An overview of the establishment of a national contact tracing programme: a quality improvement approach in a time of pandemic [version 1; peer review: awaiting peer review]

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\textbf{Abstract}

\textbf{Background:} With the onset of the coronavirus disease 2019 (COVID-19) pandemic, the Irish health system needed a contact tracing and management intervention at a national level to undertake high volume, low complexity contact tracing. This paper describes the establishment and first year of a national Contact Management Programme (CMP) in Ireland, its core components, outcomes on key measures (coverage, timeliness, and training) and learnings from the process.

\textbf{Methods:} CMP is centred on four steps, 1) case: rapid notification to a person of a result and provision of advice, 2) contacts: rapid identification of contacts, 3) control: rapid public health management of contacts, which includes testing and 4) active follow-up of close contacts with additional testing and public health advice reminder SMS and calls. The outcome measures used in this study are: 1) The proportion of all Irish cases contact traced through the CMP (Coverage), 2) the time taken to complete the 3 types of CMP calls (timeliness), 3) number of contact tracers trained and their feedback (training).

\textbf{Results:} 246,666 positive cases were recorded using the CMP between
17th March 2020 and 30th April 2021, with contact tracing successfully completed for 237,759 cases, representing 99% and 96%, respectively, of the 248,529 cases notified in Ireland up to the 30th of April 2021. The average time taken for contact tracing to be completed was 29.4 hours (95% CI 28.9, 29.9) and the median was 16.8 hours (approximate 95% CI 15.9, 17.7).

**Conclusion:** Using the Quality Improvement (QI) approach, the Health Service Executive (HSE) successfully established and scaled up a Contact Management Programme that rapidly notified results to people and traced their close contacts. CMP contributed to the success of the Irish health service in managing the pandemic. CMP slowed COVID-19 transmission and lessened the impact on health services capacity.

**Keywords**
Contact management programme, Contact tracing, COVID-19, Quality Improvement

This article is included in the *Coronavirus (COVID-19)* collection.
Introduction
The coronavirus disease 2019 (COVID-19) pandemic is a global health emergency and has placed unprecedented pressures on healthcare systems around the world. As of 20th December 2021, there are 273,900,334 confirmed cases of COVID-19, including 5,351,812 deaths worldwide. Ireland has also suffered a loss of 5,835 lives and a total of 656,600 confirmed cases of COVID-19 as of 20th December 2021 highlighting the magnitude of the problem. Contact tracing is a core component in the management of infectious disease outbreaks and has been a part of the strategies of various countries to battle the COVID-19 pandemic. To stop the spread of COVID-19, the World Health Organization (WHO) recommends finding and testing all suspected cases, isolating, and treating confirmed cases and identifying close contacts of the confirmed cases for quarantine and observation. Countries should implement measures suited to their epidemiological conditions and system capacities while learning from success stories including China, Singapore, and South Korea who have demonstrated that identification and management of cases and their close contacts are effective practices.

Studies have shown that reducing tracing delays by shortening the time to trace contacts and prompt testing and isolation of positive cases can enhance contact tracing effectiveness while also reducing reproduction numbers. In most situations, efficient contact tracing and case isolation can significantly control new outbreaks of COVID-19 within 3 months. In addition to this, digital contact tracing through apps allows for instant notifications and has the potential to reduce the number of cases using finite resources.

There are eight regional Departments of Public Health in Ireland and under normal circumstances, each region manages contact traces infectious diseases (IDs). The Health Protection Surveillance Centre (HPSC) coordinates nationwide outbreaks in collaboration with the eight regional Medical Officers of Health (MoH)/Departments of Public Health and Northern Irish authorities as required. However due to the rapid spread of COVID-19, coordination between the Departments of Public Health became challenging. Contact tracing services in departments with small numbers of staff and large urban populations became overwhelmed. There was a need for a contact tracing and management intervention at a national level to undertake high volume, low complexity contact tracing in Ireland. Members of the National Quality Improvement (QI) team, who also had expertise in public health, identified an opportunity to apply a QI approach to design and implement a national Contact Management Programme (CMP) at pace and scale.

The aims of the CMP are to rapidly identify and close chains of transmission of COVID-19 and collect essential surveillance data, thereby slowing COVID-19 transmission in Ireland and lessening the impact on health system capacity, in addition to freeing-up the Departments of Public Health to focus on complex public health issues. The aim of the paper is to describe the establishment of the CMP, its core components, outcomes on key measures (coverage, timeliness, and training) and learnings from the process since its establishment up till its first year of operations (May 2021).

