Vaccinate to combat COVID-19 in China

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than promotes academic dialogue with our colleagues in China.

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As W. C. Kirby argues in his Editorial "Zeroing out on zero-COVID" (3 June, p. 1026), the cost of China's strict zero-COVID policy is enormous. From local to regional to international impacts, this policy is likely to increase unemployment and poverty while further disrupting global supply, communication, and cooperation. China should replace its zero-COVID strategy with a plan to increase vaccination rates.

This year marks the largest surge in COVID-19 cases in China since the beginning of the outbreak in 2019 (*1*). Shanghai was the epicenter of the surge, recording 625,186 positive cases during the city's strict lockdown from 1 April to 1 June (*2*). Most cases (90.75%) were asymptomatic, and the death rate was only 0.094% (*2*). Of the 588 people in Shanghai who died from Covid-19 during this time, the average age was 82.9, and all had severe preexisting medical conditions (*3*). For those above 80, the vaccination rate was a meager 1.3% (*3*).

Between 10 March and 16 April, each Shanghai resident underwent more than a dozen polymerase chain reaction (PCR) tests, in addition to daily at-home antigen testing (*4*). Long lines for testing increased the possibility of spreading the virus, and with tens of millions of people taking tests daily, false positives were frequent (*5*). The cost of massive testing sites and test materials, combined with the required employee salaries, could reach billions of US dollars (*6*).

Lockdowns and mandatory proactive testing have high social and economic costs as well. People have had difficulty accessing hospital services, acquiring medications, and making routine medical appointments (*7*). Loss of employment has led to food and housing insecurity (*8*). Shanghai's industrial output fell by 61.5% in April compared to a year earlier. Retail sales fell by 48.3% over the same period (*9*).

Instead of spending billions on testing and quarantine, China should invest in vaccination (*10*). Data from Shanghai show that with three doses of China's vaccine, including two primary shots and a booster, the incidence of severe symptoms decreases by 90% (*11*). Yet vaccination rates remain surprisingly low. By May, only 62% of Shanghai residents older than 60 had received two doses of the vaccine, and only 39% had received boosters. The cost of vaccinating all residents over 60 would be much lower than the cost of regular testing (*12*), while mitigating the social and economic consequences of the zero-COVID strategy.

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