Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

2013.[8] The regional committees aim to provide technical assistance to national tuberculosis control programmes.[9]

The main efforts of experts from such committees and national tuberculosis programmes should be aimed at using rapid diagnostic methods for drug-resistant tuberculosis, providing access to diagnostic tests for all patients, providing appropriate treatment for patients with MDR tuberculosis, and introducing rational approaches in the use of new antituberculosis drugs.[10] The most important measure that might help to prevent the spread of drug-resistant tuberculosis is the implementation of short-course regimens of chemotherapy for patients with MDR tuberculosis. Introduction of 9–12 month courses of MDR therapy will increase the effectiveness of treatment and reduce the total number of antituberculosis drugs during the course of treatment and save funds that can be used to treat more patients.[11] The use of new drugs that correspond with WHO recommendations will improve the quality of treatment for adults and children with drug-resistant tuberculosis and will help to eliminate tuberculosis globally.[12,13]

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1 Sharma A, Hill A, Kurbatova E, et al. Estimating the future burden of multidrug-resistant and extensively drug-resistant tuberculosis in India, the Philippines, Russia, and South Africa: a mathematical modelling study. *Lancet Infect Dis* 2017; published online May 9. http://dx.doi.org/10.1016/S1473-3099(17)30247-5.
2 WHO. On the road to ending TB: highlights from the 30 highest TB burden countries. Geneva: World Health Organization, 2016. http://apps.who.int/iris/bitstream/10665/204662/1/WHO_HTM_TB_2016.06_eng.pdf?ua=1
3 WHO. Global tuberculosis report, 2016. Geneva: World Health Organization, 2016. http://www.who.int/tb/publications/global_report/en/ (accessed April 22, 2017).
4 Roadmap to implement the tuberculosis action plan for the WHO European region 2016-2020. WHO 2016 http://www.euro.who.int/__data/assets/pdf_file/0020/318233/Roadmap-implement-TBC-action-plan-20162020.pdf?ua=1 (accessed April 22, 2017).
5 WHO. Tuberculosis surveillance and monitoring in Europe 2017. http://www.euro.who.int/__data/assets/pdf_file/0020/334703/tuberculosis-surveillance-and-monitoring-in-europe-2017.pdf?ua=1.
6 The Global Fund. https://www.theglobalfund.org/ru/ (accessed April 22, 2017).
7 J. Peter Cegielski, Tracy Dalton,[1] Martin Yagui,[2] Extensive Drug Resistance Acquired During Treatment of Multidrug-Resistant Tuberculosis. Clin Infect Dis. 2014 Oct 15; 59(8): 1049–1063. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4184341/ (accessed April 22, 2017).
8 Stop TB Partnership. Global drug-resistant TB initiative http://www.stoptb.org/wg/mdrtb/default.asp (accessed April 22, 2017).
9 Global drug resistance TB initiatives. http://www.stoptb.org/wg/mdrtb/.
10 Global drug facility. http://www.stoptb.org/gdf/ (accessed April 22, 2017).
11 WHO. Treatment guidelines for drug-resistant tuberculosis (2016 update). World Health Organization, 2016. http://www.who.int/tb/areas-of-work/drug-resistant-tb/treatment/resources/en/ (accessed April 22, 2017).
12 WHO. The use of delamanid in the treatment of multidrug-resistant tuberculosis. Interim policy guidance. World Health Organization, 2014. http://apps.who.int/iris/bitstream/10665/137334/1/WHO_HTM_TB_2014.23_eng.pdf?ua=1 (accessed April 22, 2017).
13 WHO. The use of bedaquiline in the treatment of multidrug-resistant tuberculosis. Interim policy guidance. World Health Organization, 2013. http://www.who.int/tb/publications/mdrtb-treatment-guideline/en/ (accessed April 22, 2017).

Infectious diseases in China in the post-SARS era

The epidemiology and comparative burden of communicable diseases determines which diseases warrant public health resources and intervention. In a country as large as China, identification of the communicable diseases causing the greatest burden and the population groups most affected by specific diseases is a massive, and very important, undertaking. In *The Lancet Infectious Diseases*, Shigui Yang and colleagues report surveillance data for communicable diseases in China over a 10-year period (2004–13), covering a population of 1·3 billion people and incorporating nearly 55 million notified cases of 45 infectious diseases.[1]

Public health surveillance—the so-called cornerstone of public health—has been defined as "the continuous, systematic collection, analysis and interpretation of health-related data needed for the planning, implementation and evaluation of public health practice".[2,3] The 2003 severe acute respiratory syndrome (SARS) epidemic exposed substantial weaknesses in China's national public health surveillance system, which was established in the 1950s. SARS emerged from Guangdong province in southern China, resulting in 5327 cases and 348 deaths in mainland China and an estimated loss of US$25·3 billion to China's economy.[4,5] In response, China overhauled its approach to public health surveillance and control, with substantial legislative changes, a ten-fold increase in public health funding from 2003 to 2012, and establishment of the largest web-based communicable diseases reporting system in the world.[4,5] Another key feature of surveillance systems is data availability; the data analysed by Yang and colleagues were available publicly from the Public Health Science Data Center of the


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Chinese Center for Disease Control and Prevention and from the official website of the National Health and Family Planning Commission.[1] A review of notification data in China is timely in this new era of infectious diseases surveillance and publicly available data.

