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COVID-19 testing in Slovakia

The decision of the Slovak Government to test all its adult population for SARS-CoV-2 infection sparked controversy in the country. Edward Holt reports.

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Infectious disease experts in Slovakia have urged the government to abandon plans to repeat nationwide testing of millions of people for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) amid warnings it would be a waste of resources and doubts over its effectiveness. The country made international headlines as, over the last weekend of October, Slovak authorities tested almost all the country's adult population for coronavirus. A total of 3.6 million people—out of an estimated 4 million target population—were tested that weekend with a countrywide positivity rate of 1.06%. Testing was repeated the following weekend in selected areas where the rate had been above 0.7%. The government turned to the plan as a way of trying to halt what it said at the time was an alarming acceleration in the virus spread with an economically costly strict 3-week lockdown as the only alternative.

Prime Minister Igor Matovic announced in mid-November that further nationwide testing would be carried out over the first three weekends of December. But on Nov 25, he said the testing was being postponed. This came amid growing opposition to the plans, including within the government's own pandemic advisory commission of scientific experts who said that while the nationwide testing had been a success, further rounds would exhaust the already stretched capacity of medical workers. Instead, they said that it would be more effective to carry out regular testing of specific high-risk communities, such as in locations with high infection rates, schools, hospitals, care homes, and critical state services.

Pavol Jarcuska, president of the Slovak Society of Infectologists and a member of the commission

who signed the statement, told *The Lancet Infectious Diseases*: "The mass testing was definitely useful in that it took tens of thousands of infected people out of circulation. What needs to happen now is more testing, backed up by contact tracing".

The initial testing at the end of October was hailed by the Slovak Government as the first of its kind in the world. Earlier in October, Chinese authorities tested more than 7 million people in the city of Qingdao over 3 days, but authorities used a process known as "sample pooling" in which residents' individual samples were collected and then processed in batches of ten at a time in a single nucleic acid test. The Slovak testing used antigen tests on each individual. Antigenic tests are not as sensitive as RT-PCR, so they can produce a high rate of false negatives and positives. PCR tests were not used to confirm results, although WHO said antigen tests are only suitable for mass testing in tandem with PCR tests. Critics also point out the daily positivity rate for PCR tests is roughly the same as it was before the mass testing, running at around 17–18% at the time the postponement was announced. Alexandra Brazinova, an epidemiologist at the Medical Faculty of Comenius University in Bratislava, told *The Lancet Infectious Diseases*: "The fact that the positivity rate remains high tells us the mass testing did not resolve the situation once and for all. There remain many undiagnosed cases in the population".

Meanwhile, although COVID-19 hospitalisations plateaued a few weeks after the testing, at the time the PM announced the postponement there was no sign they were falling and some hospitals said they were close to collapse because they were having to treat so many people with the disease.

Despite the opposition repeating the testing, the PM appears determined not to abandon his plans entirely. He cited problems with procuring the 8 million antigen tests needed by the first weekend of December as being behind the postponement. Even if it does not go ahead, the initial testing has played a vital epidemiological role in Slovakia, and for other countries who monitored it closely ahead of potential similar projects in their own states, some health experts outside Slovakia believe. Igor Rudan, Professor of International Health and Molecular Medicine at the University of Edinburgh, said: "I think the first round of testing must have helped in controlling Slovakia's second wave. The broadness of the mass testing approach means it is implausible that it would not slow down the spread of SARS-CoV-2. It will take time to study whether this approach was more efficient and cost-effective than strict social distancing measures. I don't think that other countries will be discouraged from replicating elements of this approach in the future".

Imposing a lockdown after carrying out testing designed to avoid such a scenario could have a profound effect on public faith in future measures to tackle the virus, including eventual vaccine uptake, especially as surveys in Slovak media have shown low public trust in the government's handling of the pandemic. Vladimir Leksa, an immunologist at the Slovak Academy of Sciences, said: "The first mass testing was advertised by the PM as a tool to avoid lockdown. If one is imposed, there is a risk people will lose trust in any government measures and so by the time a vaccine comes around they won't trust what the government says and won't take it".

Edward Holt