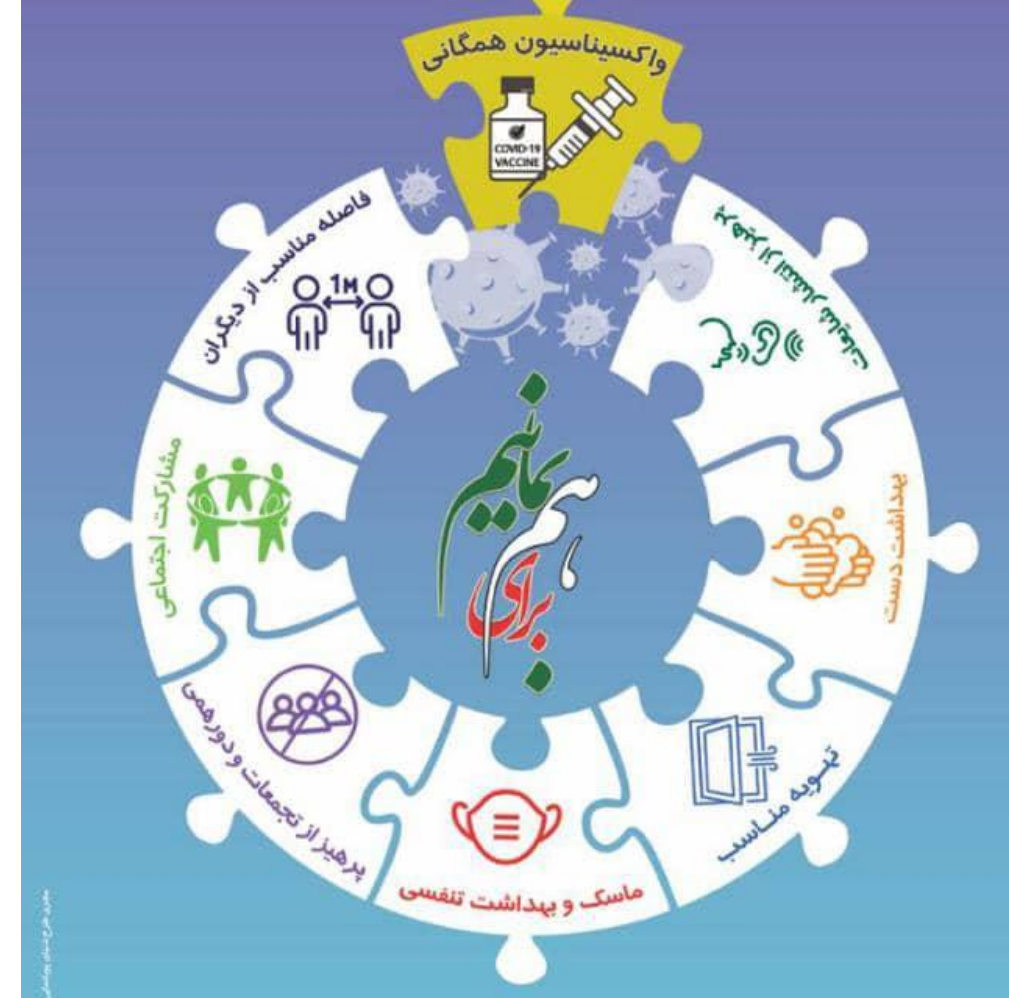


Covid-19

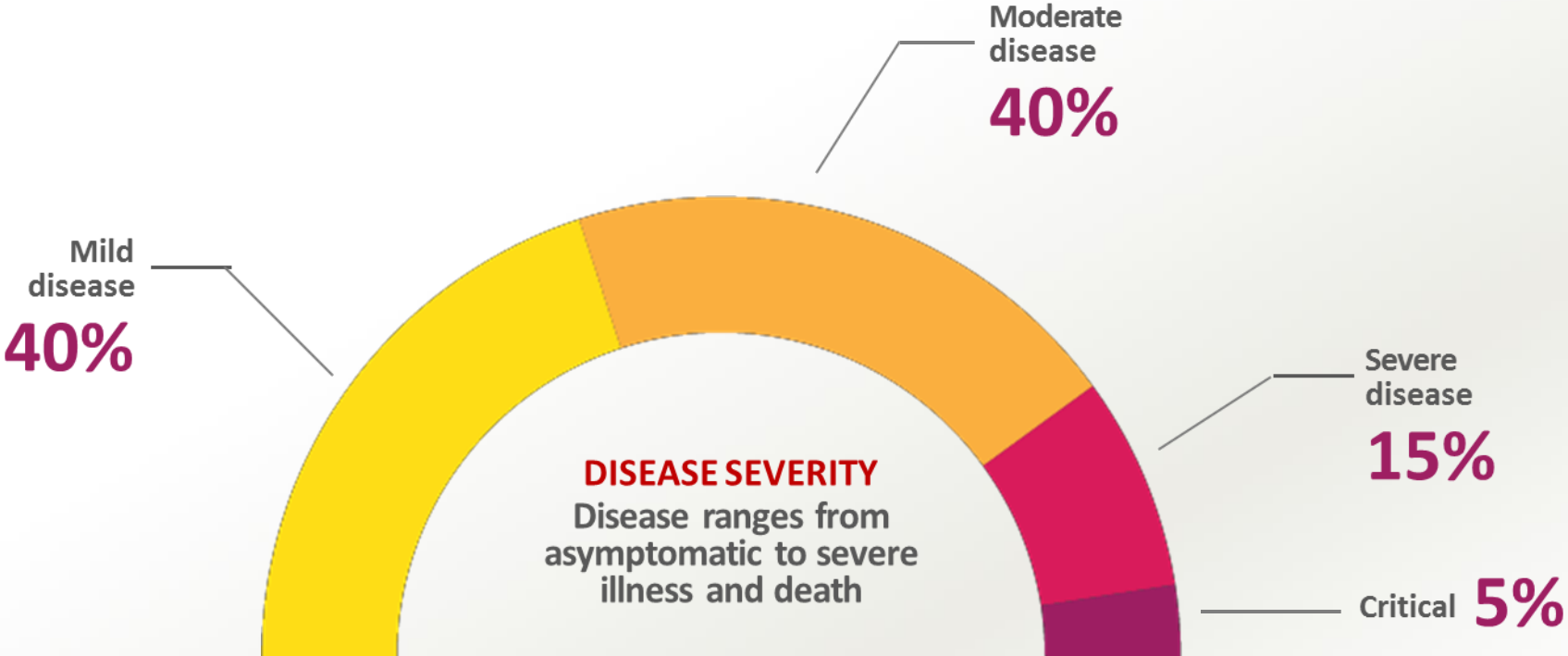


دکتر فرشید رضایی (متخصص بیماری های عفونی)

