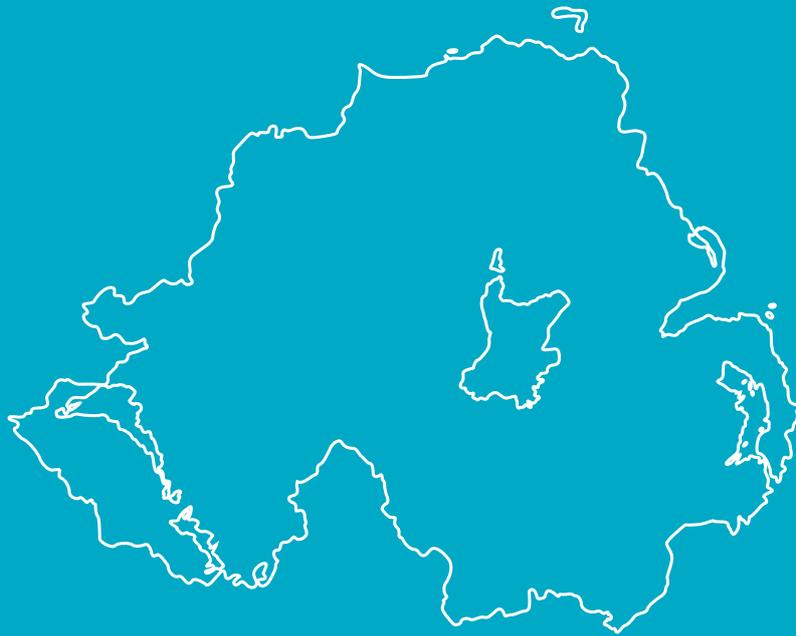


Coronavirus (COVID-19)

Weekly Epidemiological Bulletin



Northern Ireland

Summary - Up to week 28 (18 July 2021)

To week 28, there have been a total of 139,429 laboratory confirmed cases¹ of COVID-19, including 2,982 registered COVID-19 deaths² in Northern Ireland (NI).

COVID-19 case epidemiology



- 139,429 laboratory confirmed cases (14.7% from HSC laboratories)
- 52.9% of total cases are female
- In week 28, those aged 15-44 had the highest case rate (705.6 per 100,000 population; 25.3% positivity)
- In week 28, Belfast had the highest case rate (621.8 per 100,000 population; 23.9% positivity)

Confirmed COVID-19 care home outbreaks



- 600 confirmed COVID-19 outbreaks reported in total; includes 12 reported in week 28
- Involving 339 care homes (70.2% of all NI care homes)
- The highest proportion of outbreaks (74.4%) were reported from the Southern Trust area

Sentinel testing



- Testing started 27 April 2020
- Number of individuals tested in total: 1,215 (3.3% positivity)

¹ Virological reports and the National Testing Programme.

² NISRA; 2020-21 - up to 02 July 2021. [Data for the current week unavailable.](#)

Critical care surveillance



- 596 confirmed COVID-19 individuals
- The majority of reported critical care cases were male (69.1%)
- Median age of cases was 61 years (range <1 – 90 years)

Schools Surveillance



- 2,541 COVID-19 incidents reported in 971 schools (65.6% of all NI schools)
- 52.6% of incidents have been single cases, 34.9% were clusters of 2-5 cases; 12.5% were clusters of 6 or more cases
- Since schools opened, the highest proportion of incidents have been reported in Belfast (79%)

Mortality surveillance



- Excess deaths were reported in 2020 in weeks 13-20, 22 and 45 and in 2021 in week 2; mainly in those over 65 years old

Testing surveillance virology



- Number of individuals tested in total: 1,545,406 (9.0% positivity)
- Number of individuals tested in:
 - HSC laboratories: 470,130 (30.4% of total tests)
 - National Testing Programme: 1,075,276 (69.6% of total tests)

Introduction

COVID-19 is an illness that can affect your lungs and airways. It's caused by a virus called SARS-CoV2 (a member of the coronavirus family).

The Public Health Agency (PHA) Health Protection team has developed this report with the primary focus of looking at the demographic characteristics (age, sex and geographical location) of people affected by the virus. It also looks at some of the wider impacts of the virus on the healthcare system, comparing recent trends in activity with historic norms. There is a large amount of data being regularly published regarding COVID-19 (for example, [the Department of Health COVID-19 Daily Dashboard Updates](#) and the [NISRA Deaths Registered Dashboard](#)). This report presents data from existing and newly developed PHA Health Protection surveillance systems that monitor COVID-19 activity in NI and complements the range of existing data currently available.

As this is an emerging pandemic the systems used will constantly evolve and the complexity of the analysis will increase. Any updates will be documented in a “what’s new” section.

Unless otherwise stated, data are presented using epidemiological weeks (a standardised method of counting weeks [Monday-Sunday] to allow for the comparison of data year after year). This is dependent on the data available and annual comparisons are not yet possible as the virus only emerged in 2020.