Methods
Context
This study is reported using Revised Standards for Quality Improvement Reporting Excellence (SQUIRE 2.0) guidelines. On 11th March 2020, the Chief Executive Officer (CEO) of the Health Service Executive (HSE) Ireland directed the Chief Clinical Officer (CCO) to establish national level contact tracing. A team with expertise in QI (National Quality Improvement Team), programme development (National Women and Infants Programme) and public health infectious disease management was established. The CMP design was based on the Model for Improvement, a QI method which centres around the development of improvement ideas with a clear aim, measures to know whether the aim has been achieved and small tests of change using PDSA (Plan Do Study Act) iterative cycles. The design of the CMP was an iterative process based on international best practices. Although the CMP closely mirrors these guidelines, the implementation using QI approaches in the Irish context is novel. Figure 1 maps CMP design onto the Model for Improvement. The four-step process blueprint of CMP was created using process flow mapping, a lean methodology tool. The national framework for improving quality in HSE guided the implementation of the QI approach for the CMP.

Intervention
CMP drivers are leadership and governance, collaboration, training, IT System, contact tracing centres, patient engagement and national standardisation process. The four key steps of the CMP are rapid notification to a person of a result and provision of advice, rapid identification of contacts of confirmed cases, rapid public health management of contacts of confirmed cases and active follow-up of close contacts. These steps are presented in Table 1.

CMP primary drivers
The primary drivers identified in establishing the CMP and their impact on CMP are outlined in the following sections.

Leadership and governance. The HSE senior leadership team prioritised and supported the CMP and clinical leaders from all disciplines advocated its use. The CMP Programme Lead was empowered to make decisions and recruit resources. A consultant in public health was recruited as the CMP Medical Officer of Health. Clear governance structures were established and documented to track high-level decisions and organisational charts were developed and updated regularly.

Collaboration. Collaboration with stakeholders across the HSE (National QI Team, National Women and Infants Health Programme and other agencies), the Defence Forces, universities and others across the public and private sector was key to the rapid establishment of the CMP. Many across these sectors
volunteered for redeployment to assist national efforts. Initially, several public health stakeholders raised concerns around possible risk of lower quality of contact tracing in CMP. For many regional Departments of Public Health that were able to manage contact tracing for a relatively low volume of cases, the use of CovidCare Tracker (CCT) IT system seemed to be tedious. The CMP leadership continuously collaborated with these Departments of Public Health to resolve concerns and developed processes to better fit their requirements.

**Education and training.** A CMP induction programme was developed to meet the urgent and large-scale requirement to train people in contact tracing. The programme prepared newly redeployed staff to work in the contact tracing centres (CTCs). The programme was co-designed with public health physicians, educationalists and QI facilitators and was tested with the first group of contact tracers. The programme was initially delivered face-to-face but moved to virtual delivery supported by a teaching university’s virtual learning platform. The programme consisted of self-directed learning, facilitated interactive virtual sessions, video role plays, audio presentations, CCT instructional videos and user manuals. A staff support component was integrated into the programme to support contact tracers in undertaking new roles in a rapidly evolving environment. The programme and its delivery were continually evaluated and adapted to reflect participant feedback. Caller scripts guide and support the CTC contact tracers in undertaking the different types of calls. Rapid PDSA cycles were employed to test and refine caller scripts which played a vital role in further script development in response to evolving public health policy and guidance, new updates to the CCT and recurring issues and scenarios.

**IT system.** A national web-based Contact Tracing IT system was designed to enable contact tracing for different people (for example clinicians breaking the bad news of a positive result, and non-clinicians collecting contact information). This bespoke system allows contact tracing to take place in any location, enabling safe distanced working. It collects and stores epidemiological and case management information to inform management of the pandemic nationally.