Yang and colleagues identified the infectious diseases that warrant public health attention in China, including those with the highest notification incidence (hand, foot, and mouth disease, hepatitis B, and tuberculosis, which together made up two-thirds of all notifications); those with the highest case-fatality ratio (rabies); and infectious diseases with the most rapidly increasing notification incidence (hydatid disease, hepatitis C, and syphilis). Not surprisingly, the highest overall notification incidence was among children younger than 10 years, whereas case-fatality ratios increased with age. Males had higher notification incidence and case fatality ratios than did females, indicating a need to target men in preventive and control activities. Wang and colleagues' analyses of seasonality for each of the 45 infectious diseases and notification incidence by province can be used to inform targeted public health interventions by location and season.

We all recognise that surveillance data are incomplete and imperfect. Case ascertainment—the proportion of all incident symptomatic cases captured by the surveillance system—varies by disease, location, time, age, and sex.[6] Improved case ascertainment could account for some of the noted increase in overall notification incidence (on average, 6·2% per year from 2004 to 2008 and 2·3% per year from 2009 to 2013),[1] including improvements in the surveillance system and notification process early in the study period. Importantly, 20 infectious diseases, including several vaccine-preventable diseases, showed significantly decreasing incidence over the study period, adding to substantial reductions reported in China from 1970 to 2007.[4] China is participating in the WHO Western Pacific Region goals for polio and measles elimination and hepatitis B control and has made tremendous progress towards these goals. 20 cases of polio were reported among 1·3 billion people over a decade, and incidence is now zero.[1] The prevalence of hepatitis B among young children has declined strikingly, with China achieving the WHO regional target of less than 1% HBsAg seropositivity among children younger than 5 years before the target date.[7] As these children reach adulthood, there will be a profound fall in hepatitis B incidence and associated disease burden. Surveillance data for measles show similar progress but at subnational scales. Measles incidence has declined for age groups in which people have been vaccinated since the elimination goal was declared.[8]

To determine the extent of under-ascertainment and bias within the data analysed by Yang and colleagues is impossible. However, the function of surveillance—to inform public health action—can be met by imperfect data.[9] The longitudinal analysis of 10 years of national surveillance data represents a comprehensive picture of the epidemiology of nationally notifiable diseases in modern China. The findings should be used by public health decision makers—both provincial and national—to prioritise diseases and populations for public health action.

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1 Yang S, Wu J, Ding C, et al. Epidemiological features of and changes in incidence of infectious diseases in China in the first decade after the SARS outbreak: an observational trend study. *Lancet Infect Dis* 2017; published online April 12. http://dx.doi.org/10.1016/S1473-3099(17)30227-X.
2 Lee L, Thacker S. The cornerstone of public health practice: public health surveillance, 1961–2011. *MMWR Surveill Summ* 2011; **60** (suppl 4)**:** 15–21.
3 World Health Organization. Health topics: public health surveillance. March, 2017. http://www.who.int/topics/public_health_surveillance/en/ (accessed March 20, 2017).
4 Wang L, Wang Y, Jin S, et al. Emergence and control of infectious diseases in China. *Lancet* 2008; **372:** 1598–605.
5 Wei P, Cai Z, Hua J, et al. Pains and gains from China's experiences with emerging epidemics: from SARS to H7N9. *BioMed Research Int* 2016; **2016:** 5717108.
6 Gibbons CL, Mangen M-JJ, Plass D, et al. Measuring underreporting and under-ascertainment in infectious disease datasets: a comparison of methods. *BMC Public Health* 2014; **14:** 147.
7 Liang X, Bi S, Yang W, et al. Epidemiological serosurvey of hepatitis B in China: declining HBV prevalence due to hepatitis B vaccination. *Vaccine* 2009; **27:** 6550–57.
8 World Health Organization Western Pacific Region. Country profile: measles elimination—China. May, 2016. http://www.wpro.who.int/immunization/documents/measles_country_profile_may2016_chn.pdf (accessed March 18, 2017).
9 Henderson DA. Surveillance of smallpox. *Int J Epidemiol* 1976; **5:** 19–28.