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.

the needs of frontline health-care workers and the most vulnerable populations in communities who are more susceptible to infection and mortality if infected, including older adults (particularly those older than 65 years) and people with underlying health conditions.

People in some regions (eg, Thailand, China, and Japan) opted for makeshift alternatives or repeated usage of disposable surgical masks. Notably, improper use of face masks, such as not changing disposable masks, could jeopardise the protective effect and even increase the risk of infection.

Consideration should also be given to variations in societal and cultural paradigms of mask usage. The contrast between face mask use as hygienic practice (ie, in many Asian countries) or as something only people who are unwell do (ie, in European and North American countries) has induced stigmatisation and racial aggravations, for which further public education is needed. One advantage of universal use of face masks is that it prevents discrimination of individuals who wear masks when unwell because everybody is wearing a mask.

It is time for governments and public health agencies to make rational recommendations on appropriate face mask use to complement their recommendations on other preventive measures, such as hand hygiene. WHO currently recommends that people should wear face masks if they have respiratory symptoms or if they are caring for somebody with symptoms. Perhaps it would also be rational to recommend that people in quarantine wear face masks if they need to leave home for any reason, to prevent potential asymptomatic or presymptomatic transmission. In addition, vulnerable populations, such as older adults and those with underlying medical conditions, should wear face masks if available. Universal use of face masks could be considered if supplies permit. In parallel, urgent research on the duration of protection of face masks, the measures to prolong life of disposable masks, and the invention on reusable masks should be encouraged. Taiwan had the foresight to create a large stockpile of face masks; other countries or regions might now consider this as part of future pandemic plans.

We declare no competing interests.

Editorial note: the Lancet Group takes a neutral position with respect to territorial claims in published maps and institutional affiliations.

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Do chronic respiratory diseases or their treatment affect the risk of SARS-CoV-2 infection?

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Coronavirus disease 2019 (COVID-19), caused by the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is an acute respiratory disease that can lead to respiratory failure and death.[1] Previous epidemics of novel coronavirus diseases, such as severe acute respiratory syndrome (SARS) and Middle

	Number of patients	Health-care workers (%)	Mean or median age (years)	Prevalence (%)			
				Chronic respiratory disease	COPD	Asthma	Diabetes
Patients with COVID-19							
China[12]	44 672	3·8%	~51	2·4%	..	..	5·3%
Wuhan, China[13]	140	..	57*	..	1·4%	..	12·1%
Patients with SARS							
Toronto, Canada[14]	147	51%	45*	..	1·0%	..	11·0%
Taipei, Taiwan[15]	67	37%	51·0	6·0%	..	..	23·9%
Kaohsiung, Taiwan[16]	52	31%	48·1	..	10·0%	..	..
Hong Kong[17]	88	19%	42·1	..	0	1·0%	10·0%
Hong Kong[18]	112	61%	39·3	..	2·6%	..	4·5%
General population†							
China[19]	..	..	..	6·9%	4·9%	2·3%	6·6%
Canada[19]	..	..	..	10·4%	5·4%	5·4%	8·2%
Taiwan[19]	..	..	..	13·1%	10·4%	3·9%	10·6%
Hong Kong[20]	..	..	..	..	1·4%	1·9%	3·8%

Table references are listed in the appendix. COPD=chronic obstructive pulmonary disease. COVID-19=coronavirus disease 2019. SARS=severe acute respiratory syndrome. *Median age. †Estimates for China, Canada, and Taiwan from the Global Burden of Disease Study; Hong Kong estimates from the Department of Health, Hong Kong Special Administrative Region Government.

Table: **Prevalence of chronic respiratory diseases and diabetes in patients with COVID-19 and SARS**

See **Online** for appendix

East respiratory syndrome (MERS), were associated with similar clinical features and outcomes.[2] One might anticipate that patients with chronic respiratory diseases, particularly chronic obstructive pulmonary disease (COPD) and asthma, would be at increased risk of SARS-CoV-2 infection and more severe presentations of COVID-19. However, it is striking that both diseases appear to be under-represented in the comorbidities reported for patients with COVID-19, compared with the global burden of disease estimates of the prevalence of these conditions in the general population (table); a similar pattern was seen with SARS. By contrast, the prevalence of diabetes in patients with COVID-19 or SARS is as high as or higher than the estimated national prevalence, as might be expected.

