

# Billions on defence, peanuts on public health

I recently co-reviewed a paper (1) that considered a perennial question: why is insufficient funding devoted to public health? David Hemenway, author of that essay, gave several reasons explaining why public health is usually the neglected sibling in the medical family (see box).

## Hemenway's 4 reasons to neglect public health

- \* Humans are hardwired to favour short over long-term gains.
- \* People prefer public funds to support and benefit known individuals versus unknown populations.
- \* Public health faces vested interested opposition to social change.
- \* There is little recognition of the largely anonymous public health professionals who perform this comparatively low-status work.

Hemenway mentions a recent example of the relative anonymity of those who strive to advance public health: the greatly under-recognised work of Maurice Hilleman (1919-2005), whose ingenuity and insight contributed to the development of more than 30 vaccines, including against Japanese encephalitis. But sometimes history is surprising. Some pioneers of public health, including Louis Pasteur, Ignaz Semmelweis and Joseph Lister are remembered far longer than their contemporaries (perhaps more illustrious at the time) who engaged in purely clinical or surgical activities.

Hemenway's paper was published in the *New England Journal of Medicine (NEJM)*, the most prestigious medical journal in the most powerful, unequal nation on earth. He may have self-censored in order to have this short essay accepted. While it is plausible that primitive hardwiring enables short-term gains frequently to trump long-term benefits, is not the purpose of government to raise and spend public funds in ways which benefit the public good? Admittedly, this is generally not the case, whether in the US or globally. Yet to suggest the fundamental reason lies in our hardwiring is too defeatist. Hemenway mentions opposition to the "great sanitary awakening" of the nineteenth century. This is correct, but such opposition was overcome in some countries, starting with Britain. Individuals may be hard-wired, but the wiring of populations is not fixed. If it were you would be going home to your cave this evening!

Furthermore, the need to spend public funds on defence involves neural trade-offs in individuals and groups which are similar to those involved in public health calculations. In the case of funding military ventures and preparations, individuals, tax-payers and governments use current resources to prepare for hypothetical future threats to unknown peoples, especially in high-income countries. Globally, military

spending outranks that on public health by at least an order of magnitude (tenfold).

Hemenway points out that politicians frequently favour private over public health, for example subsidising a high-cost cardiovascular drug over constructing a safe bike lanes which might ultimately lead to a greater improvement in cardiac health. Is this due to primitive hardwiring, or does it show a pragmatic recognition of the electorate's mind? If the latter, might that perception more accurately reflect the co-ordinated and well-funded lobbying of groups who profit from funding private and military goods?

We may criticise Hemenway's paper but we applaud him for airing these issues in the *NEJM*. Those fighting to improve global health are participating in a centuries-long struggle whose outcome is not yet known. Looking back, we might recognise handwashing, the abolition of slavery in some countries and the eradication of smallpox as great milestones. Looking ahead, the challenges of climate change, the rising price of energy and the resultant potential for food scarcity and conflict over diminishing resources exemplify how far we have to go (2).

Rudolph Virchow is remembered for saying that public health, politics and social change are inseparable. However, Semmelweis, apparently psychotic, perhaps from syphilis (a common occupational hazard of the time), did not help his case (reducing puerperal fever by hand disinfection) by criticising that great scientist, along with many others. Virchow is still known as a pre-eminent figure in several fields of medicine, including public health and "One Health", which recognises the links between human, animal and environmental health. Semmelweis, perhaps the most famous obstetrician of all time, died in obscurity, not least because he had alienated most of his potential allies, including Virchow. We would do well to remember that civility and chance also influence funding decisions, be they for public health or anything else.

## Slum Dog Millionaire & The White Tiger

Probably many of you have seen or heard of the Academy Award-winning *Slum Dog Millionaire*, which has been likened to the work of the nineteenth-century English reformer Charles Dickens (1812-1870). Based on a novel by former Indian diplomat Vikas Swarup, this film tells the unlikely tale of

In Robert Thom's *The Little Animals*, 17th century Dutch scientist Antonie von Leeuwenhoek explores the microscopic world through handmade lenses; he was the first to report what we now know as protozoa and bacteria (which he called "animacules").

a boy from the Mumbai slum who wins a quiz show. But the movie's real purpose is to show the depravity and unfairness of modern India.

A few months ago I read *The White Tiger*, for which author Aravind Adiga was awarded the 2008 Man Booker Prize. Dickensian threads run through this highly entertaining and funny story, and reveal much that is rotten about modern India, from the vote rigging that passes for democracy to the way that the narrator's high-caste employers expect their low-caste driver to confess falsely to the culpable driving that killed a pedestrian. Adiga was raised in India but has spent many years in Western countries. The most disturbing element in this book is its premonition that the Indian Naxalite (Maoist) movement, still largely confined to rural India, will inevitably infiltrate its cities.

Such diffusion seems only a matter of time, unless the grossly unjust social features of India can be improved, which include environmental degradation. These unjust social factors are especially marked in rural areas. Many Indians who have lived overseas such as Adiga and Swarup seem keen to reform their motherland. Time is against them, not least because the forecast consequences of climate change in India are so dire. Aquifers are also seriously depleted in much of the highly fertile irrigated grain belt of parts of northwest India. Yields are at risk even without climate change. Relatively high population growth persists in northern India, especially among the poor. This impedes economic development and adds to the absolute number of undernourished children. Concerns about the relationship between conflict, governance, poor nutrition and food insecurity are consistent with those long held by food and development workers, such as Sir John Orr, the first director of the Food and Agricultural Organisation (2).

## References

1. Lloyd S, Butler CD. "Why we don't spend enough on public health." *NEJM*. 2010;362:1657-8. *Faculty 1000 Medicine (Global Health) 2010*, <http://f1000.com/3315957#evaluations>
2. Butler CD. "Climate change, crop yields, and the future." *SCN News 2010*; 38:18-25, [http://www.unscn.org/en/publications/scn\\_news/](http://www.unscn.org/en/publications/scn_news/)

