



Tithe an  
Oireachtais  
Houses of the  
Oireachtas

# Tuarascáil Eatramhach maidir le Tástáil agus Rianú An Coiste Speisialta um Fhreagra ar Covid-19

Lúnasa 2020

## Interim Report on Testing and Tracing Special Committee on Covid-19 Response

August 2020





**Tithe an  
Oireachtais**  
**Houses of the  
Oireachtas**

**Tithe an Oireachtais**

**An Coiste Speisialta um Fhreagra ar Covid-19**

**Tuarascáil Eatramhach maidir le Tástáil agus Rianú**

**Lúnasa 2020**

---

**Houses of the Oireachtas**

**Special Committee on Covid-19 Response**

**Interim Report on Testing and Tracing**

**August 2020**

**33 SCCR 003**

**TABLE OF CONTENTS**

**Contents**

TABLE OF CONTENTS..... 2

CHAIRMAN’S FOREWORD .....3

SUMMARY OF RECOMMENDATIONS..... 6

    Section 1: The importance of testing and tracing..... 6

    Section 2: Detailed test and trace planning..... 6

    Section 3: Capacity and turnaround times ..... 7

    Section 4: Travel testing and tracing..... 8

    Section 5: Healthcare staff..... 9

    Section 6: The app..... 9

1. Introduction ..... 11

2. Evidence From Committee Meetings And Submissions ..... 12

    TABLE 1 – WRITTEN SUBMISSIONS ..... 12

    TABLE 2 – MEETINGS WITH STAKEHOLDERS ..... 13

3. The importance of testing and tracing..... 15

4. Detailed test and trace planning..... 17

5. Capacity and turnaround times ..... 20

    5.1 Turnaround time ..... 20

    5.2 Supply of tests..... 21

    5.3 Cost ..... 22

6. Travel testing and tracing: ..... 24

7. Healthcare staff:..... 26

8. The app: ..... 28

Appendix 1: Terms of Reference ..... 31

Appendix 2: Committee Membership..... 33

## CHAIRMAN'S FOREWORD



**Michael McNamara T.D.**

I welcome the publication today of the Special Committee's Interim Report on Testing and Tracing

As the report outlines, a robust system of testing and contact tracing is central to allowing the phased reopening of commercial and social activity, the majority of which were closed during the shut-down in March.

Its effectiveness will depend in part on the implementation of other controls, in particular hand washing and maintaining an adequate distance from others in social settings.

The Committee understands that the system that was put in place in March was done in a hurry and a lot of contingency measures had to be taken given the risk of a pandemic sweeping the State. Because of the efforts of all our people, those measures were not needed, however, what became clear to the Committee is that another lockdown would be unsustainable. Testing and contact tracing will allow the State to live with and treat outbreaks of Covid-19 as they arise.

A number of new testing and tracing measures will be put in place later this month and will have to be kept under review.

Finally, we will need a system that has capacity to deal with a sudden surge in demand which will happen if we get a flu epidemic in the Autumn given the overlap on symptoms between the flu and Covid-19 and our already over-crowded hospitals and A&E Departments. These issues are also highlighted in the report.

I want to thank the stakeholders who engaged with the Committee, Members of the Committee and the Secretariat for their work on this issue.

I commend the report to the Dáil.

A handwritten signature in black ink that reads "Michael McNamara".

Chairman

5<sup>th</sup> August 2020

MEMBERSHIP OF SPECIAL COMMITTEE ON COVID-19 RESPONSE



**Colm Brophy,**  
Fine Gael



**Colm Burke,**  
Fine Gael



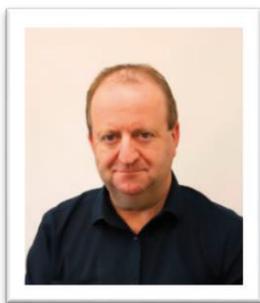
**Mary Butler,**  
Fianna Fáil



**Jennifer Carroll MacNeill,**  
Fine Gael



**Matt Carthy,**  
Sinn Féin



**Michael Collins,**  
Rural Independent Group



**David Cullinane,**  
Sinn Féin



**Pearse Doherty,**  
Sinn Féin



**Stephen Donnelly,**  
Fianna Fáil



**Norma Foley,**  
Fianna Fáil



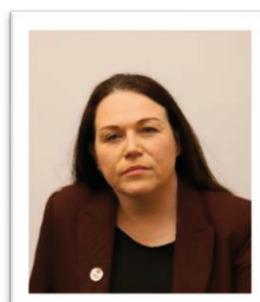
**John McGuinness,**  
Fianna Fáil



**Michael McNamara,**  
(Chairman)  
Independent Group



**Fergus O' Dowd,**  
Fine Gael



**Louise O' Reilly,**  
Sinn Féin



**Matt Shanahan,**  
Regional Independent Group



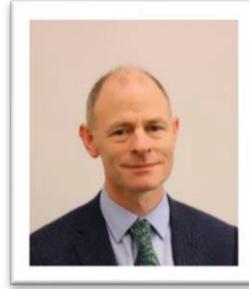
**Róisín Shortall,**  
Social Democrats



**Bríd Smith,  
Solidarity / People  
Before Profit**



**Duncan Smith,  
Labour**



**Ossian Smyth,  
Green Party**

## SUMMARY OF RECOMMENDATIONS

### Section 1: The importance of testing and tracing

#### Recommendation 1:

It is apparent that many people are not attending for testing after being identified as contacts of confirmed cases. The State must respond more vigorously to do this to ensure that being tested in such circumstances is understood to be a mandatory public health responsibility.

### Section 2: Detailed test and trace planning

#### Recommendation 2:

The detail of the HSE’s August test and trace plan will be crucial to public health outcomes. The Committee recommends that this plan should include ambitious targets on testing capacity and turnaround times, with matching investment in healthcare facilities, including isolation rooms. Implementation through regional specialist networks should be considered for the plan.

#### Recommendation 3:

The potential for hospital overcrowding to negatively impact on virus containment is a serious risk. The Committee recommends that limiting hospital crowding needs to be addressed within the test and trace plan, and that any investment which could help to resolve the issue be deployed.

#### Recommendation 4:

The Committee recommends that the HSE’s target turnaround time for end-to-end testing should be at most one day.

**Recommendation 5:**

Alternative channels for accessing testing and tracing should be made available as part of the plan for people who are unable to avail of voice calls (e. g. people who are deaf).

**Recommendation 6:**

The Committee recommends that detailed anonymised data about infections – including geographical and demographic information – should be made public as quickly as possible, and that this practice should be provided for in the official plan. This will help to inform public safety.

## Section 3: Capacity and turnaround times

**Recommendation 7:**

Acute settings have a faster median end-to-end turnaround time than the community healthcare sector. The Committee recommends that solutions which can bridge this gap and shorten test and trace time from first presentation in the community sector be aggressively pursued.

**Recommendation 8:**

The Committee recommends that the HSE explore utilising existing testing channels between GPs and laboratories for the use of Covid-19 testing to quicken testing time. If this is not a viable solution for Covid-19 testing, the reasons should be stated clearly.

**Recommendation 9:**

The Committee recommends that the importance of seeking testing early in onset of symptoms should be emphasised in public health messaging.

**Recommendation 10:**

The Committee recommends that ensuring a sufficient supply of testing equipment should remain a priority. In addition, the number of testing experts working needs to be maintained at a sufficient level.

**Recommendation 11:**

The Committee recommends that the State should aim to achieve capacity where free at the point of provision protections such as flu vaccines and face masks could be provided, as reduced cost for the public is likely to improve the effectiveness of public health measures.

Section 4: Travel testing and tracing

**Recommendation 12:**

Infections entering the country through travel from overseas is a strong risk. The Committee recommends that all entrants should be temperature screened on arrival, and be tested at least twice (due to the limitations of point-in-time testing).

**Recommendation 13:**

The Committee recommends that mandatory quarantine upon entry should be monitored more closely. Quarantine should be enforced so that entrants are required to prove that they are compliant with this public health imperative.