دفتر آموزش و ارتقا سلامت

وزارت بهداشت درمان و آموزش پزشکی

Most COVID-19 patients have mild to moderate disease

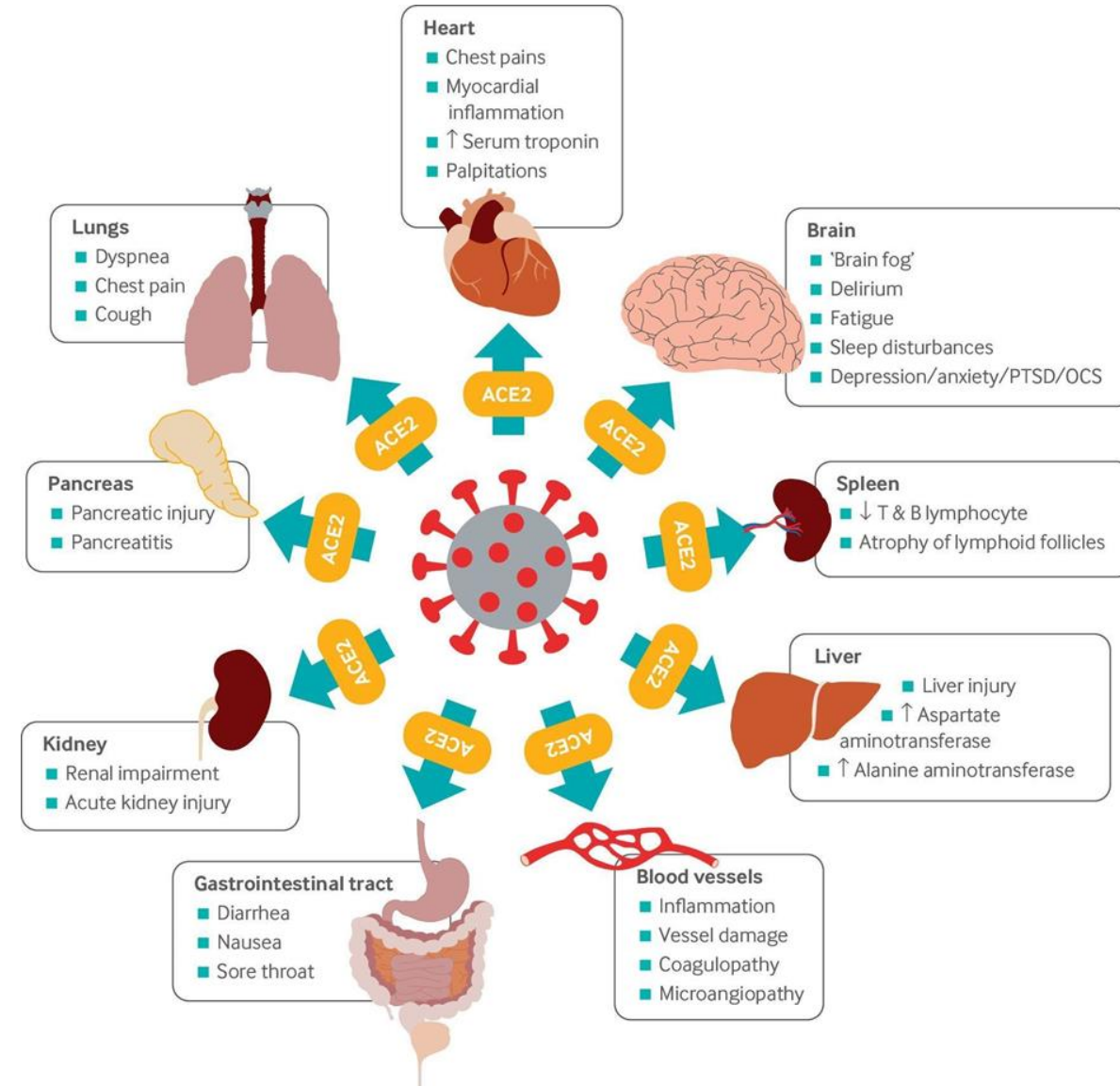


Mild covid?

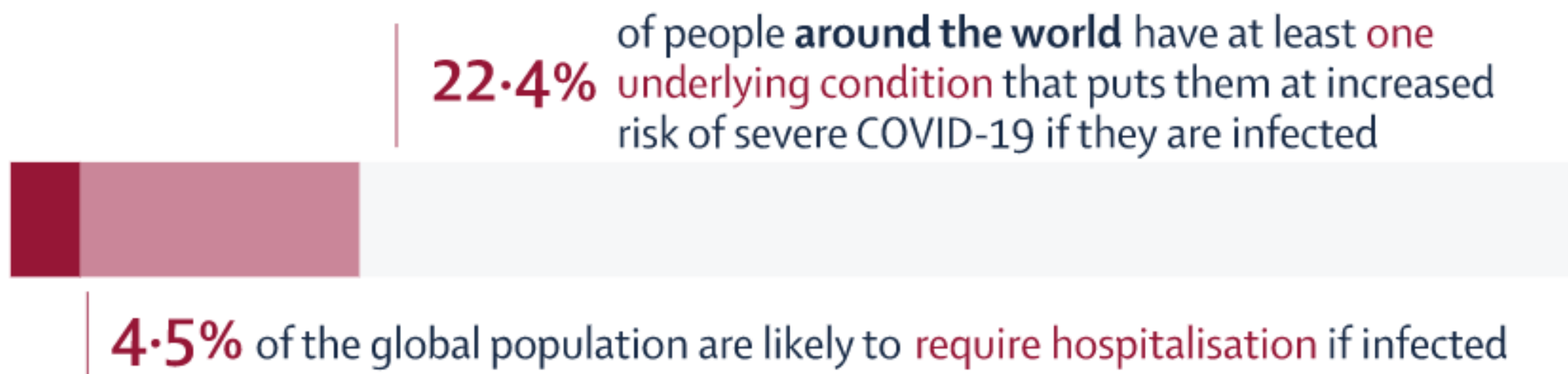
- A [Dutch survey](#) of more than 1,600 covid-19 patients, 91% of which were not hospitalised and 85% described their health as good before the infection, found that **symptoms such as fatigue (88%), shortness of breath (75%), chest pressure (45%), headache (40%), muscle pain (36%) and palpitations (32%) last for months after initial infection.**
- Nearly half of those surveyed said they were no longer able to exercise.
- The UK COVID Symptom Study [App](#) found that 10% of people reporting symptoms are sick for more than three weeks.

we cannot fight what we do **not** measure

- Death is not the only thing to count in this pandemic



How many people could be at increased risk of severe COVID-19 due to underlying health conditions?



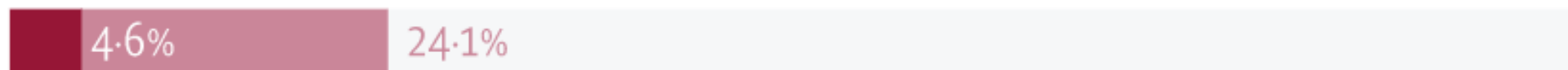
Europe



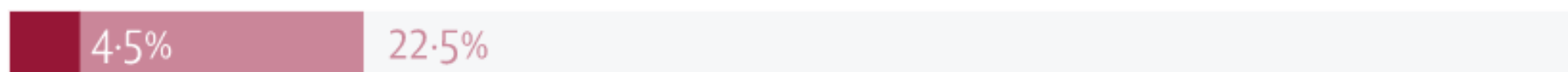
Northern America



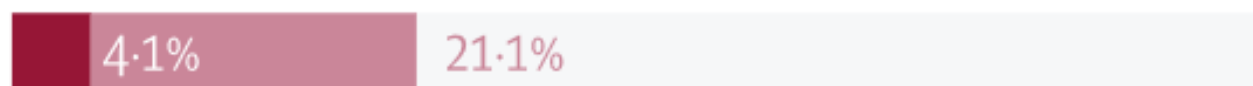
Oceania



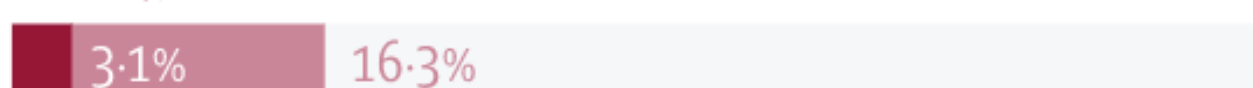
Asia



Latin America and the Caribbean



Africa



The proportion at increased risk is highest in regions with older-age populations that have a higher share of their population living with underlying conditions

The proportion at increased risk is lowest in regions with younger-age populations, but of severe cases that occur, a higher proportion could be fatal in Africa than elsewhere.

