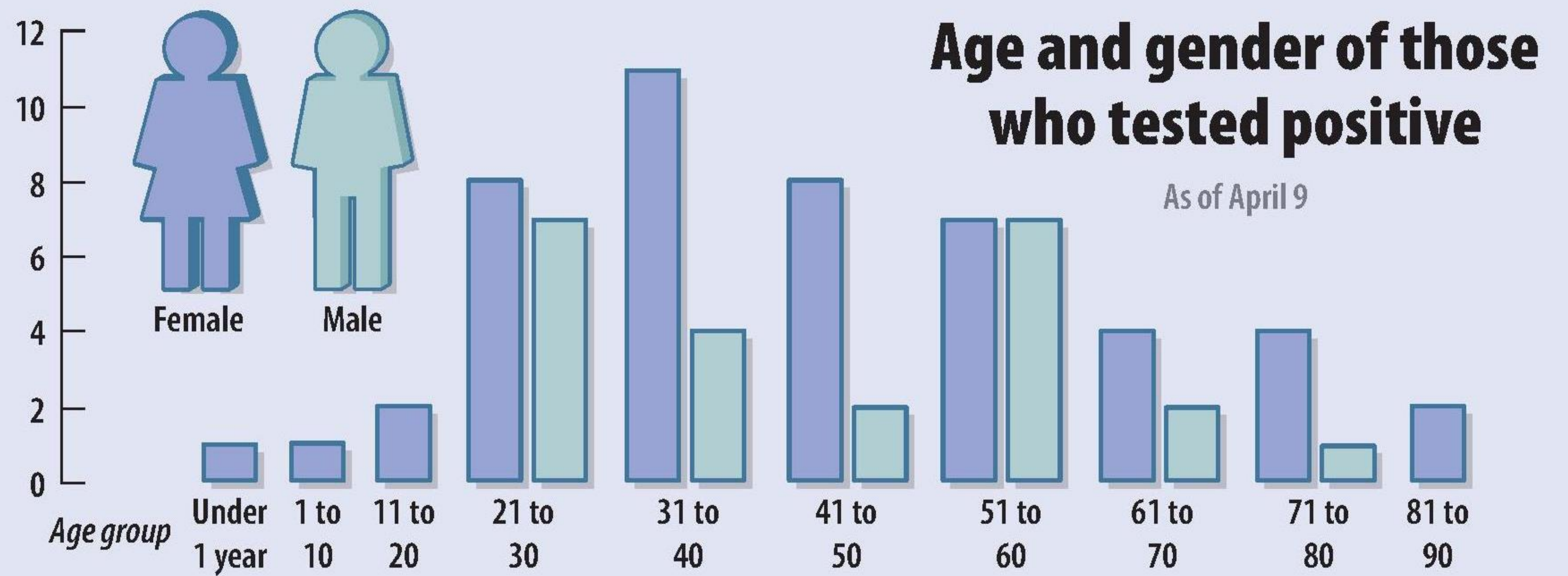
