Title: Test and Trace Paper – NPHET

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Organisation: HSE
Date: 11th November 2021

Action required:
☐ For noting
☑ For discussion
☐ For decision

Approved for future publication: YES/NO (remove as applicable)
1.0 Executive Summary

- Community referrals have increased by 11% in comparison to the same time-period last week while community positivity has increased which is now at c.18.1%.
- Swabs completed in the community was 150,532, this is a 14% increase in comparison to the same time-period last week. The highest day over the past week reached c.24,327 swabs (including test centre and outbreak referrals) which is in excess of our surge capacity of 20,000.
- Monday, 8th November 2021 reported one of the highest days for testing demand ever. Over 30,000 referrals were recorded in total, with 16,789 of these being self-referrals.
- Serial testing continues in residential care facilities (92 cases identified) and food production facilities (57 cases identified).
- A key service improvement to release CMP capacity is the automation of call three (call to close contacts to book a test) introduced on the 2nd of November.
- A key service improvement recommended by NPHET was to introduce antigen testing for vaccinated asymptomatic close contacts which went live on Thursday 28th October (c.3,500 per day).
- Over 45,000 antigen tests have been reported through the public antigen results portal.
- The HSE continues to engage with the Rapid Antigen Advisory Group, chaired by Professor Mary Horgan.
- Overall, the HSE Test and Trace system is performing but is operating close to maximum surge levels, which will be challenging if it continues for a prolonged period or indeed if numbers continue to rise exponentially.

2.0 Service Status

The Test and Trace system is now operating at surge and the demand status is being continuously and actively monitored. As a result of other conditions, such as RSV and flu, circulating in the community there could be further demand on the testing system which may lead to delays in accessing the testing services. We continue to monitor this situation very closely and take into account the evolving needs and potential service demands in the context of increasing virus transmission within the community.

3.0 Current Trends

3.1 Referrals Process

- From the 03rd–09th November, there were c.169,858 community referrals. Overall, total community referrals have increased by 11% in comparison to the same time-period last week while community positivity has increased to c.18.1%.
- From 03rd–09th November, there were:
  - 190 international travel portal referrals (↓ 20% compared to last week)
  - 111,002 self-referrals (↑11% compared to last week)
  - 15,720 GP referrals (↑15% compared to last week)
• Over the last 7 days, the number of **swabs completed in the community** was c.150,532, this is a **14% increase** in comparison to the same time period last week. The highest community swabbing day over the past week reached **c.24,327 swabs**. This translates into additional pressure in a number of areas with difficulty for accessing appointments today and tomorrow in Dublin, Wicklow, Kildare, Cork city, Louth and Meath.

• Over the past week, c. 88.7% of people received a swabbing appointment in less than 24 hours. The median time to get access to swabbing is 0.3 days. The trend in respect of time to get a swabbing appointment in less than 24 hours has exceeded the target since mid-January 2021.

• Daily capacity is 20,000 at surge levels in Test Centres. We have exceeded this in **6 out of the last 7 days**.

• From the **03rd– 09th November**, there have been approximately 184,612 lab tests reported in community, private and acute labs.

• In the community, over the last 7 days (03rd– 09th November), the median end-to-end turnaround time from referral to:
  - SMS for **not detected** tests was **1.1 day**
  - Communication of a **detected result by call** was **2.1 days**
  - Contact tracing completed, for **detected results** was **2.1 days**

• Of those tested with close contacts during the same 7-day period, the average number of close contacts was 3.5. On the 09th of November, of those tested with close contacts, the average number of close contacts per person was 3.5.

• From the **03rd– 09th November**, there were:
➢ 24,746 call 1s (↑50% compared to last week)
➢ 22,218 call 2s (↑36% compared to last week)
➢ 7,779 call 3s (↓51% compared to last week)

### 4.0 Current Capacity

National standing capacity for swabbing is 21,500 while surge capacity overall is 26,500 (to 28,500 by mid Jan 2022). This includes community swabbing, serial testing, home and mobile, and acute hospital swabbing.