**Recommendation 14:**

Unofficial, private tests may not be reliable and can give false confidence. The Committee recommends that the dangers of such tests be emphasised in messaging to the public.

## Section 5: Healthcare staff

### Recommendation 15:

The rate of infection for healthcare workers in Ireland has been high. The Committee recommends that all healthcare workers should be temperature screened upon entering settings, if the evidence indicates that there is any advantage to doing so in virus recognition.

### Recommendation 16:

Further, the Committee recommends that all healthcare workers should be tested regularly as part of ongoing mass testing, as nursing home workers were, to identify instances of asymptomatic carriers.

### Recommendation 17:

The Committee recommends that Covid-19 acquired in workplaces should be considered a notifiable occupational illness.

## Section 6: The app

### Recommendation 18:

The Committee recommends that usage of the app should be assessed to ensure that a digital literacy gap is not negatively impacting effective usage or people's meaningful ability to consent.

### Recommendation 19:

The Committee recommends that ongoing assessment should also be done on the technical performance of the app and the extent to which it is adding value to test and trace efforts; such analysis should be made public. A false positive rate in the app's performance should also be shared publicly.

**Recommendation 20:**

The Committee recommends that an issue tracker should be made available for the app, that Google and Apple should be asked to publish more information on the GAEN API, and that more information should be provided about the use of Google Firebase and Twilio.

**Recommendation 21:**

The Committee recommends that a full description of all network devices and logging in the app's operation should be shared.

**Recommendation 22:**

The Committee recommends that the criteria by which the sunset clause will be invoked should be shared.

## 1. Introduction

1. The Special Committee on Covid-19 Response undertook as part of its work programme to examine the State's efforts on testing and contact tracing, with particular regard to readiness for potential future outbreaks of Covid-19.
2. The Committee held three meetings which included consideration of this matter. The Committee's meeting of 25 June 2020 contained the most extensive treatment of testing and tracing issues. Due to the Covid-19 restrictions on the length of sessions and number of witnesses, these meetings focused on engagement with the Department of Health, the HSE and a limited number of experts.
3. To counterbalance the restricted nature of sittings and in order to get a wider view of the issue, the Committee also received 15 written submissions from medical and testing experts, communications and data privacy experts, and other individuals and organisations with expertise in the area.
4. From an examination of the submissions received by it and from the oral evidence given at meetings, the Committee heard evidence which illustrates the vital importance of an effective and efficient testing and tracing system. For this, the HSE's forthcoming detailed plan will be of crucial importance.
5. The plan's ability to maintain strong testing capacity on the ground, in particular regarding quick end-to-end turnaround times, will be of crucial importance.
6. The evidence received also highlights areas of special concern in the continued operation of Ireland's Test-Trace-Isolate (TTI) system – whether entrants from overseas and healthcare staff should be subject to extra testing and the risks around hospital under-capacity and potential overcrowding.
7. A Covid-19 tracker app for Ireland was launched on 7 July 2020, to supplement manual contact tracing by using Bluetooth-proximity technology on mobile phones. While some concerns about the app have been articulated, it contains potential to contribute to contact tracing.
8. This report aims to summarise succinctly the major issues which the Committee encountered in its exploration of the evidence and to articulate recommendations which help to focus efforts to make Ireland's testing and tracing system as effective as it can be. Our society's ability to operate safely into the future depends on the achievement of that goal.

## 2. Evidence From Committee Meetings And Submissions

9. Table 1 below provides details relating to written evidence received by the Special Committee on this topic. The submissions have been uploaded to the Oireachtas website and links are provided in the table.

10. Table 2 below identifies all stakeholders who gave oral evidence to the Special Committee, together with the date and the session during which they gave such evidence. Links to the Official Report of those meetings are available in this table.

TABLE 1 – WRITTEN SUBMISSIONS

Name of organisation	Date received
<a href="#">Chime</a>	29 June 2020
<a href="#">Defence Forces</a>	15 June 2020
<a href="#">Department of Health</a>	16 June 2020
<a href="#">Health Products Regulatory Authority</a>	16 June 2020
<a href="#">Health Service Executive</a>	16 June 2020
<a href="#">Irish Council for Civil Liberties and Digital Rights Ireland</a>	16 June 2020
<a href="#">Irish Medical Organisation</a>	16 June 2020
<a href="#">Irish Nurses and Midwives Organisation</a>	16 June 2020
<a href="#">Irish Wheelchair Association</a>	29 June 2020
<a href="#">Medical Laboratory Scientists Association and the Academy of Clinical Science and Laboratory Medicine</a>	19 June 2020
<a href="#">Dr. Stephen Farrell and Prof. Doug Leith / TCD</a>	16 June 2020
<a href="#">Dr. Tomás J. Ryan / TCD</a>	22 June 2020
<a href="#">Prof. Eugenia Siapera / UCD</a>	16 June 2020
<a href="#">Prof. Patrick Mallon / UCD</a>	16 June 2020
<a href="#">Science Foundation Ireland / Dr. Brendan Jennings, Waterford IT</a>	16 June 2020

TABLE 2– MEETINGS WITH STAKEHOLDERS

Date	Session 1	Session 2
<u>19 May 2020</u>	<p>Dr. Tony Holohan, Chief Medical Officer, Department of Health</p> <p>Mr. Jim Breslin, Secretary General, Department of Health</p>	<p>Mr. Paul Reid, CEO, HSE</p> <p>Ms Anne O'Connor, HSE, responsible for testing and tracing</p> <p>Dr. Colm Henry, Chief Clinical Officer, HSE</p>
<u>9 June 2020</u>	<p>Dr. Cillian De Gascun, director of the National Virus Reference Laboratory, NVRL,</p> <p>Professor Philip Nolan, President, NUI Maynooth</p>	
<u>25 June 2020</u>	<p>Professor Patrick Mallon, Professor of Microbial Diseases, School of Medicine, University College Dublin</p> <p>Mr. Damien McCallion, National Director of Emergency Management and Director General of the Co-operation and Working Together Partnership, HSE</p> <p>Dr. Colm Henry, Chief Clinical Officer, HSE</p> <p>Ms Niamh O'Beirne, National Lead for Contact Tracing and Testing, HSE</p> <p>Dr. Cillian De Gascun, Department of Health, consultant virologist and director of the National Virus Reference Laboratory and member of</p>	

	<p>the National Public Health Emergency Team, NPHET</p> <p>Dr. Alan Smith, Deputy Chief Medical Officer, Department of Health</p> <p>Mr. Muiris O'Connor, Assistant Secretary, research and development and health analytics division, Department of Health</p> <p>Ms Laura Casey, Principal Officer, Department of Health</p>	
--	--	--

### 3. The importance of testing and tracing

11. Testing and tracing is one part of the control mechanisms available to the State to prevent the spread of Covid-19. It will only be effective alongside the other primary measures of handwashing, cough etiquette, social distancing and the wearing of face masks where social distancing is not possible. The only other prevention measure available to the State is a lock-down of all but essential activities either in regions or in the State as a whole. An effective testing and tracing system that is less than robust and effective will inevitably lead to a return of restrictions and this must be avoided.
12. It is important to note that, as well as Covid-19 causing deaths, recoverees can experience considerable morbidity and prolonged recovery times.
13. Any level of ongoing community transmission is damaging to both public health and the economy.
14. The Committee received a reminder that Ireland is still within a geographical high-risk zone for Covid-19 and an expert opinion that “it is inevitable that we will experience a resurgence of cases as we relax restrictions and permit more travel”.<sup>1</sup>
15. International examples, such as in Germany and Melbourne, Australia, show that areas which have the virus under control can quickly experience infection hotspots, which can leave authorities scrambling to increase testing capacity. Therefore, ability to respond quickly to flare-ups with robust testing capacity in place is crucial.<sup>2</sup>
16. The Committee was told that Europe will continue to see new outbreaks of the disease, and public monitoring will be necessary to ensure they remain as “manageable outbreaks” rather than becoming significant resurgences.<sup>3</sup>
17. The Committee was also told that it should be possible for Ireland to “effectively eliminate” the virus from the country using an aggressive test-trace-isolate strategy with enforcement, incoming travel quarantine, masks and social distancing. The possibility of mass asymptomatic testing using saliva samples was also mooted.<sup>4</sup> The Committee discussed this idea of an elimination of the virus, but it was felt that this was not a practicable solution in the long term as it would require an effective long-term shutdown of the State and a long period of self-isolation which was not deemed practicable.
18. Our system of testing and tracing is likely to face two severe stress tests for the system in the coming months. The first is in August, depending on how much travel occurs, both from overseas and between different parts of the State where there are varying levels of

