Summer push towards elimination of COVID-19 in Scotland

Key messages

1. Scotland is now in a strong position to eliminate the COVID-19 virus. Elimination is the process of moving towards zero infections, and one where we expect to see future cases to be imported, but if these are identified quickly, traced and all exposed isolated, can facilitate a return to a largely 'normal' daily life for most.
2. The daily rate of new infections is low, transmission rates have been brought down to R<1 and PCR testing capacity has been ramped up dramatically, to the extent that we currently have significant unused capacity.
3. This provides a short but crucial window of opportunity to push towards elimination of the virus over the summer months so that Scotland is in the best position possible before we enter autumn and the anticipated second northern hemisphere wave.
4. This would require an immediate and urgent change in strategy to start testing essential health and social care workers on a weekly basis as detailed below. We need to aggressively identify who has the virus and try to also isolate those who could be transmitting the virus in a pre-symptomatic phase.

The case for pushing towards elimination

1. This virus is too dangerous to let spread through a population unchecked; not only because of health services capacity, but also because of the morbidity it entails as well as the overall mortality
2. We cannot stay in lockdown forever, or even until a vaccine is developed. We cannot expect people to shield indefinitely, nor have children denied access to education for any longer. Shops/restaurants/pubs need to open, social and economic activity needs to resume. 1m v. 2m misses the larger issue which is that most restaurants/pubs will not be financially viable at either, and children need to play and interact together closely. Society and the economy can only resume when the virus is no longer a lurking threat.
3. We need to find the 'least worst' path out of this. Complete lockdown is not possible, but test and protect will be stretched as soon as winter hits and flu symptoms rise which are the same as COVID symptoms. It is already hard for hospitals to discern where to place patients given speed of testing is too slow. The system might manage in the summer but will struggle in the autumn - and we need to avoid a second lockdown next winter.
4. More and more countries are trying to suppress the virus to a low level, and where possible, eliminate it; not only New Zealand, but also Australia, Thailand, Vietnam, Faroe Islands, Iceland, and Fiji, and other countries in E. Asia will follow.

5. Ramping up testing requires enormous work and logistics, but the prize of speeding up return to 'normal' life is worth it. There is a narrow time window to do this before schools re-open and seasonal infections rise. Ireland is also moving in this direction. Countries that have eliminated the virus can form a joint travel bubble as already being discussed by Faroe Islands and New Zealand, and other countries.
6. Testing is only one part of the overall strategy and continuation of other interventions such as banning mass gatherings, handwashing and environmental disinfection are important too. Shielded and elderly groups need to be given continual information and advice so as to inform their daily decisions.

Scotland's current position

1. We are **currently performing 5,253 tests daily on Scottish residents***

   - 4,200 performed by NHS laboratories
   - 1,053 performed by the Glasgow Lighthouse Laboratory

2. The groups already being tested are:

   - All symptomatic suspected cases >5 years of age
   - All symptomatic healthcare workers, social care workers, care home residents and prison inmates.
   - Patients over 70 years on admission to hospital
   - Care home residents on discharge from hospital
   - Care home residents on admission from the community
   - All (linked) care home residents and staff if one positive case detected
   - Asymptomatic general population surveillance

   *data based on 17 June 2020

Scotland's testing capacity

1. Our **total daily testing capacity in Scotland is currently close to 30,000.**

   - 9,362 (weekdays) and 7,829 (weekend days) in NHS laboratories
   - 20,000 in the Glasgow Lighthouse Laboratory

2. The Lighthouse Laboratory in Glasgow currently has unused capacity of more than 10,000 tests/day (based on maximum daily usage of 8,447 during May). * The NHS laboratory mean daily unused capacity is 2,788. Therefore, **the total unused test capacity in Scotland is currently 12,788 tests daily.**

3. The total turnaround time (from patient swabbed to result available) is <48 hrs for 99% of tests. The Lighthouse Laboratory is expecting to

achieve a target of 24 hours total turnaround time by the end of June. Reducing this further is outside the control of the laboratory as sample collection and transportation is handled by Deloitte.

4. The Lighthouse Laboratory in Glasgow is planning a significant ramp-up in capacity during the summer. Liquid handling robots are being introduced incrementally through July 2020, adding additional capacity as they come online, and reaching a maximum 50,000 tests per day from the second week in August.