Current standing capacity for laboratory testing is 30,000 tests (25,000 community and 5,000 acute hospitals). A surge plan is in place to increase to 38,000 (33,000 Community Tests and including 5,000 acute).

Standing capacity within Contact Tracing is 4,045 for both Level 1 and Level 2, with surge capacity at 5,455. Based on current headcount, Contact Tracing is approaching maximum capacity with 5,355 as at 8th November 2021 and the average capacity for the past 7 days is 5,595 (This number will change on a daily basis depending on rostering of staff and excludes the Defence Forces support.)

#### Table 1. Overview of standing capacity and surge capacity

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Standing Capacity</th>
<th>Surge Capacity</th>
<th>Surge Plus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Swabbing</strong></td>
<td>21,500</td>
<td>26,500 (28,500 mid Jan 22)</td>
<td><strong>Surge Plus</strong></td>
</tr>
<tr>
<td>Swabbing – Community</td>
<td>15,000</td>
<td>18,000*</td>
<td>If demand exceeds surge capacity, measures to control demand will be implemented.</td>
</tr>
<tr>
<td>Swabbing – Home &amp; Mobile</td>
<td>1000</td>
<td>2000 (4000 by mid Jan 2022)</td>
<td></td>
</tr>
<tr>
<td>Swabbing – Serial Testing**</td>
<td>500</td>
<td>500</td>
<td>If surge capacity exceeded, measures available to increase capacity with existing third parties by up to c. 3,000 on a short-term basis. Need to align with swabbing capacity</td>
</tr>
<tr>
<td>Acute</td>
<td>5,000</td>
<td>6,000</td>
<td></td>
</tr>
<tr>
<td><strong>Laboratory</strong></td>
<td>30,000</td>
<td>38,000*** + daily tests (7-day notice period to access additional capacity)</td>
<td>38,000 ***Average per day</td>
</tr>
<tr>
<td>Laboratory - Lab 1</td>
<td>15,000</td>
<td>17,000</td>
<td></td>
</tr>
<tr>
<td>Laboratory - Lab 2</td>
<td>6,000</td>
<td>6,000</td>
<td></td>
</tr>
<tr>
<td>Laboratory - Lab 2 (offshore)</td>
<td>4,000</td>
<td>6000 (+) need advance warning to accommodate</td>
<td></td>
</tr>
<tr>
<td>Laboratory – Lab 3</td>
<td>4,000</td>
<td>4,000</td>
<td></td>
</tr>
<tr>
<td>Laboratory - Acutes</td>
<td>5,000</td>
<td>5,000****</td>
<td></td>
</tr>
<tr>
<td><strong>Contact Tracing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calls 1, 2 &amp; 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1: Call 1+Call 2</td>
<td>2000</td>
<td>2800</td>
<td>Technology solutions will be applied to manage demand.</td>
</tr>
<tr>
<td>Level 2: Call 3</td>
<td>2045</td>
<td>2645</td>
<td></td>
</tr>
<tr>
<td><strong>Total Call Capacity (L1 +L2)</strong></td>
<td>4045</td>
<td>5455</td>
<td>5,595</td>
</tr>
</tbody>
</table>

* Short-term surge capacity, not sustainable beyond a number of days
** Serial testing programmes under review. Serial testing capacity has reduced from 5,000 per day as testing programmes have been scaled back. Swabbing in Residential Care Facilities (RCFs) is carried out by RCF staff and therefore capacity cannot be transferred to other settings.
***Average per day
**Acute hospitals are running consistently at 5,000 presents significant challenges**

Contact tracing descriptions:
- **Call 2A** = Notification of positive case and identification of close contacts
- **Call 3** = Notification of close contacts

### 5.0 Surge Plan Implementation

Several actions have been taken since July 2021 to reduce the demand on Swabbing and Laboratories and to increase capacity across Contact Tracing, as listed below:

