

# Coronavirus: the 2021 Director of Public Health Report for Northern Ireland



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# Foreword

# Foreword



 **Dr Brid Farrell**

Welcome to the 12th Annual Report of the Director of Public Health. This report builds on the previous Annual Director of Public Health Report published in 2020 which described the initial impact of COVID-19 in Northern Ireland and the response of the Public Health Agency (PHA) during the preliminary stages of the pandemic. This report once again focuses on COVID-19, describing some of the broader health and societal consequences which have become apparent in the intervening period. It highlights some of the work being undertaken across Northern Ireland to mitigate the impacts of the pandemic on the health and wellbeing of our population. In particular, the report outlines key developments within the field of public health which have supported the pandemic response, as well as providing a solid foundation in our plans for longer-term recovery. The report acknowledges the commitment of the public health and healthcare workforce in Northern Ireland to protecting the health of our population during the second year of the pandemic response.


The report begins by providing an overview of the COVID-19 pandemic within Northern Ireland throughout 2021, together with the public health response during this time period. This highlights the synergy between new and traditional ways of working, illustrating how digital interventions and innovative approaches cultivated during the pandemic have complemented the long-standing, evidence-based cornerstones of public health practice. The report highlights contributions from colleagues across the PHA and partner organisations, and provides a snapshot of the extensive work being undertaken 'on the ground' to address the many and varied challenges presented to population health in Northern Ireland by COVID-19.

The Health Protection Team of the PHA, ably supported by colleagues from across the broad sphere of public health, has played a central role in the coordination of the pandemic response in Northern Ireland, since the identification of the first case of COVID-19 on 26 February 2020. The PHA has worked to mitigate the wider health impacts of the pandemic, minimising the disruption to routine health service provision. Maintaining population screening programmes to enable early detection of cancer and other conditions has necessitated the implementation of new ways of patient engagement and service delivery to ensure the continuation of high quality service provision. The report describes initiatives undertaken in collaboration with partner organisations to address inequalities in cancer screening uptake among women during the pandemic, as well as the introduction of new technologies and techniques to improve and develop existing screening programmes.

The mental health effects of infection by SARS-CoV-2, in addition to the wider psychological and emotional impacts of the pandemic, have been extensively documented by researchers around the world. The pandemic has also served to widen health inequalities in those already suffering from mental health conditions, with individuals suffering from mental illness at increased risk of infection, as well as experiencing higher rates of hospital admission and death from COVID-19. Furthermore, a local study in Northern Ireland has demonstrated significantly lower uptake of COVID-19 vaccination among those being treated with anti-anxiety and anti-psychotic

medications, compared to those not receiving such medications.<sup>1</sup> This report describes the findings of studies funded by the Health and Social Care Research and Development Division of the PHA, which have explored the harmful effects of the pandemic on the wellbeing and quality of life of our health and social care staff, and college students in Northern Ireland and the Republic of Ireland. These studies outline strategies to improve and support holistic health and wellbeing of these groups, at policy, organisational and individual level.

The report also highlights work being undertaken to address the impact of the pandemic on widening health inequalities across Northern Ireland, through the adoption of targeted population and community engagement approaches. A key focus throughout 2021 has been on addressing inequalities in COVID-19 vaccination uptake among specific population subgroups, through the implementation of targeted, evidence-based strategies.



**Dr Brid Farrell**

Acting Director of Public Health  
Public Health Agency

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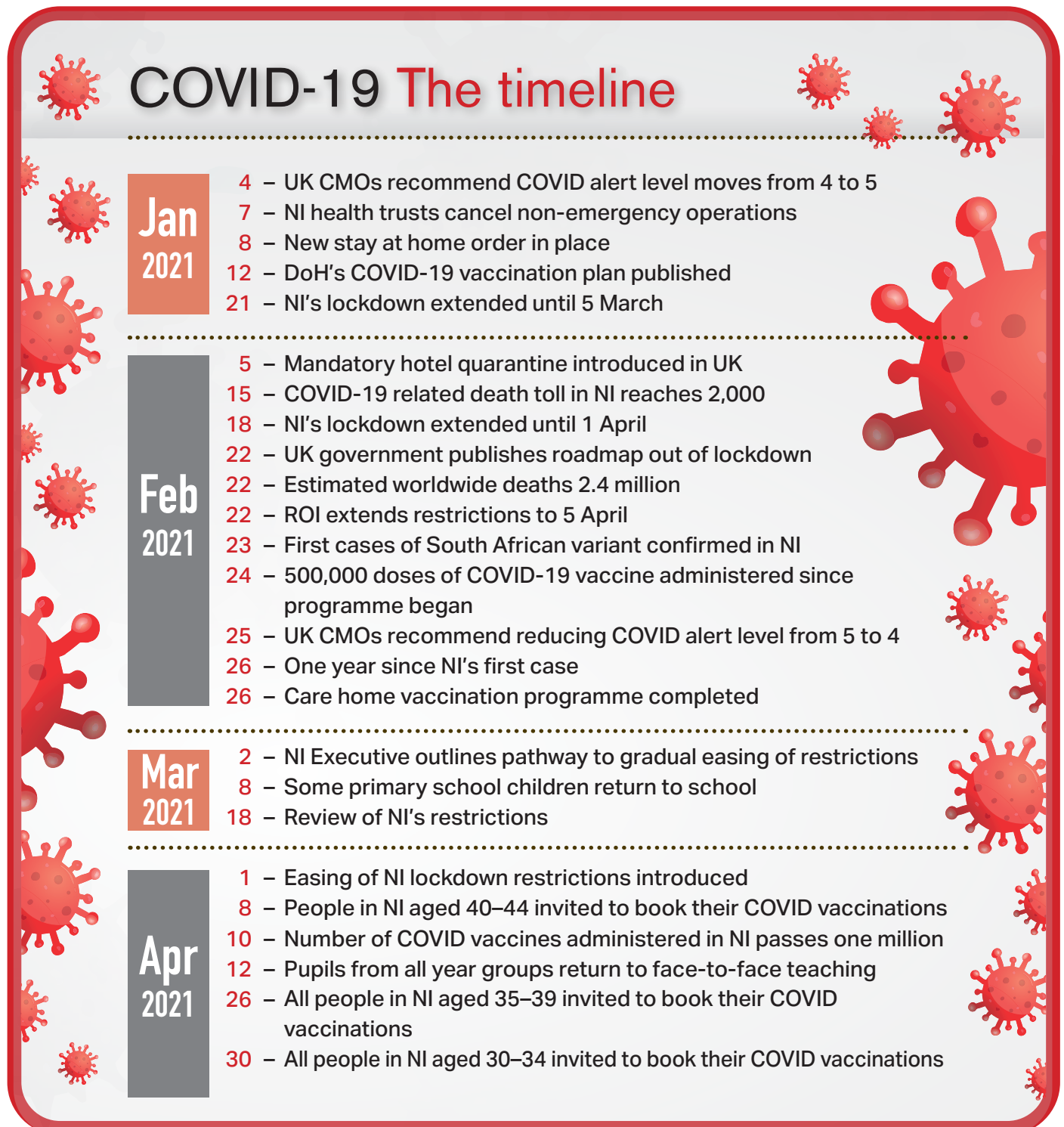


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## An overview of COVID-19 in Northern Ireland during 2021

Figure 1 highlights key events during the COVID-19 pandemic in Northern Ireland throughout 2021.

**Figure 1: Timeline of key events in the course of the COVID-19 pandemic in Northern Ireland during 2021.**



# COVID-19 The timeline

May  
2021

- 6 – Seven cases of the new Delta variant are confirmed in Northern Ireland
- 18 – Number of people in NI to receive their first COVID vaccine passes one million
- 27 – COVID vaccinations are opened to everyone aged 18 and over in NI, the first part of the UK to offer the vaccine to all adults

Jun  
2021

- 27 – Walk in vaccinations become available for all over 18s in NI
- 30 – Delta variant now dominant in NI
- 30 – The highest number of daily COVID cases since February 2021 recorded

Jul  
2021

- 15 – More than 1,000 new daily COVID cases reported
- 23 – DoH launches NI's vaccine certification app, CovidCertNI
- 25 – More than a million people in NI (roughly 70% of the adult population) have had both COVID vaccinations
- 27 – Growing COVID admissions lead to the cancellation of planned surgeries

Aug  
2021

- 2 – Kidney transplants cancelled in Belfast due to staff shortages
- 2 – NI Executive launches the Building Forward: Consolidated COVID-19 Recovery Plan, a suite of recovery actions to be delivered over the next 2 years
- 5 – DoH figures show that the number of hospital procedures reduced by 46% in 2020/21, with 59,762 cases compared with 110,605 in 2019/20
- 6 – The first teenagers aged 16 and 17 receive COVID vaccinations
- 6 – The number of COVID related deaths in NI passes 3,000
- 9 – Professor Ian Young, NI's Chief Scientific Adviser, says the dramatic reduction in the number of people testing positive for COVID being admitted to hospital shows that vaccination reduces the risk of hospitalisation
- 20 – NI records highest number of daily COVID cases since the start of the pandemic, with 2,397 new cases reported
- 21 – Walk in vaccination centres are open for anyone over 18 to get their first COVID vaccine in the Big Jab Weekend, resulting in over 12,000 vaccinations given

# COVID-19 The timeline

Sep  
2021

- 6 – The UK government announces plans for a new Health and Social Care Tax to help address the patient backlog and shortfalls in social care provisions
- 13 – Walk-in vaccination centres are established at 60 university and further education college campuses across NI (“the Jabbathon”)
- 14 – People aged 12–15 in NI to be offered a first dose of COVID vaccine
- 17 – DoH announces a widening of the criteria for flu jabs over the coming winter when flu and COVID will be circulating in the population

Oct  
2021

- 2 – DoH confirms people who are immunosuppressed will be invited for a third COVID vaccine
- 19 – Release of the NI Executive’s Autumn/Winter COVID-19 Contingency Plan. Measures include the continued legal requirement for face coverings to be worn in indoor settings throughout the autumn and winter, and the provision for the introduction of COVID passports in high risk settings if cases continue to rise.
- 20 – The rules for care home visits are relaxed

Nov  
2021

- 1 – Dedicated centres for the treatment of people with long-term symptoms of COVID are opened.
- 16 – More than 170 new COVID cases are linked to a teenage disco
- 23 – The NI Executive strengthens its advice for people to work from home whenever possible
- 29 – The COVID certification initiative introduced
- 30 – Booster vaccination clinics open

Dec  
2021

- 7 – The first cases of the Omicron variant identified in NI
- 19 – The booster programme is opened to all adults over the age of 18
- 23 – The Omicron variant is dominant in NI
- 23 – The COVID treatments molnupiravir and neutralising monoclonal antibodies (nMABs) are made available for high risk people in the community
- 24 – A further 3,286 COVID cases are recorded in NI, the largest daily increase so far
- 31 – The period required to self-isolate following a positive COVID test reduced from ten to seven days
- 31 – NI 421,599 cases and 4,013 deaths reported to date

# The public health response to COVID-19 during 2021

## Surveillance

Public health surveillance is the continuous collection, analysis and interpretation of health-related data to inform policy and action to protect the public's health. Before the COVID-19 pandemic, the number of cases of any single infectious disease reported each year was usually in the order of hundreds. The information systems and analysis processes that were designed to manage information on that scale were not suitable for the COVID-19 pandemic, during which thousands of cases were notified daily at some points, and hundreds of thousands of cases overall.

COVID-19 prompted a step change in the demand for information in and from the PHA due to the urgent need for population health intelligence to inform the public, media, policymakers, health service planners and researchers. Healthcare data were used to manage the direct care and contact tracing of patients, to measure the incidence and severity of COVID-19, to improve healthcare safety, to project the course of the epidemic and to address health inequalities. The scale and pace of these data required adoption of what were, for many health analysts, new approaches towards work-flow, data architecture, storage, analysis and dissemination.

The PHA used information management systems that were designed to manage much greater amounts of data than in the past, scheduled reports to update policy-makers daily and deployed interactive dashboards. We now have integrated surveillance across routinely collected healthcare data, including genomic data, following our participation in the COG-UK programme.<sup>1</sup> Our ability to deliver population-level health insights at scale and speed has been greatly enhanced. Some of the innovations used in surveillance are highlighted below:

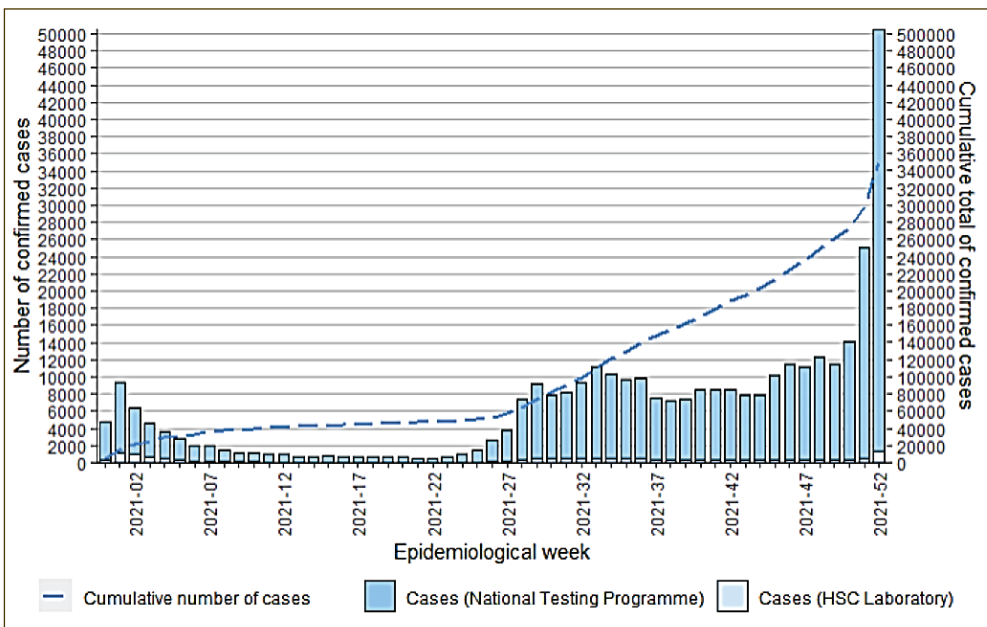
- Monitoring and risk-assessing the emergence of new genomic variants is a new and important function for the PHA.
- Work carried out through the BSO Honest Broker Service has provided evidence about COVID-19 vaccine effectiveness and how mental health and social factors may influence the equity of vaccine coverage.<sup>2,3</sup>
- Direct public engagement about the use of health data was undertaken by the Northern Ireland Trusted Research Environment, supported by Health Data Research UK.
- The PHA participated in the HDR-funded Data and Connectivity Vaccines Pharmacovigilance research study and CO-CONNECT project, which both featured exemplary personal and public involvement and engagement (PPIE).<sup>2,4,5</sup>
- The PHA coordinates the Northern Ireland arm of SIREN, a large UK-wide cohort study in healthcare workers investigating SARS-CoV-2 infection rates and immunity, and the efficacy of vaccines. SIREN has been influential in informing UK government policy and has resulted in several scientific publications.<sup>6-9</sup>

The epidemiology of COVID-19 during 2021 was defined by the implementation of the COVID-19 vaccine programme and the evolution of new variants of SARS-CoV-2 that were

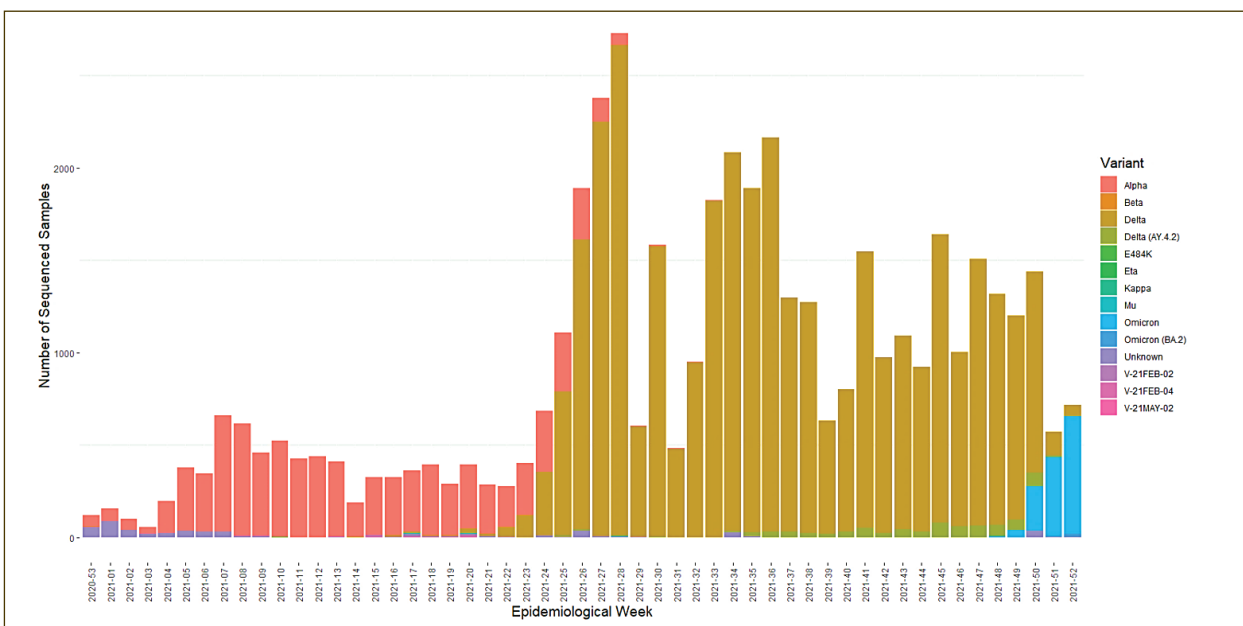


more transmissible, and often more severe than their predecessors. The start of the year was dominated by a wave of infection with the Alpha variant, which was brought under control by collective behaviour change, restrictions on social contact and mandatory face coverings in indoor public spaces (Figure 2, Figure 3). By summer 2021, coinciding with the resumption of more normal levels of social contact, the more severe Delta variant became dominant and continued at high level for six months until being replaced by the extremely transmissible, but less severe, Omicron variant in December 2021. Through the course of the year, the probability of people with COVID-19 requiring hospital care or dying continued to reduce due to the protective effects of vaccination. However, it became increasingly clear that immunity from infection and vaccination, in the context of the evasive evolution of SARS-CoV-2, was not long-lasting.

