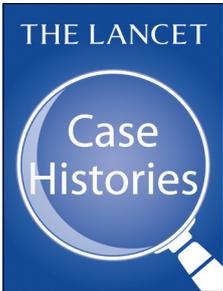




## Case histories

### Cholera



Adrian Roost

For more on **Case histories** see **Comment Lancet** 2016; **387**: 211 and **Perspectives Lancet** 2018; **392**: 2431

For more on **cholera** see <https://www.thelancet.com/clinical/diseases/cholera>

#### Further reading

Arnold D. *Colonising the body: state medicine and epidemic disease in nineteenth-century India*. Oakland, CA: University of California Press, 1993

Barnett R. *The sick rose: disease and the art of medical illustration*. London: Thames & Hudson, 2014

Hamlin C. *Cholera: the biography*. Oxford: Oxford University Press, 2009

Hardy A. *The epidemic streets: infectious disease and the rise of preventive medicine, 1856–1900*. Oxford: Clarendon Press, 1993

From 1817 onwards European governments, struggling in the aftermath of the Napoleonic Wars, watched with growing horror as a new and terrible disease left its historical heartland in south Asia and began to move west. Cholera, in the words of an editorial in the *Quarterly Review*, was “one of the most terrible pestilences which have ever devastated the earth”. Like malaria or HIV/AIDS, cholera has an inescapably global history: seven subsequent pandemics have provoked revolutions in public health, and an entirely new vision of global medicine in an age of interconnection.

Traditional Indian medicine linked cholera to variations in climate and air quality, noting an association with Hindu pilgrimages and festivals on the Ganges. European physicians, meanwhile, had been diagnosing their patients with cholera for centuries. Cholera, yellow bile, was the predominant humour of summer, adulthood, and warm climates, and “a cholera” was not necessarily a disease. It might be a kind of natural purging as the seasons turned, or in the passage from adulthood to old age. But colonial physicians drew a sharp distinction between *cholera nostra*, “our cholera”, and the contagion they encountered in south Asia.

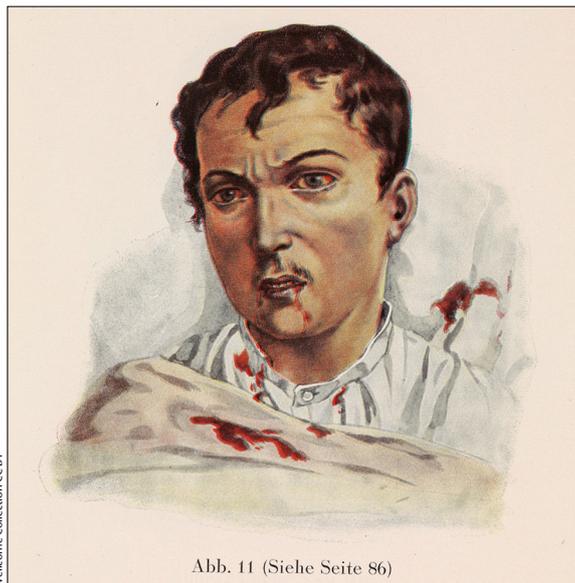
As it moved along the trade routes connecting India with Europe, cholera provoked a remarkably broad set of anxieties, political, cultural, and personal. One Victorian vision of utopia was built on the free movement of people, commodities, and capital, and for a time this seemed impossible without an equally free trade in diseases. Contemporary medicine could do nothing for cholera’s victims beyond the standard nostrums of brandy, opium, bleeding, and purging. Most of all it seemed to threaten social and political order, in an era

that also witnessed famines, economic depressions, and the rise of working-class political movements like Chartism.

For most 19th-century European physicians, “filth diseases” like cholera and typhoid were a consequence of miasmas — poisonous vapours from cesspools, graveyards, and rubbish dumps. This theory underpinned a revolution in British public health, sparked by the lawyer Edwin Chadwick’s *Report on the Sanitary Condition of the Labouring Population of Great Britain* (1842). Chadwick rejected the Malthusianism of the 1834 New Poor Law, advocating a sweeping programme of public health reform premised on cleaning up the industrial cities. But what now looks like the most empirical explanation for cholera—germ theory—appeared to many at the time to be little more than speculation. Could this continent-crossing disease really be the result of tiny, fleetingly glimpsed, possibly animate specks of matter?

In the second edition of his *On the Mode of Communication of Cholera* (1855), the English physician John Snow used innovative epidemiological studies of a cholera outbreak in Soho, London, in 1854 to show the connection between cholera and contaminated water. But Snow’s work on cholera was largely ignored at the time and had little influence on the course of 19th-century medicine and public health. When the German bacteriologist Robert Koch announced the identification of *Vibrio cholera* in 1883, his paper did not mention Snow.

By the early 20th century, sanitation reform and general improvements in diet and hygiene had eliminated cholera in most industrialised nations, and this approach was enshrined in the programme of WHO, founded in 1948. Oral rehydration therapy, developed in the late 1960s, has vastly improved survival rates, while recent research has generated a greater understanding of variations in genetic susceptibility to cholera and, most significantly, the first low-cost vaccine. After Koch’s work, various researchers worked on vaccines, but studies after World War 2 showed these conferred only short-term benefits. Following the outbreak associated with the 2010 Haitian earthquake, the World Health Assembly called for an integrated global strategy against cholera, embodied in the Global Task Force on Cholera Control, and a stockpile of oral vaccines. In the early 21st century, the global burden of cholera remains high: the disease is endemic in many African nations, with 68% of deaths recorded in the continent. Commentators have highlighted its almost uncanny ability to appear wherever sanitation and fresh water infrastructure, public health systems, and hygiene regimes break down—an observation that suggests the struggle against cholera is far from complete.



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