Long covid-19

Long COVID-19: An emerging pandemic in itself

To the Editor

The novel coronavirus SARS-CoV-2 disease is predominantly a respiratory illness that is highly contagious and is spread by droplet transmission. It causes a spectrum of illnesses from a mild sore throat to serious viral pneumonia requiring hospitalisation [1]. It is estimated that about 80% of people infected with COVID-19 have a mild course of illness. About 20% of the remaining patients require hospitalisation to treat their pneumonia and may need therapeutic assistance

Kings College London/ZOE COVID Symptom Study estimates that up to 10% of people with COVID-19 take at least three weeks to recover with some experiencing symptoms for 30 days or more [5]. A team of researchers from Italy reported that nearly nine in 10 patients (87%) discharged from a Rome hospital after recovering from COVID-19 were still experiencing at least one symptom 60 days after onset [6].

Presentations are variable and non-specific

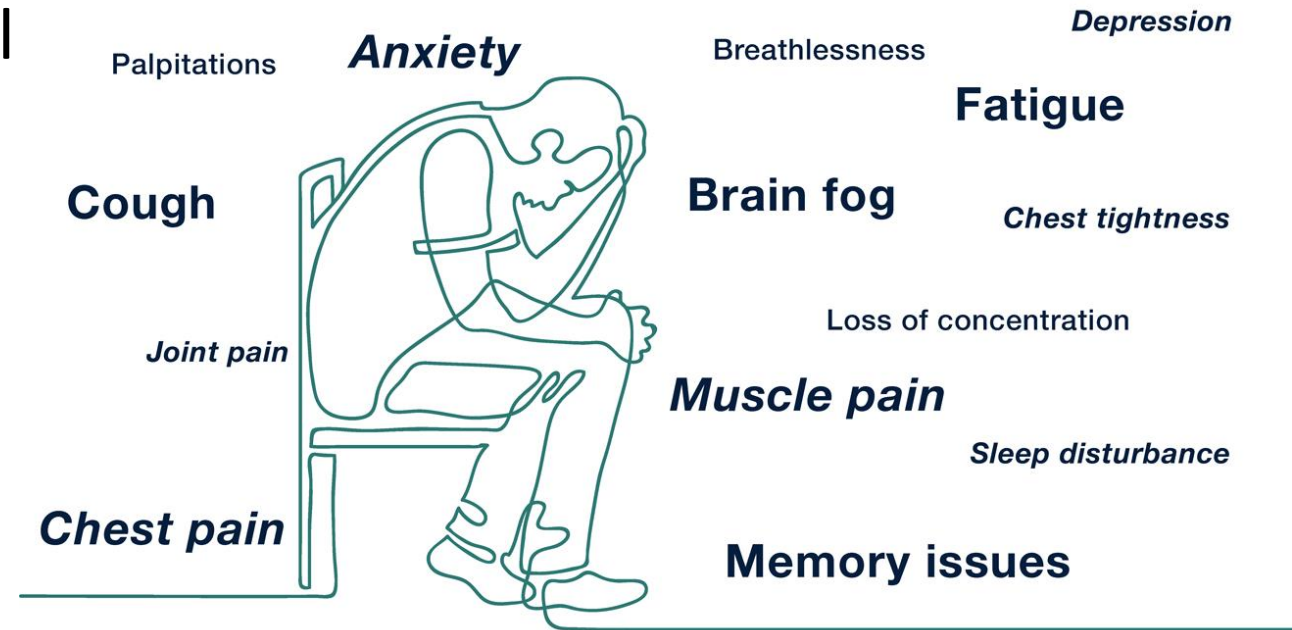
Long covid19

- Follow-up of discharged COVID-19 patients in Wuhan, China, 6 months after symptom onset showed that 76% were still symptomatic
- [Real-time Assessment of Community Transmission 2 (REACT-2) study] reported a prevalence among those who reported having COVID-19 of
 - 38% (33% in males, 42% in females) with at least one symptom lasting 12 weeks or more, and
 - 15% having at least three symptoms lasting 12 weeks or more



Long covid19

- nearly nine in 10 patients (87%) discharged from a Rome hospital after recovering from covid-19 were still experiencing at least one symptom 60 days after onset.
- They found that 13% of the 143 people were completely free of any symptoms, while 32% had one or two symptoms, and 55% had three or more.



- Although none of the patients had fever or any signs or symptoms of acute illness, **many** still reported fatigue (53%), dyspnoea (43%), joint pain (27%), and chest pain (22%).
- Two fifths of patients reported a worsened **quality of life**.

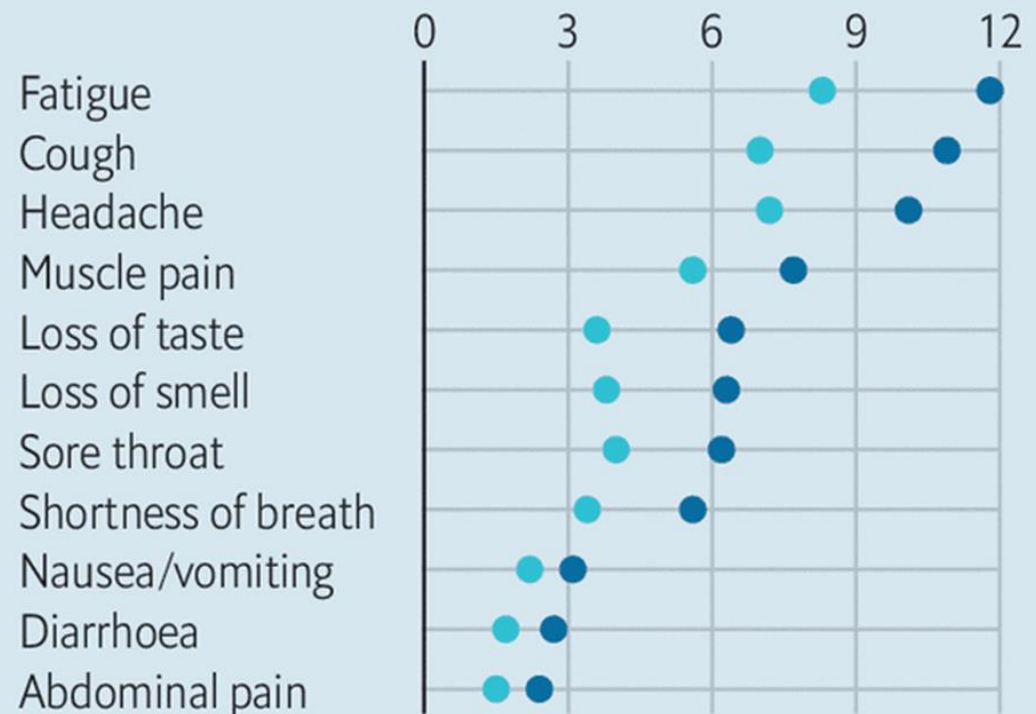
All age groups were affected by Long Covid

- Children: an estimated **33,000** aged 2 to 16 years with Long Covid, of which **26,000** had symptoms for at least 12 weeks and **9000** for at least 1 year
- Whole-population prevalence of self-reported Long Covid of any duration as estimated by the ONS was highest in **working-age** adults (1.6% in 25- to 34-year-olds and 2.1% in 35- to 69-year-olds)
- In those aged 2 to 11 and 12 to 16, the estimated population prevalence was **2 in 1000** and 5 in 1000, respectively