The data included in this report are the most up to date data available at the time of the report; however this is subject to change as the data are subject to ongoing quality assurance.

Contact tracing

Contact tracing is the process of identifying, assessing, and managing people who have been exposed to a disease to prevent onward transmission ([WHO](#)). Contact tracing can help break the chains of transmission of COVID-19 and is an essential public health tool for controlling the virus.

Contact tracing seeks to limit and prevent the spread of infections such as COVID-19. It works by identifying a confirmed case and asking them who they have been in contact with. Individual contacts are considered high risk if they have spent more than 15 minutes in close contact with a confirmed case without personal protection. This means that those who have casually passed by someone on the street will not be considered high risk. The person with a confirmed infection and their close contacts will be given advice regarding symptom management and the need to self-isolate to prevent wider spread of the virus. This advice is based on information available on the PHA [website](#) and includes social distancing, handwashing and cleaning in the home to help protect people who are at risk. We can also advise people on how to best look after those in their care.

The most up-to-date contact tracing management service update (issued 15 July 2021) can be found [here](#)*

The StopCOVID NI contact tracing app is now [available](#) from the Google or Apple App store.

*These are experimental performance and activity data and provide a snapshot of contact tracer activity. Data reported relates to a live operational system which includes case and contact activity in progress or in a queue. It is based on manually recorded information and data extracted from current contact tracing systems and reporting methods and parameters may change over time.

Automatic reporting in future may create a discontinuity in figures. New IT systems and data outputs often take some time to bed in. Data should therefore be treated with caution while the system and understanding of the data develops. At this stage, there is a risk of data entry errors or delay, which may require that data are revised and updated in future. The process of finding and removing duplicate records may also need refining, which could result in revisions to the data.

Clusters

Definition:

A cluster is currently defined as two or more laboratory confirmed cases of COVID-19 among individuals associated with a key setting, who have illness onset dates within a 14 day period. Key settings in which clusters have occurred include: workplaces, retail, hospitality and leisure premises as well as educational settings³.

Comment:

Number of all clusters (open and closed) that have been recorded by the contact tracing service up to 12pm Sunday 18 July 2021.

There have been 124 new clusters since Monday 12 July 2021^{4,5}. In total, up to 18 July 2021, a total of 576 clusters with greater than five people have been identified in the following council areas; Antrim and Newtownabbey (n=50), Ards and North Down (n=26), Armagh, Banbridge and Craigavon (n=74), Belfast (n=124), Causeway Coast and Glens (n=26), Derry and Strabane (n=59), Fermanagh and Omagh (n=30), Lisburn and Castlereagh (n=33), Mid and East Antrim (n=41), Mid Ulster (n=67) and Newry, Mourne and Down (n=46). In addition, there have been 2,235 clusters across Northern Ireland with fewer than five people.

Source: Contact Tracing Service / PHA Health Protection Service

³ COVID-19 transmission is most common in household settings. The number of affected households is not reported.

⁴ Some clusters may overlap (larger clusters may contain or overlap with several smaller clusters).

⁵ From week to week the number of clusters may change due to ongoing updates to the source information following detailed risk assessments. For this reason, we would discourage making direct comparisons between the cumulative number of clusters reported each week, with the number reported in the current week the most accurate at the time of the report.