**Figure 2: Laboratory confirmed COVID-19 cases by epidemiological week and source (HSC Laboratory testing and the National Testing Programme), 2021.**

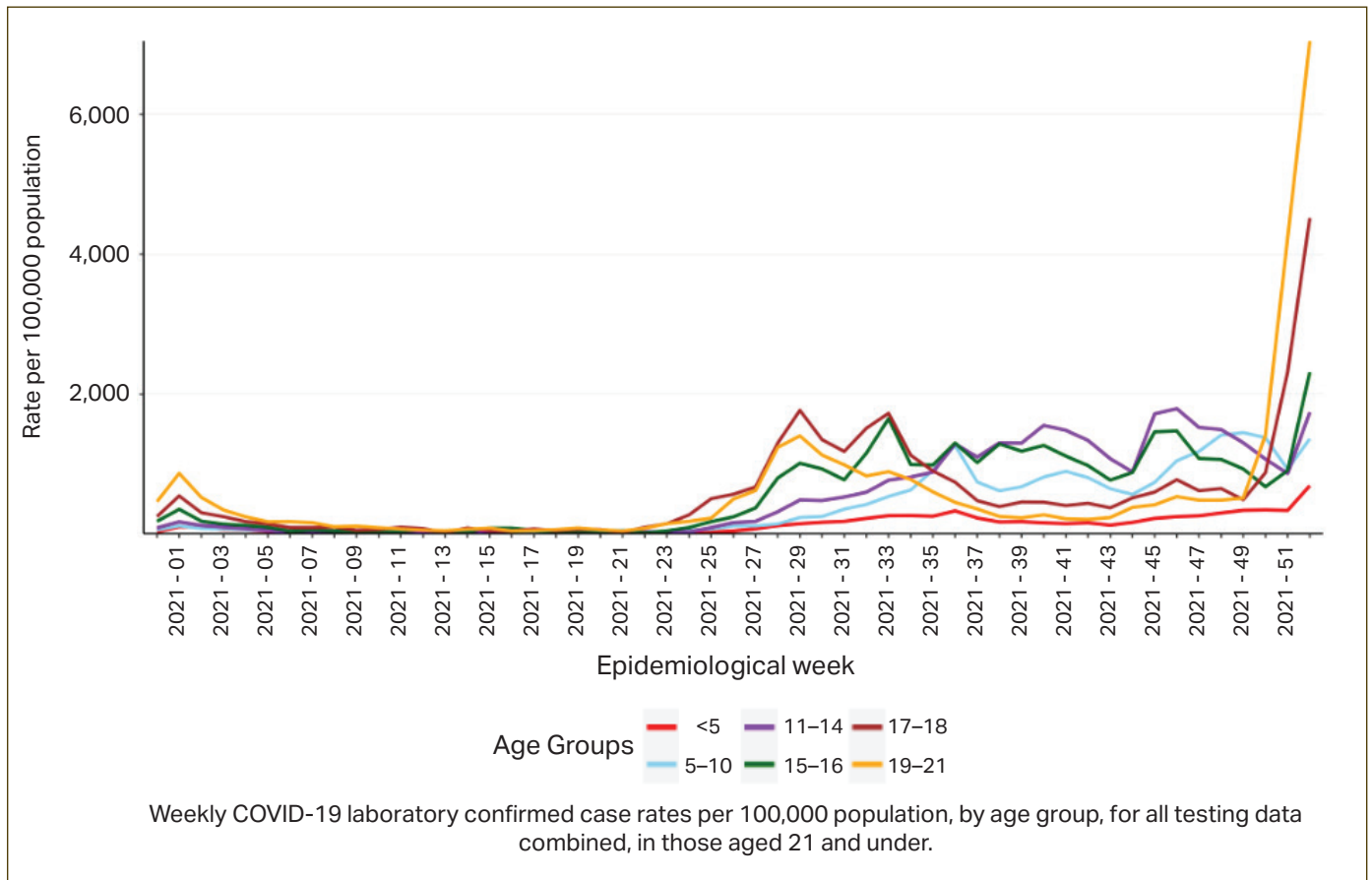


**Figure 3: Sequencing results for SARS-CoV-2 samples in 2021, by variant.**



Children (with the exception of children of healthcare workers and vulnerable children) were educated at home during the first quarter of 2021, returning to in-person teaching in phased steps either side of the Easter holidays, with measures put in place to reduce the spread of infection. The number of infections in school-age children was very low during this period, and increased for the rest of the year, growing sharply at the arrival of the Omicron variant (Figure 4).

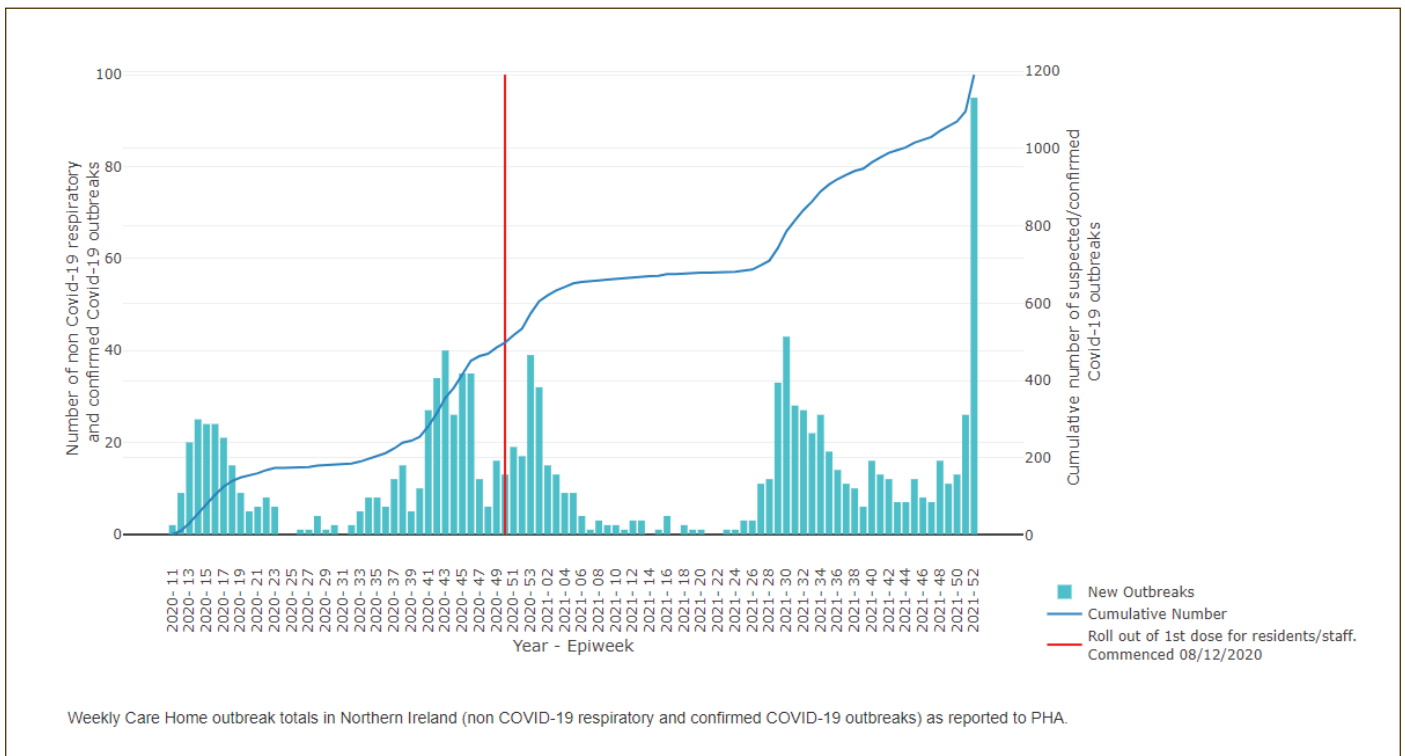
**Figure 4: Weekly COVID-19 laboratory confirmed case rates per 100,000 population, by age group, for all testing data combined, in those aged 21 and under, 2021.**



### Care homes

Care homes are a key area for the management of COVID-19 due to the vulnerability of residents. The trend observed in care homes during 2021 was a reflection of the transmission of COVID-19 in the community, with the number of confirmed care home outbreaks increasing from late June (week 25) and peaking in week 30. In early December (week 50) the number of confirmed outbreaks increased with the arrival of the Omicron variant. In week 52 the number of confirmed outbreaks reported was more than twice that of any other week of the pandemic (Figure 5).

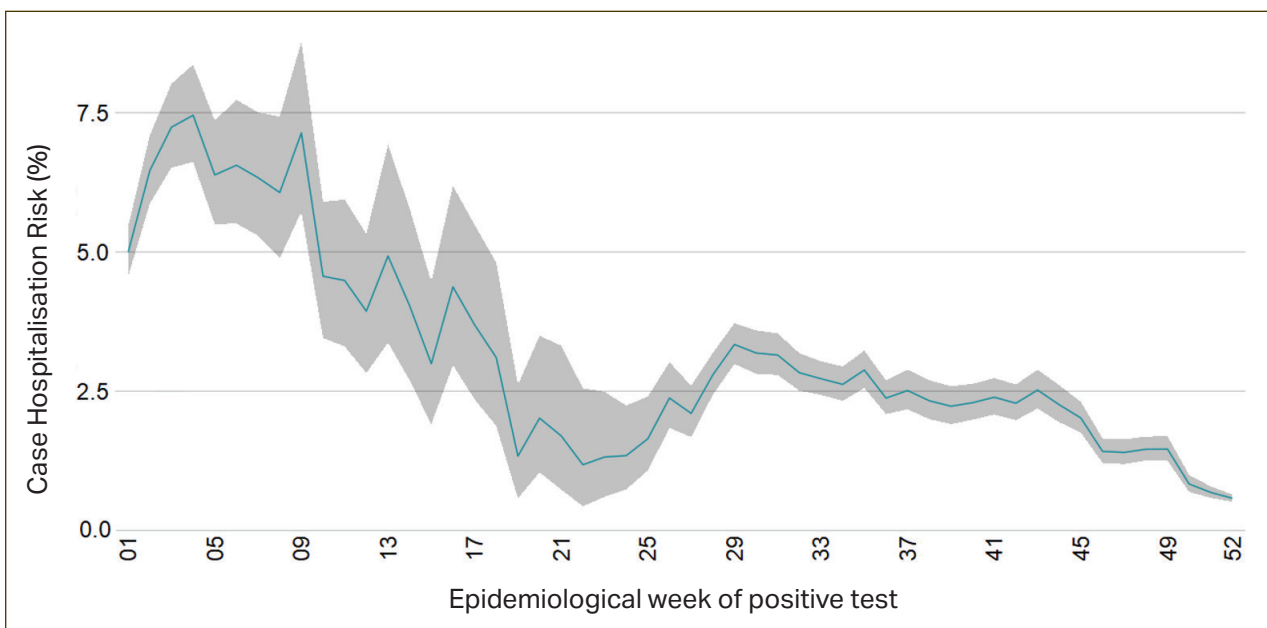
**Figure 5: Confirmed COVID-19 care home outbreaks in Northern Ireland, 2020-21.**



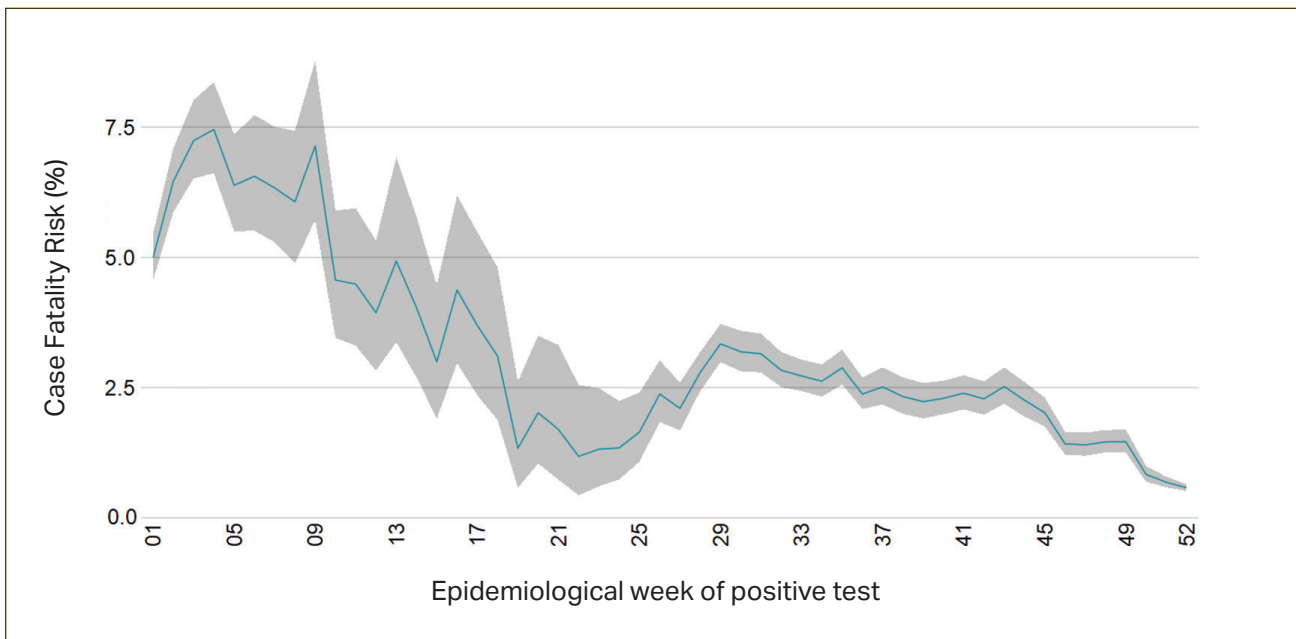
**COVID-19 hospitalisations and mortality**

The case hospitalisation risk and case fatality risk began to decrease early in 2021, due largely to the increased detection of milder cases through mass testing (Figure 6, Figure 7). The more severe Delta variant led to the increase observed in case hospitalisation and fatality risk from summer, falling with the dominance of the Omicron variant at the end of the year. The introduction of the vaccine programme in Northern Ireland reduced case hospitalisation risk and case fatality risk, as the vaccine provided protection against severe disease and death.

**Figure 6: COVID-19 Case Fatality Risk by epidemiological week, 2021.**



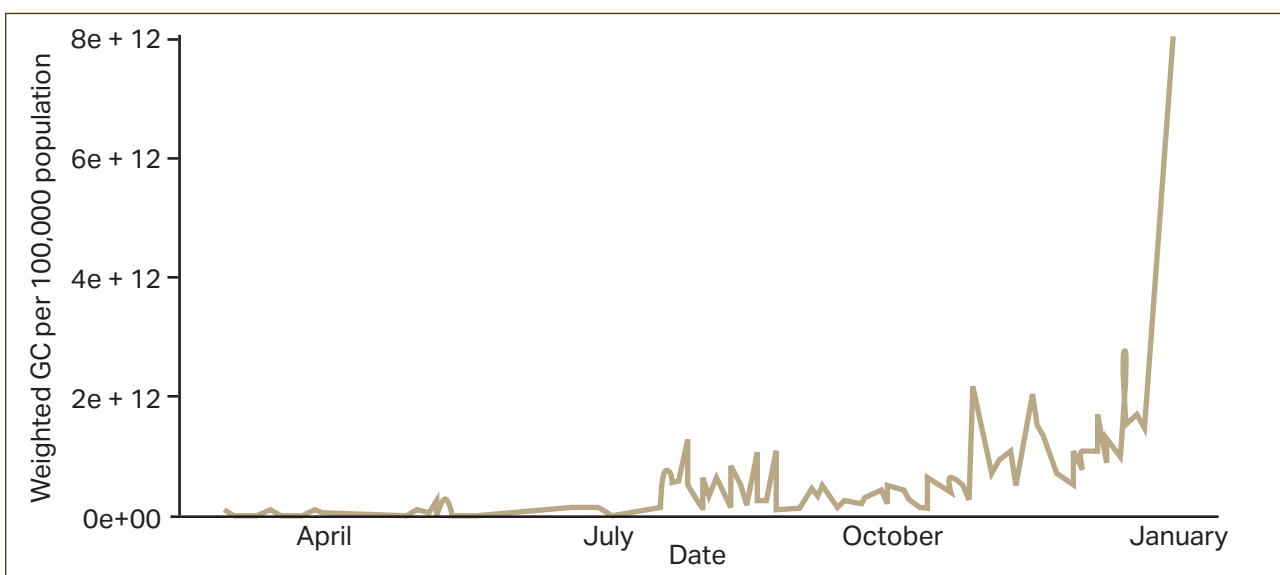
**Figure 7: COVID-19 Case Hospitalisation Risk by epidemiological week, 2021.**



**Wastewater**

Wastewater (sewage) can contain SARS-CoV-2 virus passed by people who are, or have recently been, infected with SARS-CoV-2. During 2021, Queen’s University Belfast worked with PHA, Northern Ireland Water, Department of Health (DoH) and Department of Agriculture, Environment and Rural Affairs (DAERA), to establish a surveillance programme to measure SARS-CoV-2 in wastewater. Samples are collected three times each week from 31 Wastewater Treatment Works (WWTW) in Northern Ireland, which together cover 65.6% of the population. Wastewater surveillance has become a useful tool in systematically monitoring community transmission and the circulation of new variants. Wastewater surveillance was introduced in March 2021; it detected the continued circulation of the Delta variant from late July through the winter period and the considerable increase in transmission of the Omicron variant in December 2021 (Figure 8).