A slow path to recovery

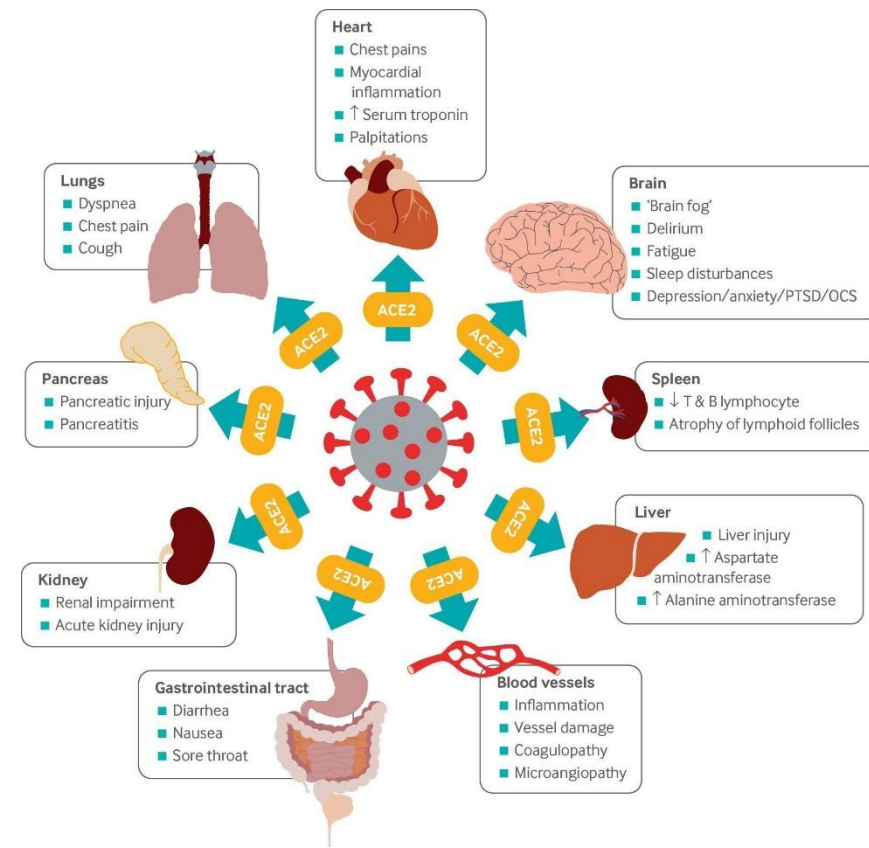
Britain, prevalence of symptoms among people testing positive for covid-19, %

● After 5 weeks ● After 12 weeks



Source: ONS Coronavirus Infection Survey

- Tissue scarring, and organ damage, could be the cause of persistent symptoms.
- Patients surviving COVID-19 in the short term have higher rates of organ-specific pathology, including of the heart, liver, kidneys, and pancreas, and higher rates of hospital readmission and mortality a few months after infection
- mechanisms such as vascular damage, hypercoagulability, and microthrombosis have also been implicated



- Another potential mechanism involves **immune system dysregulation** and autoantibodies, consistent with the cyclical nature of the symptoms.
- People with Long Covid have increased concentrations of cytokines in serum at **8 months** after infection, indicating **up-regulation** of immune and inflammatory mediators
- Even **viral reservoirs** as a potential cause of Long Covid cannot currently be excluded.
 - SARS-CoV-2 nucleocapsid protein has been detected in extrapulmonary tissues, including gut, liver, gall bladder, and lymph nodes, **up to 6 months** after infection

Brain fog

- The **cloudy thinking** you get with brain fog is also very different from cognitive problems associated with dementia or Alzheimer's disease.
- You may get similar symptoms after other infections, a minor head injury or during the menopause.
 - Brain fog is also common if you have depression, anxiety or stress.
- Brain fog is not a medical term but used to describe a range of symptoms including:
 - poor concentration
 - feeling confused
 - thinking more slowly than usual
 - fuzzy thoughts
 - forgetfulness
 - lost words
 - mental fatigue



post-COVID-19 syndrome, post-COVID-19 condition, post-acute sequelae of COVID-19



- Universal and frequently updated case definitions
- Disease registries
- Follow-up after infection to assess recovery
- Pandemic and postpandemic morbidity surveillance systems
- Direct link to prevention policy decisions
- Informing health and social care planning



- Listening, believing, and avoiding stereotypes.
- Thorough clinical assessment and investigations
- Inclusive diagnostic criteria
- Personalized treatment and rehabilitation
- Equitable care pathways
- Multidisciplinary care
- Employment rights and occupational health



- Risk factors
- Prognosis and progression
- Predictors of recovery
- Pathophysiology
- Therapeutics
- Role of vaccination
- Reinfection
- Inequalities and stigma
- Economic and services burden
- Long Covid in children

Long covid19

- Patients' groups are also providing **peer support**
- Online portal where people who are suffering long term effects of covid-19 can **communicate with nurses**, physiotherapists, and mental health specialists.

Omicron

Frequency of COVID-19 symptoms by variant

SYMPTOM	OMICRON	DELTA	PRE-DELTA
Runny nose	Common	Common	Sometimes
Headache	Common	Common	Common
Fatigue	Common	Common	Common
Sneezing	Common	Sometimes	Rare
Sore throat	Common	Common	Sometimes
Persistent cough	Sometimes	Common	Common
Chills or shivers	Sometimes	Sometimes	Sometimes
Fever	Sometimes	Sometimes	Common
Loss of smell	Rare	Sometimes	Common
Chest pain	Rare	Rare	Rare
Shortness of breath	Rare	Sometimes	Sometimes

Christmas party at a restaurant in Oslo, Norway

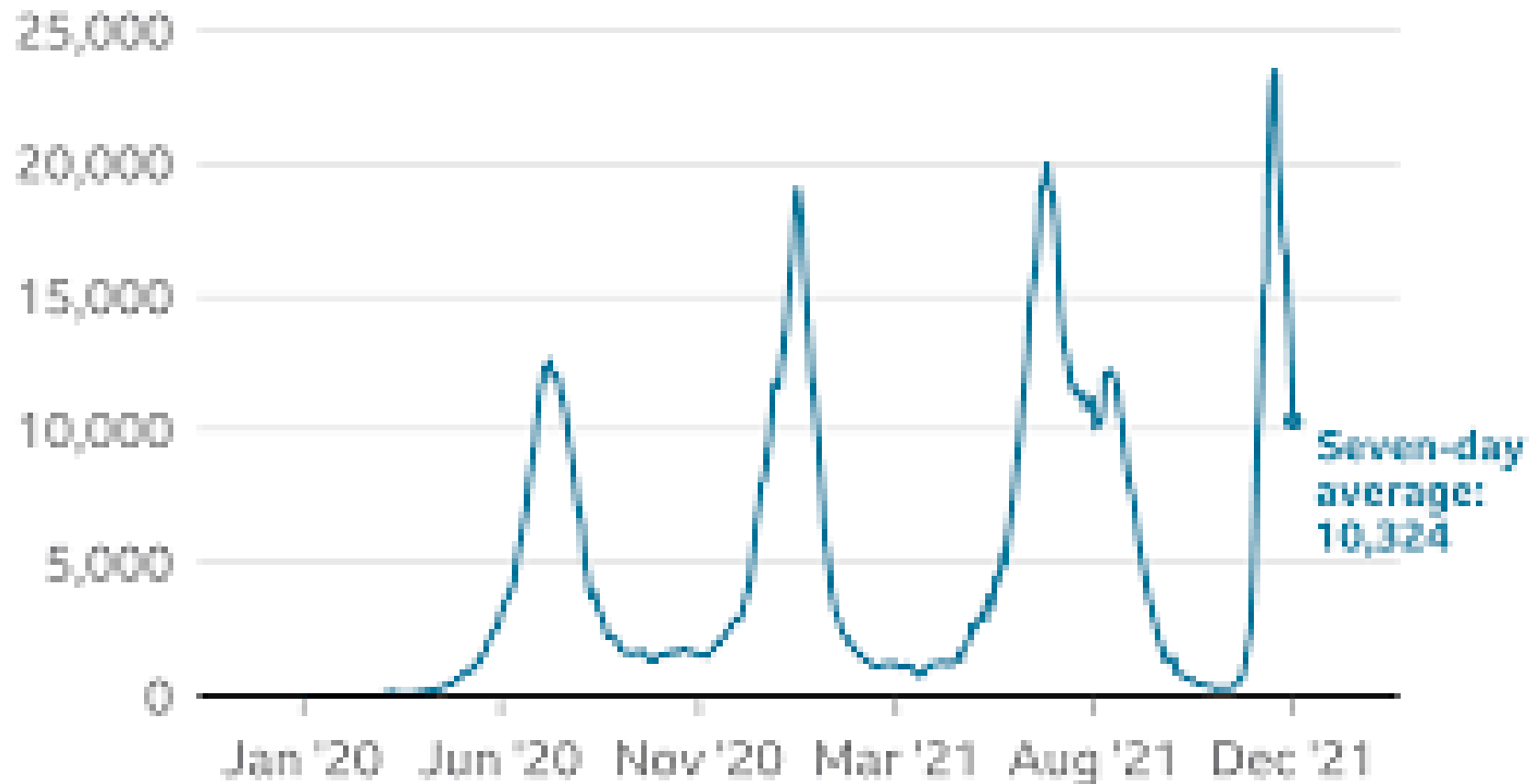
- it was evidence that omicron was "highly transmissible" among fully vaccinated adults.