Case epidemiology

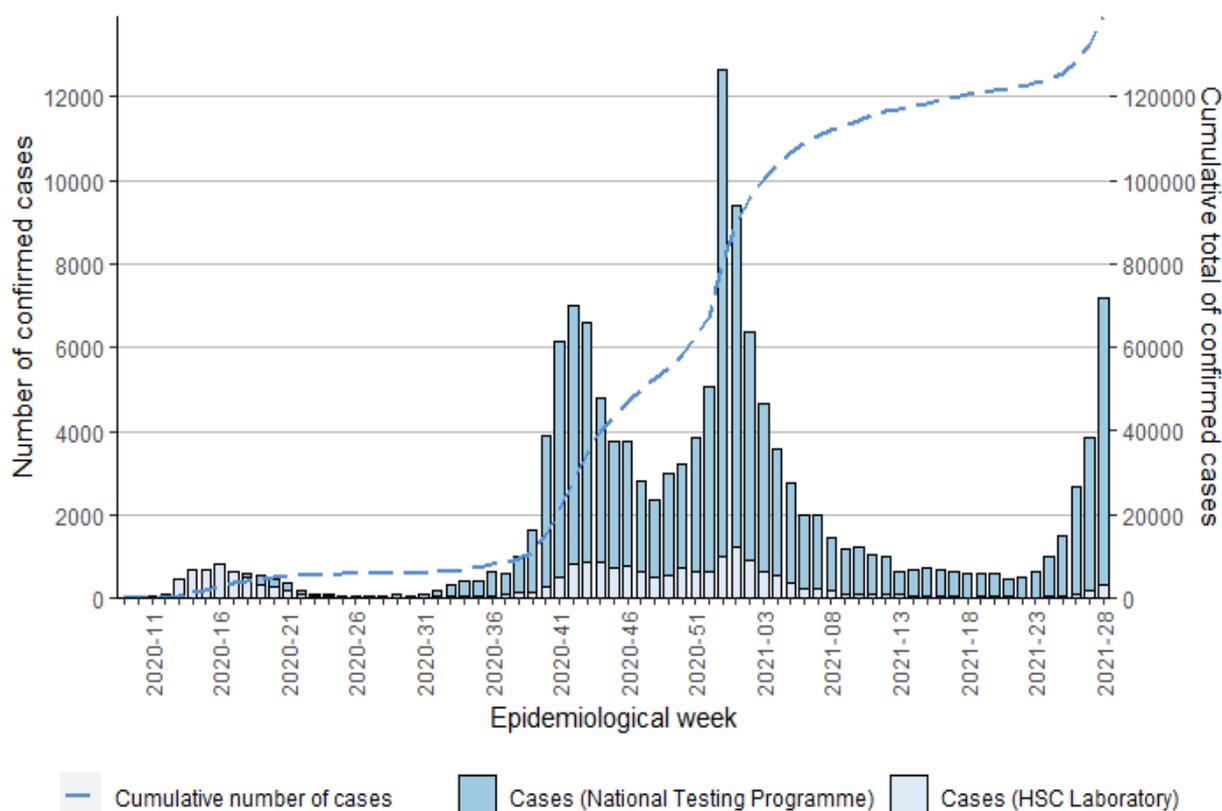


Figure 1. Laboratory confirmed COVID-19 cases by epidemiological week and source (HSC Laboratory testing and the National Testing Programme), 2020-21

Figure 1 represents the number of new weekly cases reported to the PHA (bars) and the cumulative number of cases (dashed line). Reporting is likely to be incomplete for the most recent week due to natural delays in samples reaching the labs, being tested and the information being reported. From week 40 there was an initial increase in cases, peaking at week 42 and followed by a decrease to week 45. The number of weekly cases peaked in week 53.

There has been a general downward trend in the number of weekly cases from week 53 to week 21, however there has now been an increase in the number of weekly cases since week 21.

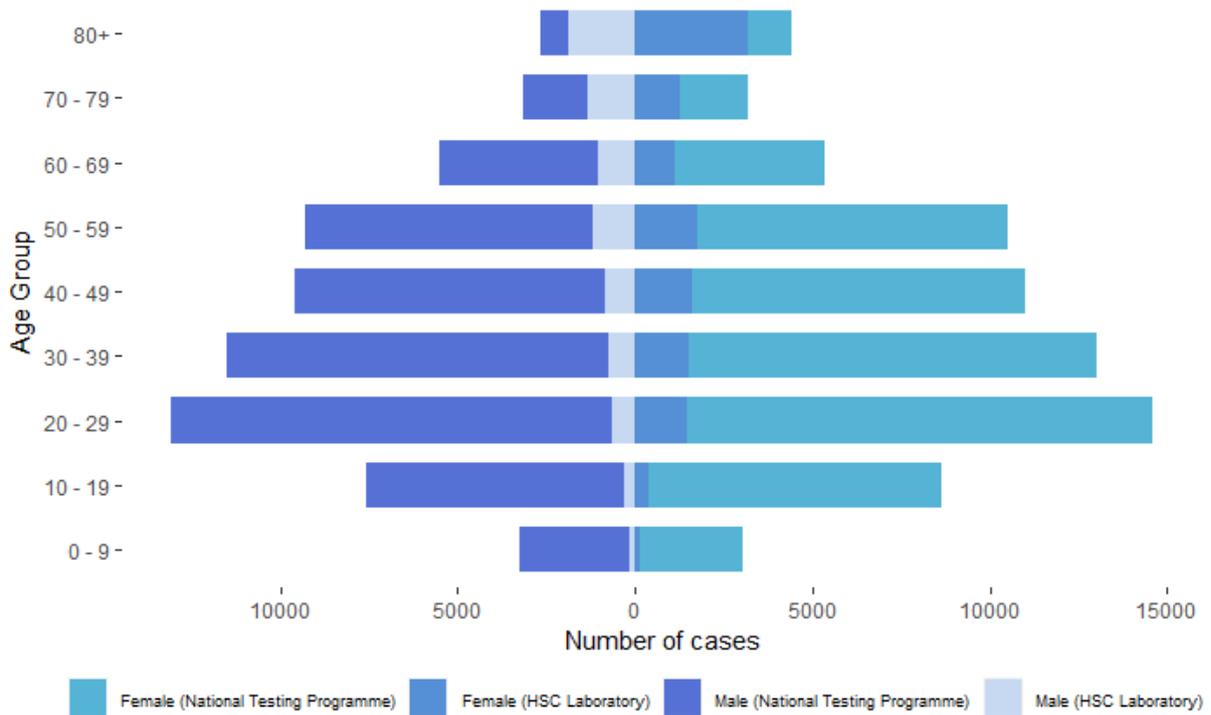


Figure 2. Laboratory confirmed cases, by age, sex and source (HSC Laboratory testing and the National Testing Programme), 2020-21

