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Health COVID-19 Response
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Cabinet Secretary for Health and Sport
First Minister

COVID-19 TESTING AND SURVEILLANCE

Purpose

1. To provide initial advice on our approach to Covid-19 testing and monitoring following the decision to move from containment to delay in response to the outbreak.

Priority

2. Immediate. We understand there continues to be a high level of media interest and scrutiny on this issue and you have sought clarity on our proposed approach.

What is our monitoring and testing regime intended to achieve?

3. During the containment phase of any outbreak, testing and contact tracing are essential in order to ensure individuals who have been exposed are provided with timely advice in order to either isolate (in order to contain the spread) and/or ensure they are provided with appropriate clinical care. This was key for example during H1N1, although this didn't move beyond the containment phase.

4. However, in relation to COVID-19, as we move into the delay phase, testing at a population level becomes less effective and impractical and therefore a different approach to cover both testing and surveillance is often deployed. This approach has three key purposes:

- ensure our testing capacity is directed in the most effective way to protect those most vulnerable and to save lives;
- ensure that the most critical staff in the public sector workforce can be at work; &
- monitor and report on the prevalence of the virus in the population.

Laboratory Capacity

5. We currently have three laboratories (Edinburgh, Glasgow and Dundee) that are fully operational. They are staffed with trained personnel and able to process 780 test per day. The National Laboratory Programme working with HPS Public Health laboratory cell and the Scottish Microbiology and Virology Network advise that current infrastructure within testing laboratories can be maximised. Opportunities to deploy non NHS staff in NHS facilities as well as capacity of private laboratory services to support are being assessed.

Securing additional Capacity

6. HPS have undertaken an exercise to explore the ability to secure additional capacity and details of this are set out within Annex A. If pursued, this would utilise both the existing additional laboratories across Scotland using commercial testing systems that would bring the today daily capacity to approximately 2,500 to 3,000 tests per day. There are significant

issues to procure the testing infrastructure, deliver a quality assured service and ensure solid data flow of results to HPS, but as that work progresses, opportunities for subsequent timely expansion of the service will be developed. Possible future models include further increased capacity across all Boards, deploying private laboratory services or securing additional large scale testing facilities in a limited number of sites to complement provision of ongoing local more rapid testing for critical samples.

7. HPS are well advanced with a digital solution to providing negative test results directly back to the citizen concerned by email and text. This convenient solution, which can reduce some of the workload burden, is dependent on all results, regardless where testing takes place, being recorded in systems that feed into ECOSS (HPS database).

National approach to testing

8. Our approach to testing should be guided by the principles of ensuring our testing capacity is directed in the most effective way to protect those most vulnerable to save lives and maximising the capacity of the critical workforce to be at work.

9. On the former we are proposing to prioritise testing for clinical cases up to a given point on the epidemic curve, specifically for whom the result will influence clinical management and infection prevention. Currently the basis we are working on is the principle of testing all hospital admissions that are suspected of being related to COVID-19 and all ICU admissions where there is an upper respiratory related condition. With the combined impact of all seven interventions (case isolation, household quarantine, social distancing for whole population, more significant social distance for people 70 and over, vulnerable people staying at home, stopping mass gatherings, and closing schools and universities), we anticipate the demand at the peak of the outbreak is estimated to be:

- 8,500 people requiring hospital beds
- 850 people requiring ICU beds

10. However, this would utilise place significant demand given this would utilise almost half of the available capacity of 3,000 tests per day. As the pandemic wave progresses, HPS are of the view that there is less reason to undertake this level of testing in all clinical cases. Their position is that as the outbreak develops, the diagnostic probability increases that even without testing there is a high chance/almost certain probability that presenting cases will have this infection. HPS have indicated that at this point they would move to sampling a statistical proportion rather than all of the hospital cases. This would free up resource during the most rapid upswing in the epidemic curve and likely happen prior to reaching the peak outlined in the above table.

11. If our aim is ultimately to contribute to saving lives then we will not be able to limit testing to hospitals. A substantial proportion of those who are likely to be infected by the virus will remain in a community setting, in particular care homes. Colleagues in HPS are currently modelling this demand. What we know is that there are 35,989 residents in 1,142 care homes. Testing a significant proportion or all of these residents would significantly exceed the available capacity in laboratories.

Maximise the capacity of the critical workforce to be at work

12. There has been a very widespread call for testing, not only for those most at risk in a clinical setting, but also for those who are most critical to our public services. The impact