Epidemiology

- the Omicron variant had been confirmed in 149 countries
- The variant is rapidly outpacing Delta in most countries and is now driving an upsurge in cases in most regions.
- Omicron is showing a significant growth advantage, higher secondary **attack rates** and a higher observed reproduction number compared to Delta.
- increased risk of household transmission: 2.9 [95% CI 2.4- 3.5])
 - For **unvaccinated** people, there was no significant difference in rates of infection between **delta and omicron**. omicron is not necessarily more transmissible than delta
 - omicron is about 2.7 to 3.7 times more infectious than the delta variant among vaccinated and boosted individuals.

- The bad news is the vaccine doesn't mean you're not going to transmit it to somebody else

Confirmed coronavirus cases in South Africa



Note: Figures over the past week may be subject to reporting delays, or figures from multiple days being released together.

Source: Johns Hopkins University, NICD, data to 30 Dec

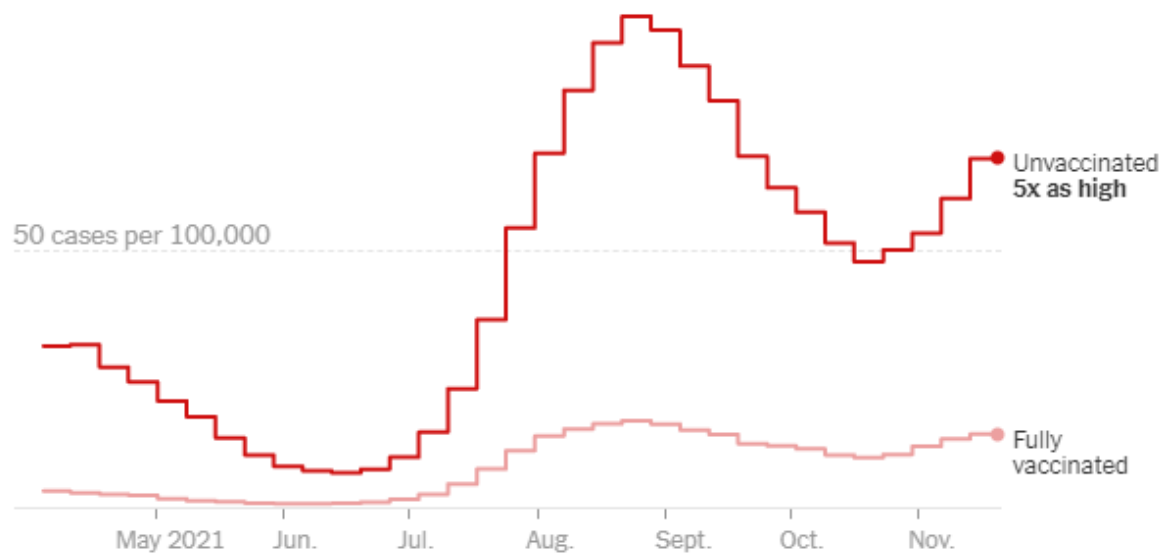


West Midwest South Northeast



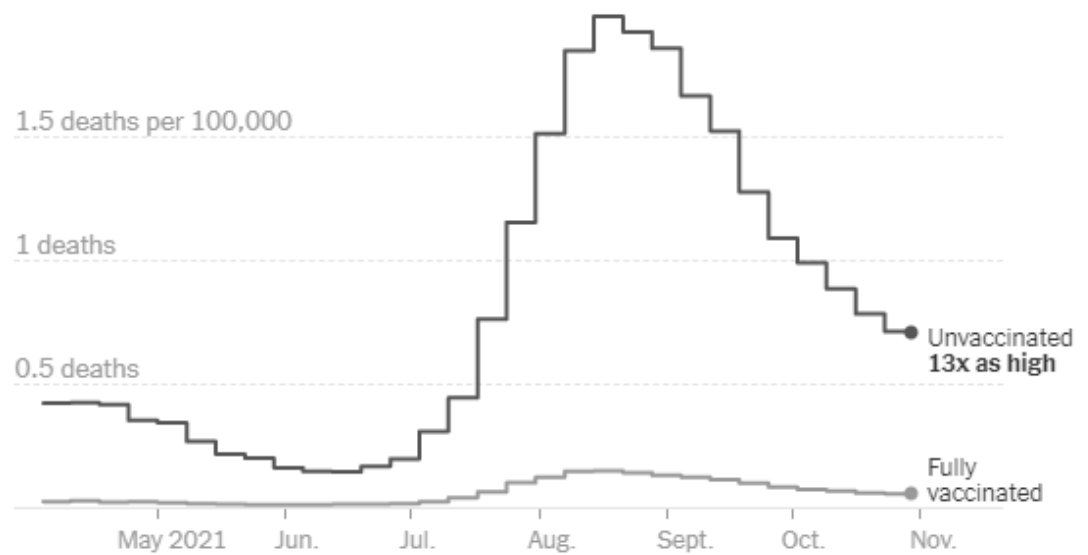
[About this data](#)

Average daily cases



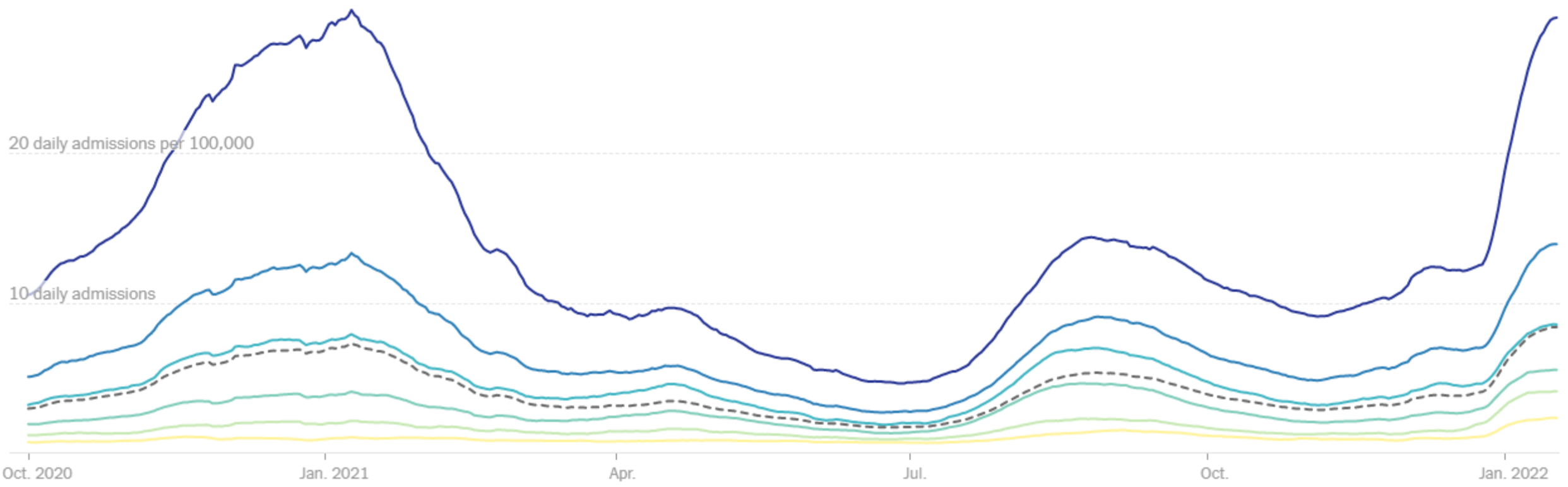
[About this data](#)