**Figure 8: SARS-CoV2 in wastewater samples in Northern Ireland, March 2021 to January 2022.**

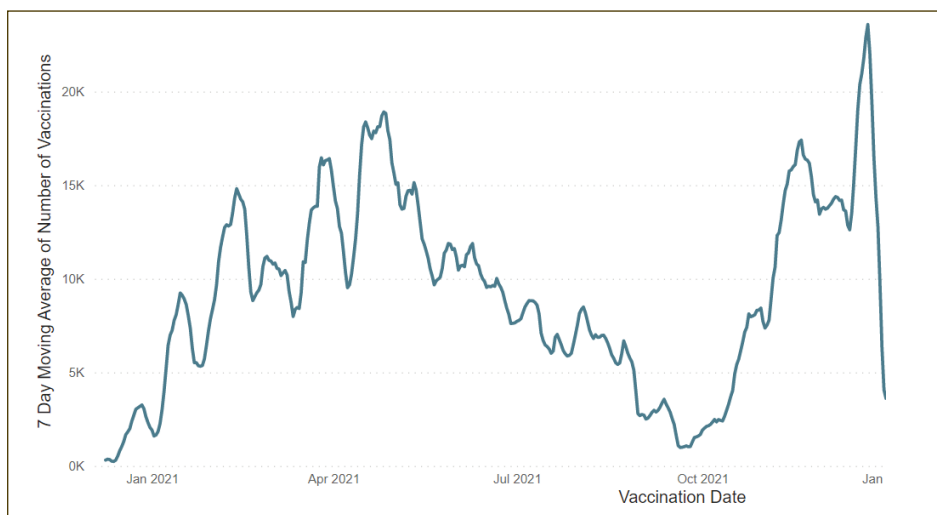


## Vaccines

In Northern Ireland the COVID-19 vaccination programme commenced on 8 December 2020. The primary vaccination course was two doses, 8 to 12 weeks apart, with a third dose for those who are immunocompromised. In the first phase of the vaccination programme the focus was on priority groups including those most at risk of severe disease or death.

Vaccine uptake began to increase in December 2020 with care home residents and front-line health and social care (HSC) workers. The number of vaccines administered each day increased in January 2021 as all those aged 50 years and over, and those aged 18–49 years with underlying health conditions were invited to be vaccinated. This resulted in an increase in uptake in January, February and March (Figure 9). A peak was reached in April 2021 with all those aged 18–49 years and pregnant women being offered the vaccine. During this period the second dose of the primary vaccination course was also being delivered. In August the vaccine was made available to all 16–17 year olds and 12–15 year olds with underlying health conditions. In September the programme was extended to all 12–15 year olds, and a third primary dose was offered for individuals aged 12 years and older with a weakened immune system. In December 2021, 5–11 year olds with serious underlying health conditions were also included in the vaccination programme. The booster dose was introduced in September 2021 to the highest priority groups with subsequent groups following onwards, characterised by the highest 7-day moving average of vaccination in December 2021. Higher uptake may also have been encouraged in this period by the increase in transmission of the Omicron variant.

**Figure 9: 7-day average number of COVID-19 vaccinations given (any dose) since the programme commenced, December 2020 to January 2022.**



More information on the vaccination programme in Northern Ireland is available in the next section.

## Research and development

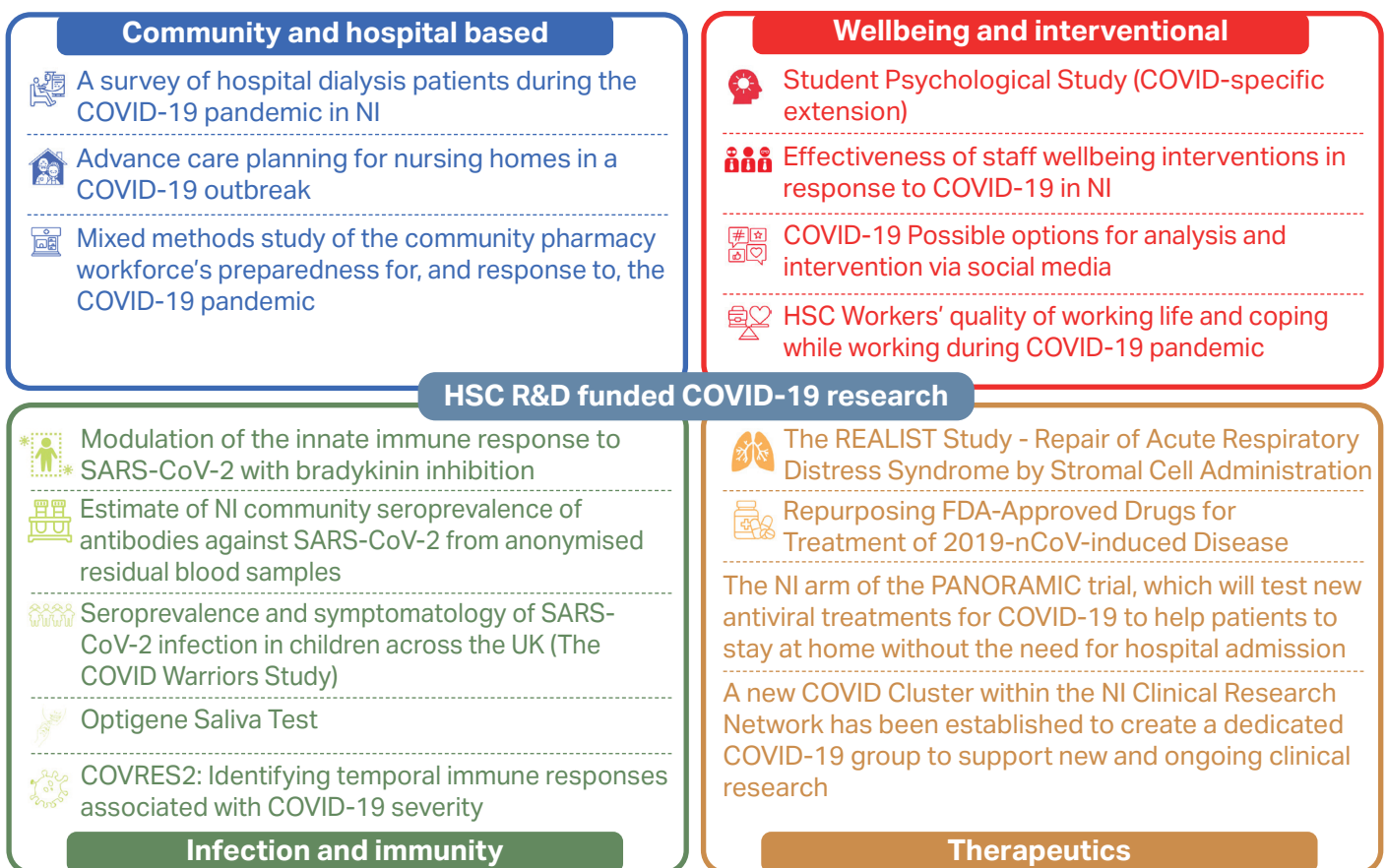
There have been many direct and indirect impacts of the COVID-19 pandemic on health and wellbeing, often exacerbating existing health inequalities. The last 24 months have made patients, practitioners, policy makers and the public more aware of the importance of research. They have seen how the development of vaccines and diagnostic tests and the identification of effective treatments for COVID-19 has relied on research, in particular clinical trials. Research conducted during the

pandemic has had a positive impact on many people’s lives and offers us all hope for the future.

The PHA’s Health and Social Care Research & Development Division (HSC R&D) has been at the forefront of the coordination, administration, support and funding of the HSC research ecosystem in Northern Ireland, in particular our clinical trials infrastructure\*, to effectively manage the COVID-19 pandemic and ensure we save lives, protect our HSC services and rebuild services to ensure the health and wellbeing needs of society are effectively addressed. Almost 30,000 participants from Northern Ireland including staff, patients, carers, students, children and the wider public have now been recruited to participate in COVID-19 research (Figure 10).

As our society seeks to look beyond the pandemic, HSC R&D Division is acutely aware that the recent priority focus on COVID-19 research, the re-direction of research resources to the care of COVID-19 patients and the impact of measures to contain the spread of COVID-19 has had negative effects on other areas of research. Many studies were slowed or paused, while others have been abandoned and some that were due to start are still pending. We need to seize the opportunity to re-invigorate HSC research in Northern Ireland and build on the successes of COVID-19 research to re-start and grow research activity across all areas of HSC. Clinical research has been critical to the treatment of citizens during the pandemic in Northern Ireland and is even more crucial for our recovery. Future HSC research will focus on and be responsive to the most pressing HSC needs of our society.

**Figure 10: HSC R&D funded COVID-19 research.**



\*The clinical trials infrastructure refers to the necessary resources (human capital, financial support, patient participants, information systems, regulatory pathways, and institutional commitment) and the manner in which they are organised and brought together to conduct a clinical trial.

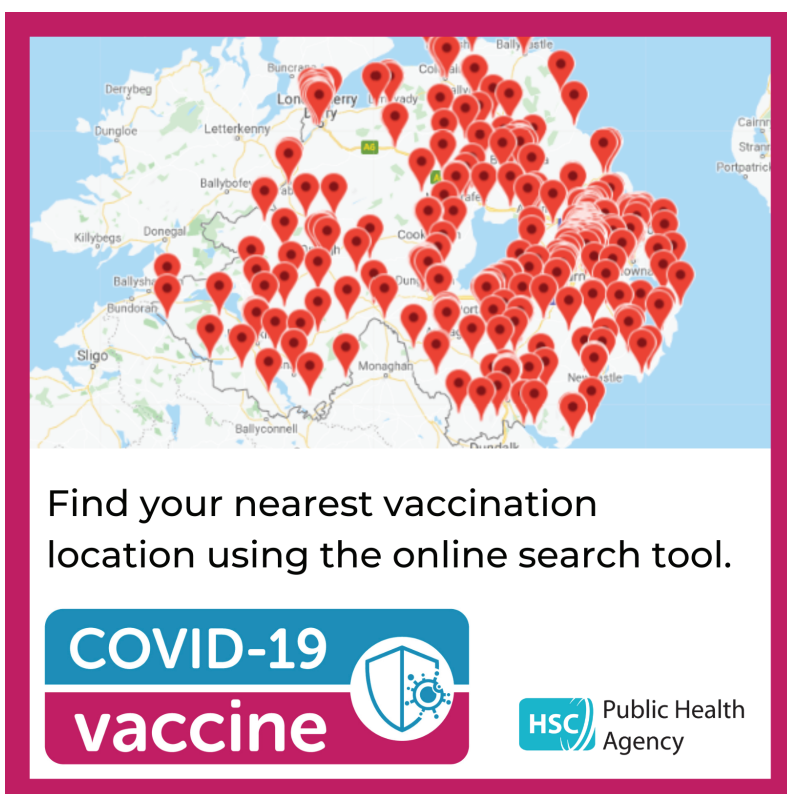
## Communication

Effective communication with the public and other stakeholders is an essential part of the pandemic response, where access to timely, accurate and easily understood information is critical. Poorly planned or implemented communication strategies can increase health inequalities, given that those at least risk are most likely to benefit, and those at greater risk may face obstacles to the understanding or interpretation of health information.

A key focus of the PHA throughout the pandemic has been to provide a trusted source of information and advice for the public, which is easily accessible and universally understood. The effectiveness of this strategy has been evidenced by the huge increases in traffic to the PHA website, as well as in the number of followers on social media platforms such as Facebook and Twitter, in comparison to equivalent figures pre-pandemic. The rapidly changing context of the COVID-19 pandemic since 2020 has presented huge challenges in attempting to ensure that the public are kept up to date with public health information and guidance. The rise in misinformation regarding COVID-19 has exacerbated these challenges, leaving the public unsure regarding the accuracy and validity of the information in circulation.

The PHA Communications Team during 2021 has been promoting the delivery of the COVID-19 vaccination programme, through TV, radio and outdoor advertising, in conjunction with social media, and raising awareness of the time and locations of vaccination clinics (Figure 11). A wide variety of targeted publications were developed to support the delivery of the programme for population subgroups, providing trusted information to enable individuals to make evidence-informed decisions on vaccination.

**Figure 11: PHA COVID-19 vaccination location online search tool.**



Many of the written resources, graphics and videos produced by the PHA Communications Team have been translated into a range of languages to expand the reach of these materials across the population. This has included the integration of subtitles and the incorporation of British and Irish Sign Language into many of the video resources developed. Such initiatives are vital in ensuring that the public health communication strategies employed seek to address, rather than exacerbate health inequalities.

In recognition of the potential for other health messages to become lost in the midst of an intensive focus on COVID-19, the PHA Communications Team have also maintained their delivery of key health promotion messages. As well as TV, radio and press advertising campaigns highlighting issues such as stroke, flu, organ donation and obesity, the Living Well campaign run in partnership with community pharmacies supported opportunistic interventions on topics such as alcohol, mental health, and cancer awareness with the substantial proportion of the population that visits a pharmacy each day (Figure 12). Social media channels, publications and press releases have also been used to remind the public of the importance of all aspects of health - mental, emotional and physical, particularly in the context of an ongoing pandemic, and to highlight strategies to protect and promote these aspects of their health and wellbeing.

**Figure 12: Living Well alcohol campaign poster.**





## Partnership working

An effective public health response to a pandemic requires a multi-agency approach, extending beyond the “traditional” healthcare sector. The COVID-19 pandemic in Northern Ireland resulted in closer partnership working between the PHA and a wide range of other stakeholders, including the DoH, other HSC organisations, media, business sector, the community and voluntary sector, the education sector, academic departments and the general public. It has also required extensive collaboration with colleagues in other parts of the UK and the Republic of Ireland.

During the pandemic, the PHA provided extensive support to specific settings at risk of severe COVID-19 infection compared to the general population.

The PHA supported the care home sector with timely public health advice. The Acute Response Team in Health Protection communicated directly with care homes on an ongoing basis to provide advice and support on the management of COVID-19 outbreaks. The PHA also coordinated the regular testing of staff and healthcare workers in the care home sector.

The PHA had a dedicated Education Cell to support schools over the course of the pandemic which worked closely with the PHA Contact Tracing Service and the Education Authority to manage COVID-19 in school settings.

Other establishments have also provided valuable input to the work of the PHA throughout the course of the pandemic. In particular, the work undertaken in the academic sector in Northern Ireland, through researchers and academic staff in Queen’s University Belfast and Ulster University has hugely facilitated the implementation of an evidence-based public health response.

Within the PHA, the response to COVID-19 necessitated cross-directorate working with staff being redeployed to new roles such as contact tracing, care homes and the education cell as part of the pandemic response. This was invaluable as Northern Ireland went through several waves of the pandemic.

## A forward look...

2021 has demonstrated the potential for new and unanticipated challenges in the course of the COVID-19 pandemic response, as well as the adaptability of the PHA and its staff to rise to these. Going forward, more challenges will emerge, both in responding directly to COVID-19, and in rebuilding services and addressing the backlog in care.

Old public health problems remain and require strong public health leadership, advocacy and action to address these.

The extensive learning and development achieved, and the partnerships fostered through the response to COVID-19 over the past two years, will enable the PHA not only to manage the issues raised by COVID-19 but also to respond effectively to the many other population health challenges needing to be addressed over the medium and longer term.

The next section of the report includes contributions from all divisions within the PHA, highlighting some of the work undertaken as part of the COVID-19 response during 2021.

## Authors

**Aoife Nic Iomhair, Speciality Registrar Public Health**

**Janice Bailie, Assistant Director, Research and Development**

**Diane Anderson, Senior Health Intelligence Manager**

**Rhonda Campbell, Programme Manager, Research and Development**

**Declan Bradley, Consultant in Public Health**

**Lisa Cromey, Speciality Registrar Public Health**

**Danielle McMichael, Senior Epidemiological Scientist**

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# *Vaccination*

- The COVID-19 vaccination programme
- Case study 1: A health improvement settings-based approach to increasing vaccination uptake
- Case study 2: A health improvement targeted population approach to increasing COVID-19 vaccination uptake in ethnic minority and migrant communities
- Developing a COVID-19 vaccine toolkit

## The COVID-19 vaccination programme

Delivery of the COVID-19 vaccination programme in Northern Ireland began on 8 December 2020 with prioritisation of care home residents and health care workers. The intensive efforts directed towards this programme of work by the DoH, HSC Trusts and the care home sector, in collaboration with the PHA, resulted in Northern Ireland successfully completing vaccination of care home residents and staff by the end of February 2021.<sup>1</sup>

Subsequent plans for roll-out of the mass vaccination programme were based on recommendations made by the Joint Committee on Vaccination and Immunisation (JCVI), an independent expert group who advise the UK government on vaccination and immunisation policy. The phased plan for roll-out considered the increased vulnerability of certain population subgroups to adverse effects from COVID-19 infection and these groups were prioritised for vaccination.