<sup>1</sup> [Committee Debate, 25 June 2020 – Prof. Mallon, p. 3](#)

<sup>2</sup> [Committee Debate, 25 June 2020 – Prof. Mallon, p. 9](#)

<sup>3</sup> [Committee Debate, 25 June 2020 – Prof. Nolan, p. 9](#)

<sup>4</sup> [Prof. Ryan submission to the Committee](#)

transmission. The second will be during flu season as a large number of people with relevant symptoms will be seeking testing at the same time.<sup>5</sup>

19. Unpreparedness for Covid-19 resurgence will also increase the likelihood of individuals attending healthcare settings for other treatments contracting Covid-19 (nosocomial infection).<sup>6</sup> Hospital overcrowding, which will aid the spread the infection, is a real risk. Ireland’s comparatively low healthcare capacity makes robust testing and tracing particularly important for this State.
20. The Committee was also advised that testing and tracing will be “the beating pulse of our country”. If it fails, we risk losing the gains made so far in containing the virus.<sup>7</sup>
21. The Committee recently received evidence from the HSE that 1,314 contacts of confirmed cases did not attend to receive day 0 or day 7 tests. This is very concerning and undermines the effectiveness of the test and trace system. The HSE shared the Committee’s concern in this matter and posited that there may be reluctance to engage due to the implications for restrictions on movement and work. The HSE was keen to emphasise that its public messaging around the importance of testing is strong and it put “a lot of time and effort” into trying to follow up with avoidant identified contacts.<sup>8</sup>

**Recommendation 1:**

**It is apparent that many people are not attending for testing after being identified as contacts of confirmed cases. The State must respond more vigorously to do this to ensure that being tested in such circumstances is understood to be a mandatory public health responsibility.**

<sup>5</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, p. 9](#)

<sup>6</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, p. 28](#)

<sup>7</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, p. 4](#)

<sup>8</sup> [Committee Debate, 21 July 2020 - Dr. Doherty, pp. 32, 33](#)

#### 4. Detailed test and trace planning

22. Due to the serious importance of effective testing and tracing as outlined above, the Committee is of the opinion that the plan for its continuing operation needs to be both ambitious and realistic.

23. The Committee was told that infectious diseases physicians and leading figures within the Royal College of Physicians Ireland have called for:

*...a detailed and coherent written plan to deal with the control of the SARS-CoV-2 virus on the island of Ireland. This should include a detailed end-to-end testing and contact tracing plan, embedded with rapid turnaround times and clear key performance indicators, KPIs. Alongside this, greater investment should be made in the coming weeks to rapidly upscale emergency department capacity, and isolation room facilities in hospitals are also required. These actions would be best achieved through the establishment and resourcing of specialist networks operating regionally under a common governance structure. These networks should comprise relevant specialists and be linked to our extensive academic university infrastructure.<sup>9</sup>*

24. The Committee was also told that for an effective and scientifically oriented TTI operation, which is informed by all necessary experts, ideally a new agency would be created to implement it, and that this would be the responsibility of a dedicated Minister.<sup>10</sup>

25. The Committee accepts that the current test and trace service was an emergency structure put in place to meet the immediate requirements of the crisis, and it welcomes the work of the HSE to design a new and more robust model that will operate until Covid-19 is no longer an issue.

26. The target for implementation of the detailed model is late August. Its focus is on building a testing service with short turnaround times and maintaining long-term capacity and flexibility for future surges.<sup>11</sup>

27. Hospital settings will also be a vital component of necessary planning for the future because of the potential for patients or staff to bring in infections. These will have to be addressed as part of that plan.

28. Managing Covid-19 in hospital settings will be challenging due to the already-squeezed nature of hospital settings in Ireland, which have often experienced trolley overcrowding.<sup>12</sup>The whole issue of creating extra physical space and of scheduling appointments will have to be

<sup>9</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, p. 4](#)

<sup>10</sup> [Prof. Ryan submission to the Committee](#)

<sup>11</sup> [Committee Debate, 25 June 2020 - Dr. Henry, p. 5](#)

<sup>12</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, p. 27](#)

addressed, as will the issue around managing better the admissions to emergency departments of acute hospitals.

29. When asked whether a one-day turnaround on testing and tracing would be part of the August plan, the HSE told the Committee that the KPIs have not yet been defined.<sup>13</sup> The Committee will recommend that a one-day turnaround time be put in place as a minimum requirement for a robust model of testing.

30. In its submission to the Committee, Chime stated that reliance on voice calls for arranging tests and consultations had restricted deaf people’s access to testing and results, with potentially very few deaf people being tested as a result. The Committee is of the opinion that awareness of this issue should inform the HSE’s plan for testing pathways going forward.<sup>14</sup>

31. The Committee is also of the opinion that, as a matter of course, making data publicly available in a timely manner, including demographic and geographical information about infection rates, is a useful component in enhancing public alertness.

32. If cases rise in a particular cohort, the above information may help to alert people to needed behavioural change<sup>15</sup>.

33. The Deputy Chief Medical Officer wrote to the Committee on 1 July 2020, providing links to websites which contain publicly available data:

A data hub to be updated daily: <https://covid19ireland-geohive.hub.arcgis.com/>

A Health Protection Surveillance Centre which produces daily reports: <https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/>

**Recommendation 2:**

**The detail of the HSE’s August test and trace plan will be crucial to public health outcomes. The Committee recommends that this plan should include ambitious targets on testing capacity and turnaround times, with matching investment in healthcare facilities, including isolation rooms. Implementation through regional specialist networks should be considered for the plan.**

<sup>13</sup> [Committee Debate, 25 June 2020 - Ms Niamh O’Beirne, p. 34](#)

<sup>14</sup> [Chime submission to Committee](#)

<sup>15</sup> [Committee Debate, 25 June 2020, p. 36](#)

**Recommendation 3:**

The potential for hospital overcrowding to negatively impact on virus containment is a serious risk. The Committee recommends that limiting hospital crowding needs to be addressed within the test and trace plan, and that any investment which could help to resolve the issue be deployed.

**Recommendation 4:**

The Committee recommends that the HSE's target turnaround time for end-to-end testing should be at most one day.

**Recommendation 5:**

Alternative channels for accessing testing and tracing should be made available as part of the plan for people who are unable to avail of voice calls (e. g. people who are deaf).

**Recommendation 6:**

The Committee recommends that detailed anonymised data about infections – including geographical and demographic information – should be made public as quickly as possible, and that this practice should be provided for in the official plan. This will help to inform public safety.

## 5. Capacity and turnaround times

34. As of 25 June, the HSE's testing rate was 18,000 per week due to decreased demand, but it claimed still to have capacity for 100,000 tests per week.<sup>16</sup>
35. This capacity has not yet been availed of and as of 25 June the numbers being tested were below 20,000 per week.<sup>17</sup> The peak number of tests was over 20,000 per day in mid-April.<sup>18</sup>
36. Due to a decreased need for contact tracing and decreased positive test results, contact tracing has been centralised in one unit in Galway. This unit has the capacity to follow up on 150 positive tests.
37. Other centres will be reopened if there are three consecutive days of at least 100 positive tests. A total of 1,700 people have been trained in contact tracing.<sup>19</sup>
38. The HSE confirmed to the Committee that every contact of a confirmed case is now automatically tested on Day 0 and Day 7. Some 2,600 identified contacts were tested as of 25 June and the infection positivity rate for them was about 10%.<sup>20</sup>
39. The Committee is also mindful that Ireland's general healthcare capacity pre-Covid-19 was lower than many other European countries<sup>21</sup> and this may heighten the risk of failing to realise the volume and speed of testing needed.