The HSE Office of the Chief Information Officer (OoCIO) working with the CMP team, used agile development methodology
## Table 1. Four steps of CMP (Establishment-May 2021)

<table>
<thead>
<tr>
<th>Step</th>
<th>Purpose</th>
<th>Phone Call or Text Message</th>
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| 1-Case | Rapid notification to a person of a result and provision of advice      | **Pre-Call 1 Positive Text:** Text from CMP to notify the person of their test result if positive and to await contact from CTC  
**Positive Call 1:** Phone call from CTC call handler to notify the person of their test result if positive  
• Checks if specialised contact tracing is required\(^a\)  
• Checks if person is a healthcare worker\(^b\)  
• Checks if previously positive\(^c\)  
• Asks about symptoms\(^d\)  
• Collects case surveillance data  
• Provides self-isolation advice  
• Enters demographic and surveillance data on CCT  
Note. If call handler does not have a clinical background or sufficient experience, they do not undertake call 1  
**Negative Text 1:** Text from CMP to notify the person of their test result if not detected  
**Indeterminate Letter 1:** Letter from CMP to notify the person of their test result if inconclusive, and to advise of requirement to contact their referring doctor |
| 2-Contacts | Rapid identification of contacts of confirmed cases of COVID-19 | **Call 2:** Phone call from CTC call handler to case to collect contacts  
• Phone call can be undertaken at same time as call 1 or later depending on expertise and clinical background of call handler  
• Establishes if level of contact reaches threshold for close contact  
• Collects the names and mobile phone numbers of the person’s close contacts and settings where they may have generated close contacts  
• Enters contact details and settings on CCT  
• Complex contacts or settings are routed to DPH using functionality on CCT |
| 3-Control | Rapid public health management of contacts of confirmed cases | **Pre-Call 3 Close Contact SMS** to notify close contacts immediately to restrict their movements and to invite them to use the ‘Request a Test’ online portal to receive public health advice and request COVID-19 test online  
**Call 3:** Phone call to close contacts  
• Close contacts can be identified at Call 2, through Public Health investigation of outbreaks or through the Covid Tracker App. Regardless of source these contacts enter the Call 3 queue on CCT for follow up.  
• Call handler does not require a clinical background  
• Refers for testing as soon as possible (known as Day 0 or as soon as possible)  
• Checks if previously positive or fully vaccinated\(^e\)  
• Checks if specialised contact tracing is required\(^f\)  
• Checks if person is a healthcare worker\(^g\)  
• Collects symptom information  
• Provides self-isolation advice if symptomatic or advice on restricted movements if asymptomatic |
| 4. Active follow up | Active follow-up of close contacts | **Active follow up**  
• Reminder text messages with public health advice sent to close contact until their last date of restricted movements\(^h\)  
• Refer for a second test (known as scheduled) on the tenth day following contact with case or fourteenth day following onset of symptoms in case if the contact has ongoing exposure to the case |

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\(^a\) The person is referred for specialised contact tracing where there is a greater level of complexity such as living in a congregated residential setting such as a nursing home or direct provision centre, associated with an outbreak.  
\(^b\) If the person is a healthcare worker, they are asked to contact their line manager or occupational health department to inform them that they have tested positive for COVID-19 and they are referred to DPH for contact tracing of occupational contacts. Other contacts are collected through CMP  
\(^c\) If positive in previous 6 months and asymptomatic, contact tracing not required  
\(^d\) The person is advised that if they start to feel unwell, but it is not an emergency to call their GP or to phone an ambulance if it is an emergency.  
\(^e\) If positive in previous 6 months or if fully vaccinated and asymptomatic no testing or restriction of movements is advised  
\(^f\) The person is referred for specialised contact tracing if they are an inpatient in a hospital or are living in a congregated residential setting such as a nursing home or direct provision centre.  
\(^g\) If the person is a healthcare worker, they are asked to contact their line manager or occupational health department to inform them that they have tested positive for COVID-19  
\(^h\) Active follow up is extended to 17 days in case of ongoing exposure, such as a household contacts
to release the first version of the CovidCare Tracker (CCT) in only 6 days. The CCT supports aspects of COVID-19 care by providing an end-to-end system of a person’s COVID journey. It links to multiple other systems to support efficient and robust data collection and management of COVID-19 cases and contacts. It links to SwiftQueue (HSE’s online appointment system) to schedule testing. It integrates with Twilio (company that send the SMS) to communicate all results and public health advice via SMS. Two web portals have been developed. Request a Test portal enables self-service receipt of public health advice and booking of tests for close contacts to compliment contact tracer delivered contact tracing in normal times but can be used to replace contact tracer calls if there is a large surge in cases, as occurred in December 2020. Trace your Contacts portal has been developed to replace call 1 and 2 as a contingency if the contact tracing programme becomes so overwhelmed that these calls cannot be made.