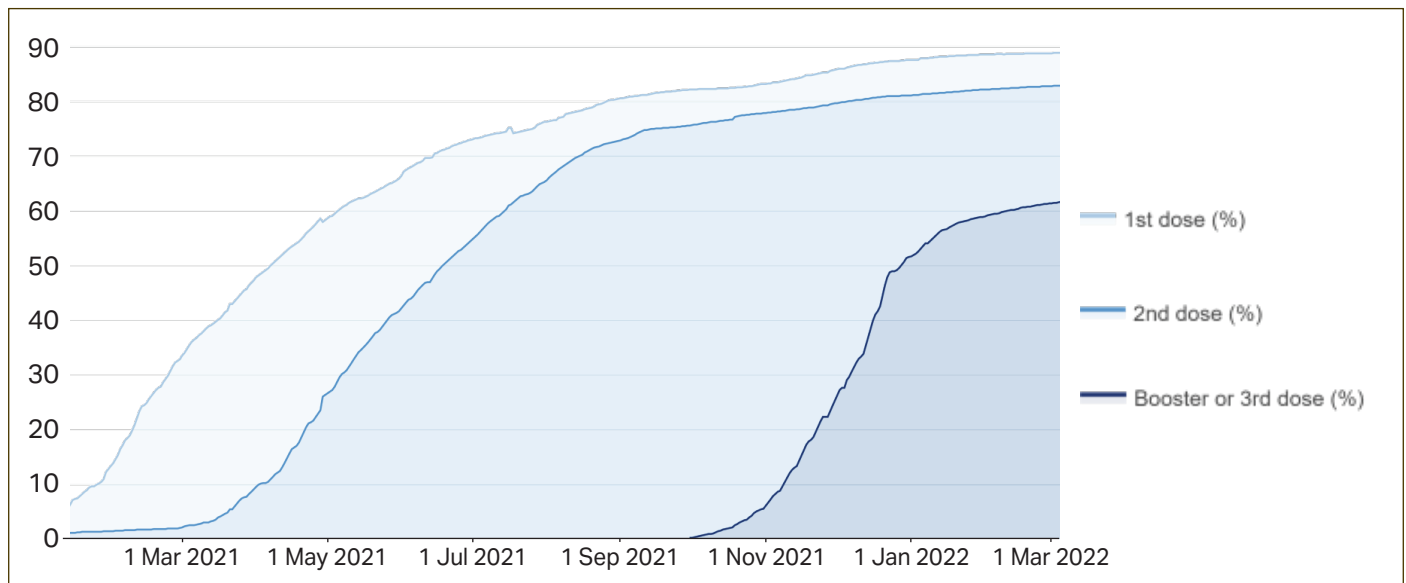
The programme, led by the DoH, has been delivered by HSC Trusts, primary care and community pharmacists. The PHA played an integral role in the COVID-19 vaccination programme in Northern Ireland through:

- attending a wide range of UK and regional meetings to prepare, plan and deliver the COVID-19 vaccination programme in Northern Ireland;
- producing essential materials to enable the efficient delivery of COVID-19 vaccinations in HSC Trust, primary care and community pharmacy settings;
- providing support to HSC Trusts, primary care and community pharmacy services delivering vaccinations;
- assessing the coverage and impact of the vaccination programme;
- coordinating the recruitment of a bank of vaccinators for both HSC Trust clinics and GP practices, as well as managing the deployment of bank vaccinators to GP practices;
- providing bespoke communication solutions, such as guides to vaccination (including translations), media campaigns, FAQs, a vaccination section on the PHA website and guidance for healthcare professionals;
- working in collaboration with the community and voluntary sector to address inequalities in COVID-19 vaccination uptake.

From April 2022, direct responsibility for the COVID-19 vaccination programme transfers from the DoH to the PHA.

Figure 13 describes the roll-out of the COVID-19 vaccination programme in Northern Ireland from December 2020 until the beginning of March 2022.<sup>2</sup>

**Figure 13: COVID-19 vaccination uptake in Northern Ireland by report date and dose from December 2020 to March 2022 (shown as a percentage of the population aged 12 and over).**



Source: UK COVID-19 Dashboard; 2022<sup>2</sup>.

Clinical trials and real-world vaccine effectiveness studies from across the globe have repeatedly shown the effectiveness of COVID-19 vaccines in reducing the risk of severe illness and death following infection with SARS-CoV-2.<sup>3</sup> In the UK, several studies of vaccine effectiveness undertaken during the Delta phase of the pandemic have shown two vaccine doses to be between 65-95% effective at protecting against symptomatic disease with COVID-19, with even higher rates of protection against hospitalisation and death.<sup>3</sup> Although protection against infection with SARS-CoV-2 and symptomatic disease does appear to wane with time, vaccines have been found to maintain high levels of protection against severe disease in the longer term.<sup>3</sup> While studies investigating vaccine effectiveness against the Omicron variant have shown substantially lower levels of protection than that from the Delta variant, protection has been shown to be enhanced by a third booster dose and remains high against hospitalisation and death.<sup>4</sup>

## Author

**Aoife Nic Iomhair, Speciality Registrar Public Health**

## References

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2. UK Government. COVID-19 Dashboard. Vaccinations in Northern Ireland. Available at: <https://coronavirus.data.gov.uk/details/vaccinations?areaType=nation&areaName=Northern%20Ireland>
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4. UK Health Security Agency. COVID-19 vaccine surveillance report - Week 8 (24 February 2022). Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1057125/Vaccine\\_surveillance\\_report\\_-\\_week-8.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1057125/Vaccine_surveillance_report_-_week-8.pdf)

## Case study 1: A health improvement settings-based approach to increasing vaccination uptake

### Vaccine uptake in the student population

By 20 July 2021, about 18% of adults in Northern Ireland had not come forward for their first dose of a COVID-19 vaccine, with the uptake rate in the 18-29 year old cohort being the lowest at around 55% on 1 July.<sup>1</sup>

The PHA proposed to the DoH that there was an opportunity to increase the vaccination rates in young people by working with the Department of the Economy, universities and further education colleges to promote vaccine uptake in the student population.

There were three main strands to this work:

- To increase knowledge in the student population of the benefits of COVID-19 vaccination and to promote informed choice.
- To highlight the available opportunities to get vaccinated before the start of term in September.
- To maximise those opportunities by organising mobile vaccination clinics on campuses during freshers' week and/or the first week of term.

Actions included:

- By the end of July correspondence had been sent to all colleges and universities for targeted dissemination to their students.
- Additional social media materials were developed and shared with colleges and universities on a regular basis during August.
- Between 13 and 30 September, 64 vaccination clinics were held across 31 campuses.
- 3,162 first dose vaccinations were administered to students.
- Second dose clinics took place at all 31 campuses during November.

### Author

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**Hilary Johnston, Health and Social Wellbeing Improvement Manager**

### References

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1. Data taken from the PHA Internal COVID-19 Vaccination Dashboard.

## Case study 2: A health improvement targeted population approach to increasing COVID-19 vaccination uptake in ethnic minority and migrant communities

Reviews of the Northern Ireland COVID-19 vaccine uptake data in March 2021 identified a number of geographic areas and groups in which vaccine uptake levels were below the Northern Ireland average.

The DoH vaccine plan included a focus on vaccine equity and ensuring implementation of interventions that would address vaccine hesitancy and low vaccine uptake.

In April 2021, in support of the DoH vaccine plan, the PHA set up a COVID-19 Vaccine Low Uptake Working Group to further support a number of key groups identified as having low vaccine uptake including:

- people living in the most deprived areas
- ethnic minority and migrant communities
- Travellers
- people who are homeless
- asylum seekers

### Workplace interventions to target low vaccine uptake

#### Moy Park

In May 2021, Moy Park approached the DoH for support to get more of their staff vaccinated, due to their concerns with the low uptake levels and vaccine hesitancy among their migrant workforce, and the transmission risk associated with their work environment.

A pilot was agreed, developed and delivered by PHA, Northern and Southern Trusts and Moy Park across the three Moy Park sites (Ballymena, Dungannon and Craigavon) in late May and early June, with local Trust Vaccination Teams setting up vaccination clinics on site. Over 500 staff received a first dose across the three sites, with second doses delivered in July.

#### Northern Ireland Meat Exporters Association

In late June 2021, the Northern Ireland Meat Exporters Association (NIMEA) approached the DoH for assistance with the low vaccine uptake among their members' workforce with high levels of migrant workers, busy working environment, and the risk of major shut-downs if an outbreak occurred on site. Based on agreement from DoH, the PHA worked with NIMEA to establish a plan involving Trusts and Community Pharmacy to improve vaccine uptake within their workforce.

## Approach

Individual interventions were developed for each of the 11 sites and included:

- On-site Trust pop-up clinic (only considered for factories with >1,000 staff).
- Attendance at a local large vaccination centre (with potential for dedicated time slots and shuttle transport provision through Community Transport).
- Signposting to local pop-up clinics (with potential for dedicated time slots and shuttle transport provision through Community Transport).
- Community Pharmacy offering Moderna vaccination on-site (only available from mid-August onwards).

## Translated materials

Translated materials were developed which included translation into 21 languages of instructions on how to use BrowseAloud – enabling users to translate all relevant information on the PHA website relating to COVID-19 and vaccinations.

Also, myth-busting materials and videos were developed in a range of languages to help reassure individuals and encourage vaccine uptake.

## Partnership working

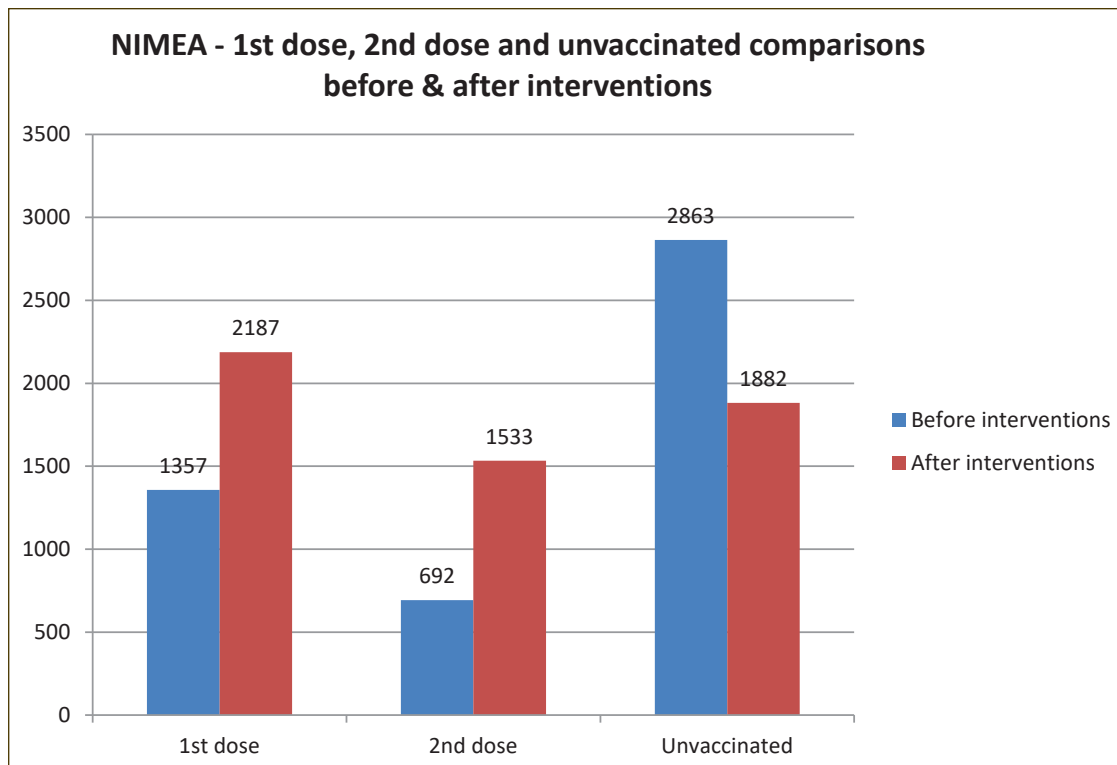
Throughout this process, PHA Health Improvement staff worked with a range of partners including:

- Trust Vaccination Team Leads (Northern, Western and Southern Trusts)
- 8 NIMEA Members across 11 sites
- Community Pharmacy reps (through the Community Pharmacy Vaccination Sub-group)
- Local Community Transport providers
- PHA-led Vaccine Low Uptake Working Group
- PHA funded ethnic minority and migrant communities support organisations (STEP NI in Dungannon and Ballymena Interethnic Forum)

Baseline data from the individual meat companies on their vaccination levels (first dose, second dose or not vaccinated), including a breakdown on nationality, was collated in early July. Post intervention data was collected in early September. Figure 14 shows the change in vaccination levels in the workforce before and after the interventions.



**Figure 14: Number of staff having had 0, 1 or 2 doses of COVID-19 vaccine before and after intervention.**



## Results

The interventions resulted in a significant increase in staff receiving first and second doses of the COVID-19 vaccine. Improved access to vaccination clinics and more accessible information encouraged more employees to come forward for vaccination, resulting in the proportion of unvaccinated staff reducing by 22 percentage points.

## Authors

**Maurice Meehan, Head of Health and Social Wellbeing Improvement**

**Paddy McEldowney, Health and Social Wellbeing Improvement Manager**

## Developing a COVID-19 vaccine toolkit

### Public health challenge

Since its launch in December 2020, the COVID-19 vaccine programme has had an enormous impact on the trajectory of the pandemic across the United Kingdom, by reducing disease severity, hospitalisations and mortality from COVID-19. Despite high population-level uptake of the programme in Northern Ireland, vaccine uptake is lower in certain groups than the population average, including children and young people, pregnant women, people living in homelessness, people from lower socioeconomic backgrounds and certain ethnic minority and migrant communities. These groups remain at increased risk of serious disease from COVID-19, leading to a potential widening of health inequalities between these communities and the general population.

### Actions

The PHA convened a regional Low Vaccine Uptake Group to identify and implement interventions that enable fair access and opportunity for individuals to receive the COVID-19 vaccination. An action plan was developed which included the creation of a digital toolkit by Health Protection, Health Improvement and Communications colleagues in the PHA. The aim of the toolkit is to provide Trusts, local councils, community pharmacies and community groups with the knowledge, materials and resources to promote COVID vaccine with local communities and to implement evidence-based strategies to improve uptake among identified groups. The toolkit contains social media graphics, promotional videos, posters, links to PHA publications and case studies of local and UK wide interventions, targeted at specific population subgroups and available in a range of languages (Figure 15).

**Figure 15: PHA social media graphic to promote COVID-19 vaccination during pregnancy.**



## Impacts

The toolkit was launched in March 2022 and will be disseminated widely by the Communications and Health Improvement Teams through established links with a range of stakeholders. The impact of the toolkit will be measured in the short term through stakeholder feedback to identify its utility in developing interventions to improve uptake, as well as suggestions for improvements to its content and format. Longer term monitoring of uptake rates across the population and within distinct subgroups will enable analysis of the impact of the work of the Low Vaccine Uptake Group.

## Next steps

Work is ongoing to further develop the breadth and depth of the toolkit, with future developments to include resources that target additional low-uptake groups, including the homeless community and asylum seekers. Efforts are also underway to incorporate patient testimonials of their experience of COVID-19 vaccination. Stakeholders will continue to be encouraged to share case studies of interventions implemented, highlighting the population groups targeted and the outcomes and learning achieved.

## Statistical facts

In Northern Ireland, as of 1 March 2022:

- 74.9% of the population have received a first vaccine dose, 69.9% a second dose and 50.4% a booster dose.\*
- 62.0% of those in the least deprived areas are fully vaccinated\*\*, compared with 39.4% in the most deprived areas.
- Only 54.0% of 12-15 year-olds have received a first vaccine dose.

Improving vaccination uptake rates among low-uptake groups can be achieved through partnership working, tailored communication and facilitating access to vaccination services.<sup>1</sup>

## Authors

**Aoife Nic Iomhair, Specialty Registrar in Public Health**

**Bronagh McBrien, Health Protection Programme Manager**

**Jillian Johnston, Health Protection Consultant and Interim Joint Head of Health Protection**

\* Data taken from the PHA Internal COVID-19 Vaccination Dashboard.

\*\*Fully vaccinated refers to an individual who has completed the full primary COVID-19 vaccination course and has also received a booster dose.

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1. National Health Service. COVID-19 vaccine programme. Maximising vaccine uptake in underserved communities: a framework for systems, sites and local authorities leading vaccination delivery. NHS, 2021. Available from: <https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2021/03/C1226-maximising-vaccine-uptake-in-underserved-communities-a-framework.pdf> Accessed 1 March 2022.

# *Test, Trace, Protect*

- Contact tracing in Northern Ireland
- Case study 3: Contact tracing data provides a 'different path' in Ards and North Down
- Testing for COVID-19 in Northern Ireland
- Case study 4: Support for places of worship in managing the spread of COVID-19
- Case study 5: A communities-based approach to increasing reach and resonance of public health messaging
- The Acute Health Protection Service response to care homes during the COVID-19 pandemic in Northern Ireland
- Port health: return to cruise ship operations 2021

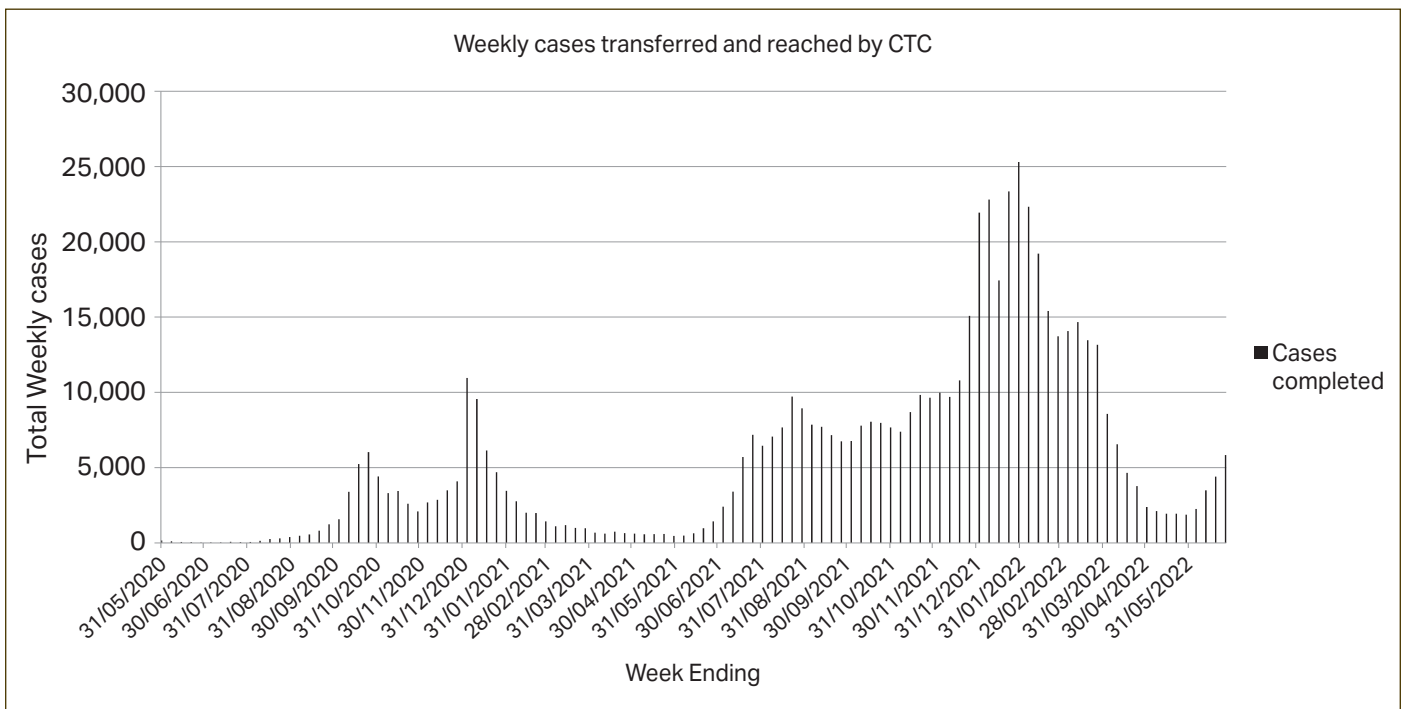
## Contact tracing in Northern Ireland

Since its inception in the early stages of the COVID-19 pandemic in 2020, the Contact Tracing Service (CTS) has worked to enable the rapid identification of close contacts of positive cases and reduce chains of transmission of COVID-19 in the community.

