

LETTER TO THE EDITOR

Open Access



Neglected tropical diseases and global burden of disease in China

Men-Bao Qian^{1,2,3,4}

Abstract

Recently, the mortality of 240 causes in China including a subnational analysis during 1990–2013 was published in *The Lancet*. This comprehensive analysis will undoubtedly impact policymaking regarding public health in China. However, it is unfavourable in some degree to neglected tropical diseases, which is the subject of this Letter to the Editor. Policymakers, especially those in less developed provinces of China, should fully consider the burden of neglected tropical diseases, which will benefit the control and final elimination of these diseases in the country.

Keywords: China, Global burden of disease, Neglected tropical diseases

Multilingual abstracts

Please see Additional file 1 for translations of the abstract into the six official working language of the United Nations.

Background

Recently, Maigeng Zhou and colleagues released the mortality of 240 causes in China, which included a subnational analysis during 1990–2013, in *The Lancet* [1]. This comprehensive analysis will undoubtedly impact policymaking regarding public health in China. However, the analysis is unfavourable to neglected tropical diseases (NTDs). In Zhou's article, the proportion of deaths caused by NTDs in all mortality causes in China in 2013 was only 0.044% (4 015/9 144 285) and only 0.019% (1 782/9 144 285) after excluding rabies (see Fig. 1) [1].

Although great achievements have been made in the control of NTDs during the past half-century in China, this recent report is likely to lead to the misconception about the unimportance of NTDs in contemporary China and subsequently to severe neglect in the control of these diseases.

Why are these diseases neglected?

First, the inherent characteristics of NTDs determine their low mortality and high disability. According to Yang's article on the Global Burden of Disease in China in 2010, the proportion of deaths caused by NTDs in all mortality causes was 0.178 and 0.164% after excluding rabies, while the corresponding disability-adjusted life years (DALYs) were 1.164 and 1.150%, respectively (see Fig. 1) [2]. The mortality indicator constitutes only a very small proportion of the life lost due to NTDs, as most NTDs do not cause significant death but rather chronic disability, which affects infected individuals as well as the socio-economics of the country in general.

Second, data on NTDs are usually underestimated due to inadequate reporting usually caused by the endemicity of NTDs in poor rural areas as well as insufficient research. For example, only 281 deaths caused by cystic echinococcosis were estimated in 2013 [1]. However, alveolar echinococcosis is usually co-endemic in areas with a presence of cystic echinococcosis. It was reported that about 25% echinococcosis is alveolar in China [3]. Further consideration of the higher severity of alveolar echinococcosis due to its progressive invasion, mortality cases due to alveolar echinococcosis could not be neglected. Another typical example is clonorchiasis. Clonorchiasis is currently the most important food-borne parasitic disease in China, but it was not classified as a definite carcinogen of cholangiocarcinoma until 2009 [4–6]. It is estimated that over 4 000 new cholangiocarcinoma cases are attributed to

Correspondence: ahtlqmb-007@163.com

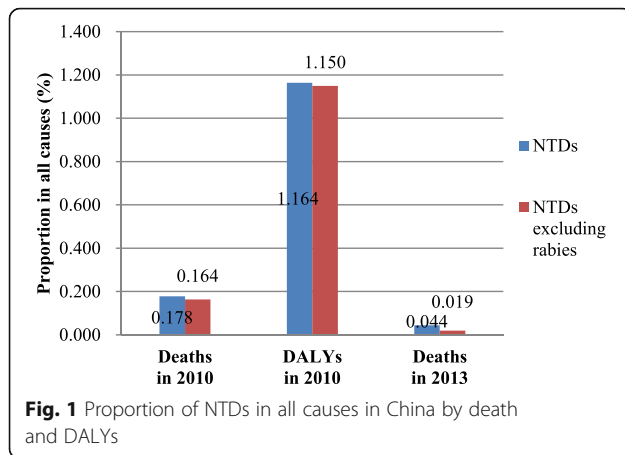
¹Key Laboratory on Biology of Parasite and Vector, Ministry of Health, Shanghai 200025, China

²National Center for International Research on Tropical Diseases, Shanghai 200025, China

³WHO Collaborating Center for Tropical Diseases, Shanghai, China

⁴National Institute of Parasitic Diseases, Chinese Center for Disease Control and Prevention, Shanghai 200025, China





Clonorchis sinensis infection globally each year, about 85% of which occur in China [4]. Taking into account the high mortality of cholangiocarcinoma, the mortality due to *C. sinensis* infection is also likely to be significant.