CMP identifies the business processes required, in collaboration with public health and other stakeholders. Such rapid pace of development inevitably led to a system that initially had minimal functionality and was ‘clunky’ to use. However, the CCT continues to evolve to both improve its user interface based on feedback, to implement new functionality including outbreak management and source investigation/retrospective contact tracing and to move to a more automated approach to contact tracing.

CCT is also used by all Departments of Public Health and allows flow of information and referrals to occur between CMP and departments. The CCT contact tracing module captures demographic details for cases, contacts, and case surveillance data, in close collaboration with the national surveillance centre, HPSC, which is used to inform national policy. CCT also captures data such as the number and timeliness of interventions.

**Contact tracing centres (CTCs).** The CMP communicates with thousands of contacts per day through physical and virtual (working from home) contact tracing centres. Contact tracers in each centre are supported by on site ‘superusers’ (experts in using CCT) and clinical leads. Each centre has its own operations manager, and a national CTC operations team coordinates across the centres. Nine CTCs spread geographically across the country were established in wave one to conduct contact tracing. These volunteer centres were replaced by permanent centres with staff recruited into the roles after first wave of the pandemic.

**Patient engagement.** Patient and staff engagement methods and forums developed by the National Quality Improvement team in the preceding years are being conducted virtually during the pandemic and were used to capture patient and public feedback and perspectives on proposed changes. Engagement with patient groups shaped the direction of contact tracing and the language used in calls and text messages to ensure the wording was clear, understandable, and meeting the needs of cases and contacts.

**National standardised process.** The key foundation on which this national contact tracing programme was built was the ‘4 Step Contact Tracing Process’ (Table 1). This provided the blueprint on which all the teams worked, ensuring all activities were pointing in the same direction.

**Measures**

The key measures in four domains chosen to demonstrate outcomes of CMP for this study are coverage, timeliness, testing and training.

- **Coverage** refers to the proportion of all Irish cases contact traced through the CMP between March 17th 2020 and April 30th 2021. The number of cases recorded on the CCT was compared with data reported by the Health Protection and Surveillance Centre to determine 1) number and proportion of all cases of COVID-19 managed on CCT, 2) number of contacts managed by CTCs and by Departments of Public health using CCT.

- **Timeliness** refers to the time taken to complete the 3 types of CMP calls the maximum number of calls made to cases and contacts by the CMP on a single day between March 17th 2020 and April 30th 2021. Call timestamps from the CCT were used to calculate 1) time to complete calls 1, 2, and 3, and 2) time to complete contact tracing. The time taken to complete call 1 was defined as the time between case upload to the CCT and the case being marked as informed on the CCT and includes overnight hours. The time for call 2 was defined as the time between call 1 completion and the time that the contact tracing was recorded as complete for the case (call 2) and includes overnight hours. The time for call 3 was defined as the time between a close contact being captured on the CCT during call 2, and the time that the call to the contact was marked as complete and includes overnight hours. The time for contact tracing to be completed was defined as the time between a case being uploaded to the CCT and the time when their last close contact was informed and includes overnight hours.

- **Training** refers to the number of new contact tracers trained between March 2020 to March 2021. CMP Induction Evaluation Data was used to determine 1) number of people trained, 2) feedback from people trained.

**Patient and public involvement**

Patients or the public were not directly involved in the design, or conduct, or reporting, or dissemination plans of our study.

**Analysis**

Statistical analysis was performed using R (version 4.0.5). Descriptive statistics provided include the proportion of cases managed by CMP and the mean and median times taken for
calls to be completed with 95% confidence intervals. Line charts have been used to illustrate the results.

**Ethical considerations**

The processing of data for the purpose of surveillance, investigation, prevention, and control of infectious diseases including contact tracing is permitted under the Infectious Diseases Regulations, 1981. Case and contact information are treated as confidential information. Call handlers sign a confidentiality form, the CCT is accessed by secure log in, and Data Privacy Impact Assessments have been submitted and approved by the Data Protection Commissioner. The aggregated and anonymised data is published daily in epidemiology reports of COVID-19 in Ireland.

