

FM / SG CMO Covid 19 Advisory Group Briefing – Test, Trace Isolate Support, Friday 08 May 2020

Actions:

| Action | Owner | By | Comment |
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| CMO Advisory Group to check/assure Scottish Government plans | Dr Andrew Morris | Ongoing | FM commented that she had found this meeting very helpful and would be grateful for the assistance of the Advisory Group in assuring plans in the future |
| Aziz Sheikh to share interdependency slide pack with the group | | COMPLETE | Dr Morris explained that Aziz had obtained a slidepack from America that FM might be interested in seeing if it would be permitted to share it |
| FM Briefing to be held every Friday,– Subject of meeting to be decided by FM | FMPO / SGORR | Ongoing | <p>FMPO has agreed to following suggested by Head of SGORR:</p> <ul style="list-style-type: none"> • Regular Friday afternoon briefing slot (exact time will be determined by FM commitments) • FM to choose subject but will principally relate to scientific updates provided by Andrew Morris and the CMO Advisory Group (We will entitle these FM CMO Advisory Group briefing on xxxxx) • The FMPO notify SGoRR and Policy leads as early as possible on the subject matter to enable preparation for material and delivery • Slot may be used for other FM briefings (non SAG) if this time suits FM's purposes • Material should be classified "Official – Sensitive" • FMPO to diary call with SGORR every Monday for liaison on topic and timing |
| Andrew Morris and Aziz Sheik to provide advice on data structure and information | Dr Andrew Morris Aziz Sheik | Ongoing | To be considered for future FM brief and / or submission of paper on the subject |

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| governance to support the Scottish Government COVID 19 efforts | | | |
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TTIS

Summary of key points in discussion. Please also refer to slidepack.

Dr Morris set out overview for session:

TTIS essential if changes to be made to restrictions

Look at:

- Mapping in Scotland
- International comparisons
- Key scientific advances

Lot of work to build capacity for scale of TTIS that is required.

FM welcomed that and asked if there were any issues not currently included in TTIS planning?

Mapping in Scotland

1st Slide – Concerns 4 phases of what might happen when restrictions are relaxed and drives home why effective contact tracing is so important. If you don't contact trace you will see a rebound in the R rate.

Contact tracing needs to trace as close to 80% of contacts as possible to be highly effective
Could be up to 20 contacts per case

Lockdown phase looking to get as low a rate of incidences (new cases) as possible – contact tracing is much easier if we have 100 new cases each day rather than 1,000.

Remember we will see regional variations.

Mary Black talked through the evidence base. The left hand side of Slide 3 detailed a number of things that we normally know about a given virus, but we don't necessarily know yet for Covid19 but don't yet e.g.

- Is it stable – are mutations likely (since mutations are problematic for vaccines)?
- We do know that it has a high transmission rate – this is important for contact tracing, because while we can contact trace if $R > 1$, it is less effective. We also know that transmission is higher in closed setting so you get clusters of cases, which will become more apparent as community transmission declines.
- The virus may become less severe over time.
- Deactivated in sunlight.
- May be seasonal
- Highest transmission rates in closed settings – care homes, pubs, families
- Most cases are asymptomatic or mild
- May come in waves
- PCR Test is very reliable
- Antibody tests should be available in 2 months, but we don't know if a positive serology report demonstrates anything other than previous exposure to the virus. Even if it does confirm immunity, we don't know how strong immunity could be – may catch it twice.
- Vaccine only solid way out.

Implementation Science

For contact tracing to work we know that public perception and trust is key. Government need to be transparent, prepared to admit mistakes, need people with us to follow measures. Strategies will need to evolve as knowledge develops so vital to keep public on board.

A positive is that Scotland has tried and tested health protection teams. Connected systems in Scotland unlike other home nations.

Proximity Apps are interesting but not yet reliable and benefits are unknown? Need to improve efficiency.

Evolve as you learn – from own work and other countries work and adapt to the virus & testing. Footprint for emergency service persists. Pressure to go really fast, but just as important to build for the longer term.