Third, endemicity is also one typical characteristic of most NTDs. As demonstrated in Zhou's article, the distribution of NTDs varies significantly at the provincial level and this imbalance in distribution also exists at the sub-provincial level. NTDs impact people in rural areas, especially in western China, who are affected by a combination of the presence of NTDs, poverty and inadequate medical services [7]. Thus, in a view of average level ignores the importance of NTDs in special areas.

Finally, it is important for interventions to be highly cost-effective at all times. Due to definite causes and effective interventions, control of NTDs always returns substantially, especially through integrated control packages.

Suggestions

The control of NTDs is formally included in the Sustainable Development Goals [8]. Goal 3 aims to "ensure healthy lives and promote well-being for all at all ages". Item 3 of Goal 3 stipulates ending the epidemics of NTDs by 2030, as well as of AIDS, tuberculosis and malaria. Thus, policymakers in China, especially in less developed provinces, should fully consider the burden of NTDs, including the associated high disability, low mortality, serious underreporting, and severe imbalance in their distribution and high cost-effectiveness in control. Furthermore, more research on NTDs is required, especially the establishment of a comprehensive database, which will ensure a more accurate evaluation of the burden of NTDs in China [9].

Additional file

Additional file 1: Multilingual abstracts in the six official working languages of the United Nations. (PDF 661 kb)

Abbreviations

DALYs: Disability-adjusted life years; NTDs: Neglected tropical diseases

Acknowledgements

Not applicable.

Funding

MBQ was financially supported by the Fourth Round of Three-Year Public Health Action Plan (2015–2017) in Shanghai (grant No. GWTD2015S06). The funder had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Availability of data and materials

Data sharing not applicable as no datasets were generated or analysed for this paper.

Author's contribution

MBQ conceived the idea, and prepared and drafted the paper.

Competing interests

The author declares that he has no competing interests.

Consent for publication

Not applicable.

Ethics approval and consent to participate

Not applicable.

Received: 30 March 2016 Accepted: 6 January 2017

Published online: 03 February 2017

References

- Zhou M, Wang H, Zhu J, Chen W, Wang L, Liu S, et al. Cause-specific mortality for 240 causes in China during 1990–2013: a systematic subnational analysis for the global burden of disease study 2013. *Lancet*. 2016;387(10015):251–72. doi:10.1016/S0140-6736(15)00551-6.
- Yang G, Wang Y, Zeng Y, Gao GF, Liang X, Zhou M, et al. Rapid health transition in China, 1990–2010: findings from the global burden of disease study 2010. *Lancet*. 2013;381(9882):1987–2015. doi:10.1016/S0140-6736(13)61097-1.
- Technical Steering Panel for National Survey of Current Status of Major Human Parasitic Diseases. Report on the national survey of current status of major human parasitic diseases in China. Beijing: People's Medical Publishing House; 2008. in Chinese.
- Qian MB, Chen YD, Liang S, Yang GJ, Zhou XN. The global epidemiology of clonorchiasis and its relation with cholangiocarcinoma. *Infect Dis Poverty*. 2012;1(1):4. doi:10.1186/2049-9957-1-4.
- Qian MB, Chen YD, Yan F. Time to tackle clonorchiasis in China. *Infect Dis Poverty*. 2013;2(1):4. doi:10.1186/2049-9957-2-4.
- Qian MB, Utzinger J, Keiser J, Zhou XN. Clonorchiasis *Lancet*. 2016; 387(10020):800–10. doi:10.1016/S0140-6736(15)60313-0.
- Yang GJ, Liu L, Zhu HR, Griffiths SM, Tanner M, Bergquist R, et al. China's sustained drive to eliminate neglected tropical diseases. *Lancet Infect Dis*. 2014;14(9):881–92. doi:10.1016/S1473-3099(14)70727-3.
- United Nations. Sustainable development goals. <http://www.un.org/sustainabledevelopment/> Accessed 28 Mar 2016.
- Qian MB, Zhou XN. Global burden on neglected tropical diseases. *Lancet Infect Dis*. 2016;16(10):1113–4. doi:10.1016/S1473-3099(16)30328-0.