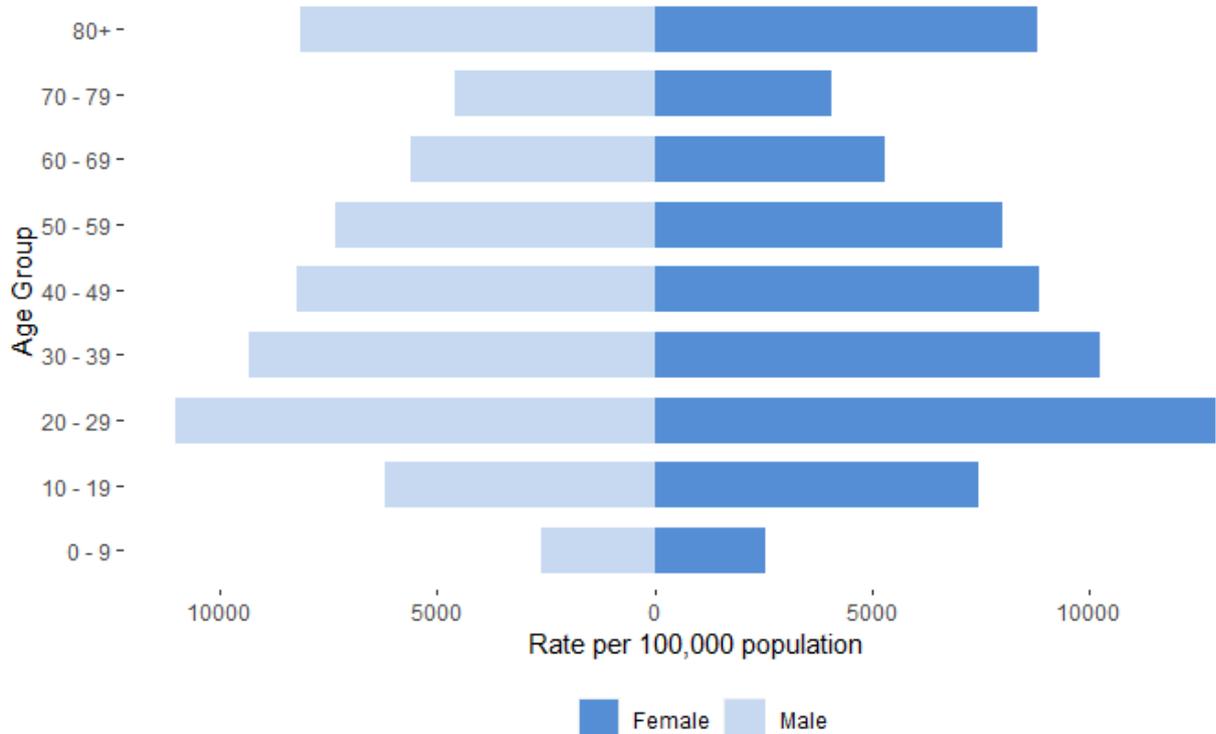


Figure 3. Laboratory confirmed cases per 100,000 population, by age and sex, for all testing data combined, 2020-21