5. Therefore, by middle of August **the total Scottish testing capacity is expected to reach 60,000 tests/day** which equates, based on current usage levels, to **total unused capacity of 42,788 tests/day**

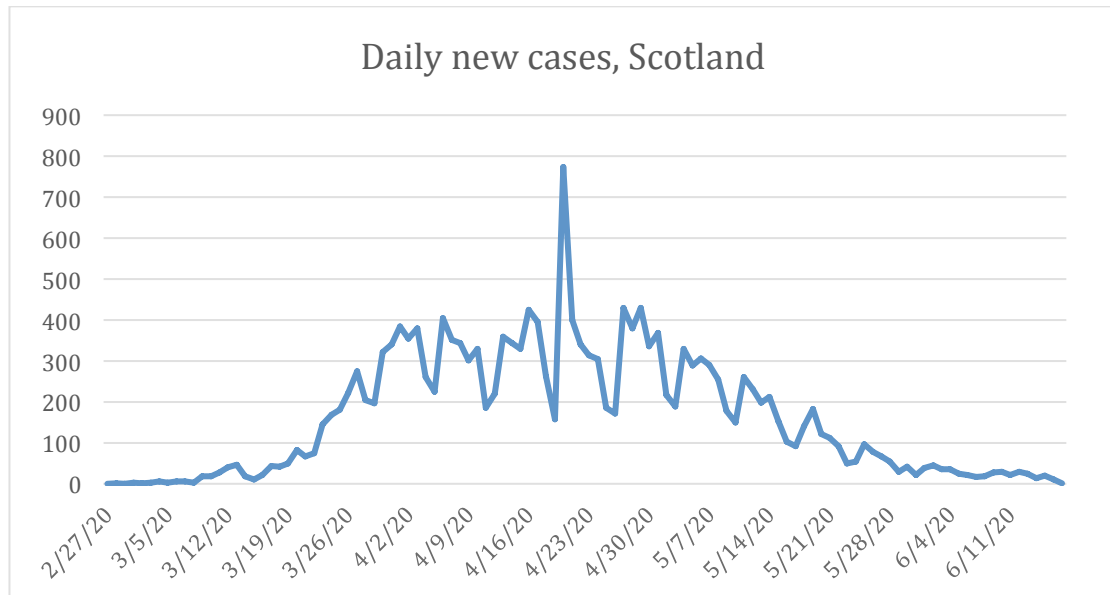*some Glasgow Lighthouse Laboratory capacity is used for non-Scottish residents

Actions required

1. We are now actively case-finding. The current policy is to test everyone with symptoms suggestive of COVID-19 who is over the age of five years. However, anecdotal evidence suggests that many people with COVID-19 related symptoms are not being tested. Greater efforts are required to inform the public that:
   • the policy has changed,
   • we now have sufficient testing capacity,
   • anyone with COVID-19 related symptoms, even if mild, should present to the NHS, and
   • being tested relates not only to protecting their personal health but is also part of their civil responsibility to protect others.

2. Using uncommitted testing capacity for untargeted testing of asymptomatic people is not appropriate. At this time, when the background infection rate is low, the number of true positives identified will be low. Rather, we need to target groups know to be at higher risk of exposure. The additional groups that should be tested are:

   • Weekly testing of elderly care home staff (6,590 tests/day)
   • Weekly testing of elderly care home residents (3,032 tests/day)
   • Weekly testing of healthcare workers (23,701 tests/day)

3. These three groups would **increase the demand for testing by an additional 33,323 tests daily** and **bring the total number of tests performed on Scottish residents to 38,576 tests daily**. This is slightly over our current testing capacity but is well within our target test capacity for middle of August. Therefore, steps to extend testing to these groups should start now.

Monitoring imported infection

1. Scotland needs to have a strict policy of quarantine for all international arrivals at airports and ports. This is similar to what other countries in a similar epidemiological position have done, but there can be exemptions for countries that are largely COVID-free (travel bubble)
2. Scotland has a border of 96 miles with England (compared to 310 miles of border between N.Ireland and Ireland). Northern Ireland and Ireland are arriving at a common position with N. Ireland setting up its own testing and tracing system and deviating from Westminster policies. Ireland has taken a generally sound public health strategy based on WHO advice. They are working towards a 'Zero-COVID' joint policy.
3. Controlling individual movements across the border will be very difficult, but can be supported through aggressively testing and tracing in the borders.

Appendix:

Daily new cases, Scotland

Daily people testing positive as a proportion of daily number of people tested for COVID-19

Testing Capacity per Day Reported by each Health Board

Health Board	Δ	Δ	Δ	Ε	Ζ	GIG	G.R.R	Κ	Δ	Λ	Σ	Σ	Σ	Τ	Υ	Ψ	Δ	Total
Weekday Testing Capacity	236	36	258	100	470	2714	36	600	100	626	1310	56	80	420	64	1000	266	1000	9342
Weekend Testing Capacity	236	36	258	100	470	1425	36	600	72	626	1110	40–Sat 10–Sun	80	420	64	1000	266	1000	7829

Sample Testing Capacity Plan