Building on the Science Legacy of COVID-19 in Scotland

Annex 2

Questionnaire analysis

Significant capability and progress tackling the pandemic

Strength of academia

Good academia/government/industry collaboration

Impetus for collaboration – common goal cutting across disciplinary and institutional boundaries

Reduction of barriers to research

> *"Scotland has offered a disproportionately large contribution to UK COVID-related science. Its willingness to pivot towards the pandemic and collaborate was exemplary, not least with public service organisations in the population health realm."*

1. Priority areas

Agreement that these areas are important, no significant new themes or changes

Viral testing, processing and sequencing

- Flexible clinical diagnostic testing capacity for a broader range of targets
- Rapid development and deployment of tests, clinical procedures and pharmaceutical treatments
- Automation of processes
- Local capability for testing
- Future genomic companion diagnostics
- Repurposing of capacity and infrastructure post-pandemic

2. Data-enabled clinical trials

- COVID-19 at expense of other trials
- Academic culture and perverse incentives
- Barriers: lack of consistency of how data is recorded across health boards, access to data for commercial companies
- Opportunity to develop trials infrastructure for the future
- Ensure that trials can deliver real-time clinical data
- Validate accuracy of trials promoting their utility

3. Population health and outcome data

- Focus on COVID-19 at expense of other studies
- Reduce barriers and delays to access to population health data
- Use data to plan future responses
- Link to other nations across the UK
- Invest in interoperability and in revealing gaps in data
- Include modelling

4. Collaborative, interdisciplinary working

- Communication with strategic leadership and government
- Public, academic and private sector agreement surrounding data management
- Collaboration between NHS and industry
- Open sharing of data and experiences across disciplines
- Value of collaborative research projects and working

5. Science communication with the public

- Much improved through pandemic
- Emergence of "specialist communicators"
- Regular updates in understandable language and transparency
- Address public distrust and misinformation
- Include private/voluntary sectors, and schools
- Explore link between communication and actual achievement of behaviour change
- Potential exclusion of vulnerable groups

Additional areas and missed opportunities (1)

- Missed opportunities surrounding non-COVID-19-related research
- COVID-19 recovery: coping with backlog and impact on routine care provision
- COVID-19 therapeutics
- Relationship of COVID-19 with other diseases
- Long-term studies on risks of COVID-19 infection
- Building public trust in health data
- Scaling up innovations that work across Scotland

> *"Many Scottish sites were able to recruit well to a broad range of COVID-19 studies, but that was only possible because non-COVID research was paused and all Clinical Research Facilities resources were devoted to COVID research. "*

Additional areas and missed opportunities (2)

- Secondary data analysis of COVID-19 datasets
- Social and behavioural science surrounding COVID-19
- Health and social inequalities
- Sustainability of established systems and processes post-COVID-19
  - Strengthening preparedness
  - Implications and learning for future programmes
  - Maintenance and/or repurposing of infrastructure

> *"There is a need to address other important health issues which are prevalent in Scotland, including cardiovascular disease, substance abuse etc. using the same and enhanced infrastructure."*

Success factors

- Consistent leadership and sharing of lessons
- Continued engagement of research community and public
- Increased visibility of scientific community
- Interdisciplinary collaboration across sectors
- Investment in research, interdisciplinary working, skills, networking
- Streamlining regulatory processes

> *"Ensure adequate resourcing of research and try to slim-down regulatory processes that wastes so much time and energy."*

Conclusions

- Concerted resources and flexible responses - significant benefits at pace
- Priority areas were reinforced as key areas going forward
- Some unintended consequences
- Carry forward positive parts of the legacy:
  - Maintenance and repurposing of infrastructures
  - Knowledge sharing across stakeholders and sectors

scottish science advisory council

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