### Developing the service

Throughout the year we continued to support investigations into clusters and outbreaks and undertook enhanced tracing where appropriate. The arrival of first the Delta and then the Omicron variants meant significant change in CTS in terms of managing significantly higher numbers of cases. We continued to recruit staff to manage these volumes and created a new role of Contact Tracing Technician to trace less complex cases as triaged by senior staff. Our stepped business escalation plan has allowed us to be flexible in meeting the changing needs of the pandemic response. At several times throughout the year we were able to call on PHA colleagues to enhance our staff complement and maintain service levels.

**Figure 16: Cases completed - weekly data from 26 May 2020 (post-pilot) to 26 June 2022.**



In 2021 CTS expanded its remit to provide extended support to education settings. The Service continues to work closely with colleagues in the Education Authority and Department of Education in supporting schools. We have worked directly with Further and Higher education establishments in supporting contact tracing and other interventions on campus.

As changes were made to international travel restrictions, CTS had an integral role in ensuring that travellers returning to Northern Ireland via the Republic of Ireland understood their obligations under the various public health regulations.

## Engaging partners and stakeholders

We continued to work with colleagues in DoH, BSO and Kainos to refine and improve the digital systems that support our work. We have a suite of digital products including state of the art informatics that allow our analytics team to provide vital data and intelligence to support not only the operation of the Service but also wider discussions around policy and strategy held at Agency, Department and Executive level.

Stakeholder interest in our work remained high throughout the year with a number of Assembly questions and media queries answered. CTS continued to engage with various groups throughout the year in order to keep them apprised of our work. We attended events with political parties and the Assembly Health Committee; education leaders and trade unions; universities and FE colleges; and groups from industry, child-minding and day care, hospitality and the community and voluntary sector. We also gave several briefings to media outlets.

At the time of writing CTS had contact traced over 600,000 cases of COVID-19 in Northern Ireland and contact tracing was still ongoing.

## Author

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**Dr Elizabeth Mitchell, Director of Contact Tracing**

## Case study 3: Contact tracing data provides a 'different path' in Ards and North Down

In early 2021, Ards and North Down Borough Council (ANDBC) were faced with a "spike" in cases in the local area. Initial concerns centred on the coastal path, which was used by many local residents for outdoor exercise. The council worked closely with the PHA to clarify where the main risk of transmission lay.

- PHA's Health Improvement Team coordinated a series of meetings between ANDBC and the community and voluntary sector.
- Data was requested from PHA's Contact Tracing Service which showed nine new clusters in the ANDBC area. These were centred around small businesses and church gatherings – no evidence was found of community transmission in outdoor areas.
- Resulting discussions with senior management in the Council ensured appropriate action was taken to address the increase in cases.

### Outputs

The PHA engaged extensively with the Council including the Council's Economic Development Department, who issued regular communications using PHA resources and graphics via their business 'e-zine' network to 1,700 small businesses.

North Down Community Network issued graphics and messaging to 550 groups via e-zine and all social media. Meeting with clergy and faith leaders from the four main churches addressed issues such as social distancing, car sharing, wakes, and standing at the back of and outside the church.

### Author

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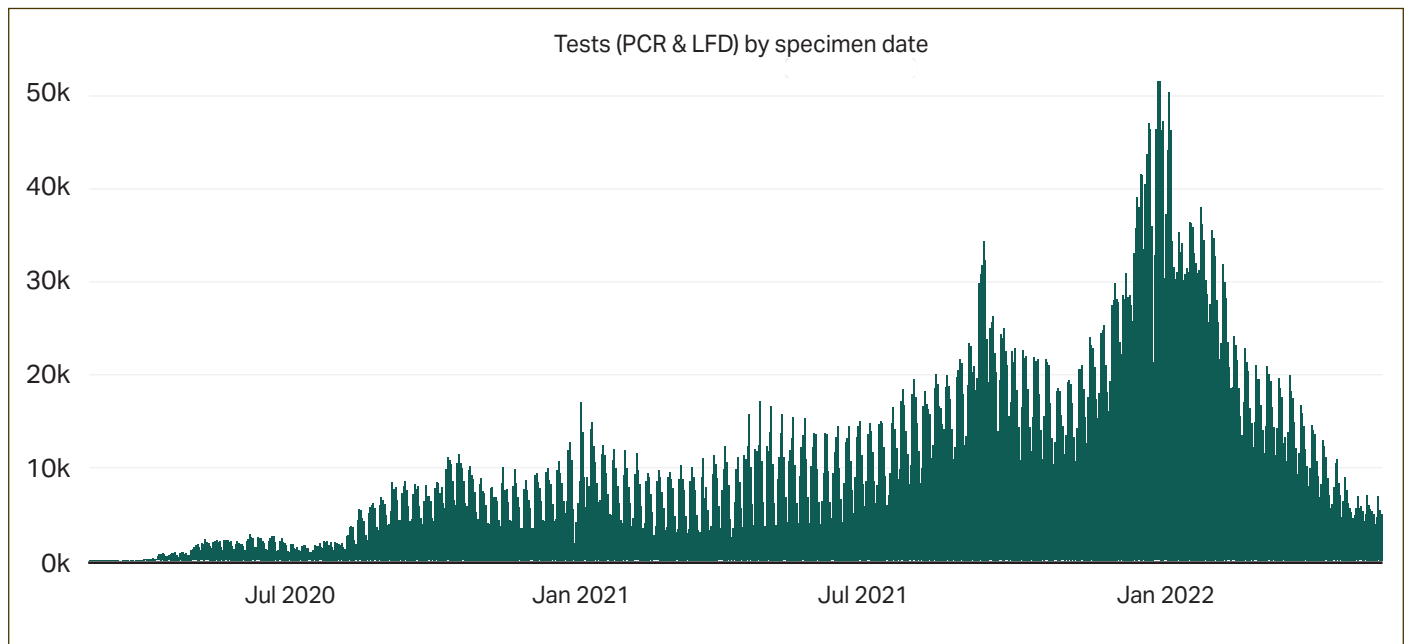
**Séamus Mullen, Head of Health and Social Wellbeing Improvement**



## Testing for COVID-19 in Northern Ireland

The first positive COVID-19 case in Northern Ireland was tested on 26 February 2020. In total, a cumulative number of 5,448,774 COVID-19 PCR tests have now been completed in Northern Ireland, and 2,652,606 lateral flow device (LFD) tests have been reported.<sup>1</sup>

**Figure 17: Tests (PCR and LFD) by specimen date, 23 February 2020-20 February 2022.**



(Source: Department of Health: COVID-19 Daily Dashboard. Accessed 22.02.2022. Microsoft Power BI)

The testing programme has evolved in the course of the pandemic and now includes a variety of technologies. The PHA testing team continues to work with colleagues across the region, including local test site partners, the Northern Ireland Expert Advisory Group for COVID-19 testing and the Northern Ireland Pathology Network, to develop the testing programme and ensure that it is delivered to a high standard. Staff link closely with colleagues working on the testing programmes in England, Scotland and Wales to share knowledge and resources.

### Pillar 1

Pillar 1 tests are those conducted within the HSC system. Initially this was only through laboratory-based PCR testing but in the course of the pandemic there has been an expansion in the number of technologies available. All Trusts are able to provide COVID-19 testing to their patients and staff. In addition to standard PCR tests, there are now further laboratory-based tests with shorter turnaround times and point of care tests which can be done without the sample being transferred to a laboratory. These quicker tests allow for rapid decision making in the healthcare system.

### Pillar 2 PCR testing

Members of the public are able to access community testing by PCR through Pillar 2 testing sites. As of February 2022, there were five 'drive through' regional test sites and nine 'walk

through' local test sites in Northern Ireland, accompanied by a fleet of mobile testing units. These mobile units are temporary sites that can be set up quickly in response to local demand. Home testing kits are also available.

### **Lateral flow device (LFD) testing**

In the course of the last year, there has been significant expansion in LFD testing in Northern Ireland. These rapid tests allow asymptomatic individuals to test at home, with a result available within 30 minutes. Around one third of those with COVID-19 can have no symptoms, so taking a LFD test can identify the virus and help individuals to take appropriate steps to stop the spread of the virus to others.

Members of the public are able to order LFD tests online for home delivery or can collect them at local collection sites, including pharmacies. In addition, LFDs are available for staff in a variety of settings, including workplaces, health and social care settings and care homes. In schools, all pupils in years 8-14 and all staff are offered LFDs.

### **LAMP testing**

In 2021, the PHA worked with the Education Authority and Queen's University Belfast to introduce a programme of LAMP testing for pupils and staff at special schools in Northern Ireland. LAMP (loop-mediated isothermal amplification) is a saliva-based test and was felt to be easier than nose and throat swab LFD testing for some children who attend special schools.

The LAMP testing programme now uses a second laboratory, based at Ulster University, in addition to Queen's University Belfast. The testing has been made available to some staff in HSC Trusts as an alternative to LFDs.

### **Author**

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**Dr Sinéad McGuinness, Consultant in Public Health Medicine**

### **References**

- 
1. Data refers to tests up to and including 20 February 2022. Available from Department of Health: COVID-19 Daily Dashboard. Accessed 22 February 2022.

## Case study 4: Support for places of worship in managing the spread of COVID-19

Places of worship play an important role in providing spiritual leadership for many individuals, and in bringing communities together. Their communal nature makes them places that can be vulnerable to the spread of COVID-19.

The PHA worked with clergy during March and April 2021 to support them in implementing and adhering to the COVID-19 government guidelines in place to protect those attending church based services, and to promote messaging around reducing transmission to congregations when attending church based services, including funerals. This project drew on existing relationships with churches built via Flourish!, an initiative to support churches in addressing the needs of people affected by suicide.

Actions included:

- Meetings were coordinated by PHA Health Improvement leads with church representatives. Included in discussions were representatives from churches, Flourish! and the PHA.
- The Flourish! website ([www.wewillflourish.com](http://www.wewillflourish.com)) was updated with a dedicated COVID-19 section providing information and links to help churches be better informed.
- A COVID-19 guidance poster was developed in partnership with PHA and clergy and circulated to all church representatives on the Flourish Churches database.
- Over 300 churches received the posters to display in their church buildings to promote key safety messages to parishioners and congregations.
- A video was produced with the Dean of Armagh Diocese to showcase good practice in church based settings.

The work was carried out to coincide with the Easter period and the return to church services over the Easter weekend of 2021.

### Author

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**Helen Gibson, Health and Social Wellbeing Improvement Senior Officer**

## Case study 5: A communities-based approach to increasing reach and resonance of public health messaging

The PHA Health Improvement team has strong relationships with community and voluntary sector and statutory organisations, from grassroots to strategic level. These have been developed over years of engagement, partnership working and responding to needs. The pandemic generated an appetite for organisations, including those without a specific health remit, to help reduce the spread and impact of COVID-19.

Health Improvement identified that collaborating with PHA Communications team would enable more routine mobilisation of these relationships, increasing reach and resonance with particular groups of interest by:

- engaging and supporting organisations who have trusted relationships with their own audiences but limited experience in accessing and disseminating PHA public messaging;
- harnessing relationships with relevant groups and organisations to inform the development of targeted messaging, and its dissemination thereafter.

### Reaching a wider audience

In the first case, the objective is to provide frequent, easy access to curated PHA communications resources so that partners can 'lift and distribute' them to their audiences. Partners' dissemination methods comprise social media, including channels managed by community volunteers, as well as traditional methods, such as placing items in hard copy newsletters.

The work operates through an email subscription service. Each mailout allows a high level overview of the content that is available for priority issues, promotes the option of translated and alternative formats where available, and gives direct access to the resources.

The service currently reaches 800 contacts and has distributed thirteen editions – comprising eight COVID-specific, one 'subscription drive', one feedback exercise and three concerning other health themes. COVID-specific editions have covered vaccination, testing, digital self tracing, financial support, car sharing and Germ Defence (in partnership with the Behaviour Change Group).

### Targeted messaging

In response to a rise in infection numbers in younger age ranges in December 2020, work was carried out with numerous young people's organisations to tailor social media resources to help young people to understand public messaging and adopt recommended behaviours. The team also worked with Department for Communities, Sport NI and governing bodies of sports organisations to develop specific messaging. High profile sports people have participated in developing and disseminating video messages and associated graphics featuring a bespoke slogan for this audience, "Train smart, play smart, be COVID smart".

**Figure 18: Examples of graphics created to target COVID-19 messaging to specific audiences.**



The sustained nature of the pandemic has enabled these collaborative approaches to be embedded as routine business between Health Improvement and Communications to increase reach and resonance of PHA messaging.

## Author

**Danny Sinclair, Health and Social Wellbeing Improvement Manager**

# The Acute Health Protection Service response to care homes during the COVID-19 pandemic in Northern Ireland

The Acute Health Protection Service has a lead role in protecting the population from infection and environmental hazards through a range of core functions including surveillance and monitoring, operational support, advice, education, training and research. The service is delivered by a multi-disciplinary team of doctors, nurses, emergency planners, scientific, surveillance and administrative staff operating on a 24/7 basis. The service provides specialist health protection advice and support to all of the independent nursing and residential facilities across Northern Ireland.

## Supporting care homes

The last two years have been extremely challenging for the independent nursing and residential facilities across the region, with care home residents, their families and staff disproportionately affected by the COVID-19 pandemic. Since the COVID-19 pandemic was declared in March 2020, the Acute Health Protection Service has provided advice and support to help care homes manage over 1,300 outbreaks, the majority of which were COVID-19. This work continues to be a key priority given the significant impact of COVID-19 on care homes.

When an issue is detected, the team work with the care home to gather the information needed to complete a risk assessment to determine what is going on, and what measures are required to limit onward spread, illness and death. This includes a range of information to determine the likelihood of transmission in the home, and the impact on residents, staff and care partners. Based on this assessment, tailored public health advice will be given to the care home. This includes infection prevention and control advice. The team continues to provide support to the care home until the outbreak is over.

The Acute Health Protection Service response has evolved to reflect the changing circumstances of the pandemic over time, including new variants of concern of COVID-19, changes in the dominant strain of COVID-19 with different characteristics, and the impact of the COVID-19 vaccination programme on residents and staff. To date, approximately 95% of care home residents have completed the primary course of COVID-19 vaccinations, and 90% have received a booster dose of COVID-19 vaccine, which has provided significant levels of protection to residents.

## Impact on wellbeing

Our primary role and responsibility is to protect the residents from illness and death due to infectious diseases; however we are mindful of the wider impacts which some of the infection prevention and control measures can have upon the wellbeing of residents and their families. The early waves of COVID-19 had higher rates of severe illness and death compared to Omicron, the current dominant strain of COVID-19. The high uptake of COVID vaccination among the care home resident population, along with access to appropriate PPE and regular testing, has enabled

the isolation period for cases and close contacts to be reduced, and allows care partners' visits to continue when a care home is in outbreak, positively impacting upon resident wellbeing.

Going forward, we will continue to work closely with care homes, residents and relatives and internal and external stakeholders across the wider health and social care system, to ensure the delivery of a robust and proportionate response to incidents and outbreaks in the care home setting to protect residents and support care home staff.

## **Authors**

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**Alison Griffiths, Nurse Consultant in Health Protection**

**Gillian Armstrong, Joint Interim Head of Health Protection**

## Port health: return to cruise ship operations 2021

More people travel greater distances and at greater speed than ever before. Over a billion people now travel by air and sea each year and today's highly mobile, interdependent and interconnected world provides many opportunities for the rapid spread of disease, including infectious diseases, food-borne diseases, environmental disasters, toxic-chemical, biological and radio-nuclear accidents. It is critical that all countries have the capacity to detect, assess, and respond to public health incidents such as these. The COVID-19 pandemic has highlighted the role of travel in the spread of High Consequence Infectious Diseases.

### Travel after COVID

In November 2020, the first Global Travel Taskforce produced 14 recommendations to support a return to international travel. Many of the recommendations, such as the Test to Release scheme, have been instrumental in supporting safe travel and will remain crucial in the months to come. On 2 March 2021, the Northern Ireland Executive office published Moving Forward: The Executive's Pathway out of Restrictions and the return to domestic cruising for Northern Ireland was scheduled for 17 June 2021.<sup>1</sup>

Over the last year significant work has been undertaken in developing a COVID-19 Port Management Plan for Northern Ireland, coordinated by the Northern Ireland Cruise Operations Group, chaired by the PHA and Belfast Harbour and including Cruise Belfast, Port Health, Maritime Policing and Belfast City Council Emergency Planning Team.

To enhance existing arrangements for port health in Northern Ireland and support the safe return to cruise ship operations for Northern Ireland, the PHA worked with Cruise Belfast (the cruise promotion partnership between Belfast Harbour and Visit Belfast), the Port Health Authority, the Belfast City Council Emergency Preparedness Group and other stakeholders to produce a Public Health Emergency Contingency Plan and Risk Assessment for Ports in Northern Ireland ensuring appropriate protocols are in place. Cruise operators engaged with the PHA and other statutory organisations and provided an overview of their COVID-19 operating guidelines based on the UK Chamber of Shipping Framework.<sup>2</sup> These guidelines are designed to be delivered in conjunction with local, regional or national guidelines in force at the time of any cruise call.