Average daily deaths



All time Last 90 days

UNDER 18 18-29 30-49 50-59 60-69 70+ ALLAGES



[About this data](#)

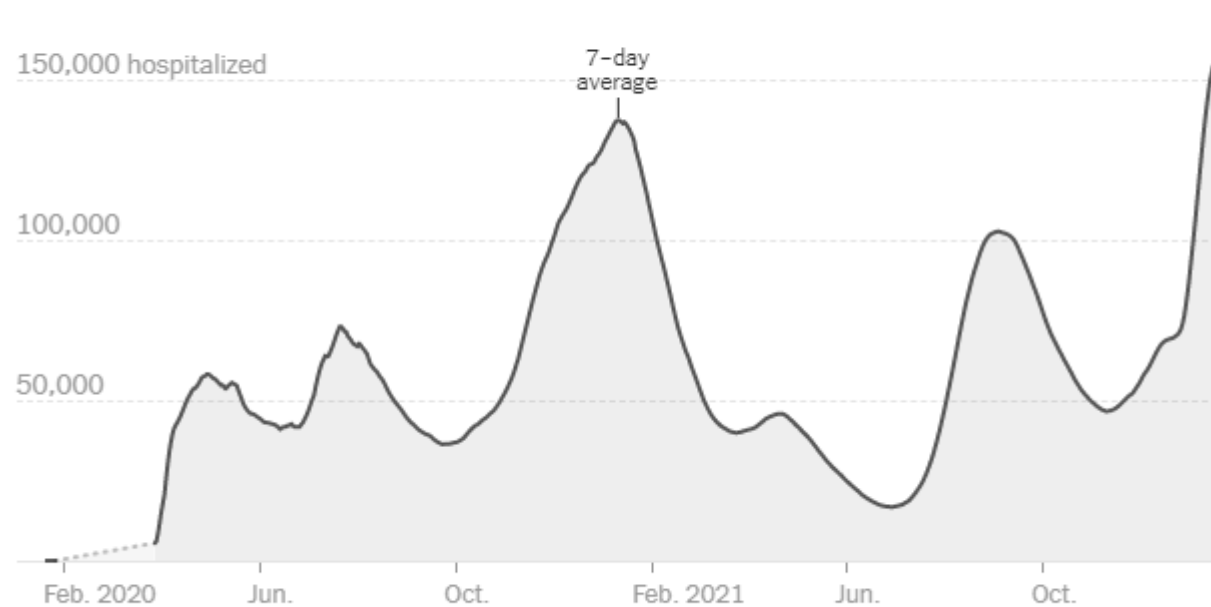
All time

Last 90 days

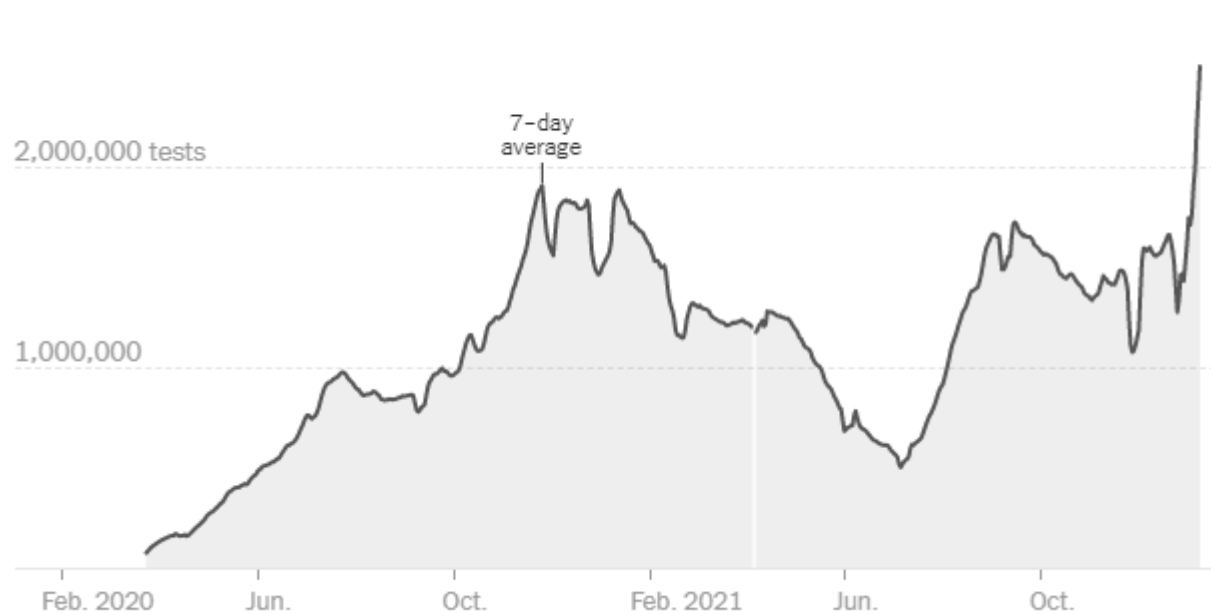
New reported cases by day



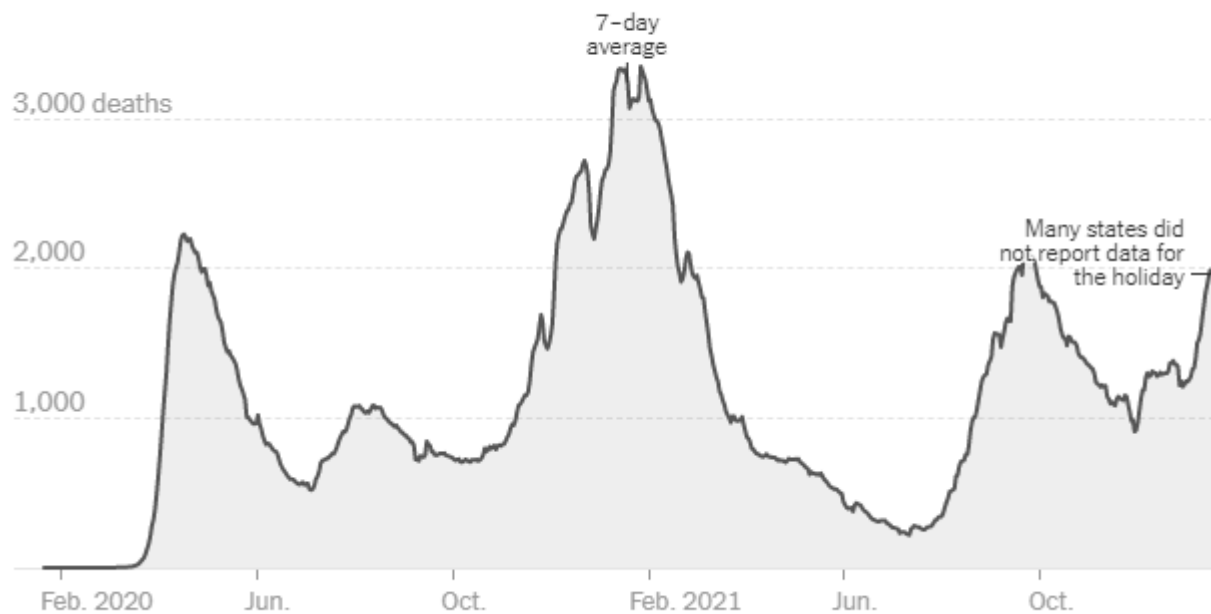
Hospitalizations









Tests by day



New reported deaths by day



	CASES DAILY AVG.	PER 100,000	14-DAY CHANGE	HOSPITALIZED AVG. PER 100,000	14-DAY CHANGE	DEATHS DAILY AVG.	PER 100,000	FULLY VACCINATED
West Feliciana, La. ›	104	668	+5,967% 	37	+295%	0	—	86%
Waukesha, Wis. ›	2,545	630	+1,231% 	69	+55%	1.1	0.28	68%
Teton, Wyo. ›	147	628	+82% 	16	+198%	0	—	89%
Dane, Wis. ›	3,110	569	+759% 	31	+61%	1.1	0.21	80%
Covington, Miss. ›	102	548	+138% 	47	+275%	0	—	48%
Tom Green, Texas ›	644	540	+200% 	28	+101%	0.3	0.21	46%

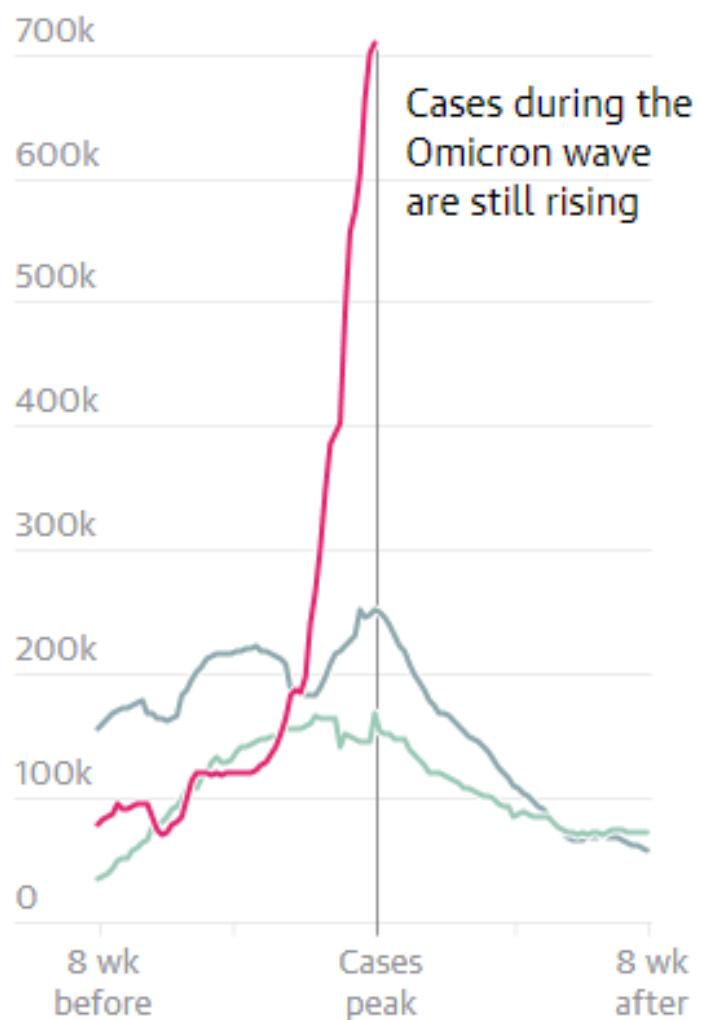
Global risk assessment

- The overall risk related to Omicron remains very high for a number of reasons.
