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## Soldiers in Milan, Italy, amid the country's coronavirus outbreak

detected per passenger flight, and found that other countries on average detected only a third as many.

South Korea has declared a health “red alert”. Investigators haven’t yet been able to determine the source of many of the country’s more than 900 known cases. On Tuesday, the UN granted the International Federation of Red Cross and Red Crescent Societies an exemption from sanctions on North Korea so it could help the country deal with covid-19.

We also don’t know the source of many of the more than 250 cases in northern Italy, and there are a handful of similarly untraceable cases in seven other countries. Until now, efforts to fight the virus have focused on containment, in which all detected cases and their contacts are quarantined. But when there is enough infection about, people catch it without it being obvious who they got it from.

Once the virus spreads “in the community” this way, containment becomes impossible, as with seasonal flu. That is the “window” Tedros fears is closing.

As containment fails, countries enter the “mitigation” phase of epidemic response, with quarantine replaced by actions such as closing schools and similar “social distancing” measures. This is aimed not at preventing the epidemic, but slowing it, so cases won’t peak so fast that they overwhelm medical facilities.

However, countries that don’t yet have community spread should fend it off by continuing containment, says the WHO. Globally, this approach could buy us more time to develop treatments and prepare countries with weak health infrastructure. ■

## Coronavirus

# Covid-19 goes global

Our chance to limit international outbreaks may be over as the virus spreads in Italy and the Middle East, reports **Debora MacKenzie**

THE global spread of the covid-19 virus seems to have exploded, with outbreaks discovered in Italy and the Middle East, and a surge in cases in South Korea.

Tedros Adhanom Ghebreyesus, the director-general of the World Health Organization, has warned that “the window of opportunity we have for containing this virus is narrowing”.

In fact, it may already have shut. On 21 February, epidemiologists said that we are failing to detect two-thirds of infected people travelling globally, “potentially resulting in multiple chains of as-yet undetected human-to-human transmission outside mainland China”. Some of those chains have now been detected, and many of

these new cases can’t be traced to their source of infection.

By 25 February, Iran had reported 95 cases. This may be an underestimate, as two people who flew from Iran to Canada and Lebanon have been found to be infected. Unless people who exit Iran by air are massively more likely to be infected than those who don’t, it would take 1600 to 2400 cases in Iran to produce two infected travellers, says Gergely Röst at the University of Szeged, Hungary. That would be more than any official count so far in a country other than China.

This is especially worrying, says Andy Tatem at the University of Southampton, UK, as broader travel records show Iran has

“strong connections to countries with weaker health systems”, which might not detect or contain the virus. These include Iraq and Afghanistan, which reported their first cases the day after Iran.

Some countries, such as Singapore, have detected most of the infected travellers

**“We are failing to detect two-thirds of people travelling globally who are infected with coronavirus”**

epidemiologists calculate they should be getting from China. Christl Donnelly and her colleagues at Imperial College London have worked out how many infections Singapore