Jill Pell mentioned a risk to current strategy with respect to asymptomatic carriers. Contact tracing will result in asking people with no symptoms to self-isolate. Those without symptoms are asked to self-isolate for twice as long (14 days) as those with symptoms (7 days). There are 3 groups that will struggle with this:

1. Those with practical / economic / financial pressures
2. Those that may not want to comply – need to think carefully about how we approach this both with education and incentives (both positive and negative incentives)
3. Essential workers – it will remove key workers from being able to work

Known to Work

Control Plan really important must involve contact tracing.

All stakeholders need to be on-board

If any changes say why – clear line of sight is essential. Who is responsible for what? Remember that in Contact tracing- no one size fits all. E.g. what works in Scottish islands not suitable for urban settings? Shared parts of service but local delivery.

Potential risks – isolating for 2 weeks has practical and financial implications so some people will not want to comply.

If don't comply with mandatory - forcing to comply?

FM: Big challenges here – how to get public consensus and cooperation?

Need to take public on journey with us to get sufficient buy in. In my view the proximity app sounds hopeful but I'm sceptical – there are so many unanswered questions. That's why I think we should build system that doesn't rely on proximity app.

Proximity App

Mary Black: Interest & Alarm in equal measures. New technology, not contributed much yet, is promising.

UK Proximity app is a centralised model. We know that public don't like centralised models of data collection. Germany closest to our situation and has now moved to using decentralised model. International passporting is also going to be important to us, and we expect global standards are likely to involve a decentralised model.

Development of a proximity app is inevitable. It could be useful in future but has not been tested, and creates an expectation in people. The privacy issue is very important. Scotland needs to be prepared to dock with it if it shows value, but is likely to create lots of false positives (e.g. phones registering contact between individuals separated by physical screens etc)..

Review of successful models of TTIS

Strategy behind testing methodology. Use systematic individuals to catch asymptomatic individuals.

South Korea – Isolation is mandatory. Government incentivises people to stay at home, fines if leave home. Monitoring by health services. Challenges similar globally.

Lessons from East Asia

Break chains of transmission. Constant surveillance. Sharing data. Monitoring boundaries. New normal face masks, temp checks. Lockdown used sparingly. Buy time till elimination, vaccine or natural immunity. But East Asia facing new clusters from imported cases.

Steps in Scotland aligned with rest of world.

Scotland is well placed to do well: Scotland has small population, not far off where need to be with testing - Need to test 100 people for every confirmed case. High levels of trust in FM & SG.

FM – Has one country got best approach to learn lessons from?

Hard to copy other countries exactly but look at Taiwan, New Zealand & South Korea. However, all had tight border controls which are harder to manage in Scotland,
FM: I'm interested in the idea of incentives to get people complying with isolation.

Isolation

Aziz Sheikh: Look at incentives & fines to deal with isolation. Devi Sridhar –messaging is key - Instead of quarantine everyone, we would just be quarantining those with virus. Need to maintain willingness to comply. Could consider incentivising by quarantining combined with promise of follow-up by NHS (if appropriate –also about wider package of support). Could involve 3% of population at any one time. Could be same groups affected more than once – some occupations or lifestyles can't or choose not to observe social distancing. Less privileged find it more difficult to comply. Need to educate and enable people, Police Scotland 4 Es approach of explaining, encouraging and only enforcing as a last resort has been very effective. Compare with France where police took a strict enforcement approach to isolation that has led to rioting. Enforcement should only be very last resort.

Ms Freeman: – How important is the link between isolate & treat by NHS?

What's your view about speed we turn around tests?

Aziz Sheikh: Turnaround time very important, ideally 4 – 8 hours turn around (Far East countries have done this).

Mary Black: Countries that have done isolate & treat – its more about staying in contact, and ready to escalate quickly if gets serious. We don't have an effective treatment yet, so it's within the package of effective support that you must write into your plans. If you see someone who is very ill in the contact tracing system you must be able to get them straight back into the emergency services path.