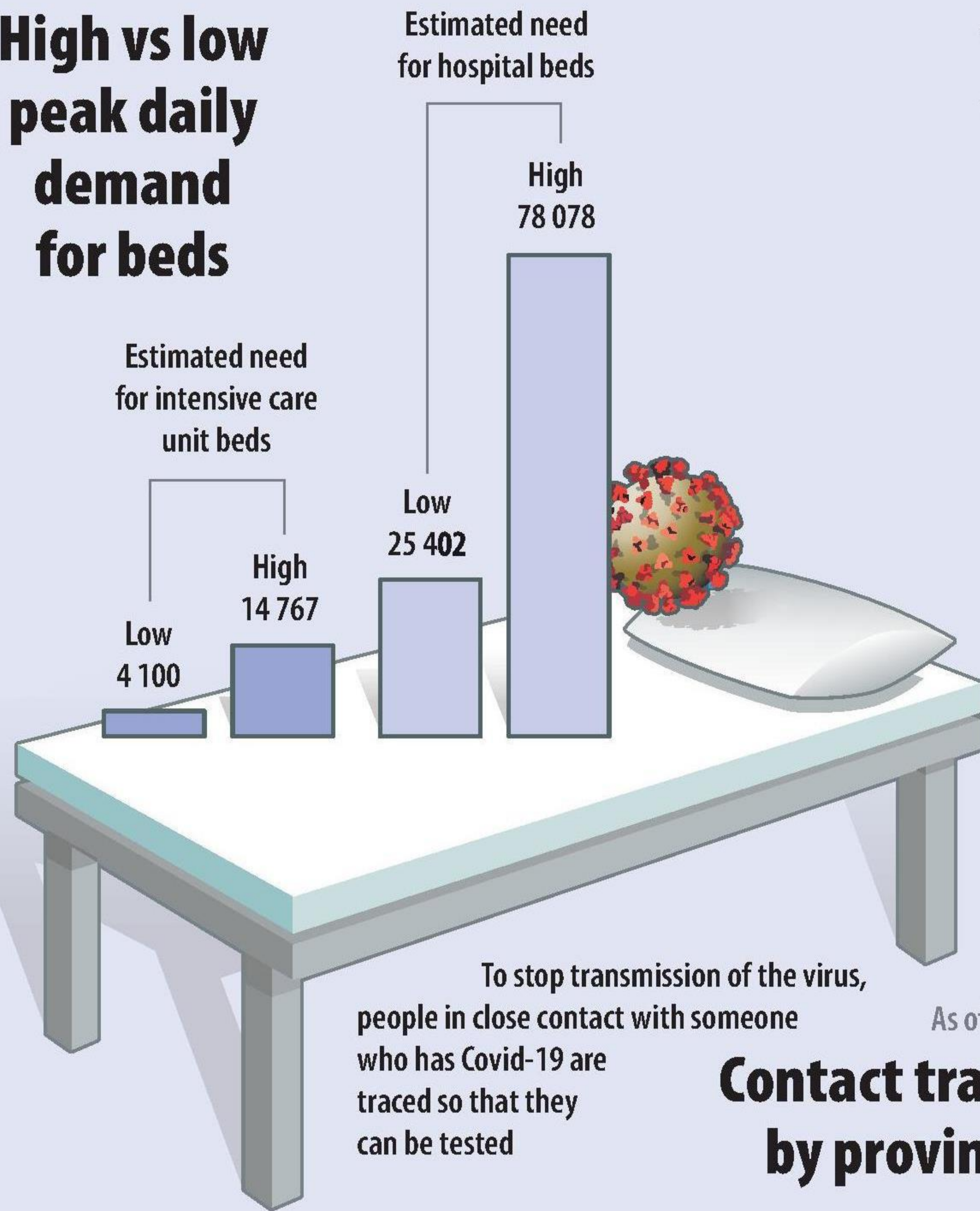