Joint planning and preparedness for the return to Northern Ireland cruise operations on 17 June 2021 was consolidated on 18 May 2021 in a PHA led four nations Port Health exercise based on a scenario of COVID positive guests and crew on board a cruise ship calling to a Northern Ireland port which included participants from a number of health protection agencies, port health partner organisations and cruise operators.



Joint working with partner organisations contributed to the successful return of cruise ship operations in Northern Ireland. A total of 70 cruise ships and guests were welcomed to our shores in 2021 and learning from the successes of 2021 will be incorporated into planning for the 2022 cruise season.

## Author

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**Mary Carey, Senior Emergency Planner**

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1. Northern Ireland Executive. Moving forward: the Executive's pathway out of restrictions. Belfast: Northern Ireland Executive March 2021. Available at: <https://www.executiveoffice-ni.gov.uk/sites/default/files/publications/execoffice/executives-pathway-out-of-restrictions.pdf> Accessed 7 April 2022.
2. Coronavirus (COVID-19): international cruise ship travel. Available at: <https://www.gov.uk/guidance/cruise-ship-travel> (Accessed 7 April 2022).

# *The impact of COVID on other aspects of healthcare*

- Expanding the seasonal influenza programme
- Addressing inequalities in cancer screening uptake during the pandemic
- A new test for bowel cancer screening
- IT developments in newborn hearing screening
- Delivering diabetic eye screening during a pandemic
- The impact of COVID-19 on trends in cancer diagnosis in Northern Ireland

## Expanding the seasonal influenza programme

### Rationale

In preparation for the 2021/22 seasonal influenza vaccination programme, the Joint Committee on Vaccination and Immunisation (JCVI) considered and recommended the continuation of the age based enhanced programme for the 2020/21 season which extended vaccination to all 50 to 64 year olds. JCVI also retained the offer of live attenuated intranasal vaccine (LAIV) to children in the first year of secondary schools.

This decision took account of:

- Previous modelling work which showed that the childhood programme fully rolled out (2-16 years) would have a greater impact on GP consultations, hospitalisations and mortality than vaccinating 50–64 year olds.
- More recent modelling of vaccination in childhood, which had a more detailed breakdown by age than was used in the initial advice on the childhood programme. This showed that all strategies for vaccinating children up to 16 years (preschool, primary and secondary school) were cost effective, but that primary school vaccination had a stronger impact on health care burden than secondary school vaccination.

In addition, JCVI agreed that expansion of the programme to all secondary school aged children would be supported for the 2021/22 season, provided the necessary infrastructure could be put in place for programme delivery, with priority given to the youngest age groups of children/teenagers, if there were any limitations to full school expansion.

JCVI also agreed that if COVID-19 remained of major concern during the winter of 2021/22 it would be reasonable to continue with the enhanced programme planned for the 2020/21 season. This was the case, coupled to very low influenza infections rates (as a result of COVID-19 prevention measures) which had the consequence of lowering any naturally acquired immunity to flu viruses. Therefore in 2021/22 influenza vaccination was again offered to adults aged 50–64 years, in addition to the expanded childhood programme, to protect them and alleviate pressure on the NHS.

A similar recommendation has been made by JCVI for the 2022/23 season with continued low influenza levels resulting from COVID-19 prevention measures in 2021/22.

### Impact of COVID-19 vaccination on 2020/21 seasonal influenza vaccination programme

The 2020/21 seasonal influenza programme began with the prospect of safe and effective COVID-19 vaccinations becoming available part way through the programme's period of operation. Initially, as with all new vaccine introductions, the Medicines and Healthcare product Regulatory Agency (MHRA) wished to be able to detect and investigate any side effect attributable to the new vaccines, and a recommendation for a four week gap between administration of any other vaccination (including influenza) and COVID-19 vaccines was made. With the growing evidence of the safety profile of the COVID-19 vaccinations this four week interval has been removed and co-administration of COVID-19 with other vaccines was approved by MHRA in time for the 2021/22 influenza vaccination programme.

The programme began in October 2020 with vaccinations being administered to large numbers of eligible people. As a consequence of limitations in worldwide vaccine supply, the programme was paused for a short period. Initially across the United Kingdom seasonal influenza vaccination was offered to the higher priority groups identified by the JCVI. As supplies improved when the DoH was able to access additional vaccine supplies from a special stock obtained by the Department of Health and Social Care for UK wide use, those aged 50-64 years not in clinical risk groups were able to access influenza vaccination from January 2021.

This expanded seasonal influenza offer coincided with the introduction of COVID-19 vaccination. Initially COVID-19 vaccination was offered to those aged over 65 years of age, most clinically vulnerable and frontline health and social care workers. However, although most people in the 50-64 year age group could have obtained their seasonal influenza vaccination allowing for four weeks until their offer of COVID-19 vaccine would have been due, the knowledge of the recommended four week gap between COVID-19 and other vaccinations had the impact of reducing the acceptance of seasonal influenza vaccine by many people in this group.

Despite this, the uptake of seasonal influenza vaccination during the 2020/21 season was better than 2019/20 which had been a record year for vaccine uptake.

Seasonal influenza vaccination rates for 2019/20 and 2020/21 are presented below.

**Table 1: Influenza vaccine uptake rates (public programme), 2020-21 and 2019-20.**

|   | Delivered by                | 2020/21<br>(to 31 Mar) | 2019/20<br>(to 31 Mar) |
|---|-----------------------------|------------------------|------------------------|
| All 2 to 4 year olds  | GP                          | 55.2%                  | 48.5%                  |
| All pregnant women  | GP                          | 42.1%                  | 46.3%                  |
| All individuals under 65 years with a chronic medical condition | GP                          | 67.8%                  | 58.9%                  |
| All individuals 65 years and over                               | GP                          | 79.1%                  | 74.8%                  |
| % of all primary school children vaccinated to date             | Trust School Nurse Service* | 72.9%                  | 72.1%                  |
| % of all year 8 school children vaccinated to date              | Trust School Nurse Service  | 66.6%                  | n/a                    |

\* This figure includes nasal and injected vaccines delivered by the school nurse service, as well as a small number of nasal vaccines delivered by their GP

**Table 2: Influenza vaccine uptake rates (frontline health and social care workers), 2020-21 and 2019-20.**

|                    | % of all frontline health care workers employed by a Trust |                        | % of all frontline social care workers employed by a Trust |                        |
|--------------------|--|------------------------|--|------------------------|
|                    | 2020/21<br>(to 31 Mar)                                     | 2019/20<br>(to 31 Mar) | 2020/21<br>(to 31 Mar)                                     | 2019/20<br>(to 31 Mar) |
| Belfast HSCT*      | 50.0%  | 43.4%                  | 41.8%  | 24.4%                  |
| South Eastern HSCT | 59.1%  | 43.6%                  | 48.5%  | 22.9%                  |
| Northern HSCT**    | 54.8%  | 43.5%                  | 40.1%  | 27.9%                  |
| Southern HSCT***   | 50.9%  | 39.6%                  | 36.4%  | 23.5%                  |
| Western HSCT       | 46.2%  | 29.1%                  | 38.8%  | 12.1%                  |
| NIAS****           | 77.3%  | 62.4%                  | n/a  | n/a                    |
| Northern Ireland   | 52.4%  | 41.2%                  | 40.8%  | 22.8%                  |

\*Belfast HSCT figures were reported up to 31 January 2021

\*\*Northern HSCT figures were not reported for January or March 2021

\*\*\*Southern HSCT figures were reported up to 28 February 2021

\*\*\*\*NIAS figures were reported up to 31 December 2020

## Author

**David Irwin, Consultant in Health Protection**

## Addressing inequalities in cancer screening uptake during the pandemic

The PHA contracts with the Women's Resource and Development Agency (WRDA) to deliver a regional, peer-led service to help tackle inequalities in cancer screening. The service aims to raise awareness and promote informed choice in breast, cervical and bowel cancer screening. It is targeted at people living in deprived areas and those identified in Section 75 of the NI Act 1998.

Working with individuals, communities and the voluntary sector to reduce the impact of health inequalities is at the core of the PHA's values and was noted in the Cancer Strategy for Northern Ireland 2022-2032:

*Health inequalities are associated with lower symptom awareness, later presentation and lower uptake of services including screening. Inequality across NI means there are potentially avoidable variations in outcomes, patient experience and survival.*<sup>1</sup>

The WRDA's programme of work includes community outreach, recruitment and training of peer facilitators and delivery of cancer screening awareness sessions in community venues. The WRDA tailors awareness session content to the needs of the attendees and delivers bespoke sessions for those with additional support needs. They work closely with community groups, charities and carers, and can arrange translation and child care services to ensure sessions are accessible.

### New approaches

The arrival of the pandemic brought a halt to this model of service delivery. An alternative service model was developed through community engagement, and training for the WRDA team and facilitators. An online programme was created consisting of Zoom group sessions, a pre-recorded webinar and a series of animated videos providing information about cancer screening and promoting Be Cancer Aware messages.

During this time, the WRDA continued to develop their relationships with key groups, targeting people from ethnic minority backgrounds, LGBTQ+ and those with sensory impairments in particular. Engagement with the British Deaf Association resulted in co-production of adapted online awareness sessions, filmed with a British and Irish Sign Language translator, along with subtitles, to make these more accessible for deaf or hearing impaired service users.

### Hybrid model

As COVID restrictions relaxed, the WRDA noted a huge demand from community groups for delivery of in-person awareness sessions, amid fears around undiagnosed cancer cases following COVID-related disruption to services. In response, the WRDA began once again to offer in-person delivery of cancer screening awareness sessions, (with due regard for social distancing and other public health guidelines). Online delivery of sessions has also continued, with demand for each modality varying as the pandemic unfolds.

In responding to the pandemic, this service has benefitted from having to develop and trial new ways to engage with those most in need in order to promote informed choice in cancer screening.

For further information on the WRDA's programme of work, please see: <https://wrda.net/breast-cervical-and-bowel-screening-awareness-programme-webinar/>

## **Author**

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**Dr Catherine Bane, Project Manager, Young Person and Adult Screening Team**

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## A new test for bowel cancer screening

Bowel cancer screening is offered to individuals aged 60-74 every two years. The aim of screening is to identify bowel cancer at an early stage, when treatment outcomes are markedly improved.

The UK National Screening Committee previously recommended a change in the primary screening test for bowel cancer, moving from Faecal Occult Blood (FOB) tests to quantitative Faecal Immunochemical Testing (FIT). Work commenced to prepare for this change in Northern Ireland, and funding was identified to progress this locally from 2019/20. Initial plans were to work towards implementation in June 2020.

This test has several benefits:

- It is more sensitive, meaning that bowel cancer screening may be able to detect more cancers and pre-cancerous adenomas. FIT tests specifically for human blood within stools, whereas the previous test may have been affected by dietary factors.
- It is an easier test to complete, and studies (across the UK and internationally) have demonstrated that moving to FIT testing increases bowel cancer screening uptake, particularly in groups that historically have been less likely to participate in screening.
- It is an automated test, reducing the risk of human error in the processing of samples.

### Implementation

The emergence of the pandemic delayed the implementation of this policy change as well as impacting on the wider screening programme. The Bowel Cancer Screening Programme was paused in March 2020, with invitations resuming in August 2020. A new target date for implementation of FIT was set for early 2021 and planning work continued at pace throughout the pandemic.

Implementation of this policy change involved a wide range of stakeholders and required coordinated action across a range of organisations. This included the updating of patient information materials, procuring the new testing kits and equipment, ensuring adequate provision of follow-up investigations within Health and Social Care (HSC) Trusts, and undertaking extensive IT system developments. These are challenging workstreams to coordinate and progress at any time, but even more so during a pandemic with the added pressures being experienced across all HSC services.

FIT was successfully introduced into the Bowel Cancer Screening Programme in January 2021.

In preparation for the launch, the PHA worked with Cancer Research UK to develop a tailored animated video that explains how to complete the test kit. The PHA worked with the Women's Resource and Development Agency (WRDA) to update their online materials for their bowel cancer screening awareness sessions. These online materials were developed by WRDA in response to the pandemic.



Provisional data suggests that FIT implementation has resulted in improvements in screening uptake, in keeping with evidence from other regions. While the programme continues to operate with backlogs in invitations as a result of the pause in 2020, these are being reduced in a managed way, with the anticipation that the programme will be fully restored by autumn 2022.

## **Author**

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**Dr Christine McKee, Consultant in Public Health**

## IT developments in newborn hearing screening

The aim of the Newborn Hearing Screening Programme (NHSP) is the early identification of and provision of effective intervention for babies born with a permanent childhood hearing impairment. It is an essential service that has continued to operate throughout the pandemic, offering screening to all babies up to six months old who are born or reside in Northern Ireland.

### Ensuring a high quality service

As part of a quality improvement and modernisation initiative, the programme took forward plans in 2020/21 to implement a new information management system (Smart4Hearing) to support service provision across the region. This was considered a priority area of work and the project continued to be progressed throughout the COVID-19 pandemic.

This complex project, led by the PHA, involved engagement with a wide range of stakeholders including HSC Trusts, BSO and Northgate Public Services. The new system will benefit the programme by:

- providing robust quality assurance of the programme;
- enhancing 'failsafe' processes which ensure that all babies are managed appropriately through the screening pathway;
- reducing the amount of manual data entry;
- providing more timely reports on how the programme is performing;
- ensuring the programme is able to report on all national quality standards and therefore provide the ability to monitor the performance of the Northern Ireland programme against other regions of the UK.

Furthermore, the initiative provided an opportunity to enhance communication links with paediatric audiology and otolaryngology colleagues, in order to support management of the entire patient journey and complete the newborn hearing screening pathway.

### Implementation

Smart4Hearing was successfully implemented in March 2021. This has been an important quality improvement initiative and will provide many benefits for future programme management.

Several challenges were encountered during the implementation as a result of the pandemic, such as providing training and support while adhering to government guidance and infection prevention and control recommendations. These challenges were overcome by the use of virtual meetings and video conferencing, the use of additional appropriate technology, and frequent communication with all stakeholders involved.

### Author

**Dr Rachel Doherty, Consultant in Public Health.**

## Delivering diabetic eye screening during a pandemic

The Northern Ireland Diabetic Eye Screening Programme (NIDESP) is commissioned and quality assured by the PHA and managed by a single provider (the Belfast Health and Social Care Trust). Screening is offered on an annual basis to people aged 12 and over who have diabetes. The eligible population currently stands at around 110,000 people in Northern Ireland. This eligible population has more than doubled from the start of the programme in 2008.

### Modernising the service

In order to improve quality and meet the needs of its increasing eligible population the programme has been the subject of a multi phased modernisation project over the last number of years. This plan included:

- introduction of a new IT system;
- development of internal quality assurance processes;
- surveillance clinics for people at higher risk of sight loss;
- a review and implementation of a new service delivery model; and
- introduction of a two year screening interval for those at lowest risk of sight threatening retinopathy.

The supporting project structure for the implementation of the new service delivery model was being finalised in late 2019/20 with the expectation that this would begin from April 2020. However, with the pausing of some population screening programmes at the beginning of the pandemic, this was no longer achievable. It became clear that in order to restart the programme during the pandemic an immediate move to a fixed site delivery model was required, as providing screening at individual GP practices was no longer feasible.

A small number of consultant led clinics continued throughout the pandemic to ensure that pregnant women were offered screening. The remaining eligible population were risk stratified to ensure that those at highest risk of sight loss were offered screening as soon as possible. Capacity was maximised by placing those at lowest risk on a two yearly screening interval rather than annual, which was an element of the modernisation project outlined above. The introduction of a two yearly screening interval was recommended by the UK National Screening Committee in 2016 for those at lower risk of sight loss. This approach was also discussed at a national level at regular 5 Nations meetings; with each of the other UK nations now at various stages of implementation.

### Planning for the future

The programme has worked extremely hard over the last 18 months to screen as many participants as possible, working within the constraints and pressures of the pandemic such as social distancing and infection control requirements, while rapidly identifying and securing new screening venues across Northern Ireland. Despite this, capacity overall remains considerably reduced.

While the programme has had to introduce both a fixed site delivery model and the variable screening interval as a result of events outside its control, it has become clear that in order to continue to meet the challenges of providing a sustainable screening service going forward,

both of these programme changes will likely need to be formally implemented. The number of people with diabetes continues to grow, and we need to ensure that we can continue to deliver a high quality screening programme that is effective at identifying those with sight threatening retinopathy and offering them suitable early treatment. The PHA continues to work with the Trust to support ongoing recovery of the programme through the impact of the pandemic, and also to plan the future model and needs of the service.