#### Referrals and Swabbing

- Expanded opening hours and enhanced rostering
- Introduced measures to increase swabbing capacity e.g. deployment of 3rd party resources, Defence Forces and NAS pop up
- Re-directed public to book tests online and stopped walk-ins to reduce admin activity at test sites and improve IPC at busy sites

#### Laboratories

- Activated additional onshore and offshore capacity as well as additional capacity in acute hospital laboratories
- Prioritisation of symptomatic cohorts and taken measures to temporarily increase turnaround times

#### Contact Tracing

- Automation of calls to close contacts (Call 3)
- Added case listing contacts onto portal
- Check in calls to increase capacity on calls 1, 2 and 3
- Upskilling of 154 Level 2 contact tracers to Level 1 to increase contact tracing capacity
- Reduction of Positive Patient Assessment (PPA) questions to minimum; max call time 25 mins.
- Workforce Management initiatives, including offering part time workers increased hours, offering Contact Tracers working a 4-hour shift overtime during busiest days, re-assignment of CMP Staff to Contact Tracing and temporary re-focus of ring-fenced CMP Contact Tracers assigned to complex settings with Departments of Public Health to CMP core functions (low complexity high volume work i.e. Call 1,2,3)
- Reduced Positive Uncontactable Cases from 4 Days to 2 Days followed by a letter
- Introduced a reduction in Contact Tracing Days for flight contact tracing
- Requested additional support from the Irish Defence Forces
- Updated work Instructions relating to quantity of attempts made to Close Contacts and Index Patients to 3 attempts over one full workday
- Amended exclusion criteria for Book a Test portal to increase volume of users who are eligible to utilise it
- Updated pre-Call 1 (2A) SMS to increase traffic to automated LYC (List Your Contacts) portal

#### Resourcing

Recruitment of staff to support swabbing and contact tracing is ongoing. As of the 8th November 2021, **791 contact tracing** staff have been hired and placed. Of the 791 contact tracing staff, 724 have been hired and
retained as part of the dedicated workforce supporting contact tracing function whilst the 67 remaining are deployed staff from the HSE and other public service roles. Recruitment and retention remains challenging as there are significant new opportunities for employees within the wider economy.

In addition, provision of further resources has been agreed with the Defence Forces which will assist in responding to the current surge. NAS are also continuing with recruitment of EMTs to assist in expanding the number of mobile swabbing teams.

6.0 Future Scenarios/Model

The latest iteration of the Irish Epidemiological Modelling Advisory Group (IEMAG) COVID-19 model was published on 26th August 2021 with four scenarios; two conservative scenarios and two pessimistic scenarios.

The original scenarios plateau and decrease towards the end of October. This is not reflecting the current case trajectory. In order to address this, all scenarios have been pushed by 30 days. This moves the plateau and decrease to the end of November with some options indicating a longer

The Test and Trace Programme are working with IEMAG to model the scenarios for Q4 2021 with particular emphasis on swabbing demand. At this point the key indicators of concern are:

- Increase in referrals for testing of 11% in comparison to the same time-period last week meaning people are delayed in some areas in receiving a test appointment (this was an 11% increase having already been at limit of capacity)
- On peak days we have taken c. 24,327 swabs in the community which is in excess of our surge capacity of 20,000 meaning people are delayed in some areas in receiving a test appointment
- Community positivity has increased over seven weeks from c.7.3% to c.17.7% which impacts on contact tracing response time

7.0 Additional Surge Steps to manage demand

Despite the actions taken to date across the Test and Trace Programme, there continues to be increased pressure across the system due to increased disease prevalence and the presence of other illnesses.

There are a range of additional steps that are kept under consideration between the Test and Trace Programme and Public Health in the event that the test and trace service was to come under sustained pressure, with delays potentially impacting on access for the public.

- **Reduce demand through modifying clinical advice**
  
  This would require policy consideration if appropriate.