The lower reported prevalence of asthma and COPD in patients diagnosed with COVID-19 might be due to one or a number of factors. First, it is possible that, in contrast to the diagnosis of diabetes, there was substantial underdiagnosis or poor recognition of chronic respiratory disease in patients with COVID-19, particularly in China. However, this seems unlikely, as in very recent data (March 23, 2020) from Italy, among 355 patients dying with COVID-19 (mean age 79·5 years), diabetes was reported in 20·3% of patients but COPD was not listed as a comorbidity for any patient.[3] Similarly, provisional data from the USA (March 31, 2020) show that chronic respiratory diseases and diabetes were comorbidities in 8·5% and 10·2% of patients with COVID-19, respectively, compared with Global Burden of Disease figures for the population as a whole of 11·3% for chronic respiratory diseases and 10·2% for diabetes; however these data are based on only 7162 of the 74 439 patients reported.[4]

A second possibility is that having a chronic respiratory disease protects against COVID-19, perhaps through a different immune response elicited by the chronic disease itself. However, this theory is not supported by the finding that among those with COVID-19 who have COPD as a comorbidity, mortality is increased, as would otherwise be expected.[5]

A third possibility is that therapies used by patients with chronic respiratory diseases can reduce the risk of infection or of developing symptoms leading to diagnosis. It is important to note that, at most, only around half of patients with COPD in China take treatments that are standard in Europe and North America,[6] but up to 75% of people in China with asthma use inhaled corticosteroids.[7] Furthermore, in in-vitro models, inhaled corticosteroids alone or in combination with bronchodilators have been shown to suppress coronavirus replication and cytokine production.[8,9] Low-quality evidence also exists from a case series in Japan, in which improvement was seen in three patients with COVID-19 requiring oxygen, but not ventilatory support,

after being given inhaled ciclesonide;[10] however, no control group was used and it is not known whether these patients would have improved spontaneously. Yet, the possibility that inhaled corticosteroids might prevent (at least partly) the development of symptomatic infection or severe presentations of COVID-19 cannot be ignored. By contrast, a systematic review on the use of systemic corticosteroids to treat SARS, once established, showed no benefit but possible harm.[11]

The potential benefits or harms of inhaled corticosteroids and other treatments for people at risk of SARS-CoV-2 infection or patients with COVID-19 are unclear at present, and no changes to the treatment or management of chronic respiratory conditions, including COPD and asthma, should be considered at this stage. However, collecting accurate data for the comorbidities and previous therapy of patients with COVID-19 will be essential to understanding risk factors for becoming infected, developing symptoms, and being diagnosed, as well as enabling answers to questions about possible benefits or harms of therapy for asthma and COPD during the COVID-19 pandemic. This could be achieved using a standard dataset as advocated by WHO, including information about the presence and severity of comorbidities and all medication that was being taken at the time of infection.

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The role of CT in case ascertainment and management of COVID-19 pneumonia in the UK: insights from high-incidence regions

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Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the seventh pathogenic human coronavirus to be identified and the third with a predilection for causing potentially fatal pneumonia, after severe acute respiratory syndrome coronavirus and Middle East respiratory syndrome coronavirus. Coronavirus disease (COVID-19) infection is highly transmissible but has a relatively low death rate (1·0–3·5%), except in older people (aged >70 years) with comorbidities.[1,2] It is estimated that 15–20% of people infected develop severe pneumonia and 5–10% require critical care.[2]

COVID-19 preparedness in countries with a surge in new cases have prioritised containment, rapid diagnosis, and fastidious contact tracing. With sustained community transmission, real-time RT-PCR (rtRT-PCR) of viral nucleic acid could be supported by