### 5.1 Turnaround time

40. The Committee is of the opinion that the turnaround times for testing, results and contact tracing are of crucial importance and that this should be kept in mind when discussing capacity; the turnaround time is a key component of capacity.
41. The HSE stated that, in contact tracing, the positive test rate among symptomatic contacts is 14%, and among asymptomatic contacts it is 9%.<sup>22</sup> This underlines the importance of quick testing and tracing, because if asymptomatic positive cases are identified quickly, their spread of the virus can be limited.

<sup>16</sup> [Committee Debate, 25 June 2020 - Dr. Henry, p. 6](#)

<sup>17</sup> [Committee Debate, 25 June 2020 - Dr. Henry, p. 13](#)

<sup>18</sup> [Committee Debate, 25 June 2020 - Dr. Henry, p. 32](#)

<sup>19</sup> *ibid*

<sup>20</sup> *ibid*

<sup>21</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, p. 15](#)

<sup>22</sup> [Committee Debate, 25 June 2020 - Dr. Henry, p. 29](#)

42. The Committee heard that a 24-hour turnaround of testing and tracing should be achieved to ensure a robust system.<sup>23</sup>
43. However, the HSE told the Committee that median end to end time (from the point of referral to the end of contact tracing) is 1.7 days – median in the acute sector being 1.54 days and 2.1 days in the community. This timeframe includes a notice to contacts that tests have been scheduled, but not the testing of contacts itself.<sup>24</sup>
44. The Committee heard that in the last flu season, approximately 103 of every 100,000 people reported flu-like symptoms to their GP every week. That corresponds to a need for 5,000 tests a week, as well as the tests needed for actual symptomatic Covid-19 cases. Delays in tests during this time could exacerbate Covid-19 outbreaks, leading to a further increase in testing need.<sup>25</sup>
45. Prof. Mallon expressed concern to the Committee that the current turnaround with low community transmission is a worrying indication for potential surge scenarios in the future.<sup>26</sup>
46. The Committee was informed that turnaround time is significantly lower in hospitals than in community settings as, in the former, the patient can be tested where they are present.<sup>27</sup>
47. This discrepancy appears to be a key gap where any solution to expedite the time between presentation in a community setting and the subsequent testing and analysis should be aggressively sought in systemic planning.
48. In its joint submission, the Medical Laboratory Scientists Association and Academy of Clinical Science and Laboratory Medicine, stated that existing timely electronic reporting pathways exist between GPs or primary care centres and that a more sustainable testing model for Covid-19 would utilise these pathways.<sup>28</sup>
49. Key points identified by the HSE to improve the response to a surge in future include the speed at which cases can be responded to, increasing awareness about the importance of presenting early with symptoms, and the dogged pursuance of close contacts of each known case for testing.<sup>29</sup>

---

## 5.2 Supply of tests

50. Cognisant that testing capacity had been constrained around the world at the height of the pandemic by a limited global supply of tests, the Committee questioned the updated status of sourcing testing equipment. In that regard, the HSE admitted that this was a “constant challenge” and that while the current supply was secure, if multiple countries experienced surges

<sup>23</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, p. 5](#)

<sup>24</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, p. 12](#)

<sup>25</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, p. 14](#)

<sup>26</sup> *ibid*

<sup>27</sup> [Committee Debate, 25 June 2020 - Dr. Henry, p. 18](#)

<sup>28</sup> [The Medical Laboratory Scientists Association and Academy of Clinical Science and Laboratory Medicine submission to Committee](#)

<sup>29</sup> *ibid*

simultaneously, sourcing challenges would recur. The HSE and the Department of Health stated that they have “looked at diversification across platforms” to try to make us less reliant on a small number of platforms and that HSE procurement has ensured diversification across the hospital laboratory network.<sup>30</sup>

51. The HSE also told the Committee that, as far back as 19 May 2020, reagent supply agreements had been made with two major providers based in Ireland, Roche and Abbott, and a supply line sourced from China – which at that point in time was supplying the HSE’s 41 labs with reagents.<sup>31</sup>
52. The Academy of Clinical Science and Laboratory Medicine and Medical Laboratory Scientists Association stated in its joint submission to the Committee that there is a need to increase the number of medical scientists practising in Ireland to help sustain lab capacity for future outbreaks.<sup>32</sup> This is something the Department of Health should take up with the new Department of Higher Education and with Science Foundation Ireland.

### 5.3 Cost

53. The HSE told the Committee that there is a wide range of costs for testing. In hospitals, the marginal cost per test is €75, while tests procured from commercial laboratories can cost up to €140. The average budgeted rate per test is around €120, but it was operating well below those levels as of 25 June.<sup>33</sup>
54. The bulk of HSE investment has been in acute hospitals and Irish laboratories such as the National Virus Reference Laboratory and that it is engaged in stockpiling and advance purchasing of tests to try to avoid supply chain issues during future surges.<sup>34</sup>
55. When asked whether private labs are being paid for a certain number of tests with this capacity being under-utilised, the HSE said that, as at 25 June 2020, it was not the case, but that sustaining capacity in Irish labs (public or private) necessitates investment, because of the potential for reoccurrence of global competition for supplies.<sup>35</sup>
56. The Committee received a briefing note from the Department of Public Expenditure and Reform, dated 24 July, providing information about testing costs. A total of €208 million has so far been allocated for testing and tracing capacity and it was stated that the position would be reassessed by the end of August. The expenditure to 3 July was €84 million. When once-off costs are excluded, the expenditure is €44 million for 447,000 processed tests. This results in an average unit cost of €98 per test, with variation across providers.
57. The note also stated that the cost of retaining capacity which is unused are “relatively small” – according to a HSE estimate, it is €0.3m-€0.7m per week (approximately €10m-€20m until the end of the year for not utilising the full 100k testing capacity which is available).

<sup>30</sup> [Committee Debate, 25 June 2020 - Mr. McCallion and Dr. De Gascun, p. 18](#)

<sup>31</sup> [Committee Debate, 19 May 2020 - Mr. Reid, p. 48](#)

<sup>32</sup> [The Medical Laboratory Scientists Association and Academy of Clinical Science and Laboratory Medicine submission to Committee](#)

<sup>33</sup> [Committee Debate, 25 June 2020 - Mr. McCallion, p. 16](#)

<sup>34</sup> [Committee Debate, 25 June 2020 - Mr. McCallion, pp. 24, 25](#)

<sup>35</sup> *ibid*

58. Prof. Mallon told the Committee that public health measures generally see more take-up, and are, therefore, more effective if there is no cost to the public. Making flu vaccines and masks free at the point of provision, therefore, should be considered. This may be an efficient and rewarding investment on the part of the State. The cost to the public needs to be factored in when considering the effectiveness of public health measures.<sup>36</sup>

**Recommendation 7:**

Acute settings have a faster median end-to-end turnaround time than the community healthcare sector. The Committee recommends that solutions which can bridge this gap and shorten test and trace time from first presentation in the community sector be aggressively pursued.

**Recommendation 8:**

The Committee recommends that the HSE explore utilising existing testing channels between GPs and laboratories for the use of Covid-19 testing to quicken testing time. If this is not a viable solution for Covid-19 testing, the reasons should be stated clearly.

**Recommendation 9:**

The Committee recommends that the importance of seeking testing early in onset of symptoms should be emphasised in public health messaging.

**Recommendation 10:**

The Committee recommends that ensuring a sufficient supply of testing equipment should remain a priority. In addition, the number of testing experts working needs to be maintained at a sufficient level.

**Recommendation 11:**

The Committee recommends that the State should aim to achieve capacity where free at the point of provision protections such as flu vaccines and face masks could be provided, as reduced cost for the public is likely to improve the effectiveness of public health measures.