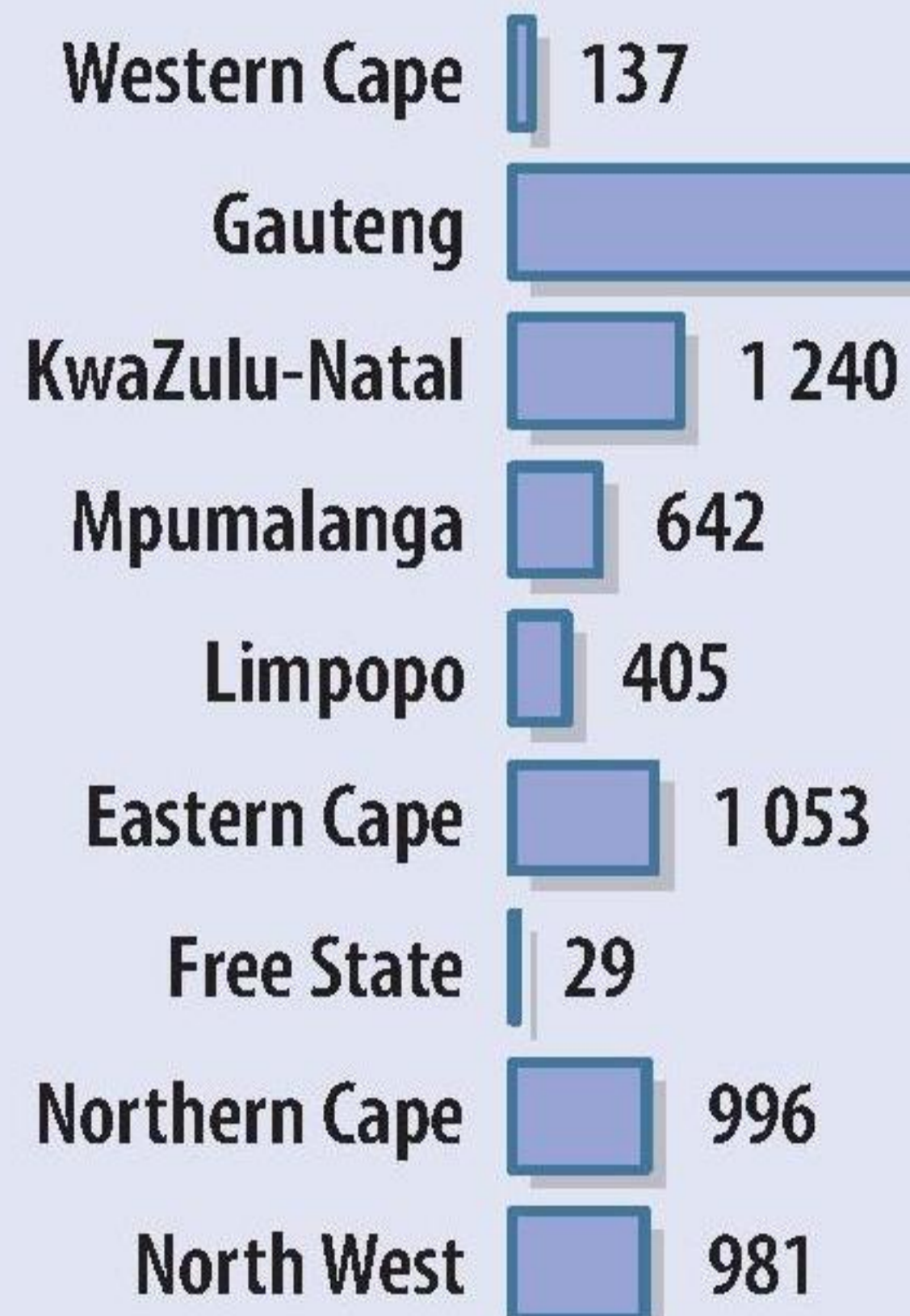
# The who, where and what of Covid-19

## Who has the virus, where the contacts are and what SA's bed capacity is

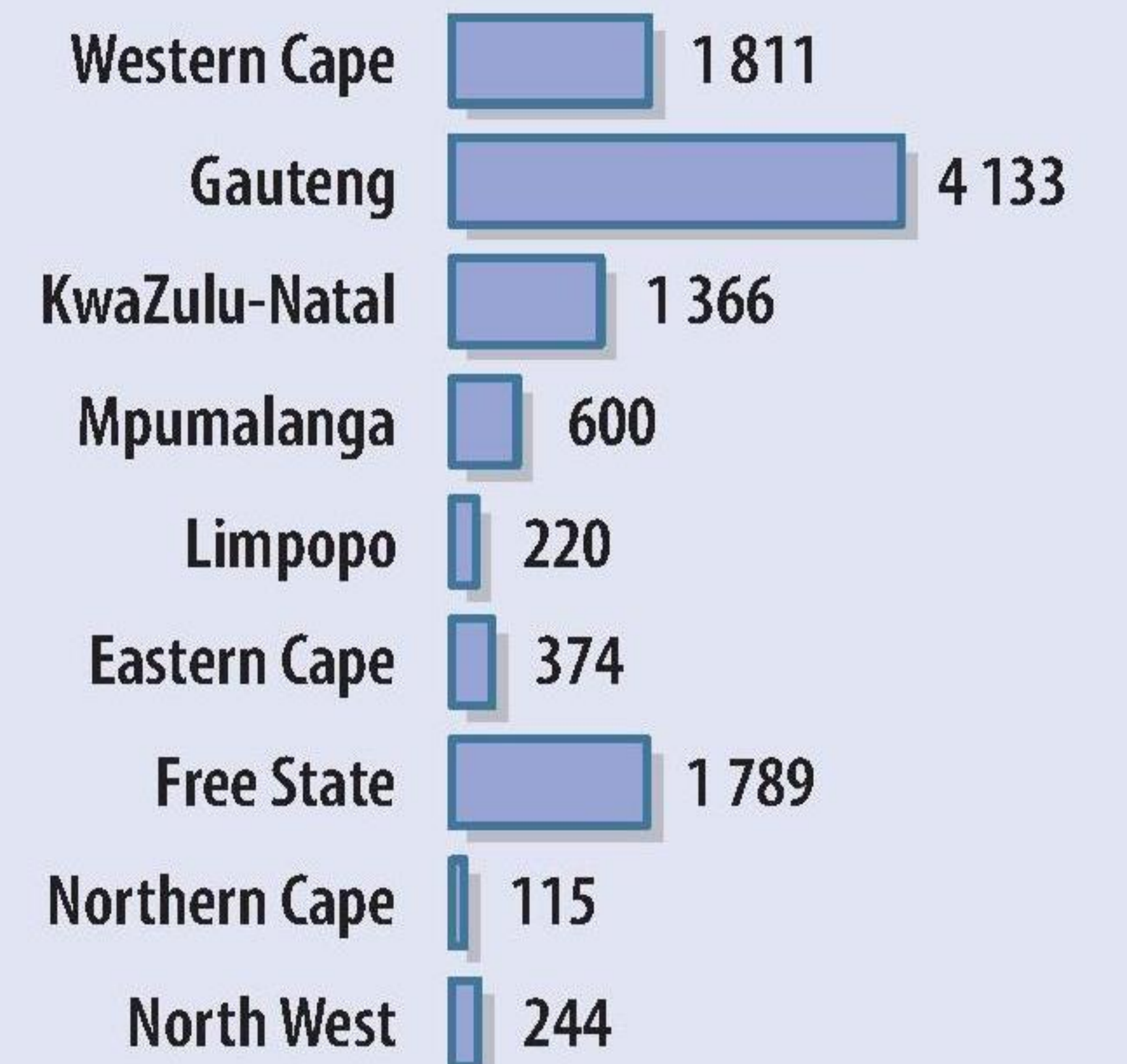
### High vs low peak daily demand for beds



### Number of tracers



### Number of contacts traced



The 13 488 tracers in SA have traced a total of 10 652 contacts and 456 074 people have been screened for Covid-19

Graphic: JOHN McCANN Compiled by: M&G DATADESK Data source: DEPT OF HEALTH

To stop transmission of the virus, people in close contact with someone who has Covid-19 are traced so that they can be tested

### Contact tracing by province

# Covid-19: Why buying time was vital

100 000 tests. 600 000 people screened. And an increase in daily tests to 30 000 — inside what the state is doing with the time the lockdown bought

### MG Data Desk & Athandiwe Saba

It took South Africa 10 days to get to its first 100 Covid-19 cases and two days to double that. The trajectory was on a significant incline and some unpopular decisions had to be made to ensure the country did not end up with hundreds of thousands of cases. President Cyril Ramaphosa declared a lockdown, which has now been extended.

Now, as the country hits the 40-day mark after the first Covid-19 case was announced, stringent lockdown rules are in place and government arms are reiterating the same point — “We have bought some time.”

That time should allow the number of the number of tests conducted each day to grow from about 3 000 to

30 000. This will mean that, 40 days after we dramatically increase testing capacity, 1.2-million people will know their Covid-19 status.

The head of the National Health Laboratory Services, Dr Karmani Chetty, told the *Mail & Guardian* they should have the capacity by next week, using the testing kits that will take 45 minutes to produce results.

This means the country has bought some time to increase the capacity to screen, test and hospitalise people if necessary in the next six months.

Other measures that have been taken, according to a report handed to the portfolio committee on health last week, include:

- Increasing the screening capacity to more than 1308 teams nationally;
- More than 11 000 people conducting screening tests;

- A total of 1 644 planned quarantine sites;
- 67 mobile testing units in the country; and
- Ensuring that until September the country has more than 19-million protective aprons, 56-million surgical masks and 5.7-million sanitisers.