**Results**

In total, 246,666 positive cases have been recorded on the CCT between 17th March 2020 and 30th April 2021, with contact tracing successfully completed for 237,759 cases, representing 99% and 96%, respectively, of the 248,529 cases notified in Ireland up to the 30th April 2021. The other cases were managed by Departments of Public Health or Occupational Health Departments, outside the CMP process. There were 681,904 close contacts captured on the system between 17th March 2020 and 30th April 2021. The CCT also recorded 86,717 complex contacts or settings which were referred to Departments of Public Health for management. The busiest day for the CMP was 4th January 2021, with 7,518 calls made to cases to inform them of their diagnosis and collect details of their contacts (combined call 1&2). CMP coverage outcomes are presented in **Figure 2**. Timeliness outcomes are summarised in **Figure 3**. The average time taken to complete ‘call 1’ was 14.9 hours (95% confidence Interval [CI] 14.8, 15.0) and the median time was 5.9 hours (approximate 95% CI 5.6, 6.3). The average time taken to complete ‘call 2’ was 4.9 hours (95% CI 4.7, 5.1) and the median was 0.8 hours (approximate 95% CI 0.6, 0.9). The average time to complete ‘call 3’ was 6.9 hours (95% CI 6.8, 6.9) and the median was 1.0 hours (approximate 95% CI 0.9, 1.1). The average time taken for contact tracing to be completed was 29.4 hours (95% CI 28.9, 29.9) and the median was 16.8 hours (approximate 95% CI 15.9, 17.7). The difference in mean and median is largely impacted by cases entering the system at night-time when CTCs were not working.

The length of time taken to complete calls decreased during the first five months of the CCT’s lifespan as CMP efficiency increased and the number of cases and contacts decreased in line with the implementation of national restrictions. The rise in case and contacts numbers during the second surge in September and October was associated with an increase in time taken to complete calls. At the end of December 2020, Ireland experienced its third and by far largest wave with case numbers increasing tenfold in less than 2 weeks. Using the lessons learned from the second surge, the contact tracing process was rapidly adjusted. Call 1 and 2 were combined into one call and the *Request a Test* portal replaced call 3, until the point at which testing of close contacts had to be paused due to testing capacity. Throughout this surge, phone calls to cases, identification of contacts and communication via SMS of contact status was maintained.

A total number of 3,834 contact tracers were trained between March 2020 to March 2021. This excludes contact tracers who returned for refresher training. Initially the training was delivered face to face during the first phase of CMP induction.

![Figure 2](image.png)

**Figure 2.** Contact Management Programme (CMP) coverage (March 2020 - May 2021). Number of cases and close contacts managed through CMP.
Later, these sessions were offered remotely. Evaluation found that the contact tracers found the content, delivery, and design of the training informative, comprehensive, and beneficial. Majority of those trained found the programme to meet their expectations and felt well prepared to work in a CTC. The results are summarised in Figure 4. With the increasing complexity of calls, the education and training team now offer discussion sessions to contact tracers to consolidate learning and build confidence in the contact tracing workforce.

The demonstrate that the establishment of the CMP led to a drastic increase in the number and proportion of all cases of COVID-19 being managed centrally. This intervention enabled contact tracing to be undertaken by people with no previous experience in public health. Given the very small number of public health experts in Ireland prior to the pandemic, the CMP was responsible for allowing contact tracing to continue throughout the pandemic. In addition, CMP freed up the specialised experts within Departments of Public Health to undertake other complex COVID work. The PDSA approach has made the process scalable and to date, there have been 16 releases adding enhancements to improve the CMP process. Some other major enhancements include the introduction of a self-service booking portal and plans to introduce source investigation to identify and manage outbreaks more efficiently.

**Discussion**

This paper describes the establishment of the CMP, its core components, outcomes on key measures and learnings from the process. Across the world, government policies towards contact tracing vary greatly. Country responses to contact tracing can be categorised as no tracing, limited tracing, and comprehensive tracing. Ireland along with a few other countries such as China, Australia, Japan, conducted comprehensive contact tracing. The testing and tracing strategy of the Irish health system has proved successful in identifying cases of COVID-19. Through the application of a QI approach, a scalable contact tracing system was rapidly developed. In close collaboration with regional Departments of Public Health, the Contact Management Programme ensured that cases and contacts were appropriately managed in a streamlined and sustainable process. The work was fast paced with new structures, services and initiatives often introduced in a matter of days. Leadership and coordination were provided by National QI Team and National Women and Infants Health Programme, working with colleagues in Public Health and across the HSE and other agencies.
In the absence of collaboration and coordination with other areas, contact tracing efforts of public health alone may quickly overwhelm the team’s capacity. Collaboration across departments and coordination at the national level was an important aspect of this approach as well. Decisive leadership, a rapid response, good coordination, understanding the socio-economic and health dimensions of the population emerged as a key factor in determining success of COVID-19 pandemic response. The learning from the CMP aligns with this evidence as leadership and governance enabled rapid mobilisation of resources and empowered the teams.