<sup>36</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, pp. 26, 27](#)

## 6. Travel testing and tracing:

59. The Committee took a range of evidence on the risk of the spread of the virus caused by international travel, especially if travel is from/to other countries which have higher infection rates. Issues around quarantine of those who visit or return to the State and in particular the difficulty of policing quarantine protocols and guidelines remains a live issue. The Committee remains concerned about international flights from areas of the world with very high incidences of Covid-19 and this has to be addressed by Government (see also paragraph 62 below).
60. As of 25 June 2020, Ireland did not track everyone entering the country to ensure adherence to the 14-day quarantine.<sup>37</sup> While a quarantine system is in place, compliance is not guaranteed and carriers entering the country may spread the infection.
61. Screening at points of entry is an important element of continued virus control. The level of screening, restrictions and follow-up judged to be necessary could be influenced by the virus levels in the point of origin of entrants.<sup>38</sup>
62. Allowing unrestricted movement of people from any area of the world where there is uncontrolled community transmission presents a strong risk.<sup>39</sup> The Committee did examine the issue of foreign travel and it is clear that there are inconsistencies that make Ireland an outlier amongst EU States. Ireland has taken a less restrictive approach to access from countries outside the EU such as the USA (especially in respect of direct flights from southern states of the USA where the incidence of Covid-19 is high). At the same time there was criticism of the Government's "Green List" which was described as more restrictive than in any European country.
63. The Committee heard that the fastest test available has an upper turnaround time of one hour, but that getting a sufficient supply of these will not be feasible for some time. If laboratories were next to points of entry, with current reliable testing methods available in sufficient quantity, testing would take three to four hours.<sup>40</sup>
64. Point-of-entry testing is limited by the fact that results can only give information about the point in time they were taken. People who were not identified as positive can still develop symptoms subsequently.
65. The nature of this "point-in-time" characteristic of testing means that follow-up testing after the "day zero" test would further help to limit infections from entrants. This should be kept in mind especially for entrants from high-risk zones.<sup>41</sup> However, the Committee is aware that other EU states are relying on point-in-time testing of entrants.

<sup>37</sup> [Committee Debate, 25 June 2020 - Dr. Henry, p. 7](#)

<sup>38</sup> [ibid](#)

<sup>39</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, p.15](#)

<sup>40</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, p. 10](#)

<sup>41</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, p. 11](#)

66. The HSE reiterated that testing upon entry has point-in-time limitations but that it has to be considered and is “under active discussion by NPHE”.<sup>42</sup>
67. The Committee was also warned about the existence of privately supplied testing, including antibody tests, which may not be sensitive enough to offer meaningful information. Very quick turnaround times (e. g. 20 minutes) should be considered suspect, and any test which is not officially validated should not be trusted. The Committee is of the opinion that strong messaging is needed to inform the public as to why they should get tested through the official channels.<sup>43</sup>

**Recommendation 12:**

**Infections entering the country through travel from overseas is a strong risk. The Committee recommends that all entrants should be temperature screened on arrival, and be tested at least twice (due to the limitations of point-in-time testing).**

**Recommendation 13:**

**The Committee recommends that mandatory quarantine upon entry should be monitored more closely. Quarantine should be enforced so that entrants are required to prove that they are compliant with this public health imperative.**

**Recommendation 14:**

**Unofficial, private tests may not be reliable and can give false confidence. The Committee recommends that the dangers of such tests be emphasised in messaging to the public.**

<sup>42</sup> [Committee Debate, 25 June 2020 - Dr. Henry, p. 17](#)

<sup>43</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, p. 14](#)

## 7. Healthcare staff:

68. The Committee is aware that the rates of infection for healthcare workers in Ireland have been alarmingly high. The Irish Nurses and Midwives Organisation stated in its submission to the Committee on 16 June that healthcare workers made up a third of all cases and that, of those where the infection source was known, 88% of nurses got the virus in a healthcare setting as staff.<sup>44</sup>
69. On 19 May 2020, the Chief Medical Officer told the Committee that the infection rate for healthcare workers at that point in time was 31.5%, “a high percentage”.<sup>45</sup>
70. When asked on 25 June whether Ireland’s infection rate for healthcare workers was the highest in the world, the HSE stated that countries cannot be compared because “we have been measuring healthcare workers as a priority from the absolute go even when we had testing difficulties and because we had a very wide definition of healthcare workers”.<sup>46</sup>
71. While the exact nature of the infection rate (comparative to other countries) may be open to some level of debate or interpretation, it is important that healthcare staff infection should be minimised insofar as is possible.
72. The INMO has called for daily temperature testing for workers entering hospitals, and other countries have seen the deployment of temperature screening in other buildings as well as healthcare settings. Prof. Mallon told the Committee that while this measure must be included in a larger package of measures and cannot be solely relied upon, it would definitely help.<sup>47</sup>
73. The HSE said that such screening already happens in nursing homes and is under consideration for other healthcare settings.<sup>48</sup> The Department of Health stated that it has asked HIQA to perform an evidence census for it on this matter but that “at this point in time... the majority of our patients in Ireland do not actually have a temperature associated with Covid-19”.<sup>49</sup>
74. The HSE said that on 24 June it commenced serial testing of all healthcare workers in nursing homes, envisaged as part of a four-week timeline, involving approximately 33,000 people. It said that this would help to deepen its understanding of the mode of transmission of the virus in asymptomatic healthcare workers.<sup>50</sup>
75. The INMO stated in its submission that this practice of routine testing for healthcare workers should be rolled out across all healthcare settings.<sup>51</sup>

<sup>44</sup> [Irish Nurses and Midwives Organisation submission to the Committee](#)

<sup>45</sup> [Committee Debate, 19 May 2020 - Dr. Holohan, p. 13](#)

<sup>46</sup> [Committee Debate, 25 June 2020 - Dr. Henry, p. 31](#)

<sup>47</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, p. 12](#)

<sup>48</sup> [Committee Debate, 25 June 2020 - Dr. Henry, p. 22v](#)

<sup>49</sup> [Committee Debate, 25 June 2020 - Dr. De Gascun, p. 22](#)

<sup>50</sup> [Committee Debate, 25 June 2020 - Ms O’Beirne and Dr. Henry, pp. 18 & 29](#)

<sup>51</sup> [Irish Nurses and Midwives Organisation submission to the Committee](#)

76. The Committee heard from Prof. Mallon that he thinks a change in regulations to categorise instances of Covid-19 contracted in workplaces as notifiable occupational illnesses would be useful, as it would help to provide information on how many people are contracting the virus in workplaces.<sup>52</sup>
77. Prof. Mallon also warned the Committee that Ireland’s healthcare staffing levels, including of infectious disease specialists, are comparatively low and that this poses a risk in relation to resurgences of the virus. He said that we got away with the first wave “by the skin of our teeth” due to public lockdown and not because of capacity in our healthcare system and that “we cannot operate safely with the current footprint and current staffing levels”.<sup>53</sup>

**Recommendation 15:**

The rate of infection for healthcare workers in Ireland has been high. The Committee recommends that all healthcare workers should be temperature screened upon entering settings, if the evidence indicates that there is any advantage to doing so in virus recognition.

**Recommendation 16:**

Further, the Committee recommends that all healthcare workers should be tested regularly as part of ongoing mass testing, as nursing home workers were, to identify instances of asymptomatic carriers.

**Recommendation 17:**

The Committee recommends that Covid-19 acquired in workplaces should be considered a notifiable occupational illness.