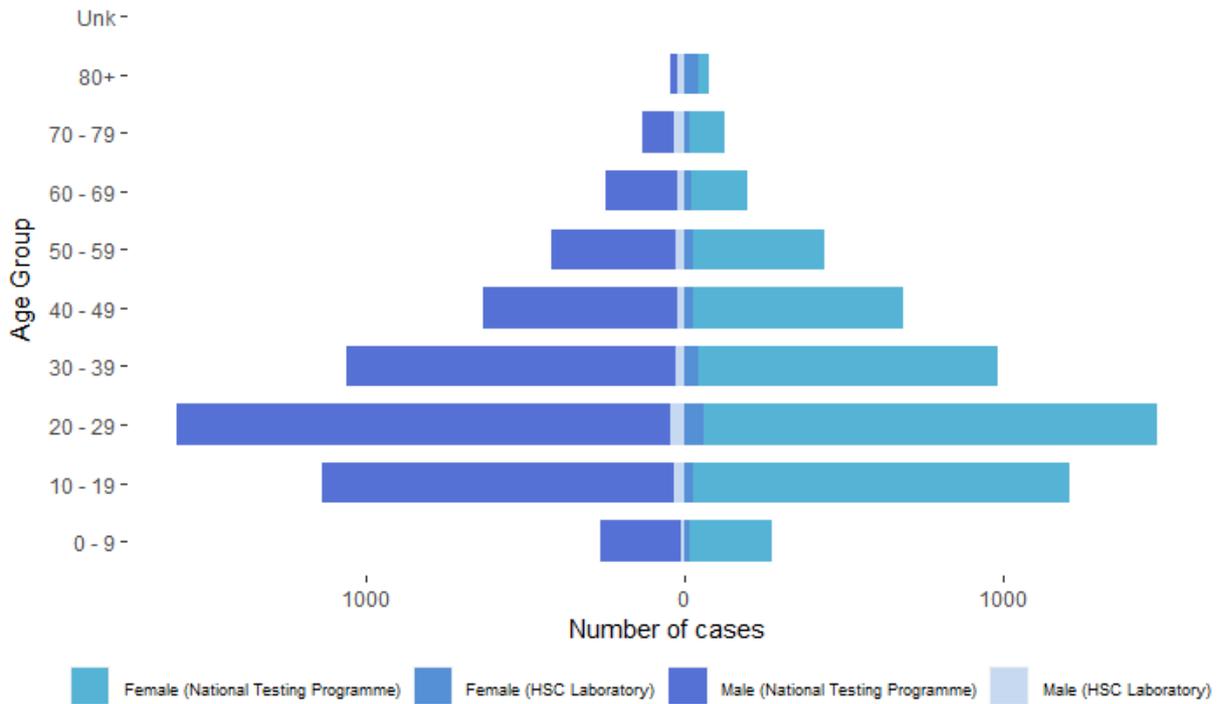


Figure 4. Laboratory confirmed cases, by age, sex and source (HSC Laboratory testing and the National Testing Programme), for weeks 27 and 28

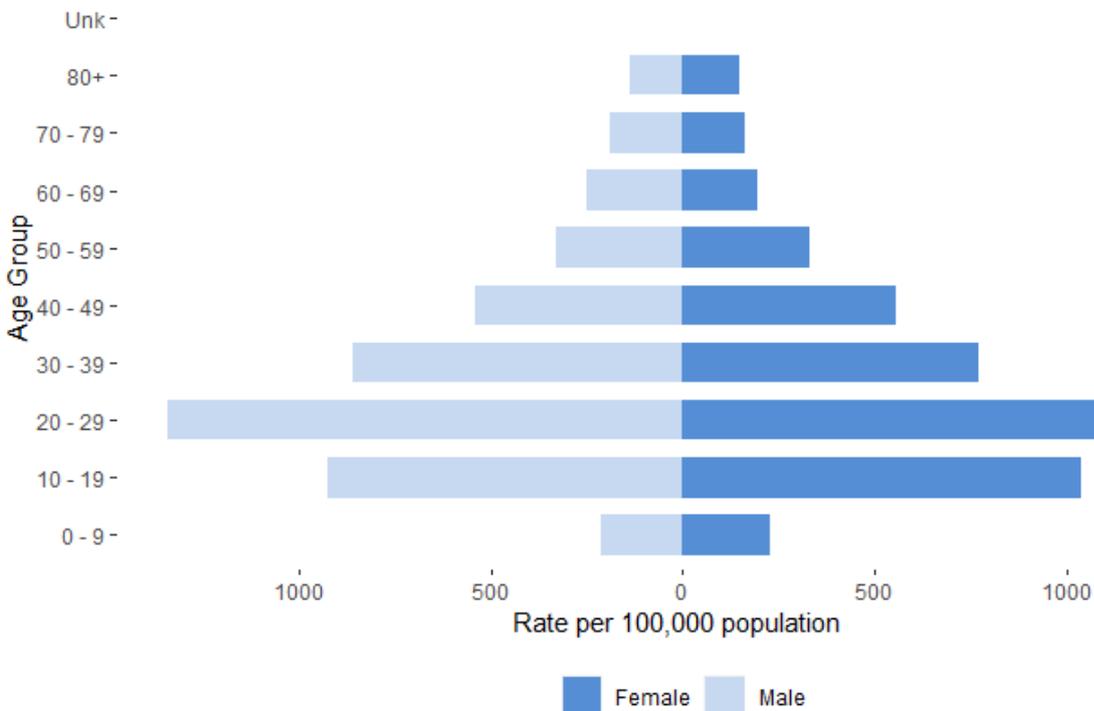


Figure 5. Laboratory confirmed cases per 100,000 population, by age and sex, for all testing data combined, for weeks 27 and 28

Figures 2 and 3 represents the cumulative number of cases reported by HSC laboratories and the National Testing Programme, and overall case rates per 100,000 population, respectively. HSC laboratory cases were mainly detected at the beginning of the pandemic in hospital settings, resulting in higher cases and rates among the older age groups. With the introduction of the National Testing Programme it has become the main source of case data as a result of enhanced community testing, which has enabled detection of a greater spectrum of disease. From this data we have seen a higher number of cases among the 20-29 age group.

