.1056/NEJMoa1411099>
- 20 J. Beaubien (2014) 'The Changing Face Of West Africa Has Fueled The Ebola Crisis'. <http://www.npr.org/blogs/goatsandsoda/2014/09/05/346142023/the-changing-face-of-west-africa-has-fueled-the-ebola-crisis>
- 21 WHO (2015) 'Global Public Goods'. <http://www.who.int/trade/glossary/story041/en/>

© Oxfam International April 2015

This paper was written by Mohga Kamal-Yanni. Oxfam acknowledges the assistance of Claire Godfrey, Philippa Saunders, Emma Wadley, Debbie Hillier, Ana Arendar, Renata Rendon, Laura Searle and Lara Seigneur in its production. The research for the paper benefited from input from Azusa Sato, Erling Høg and Hector Jimenez Portilla. Calculations for the cost of training and paying health workers were carried out by Hector Jimenez Portilla and Erling Høg. The gap map was produced by Simon Crab. It is part of a series of papers written to inform public debate on development and humanitarian policy issues. For further information on the issues raised in this paper please e-mail advocacy@oxfaminternational.org

This publication is copyright but the text may be used free of charge for the purposes of advocacy, campaigning, education, and research, provided that the source is acknowledged in full. The copyright holder requests that all such use be registered with them for impact assessment purposes. For copying in any other circumstances, or for re-use in other publications, or for translation or adaptation, permission must be secured and a fee may be charged. E-mail policyandpractice@oxfam.org.uk.

The information in this publication is correct at the time of going to press.

Published by Oxfam GB for Oxfam International under
ISBN 978-1-78077-849-5 in April 2015.
Oxfam GB, Oxfam House, John Smith Drive, Cowley, Oxford, OX4 2JY, UK.

OXFAM

Oxfam is an international confederation of 17 organizations networked together in more than 90 countries, as part of a global movement for change, to build a future free from the injustice of poverty:

Oxfam America (www.oxfamamerica.org)
Oxfam Australia (www.oxfam.org.au)
Oxfam-in-Belgium (www.oxfamsol.be)
Oxfam Canada (www.oxfam.ca)
Oxfam France (www.oxfamfrance.org)
Oxfam Germany (www.oxfam.de)
Oxfam GB (www.oxfam.org.uk)
Oxfam Hong Kong (www.oxfam.org.hk)
Oxfam India (www.oxfamindia.org)
Oxfam Intermón (Spain) (www.oxfamintermon.org)
Oxfam Ireland (www.oxfamireland.org)
Oxfam Italy (www.oxfamitalia.org)
Oxfam Japan (www.oxfam.jp)
Oxfam Mexico (www.oxfammexico.org)
Oxfam New Zealand (www.oxfam.org.nz)
Oxfam Novib (Netherlands) (www.oxfamnovib.nl)
Oxfam Québec (www.oxfam.qc.ca)

Please write to any of the agencies for further information, or visit www.oxfam.org.

www.oxfam.org



OXFAM