<sup>52</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, p. 31](#)

<sup>53</sup> [Committee Debate, 25 June 2020 - Prof. Mallon, p. 37](#)

## 8. The app:

78. A Covid-19 tracker app for Ireland, which was created by the HSE, was launched on 7 July 2020. According to the HSE product explainer for the app, it has three functions: contact tracing, allowing users to share symptoms in “daily health check-ins”, and as a trusted source of news on the virus.<sup>54</sup>
79. The contact tracing element of the app is based on using Bluetooth proximity technology, and not location data. The idea behind Bluetooth-proximity apps is that people who have been in close contact with infected persons, but who would not be identified through manual contact tracing, could be informed through proximity data collected on their smartphone.
80. Knowledge of users’ location is not necessary in this model, only that they were proximate to an identified infected person. The epidemiologically significant definition of close contact, as specified by NPHET, is as “greater than 15 minutes face-to-face (<2 metres distance)”.<sup>55</sup>
81. Singapore first developed its own Bluetooth proximity app, but the app was not approved by Apple, which limited its uptake. In April 2020, Google and Apple announced a joint project – the “Google Apple Exposure Notification” (GAEN) system. This is embedded software in Apple iOS and Google Android mobile operating systems. It facilitates the development of contact tracing apps which can use this embedded system.<sup>56</sup>
82. Concerns about the efficacy of an app-based solution for contacting tracing had been raised in submissions to the Committee. Professor Eugenia Siapera told the Committee that a UK-based study found that 56% of the population, or 80% of smartphone users, need to use a smartphone app which is based on Bluetooth proximity in order for it to be effective.
83. The 2020 EU Digital Economy and Society Index found that Ireland is behind in terms of proportion of the population who have basic digital literacy skills – the skills to “use digital devices, communication applications, and networks to access and manage information”. This may impact ability to meaningfully consent and understand privacy considerations as well as impacting ability to effectively operate an app.<sup>57</sup>
84. Another submission to the Committee, from Dr. Stephen Farrell and Prof. Doug Leith, stated that their tests of the GAEN system showed that it will be challenging for it to work effectively, with factors such as being on a bus or the way a phone is held impacting on it, but that as an experiment it is worth trying, as long as messaging is clear so that people are aware of its limitations. If the use of Bluetooth technology for this purpose does not work it will be “due to the laws of physics” but it is still unknown as to whether it may be beneficial.<sup>58</sup>

<sup>54</sup> [HSE Covid-19 Tracker app](#)

<sup>55</sup> [Science Foundation Ireland submission to the Committee](#)

<sup>56</sup> *ibid*

<sup>57</sup> [Prof. Siapera submission to the Committee](#)

<sup>58</sup> [Dr. Farrell and Prof. Leith submission to the Committee](#)

85. Days prior to the app’s public release, Digital Rights Ireland and the Irish Council for Civil Liberties issued another joint document on the app, a “pre-release report card”. The overall “grade” given was a C+.
86. The document acknowledged that the HSE had listened to concerns about the app and commended it and the Department of Health for publishing the Data Protection Impact Assessment, Data Protection Commissioner’s review of the assessment, and the app source code, thereby improving transparency and public confidence around the project. However, there were remaining criticisms. These included:

*Failing to upload an issue tracker which would allow people to upload feedback, as discussion via issue tracker is “required for the kind of transparency and accountability inherent in open source” and would help inevitable bugs to be reported, discussed and resolved.*

*Unproven efficacy (doubts about efficacy have been referenced above).*

*While the source code has been released, as requested, the app uses GAEN and this is not open source. There is “limited documentation” about GAEN’s API (Application Programming Interface) and “very limited information” about its design.*

*While the HSE has said that IP addresses will never be transmitted to backend servers, there is doubt as to whether this is practically achievable. This needs to be demonstrated through a full description of all network devices and logging.*

*The HSE should share the false positive rate (rate at which people are falsely alerted as having been in contact with a positive case) during app testing to help inform assessment of the app’s efficacy.*

*It is unclear to what extent Google Firebase is being used in the app. This service’s involvement may lead to data processing in US service’s and data therefore being available to US state agencies. Its use could also create a conflict of interest for Google, “whose primary business is advertising based on collection of user personal data”.*

*The outsourcing of a key function to US-based Twilio is also a data leakage concern.*

*While the inclusion of a sunset clause is very welcome, the criteria for the app’s effectiveness which will be used to determine its ongoing operation should be published.<sup>59</sup>*

87. Dr. Stephen Farrell and Prof. Doug Leith stated that the use of this system risks further entrenching the duopoly of Google and Apple, and that these companies’ decision not to open source their code as the HSE has done is damaging to transparency and that “Google or Apple could at any time affect the false positive/false negative rates of the HSE App with no control or oversight by the HSE, Irish government or the technology community”.<sup>60</sup>
88. The risk of private entities, such as employers, requiring the use of similar technologies would have privacy and security implications for individuals and this should be scrutinised closely.<sup>61</sup>

<sup>59</sup> [HSE Covid-19 Tracker App: Pre-Release Report Card](#)

<sup>60</sup> [Dr. Farrell and Prof. Leith submission to the Committee](#)

<sup>61</sup> *ibid*

89. The Department of Health told the Committee that the app adds value by identifying more contacts than is possible in a manual tracing process, particularly applying to strangers who might become close contacts.<sup>62</sup>

90. The HSE reported that there had been one million downloads of the app within 48 hours of its launch.<sup>63</sup>

**Recommendation 18:**

The Committee recommends that usage of the app should be assessed to ensure that a digital literacy gap is not negatively impacting effective usage or people’s meaningful ability to consent.

**Recommendation 19:**

The Committee recommends that ongoing assessment should also be done on the technical performance of the app and the extent to which it is adding value to test and trace efforts; such analysis should be made public. A false positive rate in the app’s performance should also be shared publicly.

**Recommendation 20:**

The Committee recommends that an issue tracker should be made available for the app, that Google and Apple should be asked to publish more information on the GAEN API, and that more information should be provided about the use of Google Firebase and Twilio.

**Recommendation 21:**

The Committee recommends that a full description of all network devices and logging in the app’s operation should be shared.

**Recommendation 22:**

The Committee recommends that the criteria by which the sunset clause will be invoked should be shared.

<sup>62</sup> [Committee Debate, 25 June - Mr. O’Connor, p. 35](#)

<sup>63</sup> [HSE Covid-19 Tracker App downloads](#)

## APPENDIX 1: TERMS OF REFERENCE

- (1) Dáil Éireann hereby appoints a Committee, to be known as the Special Committee on Covid-19 Response (hereinafter referred to as ‘the Committee’), to consider and take evidence on the State’s response to the Covid-19 pandemic;
- (2) the membership of the Committee shall not exceed nineteen members, appointed by notice in writing to the Ceann Comhairle as follows:
- (a) the Government, Fianna Fáil, and Sinn Féin shall each be entitled to appoint four members;
  - (b) the Green Party, the Labour Party, Social Democrats, Solidarity-People Before Profit, the Regional Group, the Rural Independent Group, and the Independent Group shall each be entitled to appoint one member;
- (3) the Ceann Comhairle shall announce the names of the members appointed pursuant to paragraph (2) for the information of the Dáil on the first sitting day following their appointment;
- (4) the quorum of the Committee shall be seven;
- (5) the Committee shall elect one of its members to be Chairman;
- (6) it shall be an instruction to the Committee that the taking of oral evidence from any one witness or group of witnesses in a single session shall not exceed 2 hours in each case;
- (7) in the absence of a member nominated to serve on the Committee, one substitute may be nominated in accordance with Standing Order 106 for each two-hour session of the Committee: Provided that a substitute may only be nominated by prior written notice to the Clerk to the Committee;
- (8) on a proposal by the Committee, the Business Committee shall agree the arrangements for the taking of the Committee’s business as part of the Business Committee’s weekly report under Standing Order 31, including but not limited to, the agenda for each meeting, the witnesses to be examined, and the format of the meeting, including time limits for presentations and questions; and
- (9) subject to paragraphs (6) and (8), the Committee shall have the following powers:
- (a) power to invite and receive oral and written evidence, oral presentations and written submissions from Ministers and witnesses in accordance with Standing Order 96(1) and (2);
  - (b) power to appoint sub-Committees in accordance with Standing Order 96(4);
  - (c) power to draft recommendations for legislative change and for new legislation in accordance with Standing Order 96(5), and to examine any statutory instrument which it considers relevant to its orders of reference in accordance with Standing Order 96(6) and (7);
  - (d) power to require that a member of the Government or Minister of State shall attend before the Committee to discuss policy, proposed primary or secondary legislation, post enactment reports on legislation, or matters relating to meetings of relevant EU Councils of Ministers that, in the opinion of the Committee, relates to its orders of reference and for which the member of the Government or Minister of State is officially responsible in accordance with Standing Order 96(8), (9), (10) and (12);
  - (e) power to require that principal officeholders in bodies in the State which are partly or wholly funded by the State or which are established or appointed by members of the

Government or by the Oireachtas shall attend meetings of the Select Committee, as appropriate, to discuss issues in relation to Covid-19 for which they are officially responsible in accordance with Standing Order 96(11) and (13);

(f) power to engage the services of persons with specialist or technical knowledge in accordance with Standing Order 96(14); and

(g) power to report to the Dáil in accordance with Standing Order 100(1).