Figures 4 and 5 show similar findings to the cumulative numbers but restricted to the previous two epidemiological weeks. These show how the age groups of cases in the most recent weeks differ from the overall cumulative cases presented in figures 2 and 3; in particular the lower case rates in older age groups in recent weeks. Also, more cases are being detected outside of hospital settings as part of the National Testing Programme.

| Table 1. Total laboratory confirmed COVID-19 cases, by sex, for all testing data combined | | | |
|---|---------------|---------------|----------------|
| Age Group | Sex | | |
| | Male | Female | Total* |
| 0 - 9 | 3,267 | 3,059 | 6,326 |
| 10 - 19 | 7,574 | 8,656 | 16,230 |
| 20 - 29 | 13,068 | 14,596 | 27,664 |
| 30 - 39 | 11,498 | 13,038 | 24,536 |
| 40 - 49 | 9,588 | 10,983 | 20,571 |
| 50 - 59 | 9,278 | 10,538 | 19,816 |
| 60 - 69 | 5,491 | 5,353 | 10,844 |
| 70 - 79 | 3,150 | 3,181 | 6,331 |
| 80+ | 2,644 | 4,405 | 7,049 |
| Unknown | 0 | 3 | 3 |
| Total | 65,558 | 73,812 | 139,370 |

*Unknown sex for 59; these are not included in the total figures

| Table 2. Laboratory confirmed COVID-19 cases, by Trust | | | | |
|--|----------------------|--------------|--------------|----------------|
| Trust Area | Epidemiological Week | | | |
| | 26 | 27 | 28 | Total |
| Belfast | 25 | 81 | 159 | 6,000 |
| Northern | 11 | 14 | 35 | 4,269 |
| South Eastern | 14 | 28 | 42 | 2,561 |
| Southern | 14 | 21 | 52 | 3,287 |
| Western | 16 | 36 | 39 | 1,778 |
| Other* | 2,570 | 3,656 | 6,846 | 121,445 |
| Unknown | 1 | 2 | 0 | 89 |
| Northern Ireland | 2,651 | 3,838 | 7,173 | 139,429 |

*Other cases includes those from the National Testing Programme, NIAS, private nursing home residents, pathology services, GPs and hospices