For a meaningful impact, contact tracers need to be trained in not only script-based guidelines, clarifying signs, symptoms and public health advice but also soft skills such as patience and empathy. The CMP education and training team quickly trained a large number of contact tracers to assume this responsibility. Person engagement through different forums also contributed to the iterative improvement of scripts. This also supports the current evidence that suggests community engagement can be an important bottom-up approach in the COVID-19 response and its improvement. Optimising the coverage of testing, timeliness of tracing coverage, reducing tracing delays by using app-based technologies has a potential of preventing up to 80% of all transmission and enhances the effectiveness of contact tracing. The outcomes of the CMP show that CMP managed 96% of the contacts centrally and combined with other public health preventative measures, played a leading role in curbing transmission.

For contact tracing to be a valuable public health measure, the majority of the secondary cases need to be detected and isolated before they become infectious along with other public health control measures. The use of technology can facilitate the achievement of this target. Evidence suggests that countries more successful in managing the disease burden of COVID-19 quickly developed and deployed digital technologies to support pandemic management. In Asian countries including China, Taiwan, and South Korea, contact tracing apps proved to be effective in supporting the contact tracing processes. This was observed in the CMP as well where the CovidCare Tracker app served as an effective and scalable tool to connect the public with the CMP, greatly enhancing the capacity and speed of contact tracing. However, high-tech tools and digital contact tracing are not a replacement for contact tracing done by trained contact tracers. CMP also reflects this and is centred around the importance of trained contact tracers. This human aspect of the process has proved to be critical in ensuring people understand public health advice and gathering important feedback for process improvement. However, an implication of this human element of the contact tracing process is its resource intensiveness. One study predicts that every new case requires an average of 36 individuals to be traced which places huge burdens on public health departments.

The pandemic response to contact tracing has highlighted the efficacy of the QI approach in enabling rapid testing, measurement and multiple PDSAs leading to a more efficient ways of working. Using the QI approach strengthened the CMP by making it easily scalable, with each change being tested and evaluated and the learning assimilated in the process. The modelling of CMP on QI principles is a unique approach to pandemic management and may have potential for transferability to future pandemic planning.

Current evidence on the COVID-19 outbreak has established the importance of contact tracing in containing the virus and...
curtailing widespread transmission and it is expected to play an important role in avoiding an increase in transmission when public health measures are deescalated. CMP along with complementary public health measures has proven to be critical in achieving and maintaining epidemic control in Ireland and will also inform the knowledge base and preparedness for responding to any emergencies in future.

Strengths and limitations
The key strength of CMP is the people. People and teams with key skills were rapidly redeployed and recruited into different areas. These teams together with other HSE and non-HSE people, allowed for this function to be operational and make up to 5000 calls in a day in during the first wave. Another strength of the CMP is its ability to adapt and respond to the changing environment using QI methods. The key limiting factor in CMP was time. Time constraints led to low engagement with the eight regional Departments of Public Health initially. The lack of time to plan and test the IT system before each release meant that technical glitches went live which caused difficulties for users. Another challenge was the frequently changing requirements requiring implementation in days. Other limitations include the lack of availability of data from regional Departments of Public Health and the absence of a unique patient identifier which limits the ability to link datasets across Ireland.

Conclusion
Ireland is one of few countries to continue comprehensive contact tracing throughout the pandemic. Using the QI approach, the HSE successfully established and scaled up a Contact Management Programme that rapidly notified results to people and traced their close contacts. The integration between the CovidCare Tracker, the COVID Tracker Ireland app, Self-Service Portals and automated SMS has led to further optimisation of contact tracing. CMP contributed to the success of the Irish health service in containing the three waves of the COVID-19 pandemic. A bespoke IT system and standardised training and support allowed for non-public health staff across the country to effectively undertake a task here to fore undertaken by public health staff under direct Public Health Physician supervision. The approach, processes and tools used in this national programme can provide direction to other countries wishing to implement a similar programme.

Data availability
The data used in this study cannot be shared publicly due to data protection concerns. Even after de-identification, some data may still be identifiable particularly during periods with low case numbers. However, the data can be accessed directly through the Central Statistics Office’s (CSO’s) COVID-19 Data Research Hub. The researchers requesting data should contact the CSO researcher liaison via email (c19researchinfo@cso.ie). More details on the process are available here.

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References