- First, the global risk of COVID-19 remains very high overall.
- Second, current data indicate that Omicron has a significant growth advantage over Delta, leading to rapid spread in the community.
 - The rapid increase in cases will lead to an increase in hospitalizations, may pose overwhelming demands on health care systems and lead to significant morbidity, particularly in vulnerable populations.

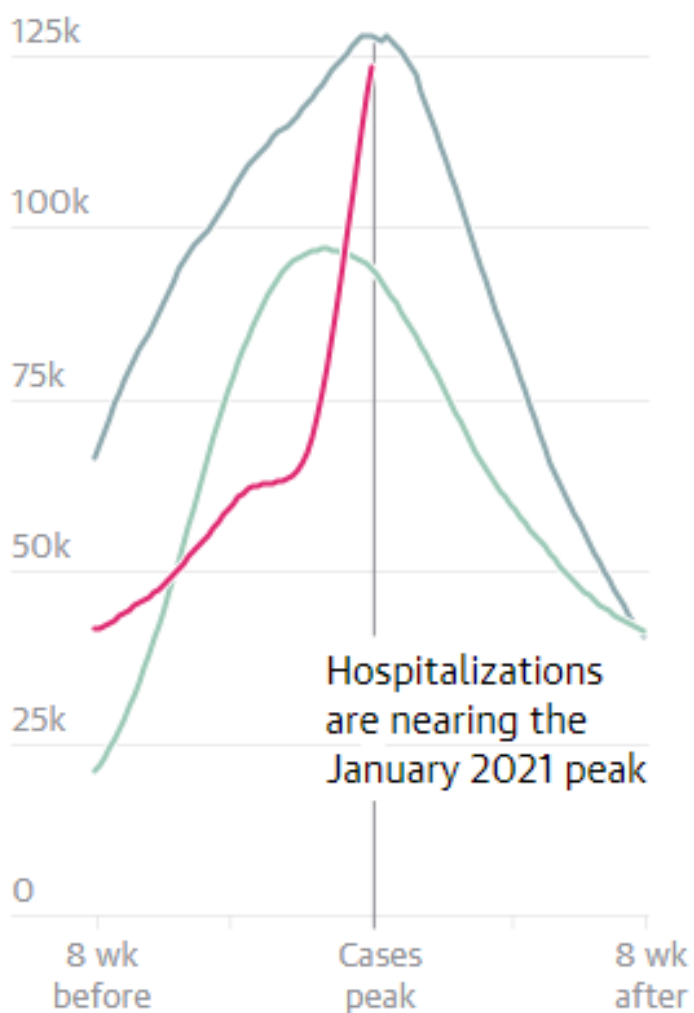
The overall threat posed by Omicron largely depends on four key questions:

- (i) how **transmissible** the variant is;
- (ii) how well **vaccines and prior infection** protect against infection, transmission, clinical disease and death;
- (iii) how **virulent** the variant is compared to other variants;
- (iv) how **populations** understand these dynamics, perceive risk and follow control measures, including public health and social measures.