There is less shielding in other countries – shielding makes isolated people more isolated/vulnerable.

Testing

South Korea have had very low levels of healthcare workers contracting it - frequent testing keeps numbers down.

Asymptomatic carriers almost 5% more in non COVID areas in hospitals than in Covid areas.

Hospitals, care homes, areas where people cluster more chance of transmission. The main thing is to expect this – it becomes very obvious once community transmission declines. There is a gap in the pathway where health care workers are treated differently. We should make sure that healthcare workers can get quick tests.

David Crossman: Emerging size of problem of asymptomatic cases being increasingly appreciated. Large percentage of cases asymptomatic – some will remain asymptomatic others will become symptomatic.

Plan only to test on a risk base- if consider asymptomatic. Cases will increase risk base & testing, especially in health care workers. Expansion could lead to eye watering numbers to be tested. There are some ways around e.g. by pooling samples.

Currently has slow mutation rate – around 2.5 mutations per month which allows the fidelity of the PCR assay to be assured.

Genome testing can fingerprint & tell us where virus originated, e.g. Shetland 2 people arriving from Italy.

Antibody testing - Proven previous infection useful for disease tracing. However we don't yet know whether serology is a marker of immunity or just of prior infection, but it is useful in testing prevalence of infection.

Antibody test available commercially by end of June and is likely to be sold direct to employers and the public. This will be out with government control and could be disruptive to messaging. .

FM:

A – Is it possible to give any idea of longevity of immunity?

B – How confident are we that antibody tests will be available?

B - Reasonably high level of confidence in antibody testing.

A – Don't know at this point. Viruses are killed by T cells and by antibodies. Don't know which is the key bit for Covid 19. We also don't know if the people who have had mild cases have had a stronger T cell response and a weak antibody response. 4 other coronaviruses that cause the common cold are known to change themselves. My personal view is that it is likely to be protective for a bit but we don't know if that will last beyond a year.
Don't plan for immunity.

Need public buy in.

Steve Reicher: Public is not one homogenous group. Young men, ethnic minorities, lower socio-economic groups have most issues with compliance. These groups may have issues with giving info on contact to authorities – need to work on this to promote how will help your friends/associates and that info will only be used for this purpose.

Look at high profile group of advisors who can message hard to reach groups.
Looking for assurance that links across UK can be strong as possible.
Align with other UK nationals.

Are all UK Nations taking similar approach?

All following WHO European centre of disease guidelines.

4 Nations in many cases taking lead from Public Health England (not Ireland)

We don't have the same delivery mechanisms and systems are not fully aligned, but need to follow up cases across borders.

Success dependent on aim of each nation – there are differences between SG and UKG here, with SG aiming for containment & England capacity driving cases down, which may cause tension.

Final points:

Information governance

Aziz Sheik: We have fantastic data infrastructure in Scotland but haven't got appropriate information governance sorted so we are falling behind Wales and England.

Andrew Morris: I would be happy for the Group to come forward with specific advice on that.

FM: That would be very helpful.

David Crossman: Movement of people an issue. People will decide whether or not to download tracing app.

Data systems need to flow both within Scotland & throughout rest of UK to deal with people movement.

Andrew Morris: Any changes should be made in series not parallel, since all sectors are interdependent so a small change in one will create a ripple effect in others
Schools & Hospitality most difficult sectors regarding lifting restrictions. Looking at different age ranges regarding return to schools, but that will also have implications for the workforce and a possible ripple effect

FM Thank you. This has been a really helpful meeting and provides reassurance that we have the right issues under consideration and are building the right stuff. I would be keen for this group to continue to check and assure our plans.

Aziz Sheik offered to share a slide pack from Massachusetts setting out some interesting data on contact tracing approaches.

Meeting concluded with agreement to hold a regular FM / SAG briefing each Friday on a subject to be decided by the FM.