- **Further Increase capacity if possible**
  
  There are limitations in the ability to increase capacity beyond the actions already taken on the surge plan. Our laboratories have sufficient capacity at this point, so the capacity challenge relates to swabbing and contact management. Any additional actions are identified below.
  
  *Referrals and swabbing*
Utilise private sector swabbing to increase overall swabbing capacity to meet growing demand. The private market is monitored regularly by our procurement team but additional capacity options are limited.

- **Service Improvements/Adaption of service model to managed demand**

These are a combination of service improvements or adaptations to the service model which enable the demand to be managed and to ensure a timely response for the public. These are subject to ongoing review and may in some cases require policy change if they were to be introduced. These are not prioritised at this point as their introduction and impact could vary at different points in the response to the disease.

**Referrals and swabbing**

- Prioritise access to PCR testing and/or antigen testing based on clinical guidelines, including criteria related to symptoms, age, vaccination status, medical conditions, and referral pathway. This would require a change to the self-registration ICT portal. This would redirect people from swabbing to home antigen testing
- Stand down confirmatory PCR testing for asymptomatic close contacts who have received a positive antigen test, in line with clinical guidelines for PCR testing prioritisation
- Stand down confirmatory PCR testing for positive antigen results and do contact tracing
- Implement antigen self-swabbing for all close contacts (unvaccinated, asymptomatic, >13 years)
- Implement antigen for asymptomatic and vaccinated who are not close contacts

**Contact Tracing**

- Use of technology to communicate with individuals who have tested positive in lieu of phone calls (Phone calls would be used for priority cases and failed SMS)
- Gathering of epidemiological data from sample set of individuals who have tested positive, via Call 2A, for surveillance purposes reducing call time.
- Only gather contacts associated with 9 PH priority areas, for example, hospitals, RCF, travelling community, etc.

**Public Communications**

Any changes to the testing and tracing strategy and operational plan have implications for communications and information sharing. There is a critical need to ensure that any change in testing criteria or processes are clearly communicated to all stakeholders, so that positive changes are not misinterpreted as negative responses to demands on the service.
8.0 Other Testing Programmes

1. Serial Testing Programmes:

- Serial testing of staff in RCFs commenced on 20th June 2020. To date, **883,465 swabs** have been completed in **598 facilities**, identifying **5,187 detected cases**, resulting in an **0.59% detection rate** since the beginning of testing.

- Cycle 17 commenced on 11th October. To date, the cycle has completed **9,215 swabs** and identified **92 detected cases**. This results in a **1.00% detection rate**.

- Serial Testing of Staff in Mental Health Facilities commenced on 21st of January 2021. To date, **9,047 swabs** have been completed in **93 facilities**, identifying **29 detected cases**, resulting in a **0.32% detection rate**.

- Cycle 10 commenced on the 11th of October. To date, **361 swabs** have been completed in **5 facilities**, identifying **3 detected cases**. This results in a **0.83% detection rate**.
• Serial Testing of Staff in Food Production Facilities commenced on 21st of August 2020. To date, 268,339 swabs have been completed in 91 facilities, identifying 1,937 detected cases, resulting in a 0.72% detection rate since the beginning of testing.

• Cycle 15 commenced on the 18th of October. To date, 4,806 swabs have been completed in 57 facilities, identifying 57 detected cases. This results in a 1.19% detection rate.

2. Antigen Testing Screening Programmes

Antigen testing screening programmes are underway in;

- Early childcare staff
- Further and Higher Education staff and students
- Food Industry staff
- Residential Care Facilities (RCFs) for Older Persons

These programmes are ongoing and the results are reported via the online system. In addition, screening programmes are being considered for difficult to reach groups and prison service.