## **Author**

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**Claire Armstrong, Quality Assurance and Programme Development Manager**

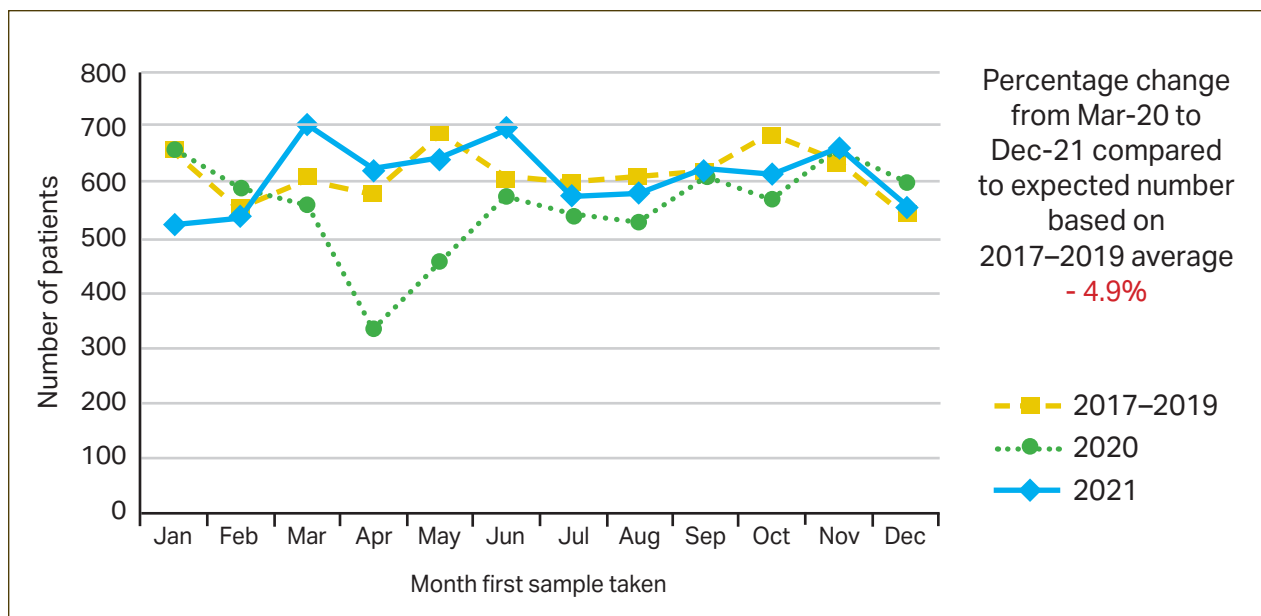
## The impact of COVID-19 on trends in cancer diagnosis in Northern Ireland

The unprecedented pressure faced by HSC services in Northern Ireland during the COVID-19 pandemic has caused extensive disruption to the routine functioning of healthcare services, including cancer screening programmes, referral pathways and diagnostic and treatment services. Stay at home messages also resulted in changes to individual healthcare seeking behaviours which are likely to have contributed to delays in patient presentation to healthcare services. Given that early cancer diagnosis is associated with improved outcomes, there is concern that late presentation and delays in diagnosis and treatment will reverse the recent trends of improvements in survival for cancer patients in Northern Ireland.

Since March 2020, the Northern Ireland Cancer Registry (NICR) have produced monthly reports providing an overview of trends in the number of patients with pathology samples indicating cancer and contrasted these with average numbers during 2017-2019.<sup>1</sup>

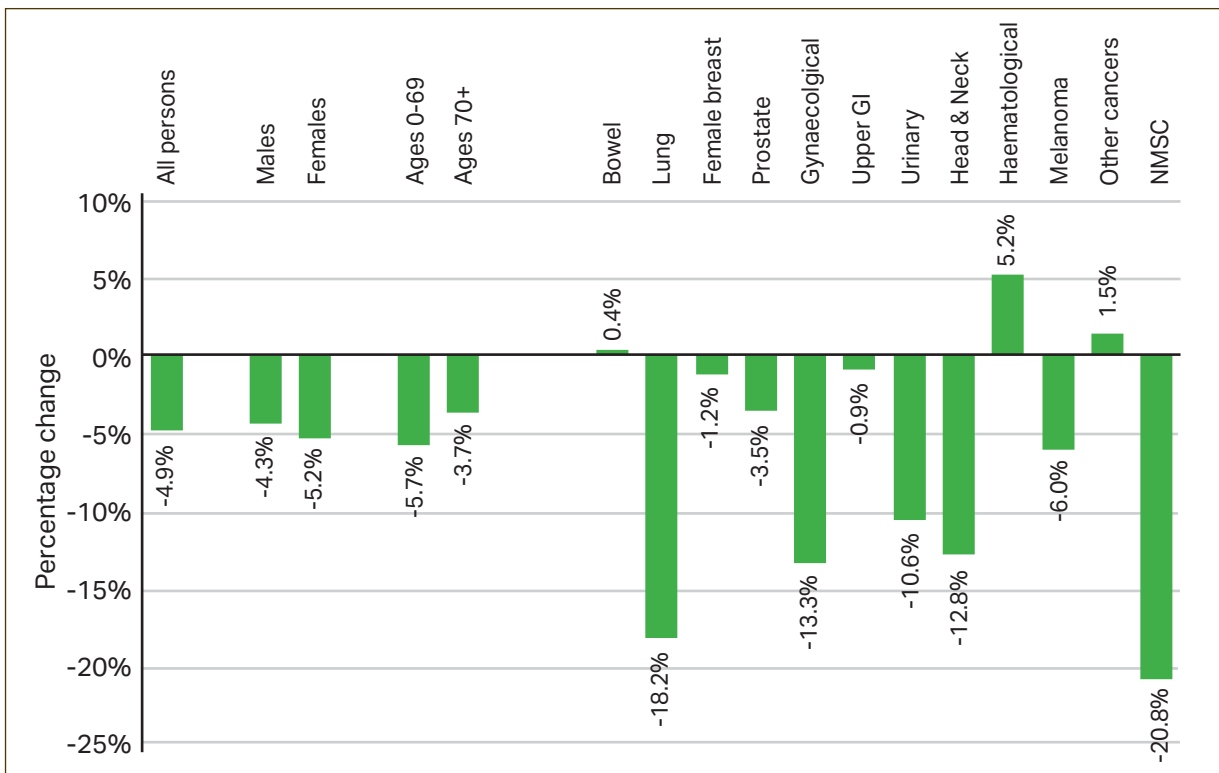
The number of samples was reduced when the levels of COVID-19 were highest. Overall, from March 2020 to December 2021, the number of patients with a pathological sample indicating cancer was 4.9% lower than the average number for the same time period in 2017-2019 (Figure 19).

**Figure 19: Trends in patients with pathology samples indicating cancer by month and year first sample taken.**



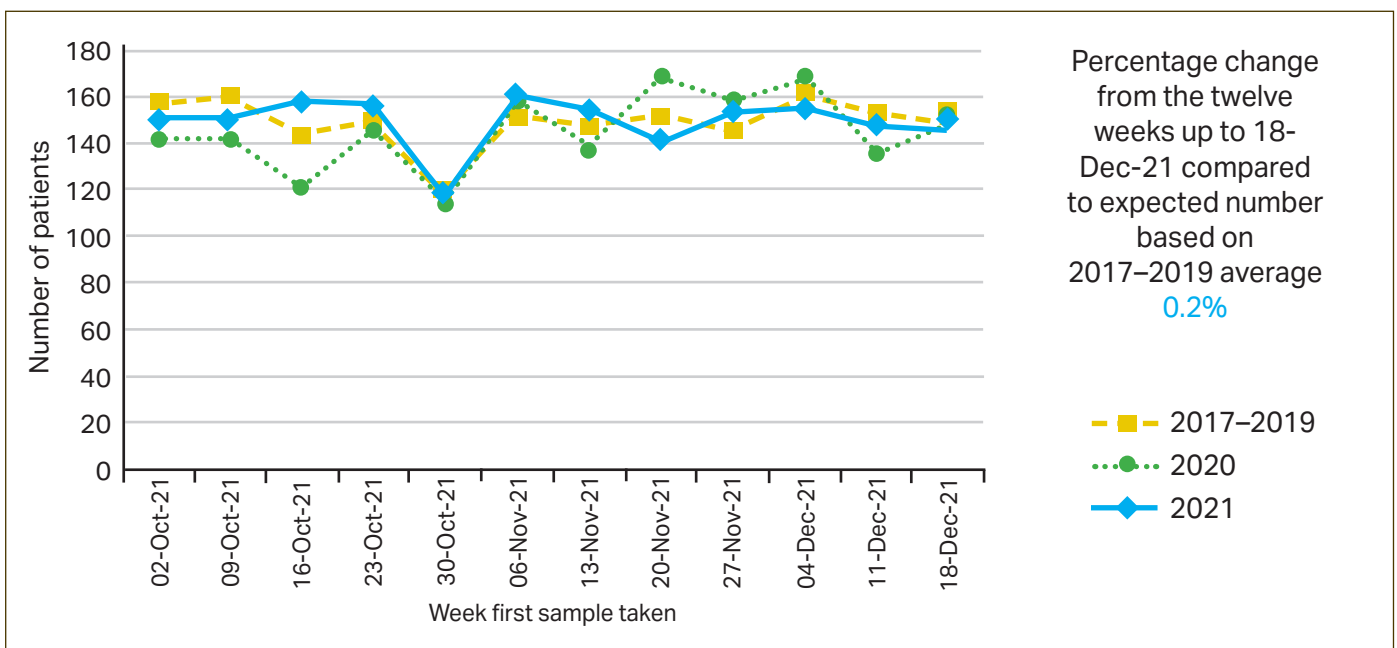
A summary of the cancer pathology trends in Northern Ireland overall and by gender, age group and cancer site from March 2020 to December 2021, as compared to the equivalent figures from 2017-2019, is illustrated in Figure 20. These data describe a greater percentage decrease in the pathological diagnosis of cancer in females (5.2%), as compared to males (4.3%), and in those aged 0-69 (5.7%), as compared to those aged over 70 (3.7%). A decrease in pathological diagnosis across most cancer subtypes is also evident, for example lung cancer (18.2%).

**Figure 20: Percentage change in the pathological diagnosis of cancer by gender, age and cancer site during the period from March 2020-December 2021, compared to the annual average in 2017-2019.**



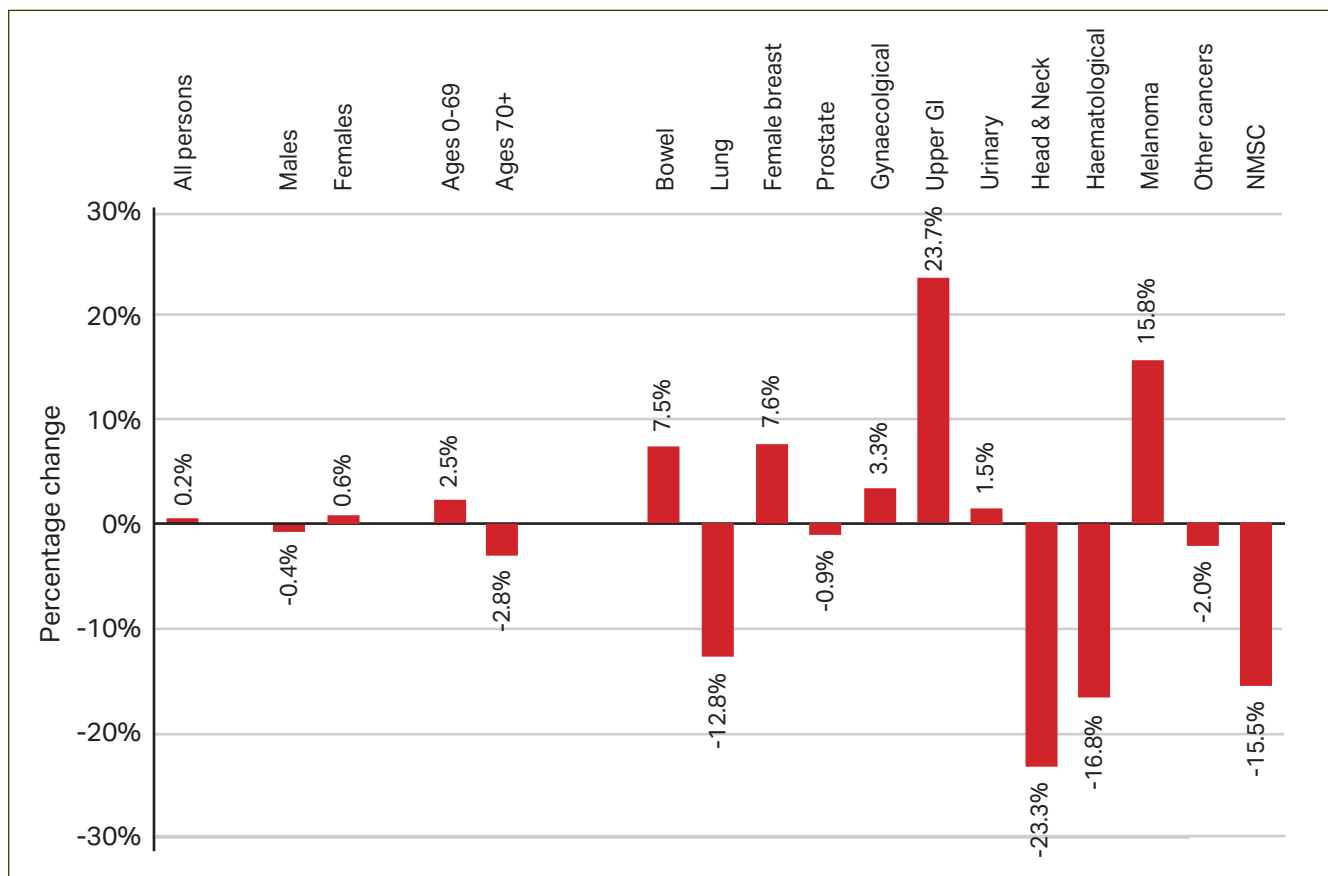
The most recent data collated by the NICR has indicated welcome signs of recovery in the rates of cancer identification in Northern Ireland, with a 0.2% increase in the number of patients with a pathology sample indicating cancer in the twelve weeks up to 18 December 2021, compared to the average value in the equivalent weeks in 2017-2019 (Figure 21).

**Figure 21: Trends in patients with pathology samples indicating cancer by week and year first sample taken.**



A summary of the cancer pathology trends in Northern Ireland overall and by gender, age group and cancer site during the twelve weeks leading up to December 2021, as compared to the equivalent figures from 2017-2019 is illustrated in Figure 22. Encouragingly, this shows only a 0.4% reduction in the pathological diagnosis of cancer in males compared to pre-pandemic levels, alongside a 0.6% increase in the pathological diagnosis of cancer in females. Of concern however, are sustained reductions in the pathological diagnosis of specific cancer subtypes, including head and neck cancer (23.3% decrease).

**Figure 22: Percentage change in the pathological diagnosis of cancer by gender, age and cancer site during the twelve weeks leading up to 18 December 2021, compared to the annual average in 2017-2019.**



The official statistics for lung cancer diagnosed in 2020, published by the NICR in March 2022, have indicated a reduction in cases diagnosed with a shift to later stage disease, reductions in surgery, radiotherapy and chemotherapy and significant reductions in survival.<sup>2</sup>

Given the significant adverse outcomes associated with advanced stage disease at both individual and population level, potential for high levels of undiagnosed cancer prevalent in the community requires urgent public health action, focused on raising public awareness of signs and symptoms, as well as prioritising the rehabilitation of cancer services. Analysis of NICR data by demographic characteristics has enabled an assessment of the population cohorts potentially more likely to be living with undiagnosed cancer, while site-specific data has also provided a useful indicator of the types of cancer which appear to have been most affected and as such, underdiagnosed. Such considerations will prove vital in informing the planning, provision and delivery of cancer services tailored to meet future population health need.

Further information is available from the NICR website: [www.qub.ac.uk/nicr](http://www.qub.ac.uk/nicr).

## Authors

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**Professor Anna Gavin, Northern Ireland Cancer Registry**

**Dr David Donnelly, Northern Ireland Cancer Registry**

**The Northern Ireland Cancer Registry Team**

**Aoife Nic Iomhair, Speciality Registrar Public Health**

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# *The impact of COVID on wellbeing*

- COVID-19 HSC Staff Wellbeing Study in Northern Ireland
- College student mental health and wellbeing, prior to and during the COVID-19 pandemic
- Health and social care workers' quality of working life and coping while working during the COVID-19 pandemic: a multi-phase cross-sectional study

## COVID-19 HSC Staff Wellbeing Study in Northern Ireland

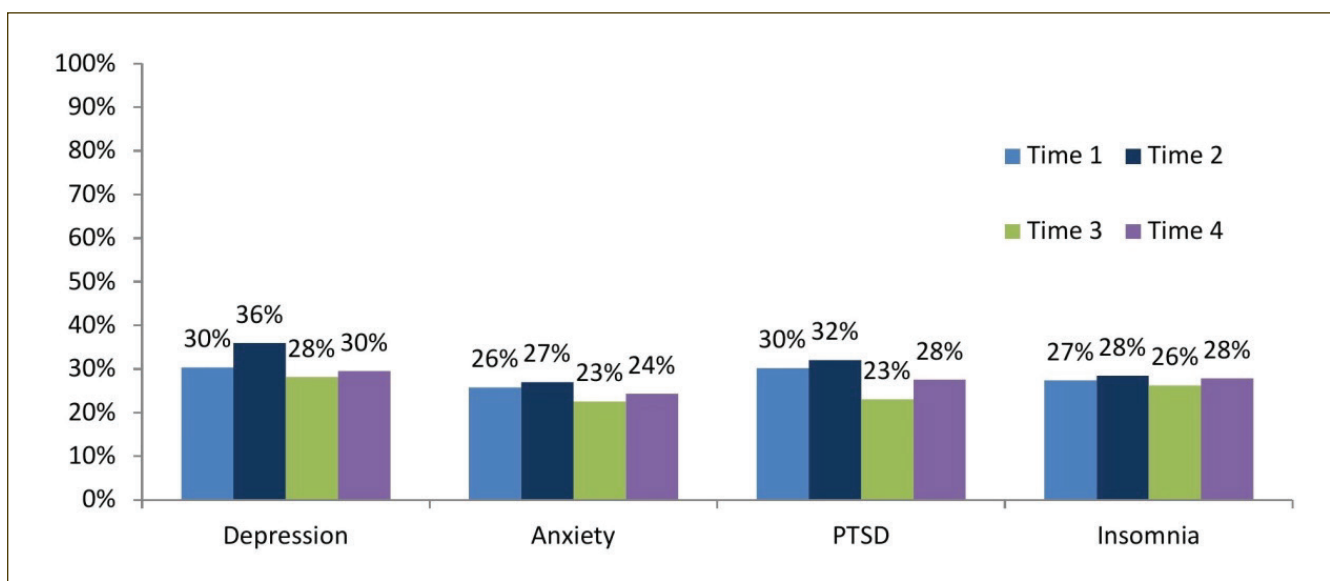
The Northern Ireland COVID-19 HSC Staff Wellbeing Survey was carried out at four time points during 2020 and 2021. It was an online survey open to all HSC staff in Northern Ireland and asked questions about mental health, wellbeing and supports used during the pandemic. Many thousands of staff took part and a good representation of staff groups was achieved at each time point – November 2020, February 2021, May 2021 and August 2021. It was funded by the PHA's Research and Development Division and carried out by the IMPACT Research Centre, based in the NHSCT. It involved collaborators in each of the Trusts and the Ambulance Service.<sup>1</sup>

### Findings

The survey included four validated psychological wellbeing measures (depression, anxiety, Post-Traumatic Stress Disorder (PTSD), and insomnia). It highlighted high levels of distress and poor wellbeing in HSC staff throughout the pandemic period. See Figure 1 that outlines levels of distress within the workforce (depression, anxiety, PTSD, insomnia) at all time points. In addition we found that 40% of staff were considering leaving their organisation (up by 5 percentage points from pre-pandemic surveys). The proportion of staff who looked forward to going to work also fell from pre-pandemic levels (43% versus 56% pre-pandemic). Analysis revealed effective communication within the organisation involved to be the most important predictor of staff wellbeing.<sup>1</sup>

Most of our participants did not use any wellbeing supports available. At Time 4, around three quarters (75%) said they had used none of the supports offered. The most common types of supports used were online resources (12%) and information leaflets/booklets (10%). Among those who had used some form of support 35% found it useful or very useful, and even if not used most were reassured supports were available.