These measures will protect healthcare workers — which Health Minister Zweli Mkhize said this week was crucial — as well as help to decrease the numbers of people each person with Covid-19 can infect. Speaking earlier this week, Professor Salim Abdool Karim, the chair of the ministerial advisory group on the pandemic, said globally a person with Covid-19 infects up to three people on average. This has dropped to near to one in South Africa.

Karim said that if the daily increase of people testing positive dropped below 44, there was an argument for easing the lockdown. That number is currently about 68.

Without mass testing, the government cannot know if and how the

lockdown is working.

In the first week after the first patient was diagnosed with Covid-19 the country was testing on average 315 people a week. This past week, 21 days after the lockdown was announced, there have been, on average, 3 652 tests conducted every day.

The National Health Laboratory Services' Chetty said: “Currently we have indicated that we can do about 15 000 tests every day. To date, we have screened more than 617 000 people and about 7 000 have been referred for testing, and this will be increasing.”

Chetty said that not many countries have conducted this kind of massive community screening, and that it's an impressive feat by South Africa. “If we can detect more positive cases, take the appropriate actions, isolate the individual, then we can prevent the massive community transmission. We can be effective in bringing down the epidemic curve and we want to keep it going downward. It's a big task.”

When the government reaches its target of 30 000 tests a day, after 40 days, about 1.2-million people will know if they are Covid-19 free or not. This is about 2% of the population.

Chetty explained that their hope is that they get to a stage where more people are screened, but fewer referred for testing. “We want to see the positivity rates decreasing. We want to screen many more, but fewer people with the symptoms. That'll mean we are getting on top of the epidemic.”

Winter is, however, an additional headache as people with cold and flu symptoms can confuse the basic screening process. “By June, we will see more people with symptoms, but we will need to differentiate what it is,” she said.

Internationally, the gold standard for testing currently seems to be South Korea, with a population of about 51-million, which in February saw its cases spike to more than 7 000 in 20 days. About 10 000 people have been infected in the country to date with 229 deaths. South Korea has arrested the increase, slowing it down to about 2 000 cases in 30 days.

The country has tested more people than many other countries. According to *Deutsche Welle*, South Korea has tested 5.6 in every 1 000 residents. The country has pulled out all the stops, testing more than 500 000 people through the drive-through testing points and opening numerous checkpoints and tents, where anyone and everyone can get tested.

In South Africa, more tests are being ordered and the Chetty said that the government is now doing more tests than the private sector.

With two weeks of the lockdown remaining, the likes of Chetty's team and the health workers conducting screenings have a big task ahead to ensure as many people are screened and tested. This will ensure the pandemic curve continues on a decline and we have fewer than 44 people testing positive every day.

## Understanding SA's curve

Dr Anban Pillay, acting director-general at the department of health, said in his briefing to the portfolio committee on health that South Africa's epidemic curve is quite different, in that until we got to about 1 000 cases, it followed the same exponential increase as in other countries, such as the United Kingdom, Italy, Spain and the United States.

But two weeks ago this changed. “There are questions as to why, because there is almost no other country that is experiencing this ... where you get to about 1 000 cases and it starts tapering off,” said Pillay.

He added that in other countries, the number of cases seems to continually increase, which is why they have such a large number of people requiring healthcare.

“One explanation is that we are not testing enough ... Another explanation is that we are testing enough, but we are not testing the right people. As the flatlining occurs, there was a steady increase in the last two weeks in the number of tests being done by the NHLS [National Health Laboratory Services] ... So it is probably not entirely due to insufficient testing.” — *Athandiwe Saba*

Widespread and intensive testing is vital because it helps the government to find where the sick people are, but also where to direct resources. For instance, according to the department of health, there are more than 72 000 health professionals in KwaZulu-Natal, with an estimated population of 11.3-million, but only 24 000 in the Eastern Cape, which has 6.7-million people. If the number of Covid-19 cases surges in the latter province, the department of health needs sufficient information to know where to direct resources and this happens when more tests are conducted.

According to the National Institute of Communicable Diseases, there have been almost 100 000 tests conducted to date. This is a small number in relation to the population that could have contracted the virus.