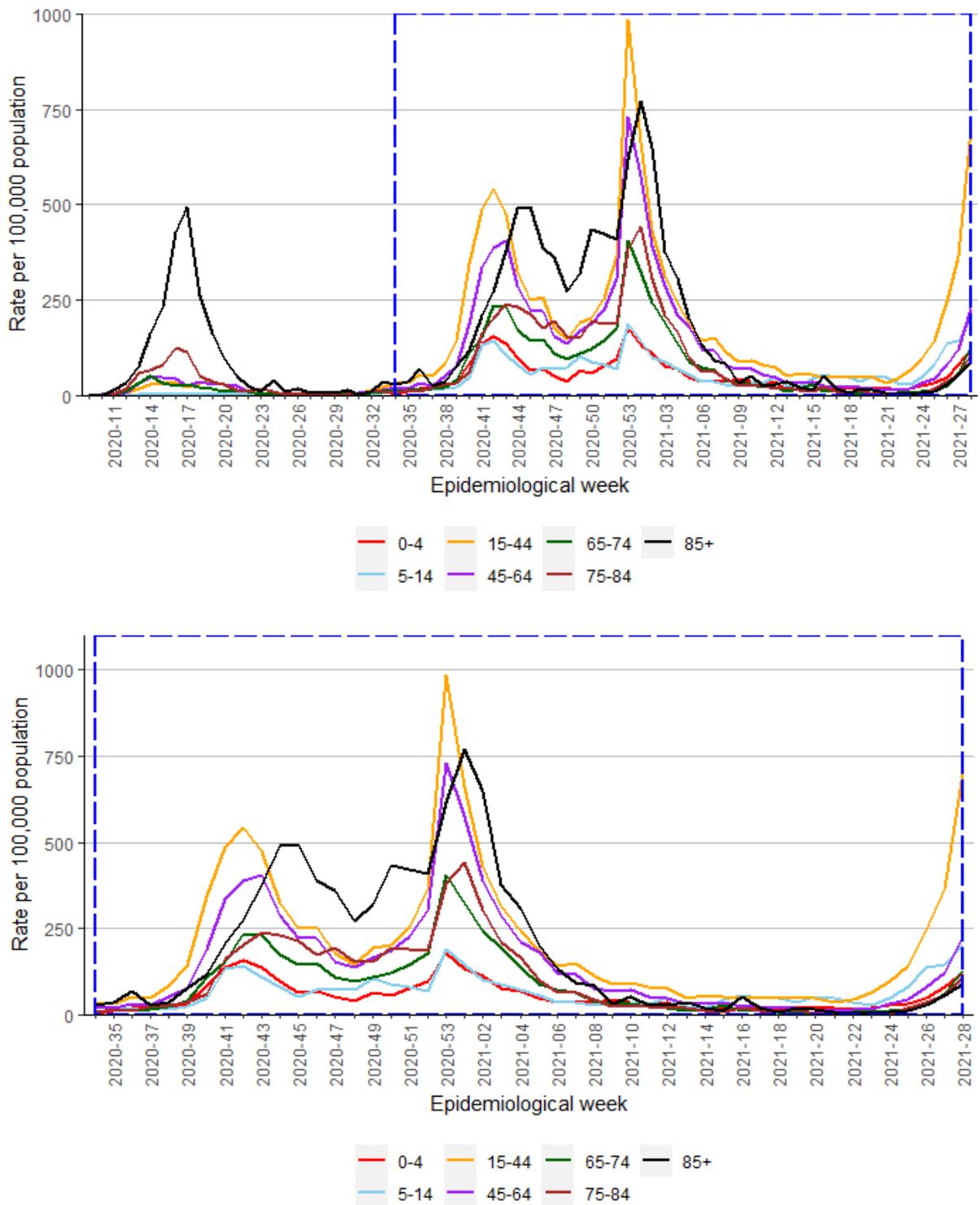


Figure 6. Weekly laboratory confirmed case rates per 100,000 population, by age group, for all testing data combined, 2020-21

The case rates increased in week 28 compared to the previous week in all age groups. The highest case rates were seen in the 15-44 age group (705.6 per 100,000). This is lower than the peak of 970.1 per 100,000 in the 15-44 age group in week 53 (27 December 2020-03 January 2021). In week 28, positivity was highest in the 5-14 age group (25.4%). The lowest positivity was observed in the 85+ age group (2.6%).

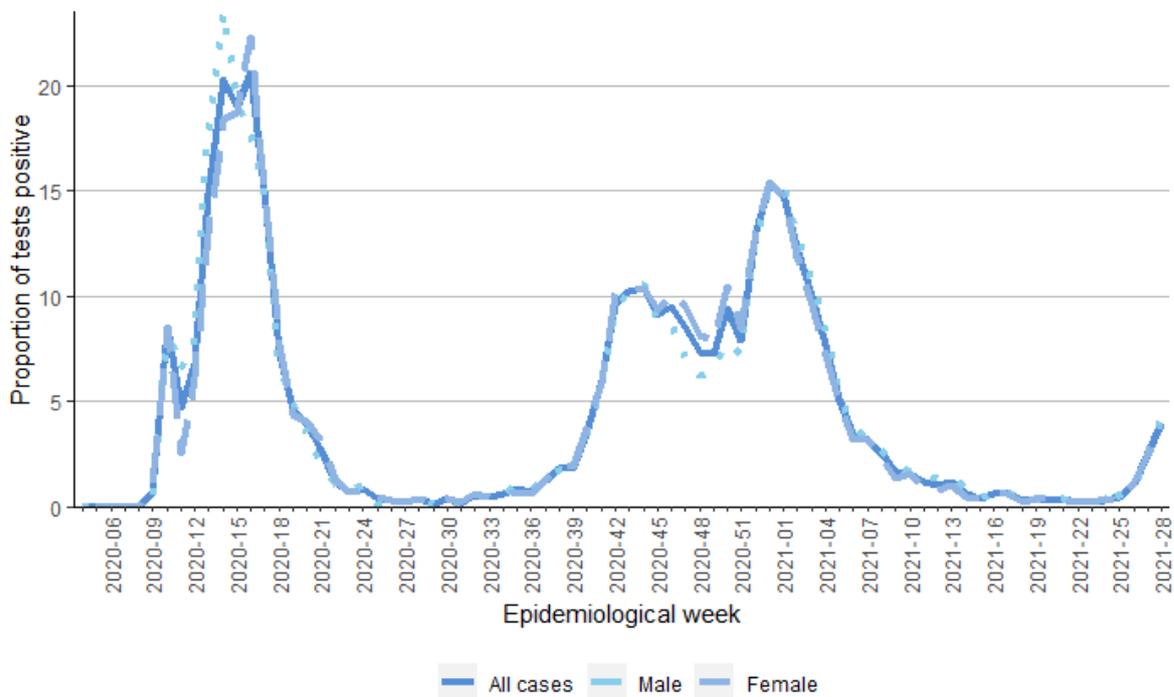


Figure 7. Positivity (%) of laboratory confirmed COVID-19 cases by epidemiological week, overall and by sex (HSC Laboratory testing), 2020-21