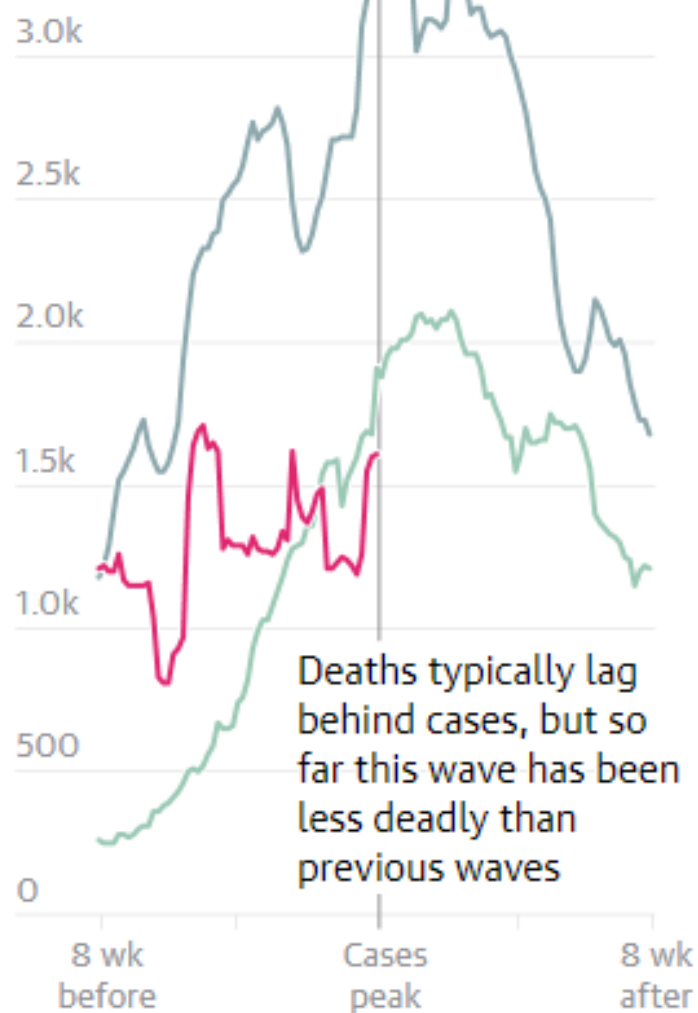
Cases

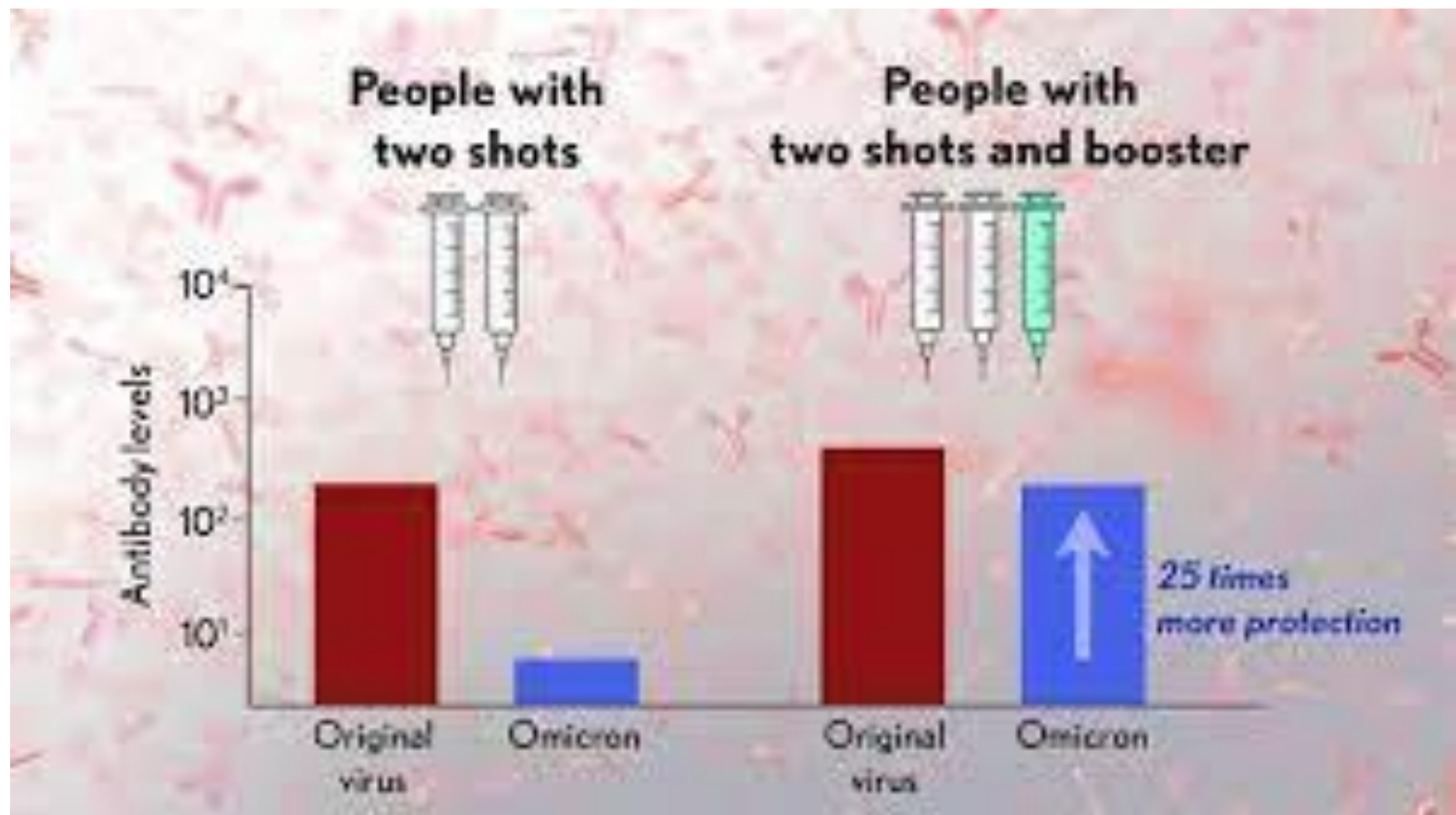


Hospitalizations



Deaths





Inactivated vaccine

- Many people who receive two jabs of an **inactivated vaccine** fail to produce immune molecules that can counter Omicron transmission. And even after a third dose of an inactivated vaccine, an individual's levels of 'neutralizing' antibodies, which provide a potent safeguard against viral infection of cells, tend to remain low.
- A 3rd shot of another type of vaccine, such as those based on [messenger RNA](#) or [purified proteins](#), seems to offer better protection against Omicron.

Shortages force sick doctors, nurses to work

- It's a situation that's forcing many hospital systems to ask asymptomatic or even symptomatic staff to return to work

Duration of self-isolation

- From 17 January people in England can stop isolating at the start of the sixth day after first testing positive for covid-19, provided that they have two negative tests on days 5 and 6 and do not have a raised temperature.
- around **two thirds** of positive cases are no longer infectious by the end of day 5,
 - use the testing capacity to help people leave isolation safely
- People who test positive must continue to self-isolate until they have had two consecutive negative tests taken on separate days.
- around 7% of people **remained** infectious if they left isolation on day 6 **after two consecutive negative** rapid lateral flow tests



The COVID generation: how is the pandemic affecting kids' brains?

- The infants born during the pandemic scored lower, on average, on tests of gross motor, fine motor and communication skills compared with those born before it (both groups were assessed by their parents using an established questionnaire)

pregnant women

- From the launch of a COVID-19 vaccination program in Scotland on Dec 8, 2020, to Oct 31, 2021, 18,457 pregnant women received 25,917 doses.
- Uptake was **much lower** in this group than among nonpregnant women ages 18 to 44 years

A longer interval between vaccination **and** infection

- Good timing is a key to success — even for riding out the [Omicron wave](#).
- Research from Japan suggests that COVID-19 vaccination followed **months later** by a breakthrough SARS-CoV-2 infection offers greater protection against the Omicron variant than do closely spaced vaccination and infection.
- **Boosters versus breakthroughs???**
 - “We’re trying to push for booster doses as soon as possible — especially among vulnerable populations — because we are only protected by vaccines, not by natural infections,”

با تشکر از توجه شما