## Appendix 2: Committee Membership

### Deputies:

Colm Brophy (FG)  
Colm Burke (FG)  
Mary Butler (FF)  
Jennifer Carroll MacNeill (FG)  
Matt Carthy (SF)  
Michael Collins (RI)  
David Cullinane (SF)  
Pearse Doherty (SF)  
Stephen Donnelly (FF)  
Norma Foley (FF)  
Michael McNamara (I) [Chairman]  
Fergus O'Dowd  
Louise O'Reilly (SF)  
Matt Shanahan (R)  
Róisín Shortall (SD)  
Bríd Smith (SPBP)  
Duncan Smith (L)  
Ossian Smyth (G)

### Notes:

1. Deputies appointed by Order of the Dáil of 7 May 2020
2. Chairman elected at Committee meeting of 12 May 2020

## Houses of the Oireachtas

Leinster House  
Kildare Street  
Dublin 2  
D02 XR20

[www.oireachtas.ie](http://www.oireachtas.ie)

Tel: +353 (0)1 6183000 or 076 1001700

Twitter: @OireachtasNews

## Connect with us



## Download our App





An Roinn Sláinte  
Department of Health

Mr. Ted McEnery  
Clerk to the Committee  
Special Committee to COVID-19 Response

By email: ted.mcenery@oireachtas.ie

*16<sup>th</sup> June, 2020*

Dear Ted

I refer to your letter of 5 June 2020 Your Ref: SCC19R-I-0147 seeking a written submission from the Department on the topic of testing and tracing.

As requested the Department is providing relevant information.

I trust that this satisfies the Committee's requirements.

Yours sincerely

Pamela Carter  
Principal Officer  
Parliamentary and Ministerial Support Unit  
(01)6354048/0874151046

Submission to Special Committee on COVID-19 Response (Oireachtas  
Committee)

Topic: Testing and Tracing

16 June 2020

## 1. Context

1. This submission contains a summary overview of (1) the testing strategy (2) the types, objectives, limitations of testing and (3) contact tracing. The HSE will provide a detailed overview of operational matters covering the end-to-end COVID-19 testing infrastructure incorporating referral, community swabbing, laboratory testing, provision of results, effectiveness of testing, contact tracing and the new COVID Tracker App.

## 2. Testing Strategy

- 2.1 Ireland has adopted a robust process of testing, isolation and contact tracing as a key strategy for containing and slowing the spread of COVID-19, as advocated by World Health Organisation (WHO), the European Centre for Disease Prevention and Control (ECDC) to “break the chain of transmission”.
- 2.2 The capacity for testing has been expanded incrementally as capacity has developed. Over the course of the pandemic this has included the broadening of the case definition to include anyone exhibiting one symptom of cough, fever or shortness of breath, a comprehensive programme of testing in long term residential care facilities, a continued focus on healthcare workers and the automatic routine testing of all close contacts. The NPHET has most recently recommended that health care workers in nursing homes be tested weekly for an initial 4 weeks to inform an ongoing surveillance programme. This is in recognition of the vulnerability of nursing homes to this virus.
- 2.3 The HSE has planned for a full testing and contact tracing pathway to undertake up to 15,000 tests per day. In line with the current lower levels of prevalence of the virus, testing levels have reduced. Over the past four weeks the average weekly number of tests processed was 22,862. As of 15 June 2020, a total of 384,501 tests have been carried out to date, with a 7% positivity rate overall.
- 2.4 Countries that do very few tests per confirmed case are unlikely to be testing widely enough to find all cases. At the WHO media briefing on 30 March, 2020, Dr Michael Ryan expressed this in terms of the positivity rate “...In general where testing has been done fairly extensively we’ve seen somewhere between 3 and 12% of tests being positive... we would certainly like to see countries testing at the level of ten negative tests to one positive as a general benchmark of a system that’s doing enough testing to pick up all cases”.
- 2.5 The median number of close contacts per case was 3 over the past two weeks, slightly up from 2 during most of May 2020. Despite maintaining the key public health messages to limit interactions as much as possible, to continue to practice social distancing and to keep a record of all close contacts, increases in the number of close contacts per case are to be expected given the progressive relaxation of restrictions.
- 2.6 Turnaround times have improved significantly. Recent reports from the HSE indicate that the turnaround time from referral to completion of contact tracing is now 3 days or less in around 86% of cases. The median time across community and hospital settings is now 1.8 days and has been improving each week.
- 2.7 The cost identified by the HSE for the full testing and tracing process is now in the region of c.€400 million for 2020, based on 100k tests per week being undertaken each week for the remainder of 2020. This figure reduces commensurately for lower testing numbers.

### 3. Types, objectives and limitations of testing

- 3.1 Real-time reverse transcription polymerase chain reaction (RT-PCR) is the gold standard for diagnosing suspected cases of COVID-19.
- 3.2 Diagnostic testing is but one component of a comprehensive public health led, infection prevention and control response to SARS-CoV-2. Combined with tracking where infected people are to provide the most appropriate management of the case, their isolation to prevent further spreading of the virus and tracing all the people that were in close contact with the index case, testing, tracking and tracing has become the central tool for preventing transmission in controlling the spread of SARS-CoV-2 in Ireland.
- 3.3 A test for SARS-CoV-2 can only provide information at a single point in time and in the case of an 'RNA not detected' result for any person at one point in time does not reflect or indicate the level of ongoing risk. That person could have a repeat test the next day with a different result.
- 3.4 The focus of diagnostic testing should continue to be on those who meet the case definition in operation and the close contacts of confirmed cases. Any testing approach needs to be grounded and evolve based on emerging evidence and guidance.
- 3.5 Where outbreaks of SARS-CoV-2 occur in the community or in settings where vulnerable populations are cared for or reside, decisions regarding the most appropriate testing strategy in response to such an outbreak must be taken on a case by case basis, informed firstly by a public health risk assessment and guided by epidemiological data and scientific evidence that impact on risk of transmission at the time or relevant to the particular setting.
- 3.6 The role of serological [antibody] tests is limited at present. Once they have been assessed to be of sufficient sensitivity and specificity these tests can be used to estimate the prevalence of immunity in the general population. However, it must be noted that based on current evidence uncertainty remains as to (i) whether antibodies fully protect from subsequent infection (ii) whether the antibody response is durable and (iii) while the individual may have sufficient immunity to prevent development of disease, they may still spread infection until the virus is cleared. This limits the usefulness of antibody testing at an individual level.
- 3.7 The first use of antibody testing in Ireland, as has occurred in other countries, will be to estimate the prevalence of immunity in the general population by conducting a population based seroprevalence survey to measure the prevalence of antibodies to SARS-CoV-2 virus in a representative sample of the Irish population in two geographically defined areas, Dublin and Sligo. Ethics approval for the study, submitted by the Health Service Executive (HSE), Health Protection Surveillance Centre (HPSC) and the National Virus Reference Laboratory (NVRL), was granted by the National Research Ethics Committee for COVID-19 on 4 June 2020. Those randomly selected, aged 12-69 and who consent to participate, will complete a questionnaire and have a blood sample taken. Samples will be analysed at the NVRL for the detection of antibodies to the virus. The study commenced on 15 June 2020, and initial results will be available toward the end of August 2020.
- 3.8 The results from similar international seroprevalence studies conducted to date indicate a low level of exposure to the virus. Studies from Spain and France indicate that just 5.0% and 4.4% of their populations respectively have ever contracted covid-19. The results from these early studies indicate that fewer people have been infected than what many mathematical models initially

predicted. They also suggest that many people remain susceptible to infection, which is important in planning for any subsequent resurgence in the virus<sup>1</sup>.