The antigen test numbers reported to date are:

<table>
<thead>
<tr>
<th>Sector</th>
<th>Commenced</th>
<th>Total Tests Completed</th>
<th>Total Positive Antigen Results</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food and Meat</td>
<td>March 2021</td>
<td>114,022</td>
<td>204</td>
<td>Results collected by DAFM</td>
</tr>
<tr>
<td>Acute Hospital</td>
<td>Feb 2021</td>
<td>3,024</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Higher Education</td>
<td>July 2021</td>
<td>2,462</td>
<td>442</td>
<td>May include results</td>
</tr>
</tbody>
</table>
Evaluation of these programmes is ongoing and any further roll-out will be based on Public Health recommendations and advice from the Rapid Antigen Test Taskforce.

Antigen testing of close contacts who are fully vaccinated and have no symptoms commenced on 28th October. A box of antigen tests is delivered by post to the individual’s home and a range of information and resources has been made available to support the user in completing the course of antigen tests. Typically, over 3,330 close contacts per day are being referred daily for antigen tests.

### 9.0 Service Improvement Initiatives

**Contact Tracing Improvement Initiatives - Automation of Call three**

The Contact Management Programme (CMP) currently provides a text to identified close contacts in order to inform them that they are a close contact and to ask them to book a test. The majority of close contacts were contacted through a phone call and this is migrating, as part of the automation plan, to improve the capacity in our contact management service.

From the evening of Tuesday, 2nd November, Call 3 has been be further automated to reach a wider group of close contacts. The key points are:

- The automation of Call 3 relates to close contacts only; individuals who tested positive will still receive a phone call.
- The automation of Call 3 will see the following changes for close contacts:
  1. Close Contacts already in the queue (20,000 as at 02/11/21) have already received a text message informing them that they will receive a further phone call from Contact Tracing. However, as of this evening, these individuals will receive a text message instead of a Call 3 directing them to the automated solution to book a test, either PCR or Antigen as appropriate.
  2. From tomorrow onwards, anyone identified as a close contact will receive a text message instead of Call 3, either PCR or Antigen as appropriate.
- The text message will include a link to the HSE portal and a 6 digit code – close contacts will be asked to answer a number of questions and then will be directed to either PCR (symptomatic) or antigen (if vaccinated and asymptomatic). They will also be encouraged to log on to the HSE website for further advice.

Following the automation of Call 3, there will be several short-term impacts across Test and Trace as the current queue is cleared, which will only last for a few days with increases in antigen test kits and PCR testing.

A communications plan has been developed to support this change.
Antigen testing results

The online system for reporting antigen self-test results is available for any antigen user to report their results, whether part of an HSE programme or other members of the general public. Antigen test results, symptomatic status and vaccination status are self-reported and not subject to validation.

To date, 45,673 results have been entered with an average of 2,104 per day for the last 7 days. 82% of positive antigen results are confirmed cases on PCR testing, an average of 1,132 cases per day.

Antigen Test Kit Distribution

A pathway for distribution of antigen tests via pharmacies is at the advanced stages of development. This model could support the wider roll out of antigen testing to identified cohorts if required, whether as a public health measure, screening programme or as a surge capacity measure to mitigate PCR testing demand.
Appendix I – Testing Profile of younger people

- Below is the volume of testing in three age groups under 18, and the number of positive cases. Overall, more than 43,261 tests were done, with 5,707 positives in this age group.

Table 1: Breakdown comparison in weeks 25th–31st Oct and 1st–7th Nov:

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>0 – 3 yrs</td>
<td>11,510</td>
<td>579</td>
<td>11,169 (↓3%)</td>
<td>777 (↑34%)</td>
</tr>
<tr>
<td>4 – 12 yrs</td>
<td>19,889</td>
<td>2,819</td>
<td>22,631 (↑14%)</td>
<td>3,648 (↑29%)</td>
</tr>
<tr>
<td>13 – 17 yrs</td>
<td>5,047</td>
<td>713</td>
<td>9,461 (↑87%)</td>
<td>1,282 (↑80%)</td>
</tr>
</tbody>
</table>