**Figure 23: Proportion of sample self-reporting moderate to severe psychological wellbeing symptoms at Times 1-4.**



## Impact

The reports from each of the time points are published on the Impact Research Centre website ( [www.impactresearchcentre.co.uk](http://www.impactresearchcentre.co.uk) ). They were distributed widely to participants, senior management within each organisation and were made available to the regional group overseeing HSC staff wellbeing during the pandemic. As a result of our reports many organisations made great efforts to improve communication about COVID issues. Others improved how redeployment was carried out (a stressful event for many staff). The reports strengthened the case for increasing support to staff during this time by providing interventions targeted at organisational, group and individual levels. There was a clear need identified to provide psychological interventions such as team supports, and wellbeing programmes as well as organisational interventions such as compassionate leadership training.

## Authors

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**Professor Ciaran Shannon, Consultant Clinical Psychologist and Director, IMPACT Research Centre**

**Dr Julie-Ann Jordan, Senior Researcher, NHSCT and Research Associate, Ulster University**

**Professor Kevin Dyer, Consultant Clinical Psychologist, Regional Trauma Network Psychology Lead, Clinical Lead – NHSCT Psychological Therapies Service**

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## College student mental health and wellbeing, prior to and during the COVID-19 pandemic

Research has revealed that many college students struggle with their mental health. Numerous students commence college with pre-existing conditions, while others develop psychological problems for the first time during their college years.<sup>1</sup> In March 2020, the World Health Organization (WHO) declared COVID-19 a pandemic, restrictions were put in place, and students moved to an online learning environment. It was surmised that this would have a negative impact on mental health and wellbeing, adding to the pressure of college life.

### Student Psychological Intervention Trial

A study led by Ulster University (UU) was conducted as part of the Student Psychological Intervention Trial (SPIT), comparing data collected from first year student participants in autumn 2019, prior to the pandemic, with data collected in autumn 2020, when students were commencing their second year at college.<sup>2</sup> SPIT is one of 11 cross-border studies that make up the Cross-border Healthcare Intervention Trials in Ireland Network (CHITIN) programme. SPIT was conducted as part of the WHO World Mental Health International College Student Initiative (WMH-ICS), with student participants from UU in Northern Ireland, and Letterkenny Institute of Technology in the Republic of Ireland.<sup>3</sup> Overall, 884 students fully completed the comprehensive online survey in both year one and year two.

Symptoms of depression, anxiety and suicidal behaviour were compared across this time-period, and stressors related to the pandemic were identified. The study revealed that many students had psychological problems when they started college, particularly those based in the Republic of Ireland (see Table 3 below and BBC report).<sup>4</sup> Levels of depression increased significantly from year one to year two, especially among students studying in Northern Ireland. This may be related to increased social isolation associated with the lockdown, a lack of interaction with their peers and online teaching. Indeed, many students said that their motivation decreased during this period and that they struggled with the online learning environment and uncertainty around examinations. Many said that their sleeping patterns were disturbed and that they worried about loved ones catching the virus.

Contrary to what may have been expected, levels of anxiety decreased. It should be noted that this may have also been the case in the absence of a pandemic, as the high levels of anxiety revealed in year one may be related to students being anxious about starting college for the first time. Conversely, the reduction in anxiety symptoms may also be related to fewer stress invoking situations as they started year two, with less social interaction.

No significant variations were found for suicidal behaviour over this time-period, yet the number of students identified as being at risk in both year one and year two is concerning. Such findings would indicate that it is very important to monitor student mental health and wellbeing, and that supports should be put in place to address the needs of these students, particularly during these challenging times, with uncertainty surrounding the pandemic and the impact it may have on their time at university. Early intervention and treatment are of utmost importance and students should be encouraged to seek help.

**Table 3: Comparison of anxiety and depression scores and suicide risk between Year 1 and Year 2.**

|                     | Year 1     |              | Year 2     |              | x2                        |
|---------------------|------------|--------------|------------|--------------|---------------------------|
|                     | n          | %            | n          | %            |                           |
| <b>Anxiety</b>      |            |              |            |              |                           |
| Total               | <b>214</b> | <b>25.5%</b> | <b>163</b> | <b>18.9%</b> | <b>10.726 (p&lt;.01)</b>  |
| ROI                 | 40         | 22.6%        | 37         | 20.3%        | .303 (p=.582)             |
| NI                  | 174        | 26.2%        | 126        | 18.5%        | 11.621 (p<.01)            |
| <b>Depression</b>   |            |              |            |              |                           |
| Total               | <b>123</b> | <b>14.9%</b> | <b>203</b> | <b>23.6%</b> | <b>20.617 (p&lt;.001)</b> |
| ROI                 | 38         | 21.6%        | 44         | 24.5%        | .272 (p=.542)             |
| NI                  | 86         | 13.1%        | 158        | 23.3%        | 22.692 (p<.001)           |
| <b>Suicide Risk</b> |            |              |            |              |                           |
| Total               | <b>65</b>  | <b>7.6%</b>  | <b>76</b>  | <b>8.6%</b>  | <b>.633 (p=.426)</b>      |
| ROI                 | 24         | 12.9%        | 17         | 9.2%         | 1.474 (p=.225)            |
| NI                  | 41         | 6.1%         | 58         | 8.4%         | 2.635 (p=.105)            |

Note: n = raw unweighted values, % weighted values; ROI = Republic of Ireland; NI = Northern Ireland x 2 tests show significant differences in prevalence rates  
Source: McLafferty et al. (2021)

## Funding

CHITIN is a unique cross-border partnership between the Public Health Agency in Northern Ireland and the Health Research Board in the Republic of Ireland. CHITIN has received €10.6 million funding from the European Union's INTERREG VA Programme, managed by the Special EU Programmes Body (SEUPB) with match funding from the Departments of Health in Northern Ireland and the Republic of Ireland.

## Author

**Elaine Murray, Senior Lecturer in Personalised Medicine (Mental Health), Ulster University**

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# Health and social care workers' quality of working life and coping while working during the COVID-19 pandemic: a multi-phase cross-sectional study

## Introduction

The wellbeing of the health and social care workforce is crucial to service delivery, and more so during the period of unprecedented demand placed on the service during the ongoing COVID-19 (SARS-CoV-2) pandemic. It is important that all health and social care employers have current evidence on which to base approaches to staff support and service delivery during and beyond the pandemic. This survey aimed to monitor health and social care workforce wellbeing and coping during the accelerative phase of the COVID-19 pandemic and at six monthly intervals through the peak and decelerative phases, and to make good practice recommendations for organisations and professional bodies based on the findings.

## Methods

This is a multi-phase cross-sectional survey-based study involving nurses, midwives, allied health professionals (AHPs), social care workers and social workers across the UK. Online surveys are released on a six monthly basis and disseminated through suitable channels to ensure reach to appropriate audiences across the Four Nations.<sup>1-5</sup>

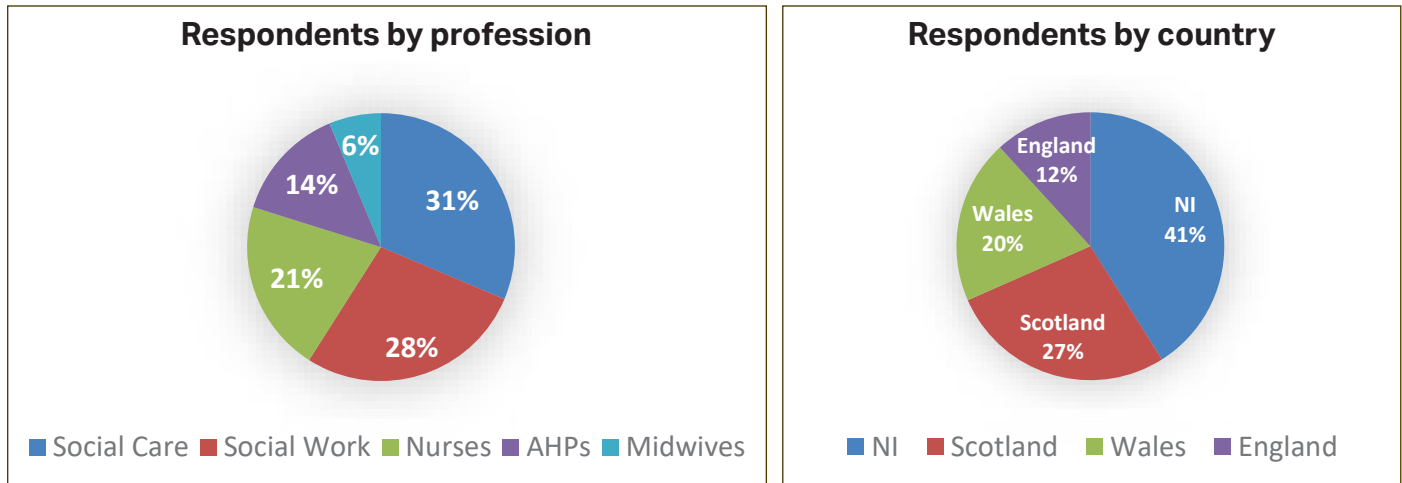
The survey included:

- Demographic and work-related information
- Mental wellbeing
- Quality of working life
- Burnout
- Coping with COVID-19-related occupational demands
- Coping with work-related stressors
- Open-ended questions

In order to gain deeper insights into workforce impacts, separate focus groups are conducted with health and social care Human Resource (HR) professionals, service managers and frontline workers. This report details the findings of Phase 3 of the survey; further phases are planned. Further details of the methodology can be found at [www.hscworkforcestudy.co.uk](http://www.hscworkforcestudy.co.uk)

## Findings

The survey received 2,721 responses, the highest proportion of which came from Northern Ireland (n=1,116), followed by Scotland (n=745), England (n=539) and then Wales (n=321). The largest groups by profession in the sample were social care workers (n=853) and social workers (n=753), followed by nurses (n=566), AHPs (n=378), and midwives (n=171). The majority of respondents were female (86.8%), primarily from the 30-59 age group (83.7%) and the vast majority were of white ethnic origin (89.5%).

**Figure 24: Distribution of survey respondents by profession and by country.**

The main areas of practice for most respondents were adults (37.0% UK-wide) and older people (22.9% UK-wide). Overall, respondents have been working more hours' overtime since the start of the pandemic compared to before. When asked about the impact of COVID-19 on their work, more than half (62.1%) of the respondents UK-wide felt overwhelmed by increased pressures, 34.5% felt their practice was impacted but not significantly and only 3.4% reported that their service had not been impacted at all. Social care workers and social workers were the most impacted occupational groups.

Responses to open-ended questions and the focus group discussions were analysed to identify common themes. The overarching themes that emerged in Phase 3 (May–July 2021) were similar to the themes identified in Phase 1 (April–July 2020) and Phase 2 (November 2020–January 2021) of the study; **Changing Conditions, Communication and Connections**.

In relation to the **Changing Conditions**, respondents reported that their services were (again) affected by staff shortages, leading to increased workloads, burnout and impacts on health and wellbeing. Positive developments included greater flexibility about working from home and a better work-life balance.

Respondents highlighted that **Communication** with employers and managers had worsened since the beginning of the pandemic. Respondents reported both negative and positive experiences around moving from face-to-face interaction to communicating by phone or online.

**Connections** were highlighted by respondents as something that constantly changed during the pandemic, with relationships with colleagues and managers worsening as the pandemic continued. Additionally, those who had been redeployed by managers also struggled at times to maintain their routines for work life balance because of new work schedules alongside other home commitments.

UK-wide, there was an overall decrease in the use of most of the positive coping strategies (such as active coping, planning) and an increase in the use of negative coping strategies (such as venting, self-blame) from Phase 1 to Phase 3 and between Phase 2 and Phase 3 of the study.

Burnout increased between Phases 2 and 3; UK-wide in Phase 3, a large proportion of respondents were experiencing moderate to severe levels of personal (78.1%) and work-related burnout (71.9%). Rates of burnout associated with clients remained relatively low with 78.4% reporting low levels of client-related burnout. In other words, patients/service users were rarely the reason for burnout in health and social care workers.

The 15 Good Practice Recommendations from Survey 1 and 2 were reviewed in the context of findings from Survey 3. These recommendations will continue to be reviewed against the findings of future surveys:

1. Health and Safety in the Workplace
2. Putting into practice the advantages of more flexibility in employment
3. Training for redeployment, skill mix and skill acquisition
4. Equity in home working when possible
5. Terms and conditions in relation to coverage of Statutory Sick Pay for staff
6. Flatter hierarchies
7. Staff wellbeing and retention
8. Annual leave and regular breaks
9. Connection
10. Communication
11. Management visibility
12. Supportive supervision
13. Organisational support
14. Team support
15. Resourcing and Infrastructure

## **Funding**

This study is funded by HSC R&D Division of the Public Health Agency, Northern Ireland (COVID Rapid Response Funding Scheme COM/5603/20), the Northern Ireland Social Care Council (NISCC) and the Southern Health and Social Care Trust, with support from England's National Institute for Health Research (NIHR) Policy Research Unit in Health and Social Care Workforce. Funding has been secured to continue the study into Phase 4 and Phase 5 with more surveys and focus groups between November 2021 and October 2022.



Examples of feedback from survey participants regarding communication, connections, work-life interface and changing conditions are provided below.

*"Being redeployed to ITU had a psychological impact that still affects me at times. As a result, I feel disconnected at times from family and still don't engage with friends that much, especially those who constantly ask "how was it?"*

**(Nurse, Hospital, England)**

*"Being at home in some ways helped the balance as without the commute I still had a little energy for my children after work. On other occasions it has been negative, as work has been non-stop for more than 12 hours in a day so there has been no time for family and it can be hard to switch off as clearly as you do when leaving an office."*

**(Social Worker, Scotland, Community)**

*"Increased demand for Mental Health support from women, increased demand for social support. Less support from AHPs due to redeployment/working from home."*

**(Midwife, Wales, Community)**

*"One of the most difficult things was that people were coming and going, things were changing, so you needed that stability, that ethos of let's look after ourselves and each other first and then what can we do for the people in our work."*

**(Social Care Manager, Northern Ireland).**

## **Authors**

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**Dr Paula McFadden, Ulster University**

**Dr Patricia Gillen, Ulster University**

**Dr Ruth Neill, Ulster University**

**Professor Jill Manthorpe, King's College London**

**Dr Denise Currie, Queen's University Belfast**

**Dr John Moriarty, Queen's University Belfast**

**Dr John Mallett, Ulster University**

**Dr Heike Schroder, Queen's University Belfast**

**Ms Patricia Nicholl, Ulster University**

**Dr Jermaine Ravalier, Bath Spa University**

**Ms Susan McGrory, Ulster University**

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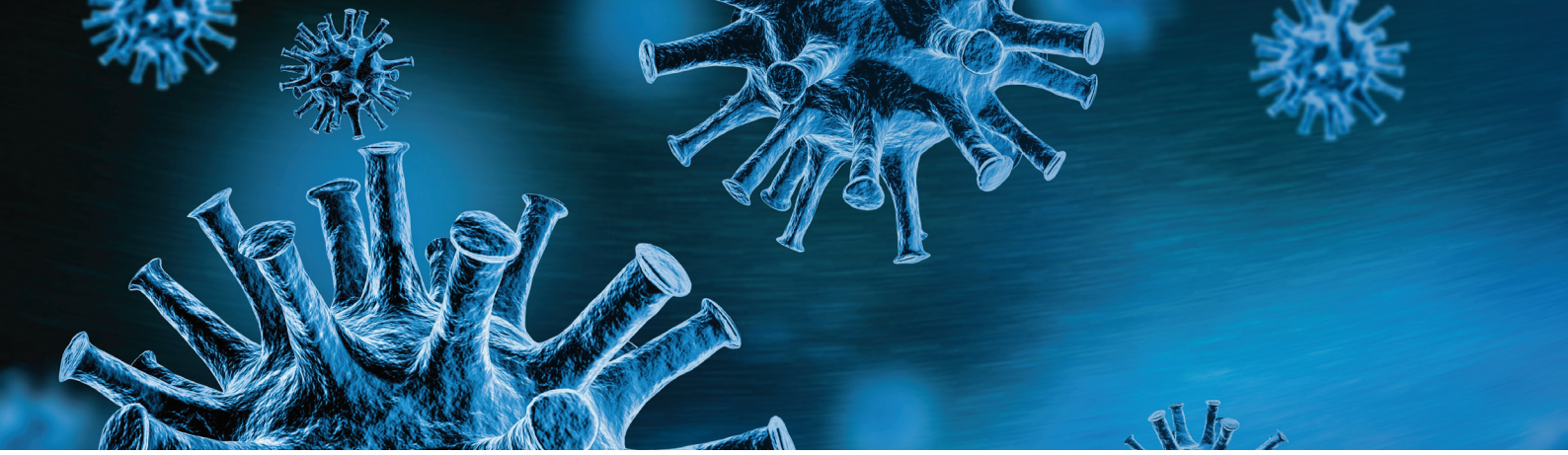
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**Public Health Agency**

12-22 Linenhall Street, Belfast BT2 8BS.  
Tel: 0300 555 0114 (local rate).  
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