



EDITORIAL

Ebola: the hidden toll of tuberculosis

Gwenan M. Knight,¹ Rein M. G. J. Houben,² Marek Lalli,² Richard G. White²<http://dx.doi.org/10.5588/pha.16.0019>

Infectious disease is still a major cause of death in Western Africa.¹ Ebola has taken the headlines recently, but the 'big three', human immunodeficiency virus (HIV), malaria and tuberculosis disease (TB), are estimated to have killed many more people in these countries over the same period (~40 000 vs. ~11 300),¹ and the Ebola epidemic is very likely to have made things worse. In particular, we wish here to highlight the potential impact on the often hidden TB burden.

According to World Health Organization (WHO) figures, Guinea, Sierra Leone and Liberia already had high levels of TB disease incidence, at respectively 177 (156–199), 310 (235–394) and 308 (273–346) per 100 000 population in 2014.¹ The situation in Guinea was somewhat of a success story, with decreasing levels of both TB mortality and incidence. However, Liberia and Sierra Leone were already struggling to cope with TB before the Ebola outbreak. In all three countries, disruptions to vulnerable health systems will impact infection prevalence and hence future disease incidence. The likely impact of the Ebola epidemic on *Mycobacterium tuberculosis* transmission will be increased TB morbidity and mortality for years to come, and the same is likely true for HIV and malaria.

As tuberculosis researchers, we are keen to stress that future research must focus on the operational side of public health. Several factors now need to be addressed, including the lack of health care staff, if we are to bring communicable diseases in Western Africa back under control.² How is a health system to maintain control of chronic epidemics such as TB whilst subject to the emergency measures of a severe epidemic? Such research should utilise mathematical modelling to determine the knock-on effects and costs to a health system if control of endemic diseases is not maintained.³ This evidence can then strengthen the hand, and focus, of ministries of health, whilst also

being used to encourage appropriate funding to those epidemics that are less in the public eye. However, care must be taken to maintain broad health systems and not to focus on individual diseases. This has now become particularly relevant to South American countries as well since the WHO declared the recent Zika outbreak a global emergency.⁴

If we are to learn anything from the Ebola outbreak, it is that health systems must be strengthened as a whole, and that we should focus less on individual disease programmes—we must step out of our 'disease-specific silos'. Globally, TB is leading the way in this respect; the new WHO 'End TB Strategy' advocates for a broad multi-sector response, including not only health systems strengthening but also accountability from other ministries such as finance, social welfare and mining.⁵ As Guinea, Sierra Leone and Liberia rebuild their health systems, there is an opportunity to revolutionise how health delivery for infectious diseases are integrated with each other, and within the wider health system. We must seize it.

References

- 1 World Health Organization. Global Health Observatory (GHO) data. Geneva, Switzerland: WHO, 2015. <http://www.who.int/gho/en/> Accessed February 2016
- 2 Edelstein M, Angelides P, Heymann D L. Ebola: the challenging road to recovery. *Lancet* 2015; 385: 2234–2235.
- 3 Walker P G, White M T, Griffin J T, Reynolds A, Ferguson N M, Ghani A C. Malaria morbidity and mortality in Ebola-affected countries caused by decreased health-care capacity, and the potential effect of mitigation strategies: a modelling analysis. *Lancet Infect Dis* 2015; 15: 825–832.
- 4 World Health Organization. WHO Director-General summarizes the outcome of the Emergency Committee on Zika. Media centre. Geneva, Switzerland: WHO, 2016. <http://who.int/mediacentre/news/statements/2016/emergency-committee-zika-microcephaly/en/> Accessed February 2016
- 5 World Health Organization. Sixty-seventh World Health Assembly, Geneva 19–24 May 2014. Resolutions and decisions. Annexes. WHA67-REC1/A67_2014_REC1. Geneva, Switzerland: WHO, 2014. http://apps.who.int/gb/ebwha/pdf_files/WHA67-REC1/A67_2014_REC1-en.pdf Accessed February 2016

AFFILIATIONS

- 1 National Institute of Health Research, Health Protection Research Unit in Healthcare Associated Infection and Antimicrobial Resistance, and Department of Infectious Diseases, Imperial College London, London, UK
- 2 TB Modelling Group, TB Centre, Department of Infectious Disease Epidemiology, Faculty of Epidemiology & Public Health, London School of Hygiene & Tropical Medicine (LSHTM) London, UK

CORRESPONDENCE

Richard White
TB Modelling Group,
TB Centre, Department of
Infectious Disease
Epidemiology, Faculty of
Epidemiology & Public
Health, LSHTM
Keppel Street
London WC1E 7HT, UK
e-mail: Richard.White@lshtm.
ac.uk

Conflicts of interest: none
declared.

Public Health Action (PHA) The voice for operational research.

Published by The Union (www.theunion.org), PHA provides a platform to fulfil its mission, 'Health solutions for the poor'. PHA publishes high-quality scientific research that provides new knowledge to improve the accessibility, equity, quality and efficiency of health systems and services.

e-ISSN 2220-8372

Editor-in-Chief: Dermot Maher, MD, Switzerland

Contact: pha@theunion.org

PHA website: <http://www.theunion.org/what-we-do/journals/pha>

Article submission: <http://mc.manuscriptcentral.com/pha>