3.9 There is particular interest internationally in the potential for rapid antibody tests to identify those who are already immune which may be useful in allowing more people to safely return to work. However significant questions remain, (see section 3.6), as to the accuracy of these tests. The Royal College of Pathologists of Australasia published a position statement on the use of rapid point of care [antibody] tests in which it states that (i) Australia's public health response will be compromised by the use of these tests in the early stages of COVID disease and (ii) Australia's excellent laboratory response to the COVID-19 pandemic would be jeopardised by inappropriate widespread use of rapid tests<sup>2</sup>. The WHO to date has recommended that the use of point-of-care rapid antibody tests should only be used in research settings and not in any other setting, including clinical decision-making, until evidence supporting their use for specific indications is available<sup>3</sup>.

3.10 While oral fluid (saliva) is very useful for the diagnosis of a number of viruses, including measles, mumps, and rubella, saliva is not a recommended specimen type for respiratory viruses, primarily because saliva contains substances that interfere with the polymerase chain reaction (PCR) used in test assays to detect Covid-19, and so it lacks sensitivity compared with specimens obtained from the nasopharynx. In addition, the primary site of replication for respiratory viruses is the respiratory tract rather than the mouth. Consequently, nasopharyngeal swabs remain the preferred specimen choice for SARS CoV 2 testing.

---

<sup>1</sup> Wise J, Covid-19: Surveys indicate low infection level in community. BMJ 2020;369:m1992 doi: 10.1136/bmj.m1992 (Published 18 May 2020)

<sup>2</sup> Royal College of Pathologists of Australasia. Position Statement (March 2020). COVID19 IgG/IgM Rapid POCT Tests.

<sup>3</sup> WHO. Advice on the use of point-of-care immunodiagnostic tests for COVID-19. Available at <https://www.who.int/news-room/commentaries/detail/advice-on-the-use-of-point-of-care-immunodiagnostic-tests-for-covid-19>

## 4. Contact Tracing

- 4.1 Contact tracing is a core public health intervention that plays an important role in the control of COVID-19. The aim of contact tracing is to rapidly identify potentially newly infected persons who may have come into contact with existing cases, in order to reduce further onward transmission. Contact tracing consists of three key steps consisting of (1) contact identification, to identify persons who may have been exposed to SARS-CoV-2 as a result of being in contact with an infected person; (2) contact listing, to trace and communicate with the identified contacts, and to provide information about suitable infection control measures, symptom monitoring and other precautionary measures such as the need for quarantine; and (3) contact follow-up, to monitor the contacts regularly for symptoms.
- 4.2 Contact tracing is an effective public health measure for the control of COVID-19. The prompt identification and management of the contacts of COVID-19 cases makes it possible to rapidly identify secondary cases that may arise after transmission from the primary cases. This enables the interruption of further onward transmission. Contact tracing, in conjunction with robust testing and surveillance systems, is central to control strategies during phases of de-escalation. Contact tracing has been a key part of the response in countries that have successfully reduced case numbers.
- 4.3 Traditional contact tracing by following up cases and contacts using public health staff is resource intensive. Moving some tasks away from public health professionals to trained non public-health staff (e.g. staff working in other areas of the public service, or volunteers such as students, retired healthcare professionals, etc.) can enable the overall contact tracing programme to be scaled up. The staff can be tasked with interviewing cases to obtain a list of contacts and following up these contacts to provide information on self-quarantine and physical distancing, the monitoring of developing symptoms and advice on what to do if symptoms develop. The use of non-public-health staff or volunteers for contact tracing can also free up speciality public health input in more complex settings such as healthcare facilities or outbreak situations.
- 4.4 To meet the scale of contact tracing capacity required, the HSE established 9 contact tracing centres (CTCs), and trained 1,700 public servants in contact tracing. The contact management programme operates a three-call process to contact trace a confirmed case. These centres generally deal with the high volume but generally low complexity cases. The 1,700 pool of trained people can be drawn on as needed. Of the 1,700 people trained approximately 300 were deployed to Departments of Public Health and approximately 700 were deployed in CTCs. The remaining trained staff were not required to date. Currently there are six CTCs in operation on rotation. Only one CTC is used per day given the current low numbers of confirmed cases.
- 4.5 In addition to the CTCs, contact tracing activity is also carried out in Departments of Public Health, who generally deal with more complex cases and facilities. Infection Prevention and Control Teams in hospitals conduct the contact tracing for in-patients within their facility and occupational health departments complete workplace contact tracing for healthcare employees.
- 4.6 The timeliness of contact tracing has improved over the course of the pandemic. Over the past 14 days, the HSE has reported that the median time to complete contact tracing (all three calls) is now one day.
- 4.7 Using new technologies such as mobile apps is another approach that can be used to complement the traditional public health approach summarised in 4.1-4.6 above. The contact tracing app that has been developed for Ireland is very much aligned with the advices and guidance issued by the EU Commission, the OECD and the WHO. The European Centre for Disease Control recently stated

*that "the use of mobile contact tracing apps for contact tracing offers several benefits; they do not rely on the memory of the case (who may be very ill at the time of interview); they allow contacts unknown to the case to be traced (e.g. passengers who sat close on a train); they can potentially speed up the process; they may facilitate further follow-up of contacts by health authorities via a messaging system. A symptom-checker feature could facilitate this, although it is not essential".*

- 4.8 The primary purpose of the contact tracing app is to complement the conventional public health approach to contact tracing. The app also permits citizens to anonymously report symptoms in real-time and this data can assist the health services in mapping, predicting and ultimately preventing the spread of Covid-19. Finally, the app provides direct access to an authoritative and trusted source of news, the purpose of which is to ensure that information and up-to-date guidance in relation to Covid-19 is readily available to anyone carrying the app.
- 4.9 Since adoption of contact tracing apps is voluntary, transparency and trust are fundamental to their success. The contact tracing app developed for Ireland uses a 'decentralised' architecture. The 'decentralised' approach is best placed to support contact tracing because it maximises the effectiveness of contact tracing across all mobile phone platforms and maximises the protection of privacy. It achieves this by minimising the amount of data required, ensuring most data is held on the users own phone rather than on a centralised (HSE or government controlled) server, and uses anonymised and encrypted data.
- 4.10 The provision of anonymised information through the symptom tracker - such as gender, age category, county of residence is all consent based. Users of the app can opt out at any time and have the right for their data to be forgotten. The app does not use location services. Furthermore, it is important to note that the identity of the index case is never disclosed via the app and that the privacy of all app users is protected at all times.
- 4.11 Privacy-by-design has underpinned all aspects of app development. The Irish app is being developed to comply with recent European Commission Data Protection recommendations and guidance documents on privacy. The project has developed Data Protection Impact Assessment (DPIA) which has been submitted to the Data Protection Commissioner. The HSE will publish the DPIA and the source code publicly to ensure that there is full transparency about the app and the data utilised within the app.
- 4.12 App development and technical tests are now complete. The app and all app features, data flows, and supporting software are functioning well. These tests have covered all relevant aspects of the functionality of the app, including download and registration; symptom check-in; daily information updates; security and vulnerability; and the close contact exposure notification service (ENS). A further large-scale field trial is underway with An Garda Síochána to gather a modelling dataset that can be used to further understand the operation of proximity detection and exposure notification in a near-to-real-life environment, to inform any further fine-tuning required.