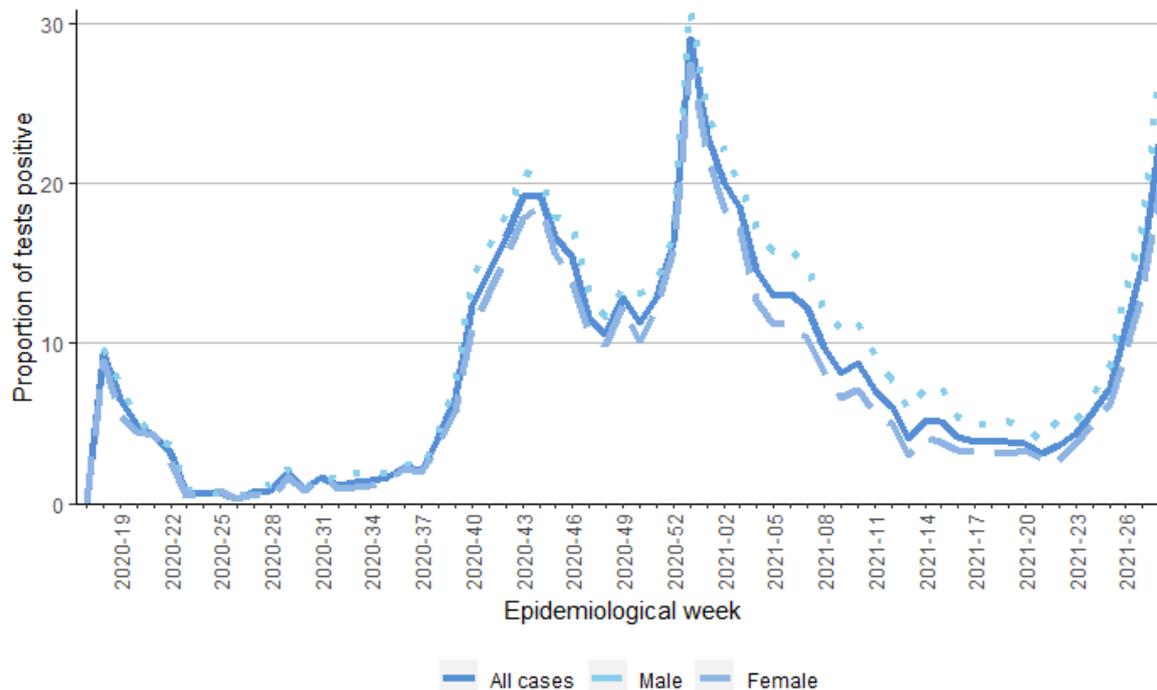


Figure 8. Positivity (%) of laboratory confirmed COVID-19 cases by epidemiological week, overall and by sex (National Testing programme), 2020-21

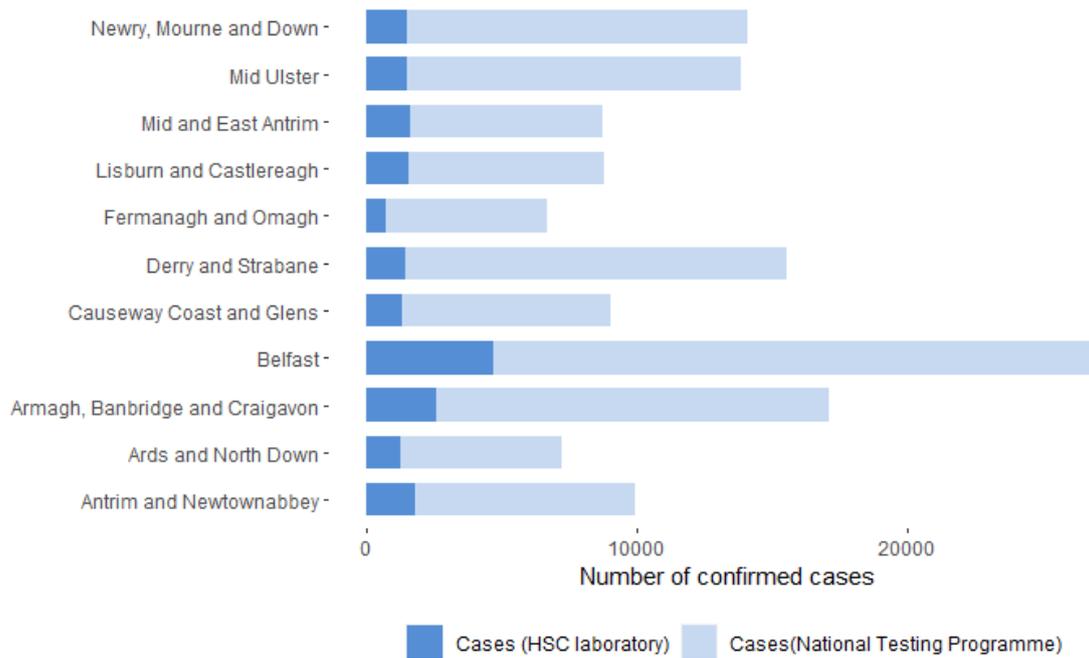


Figure 9. Total laboratory confirmed cases, by Local Government District (LGD) and source (HSC Laboratory testing and the National Testing Programme), 2020-21

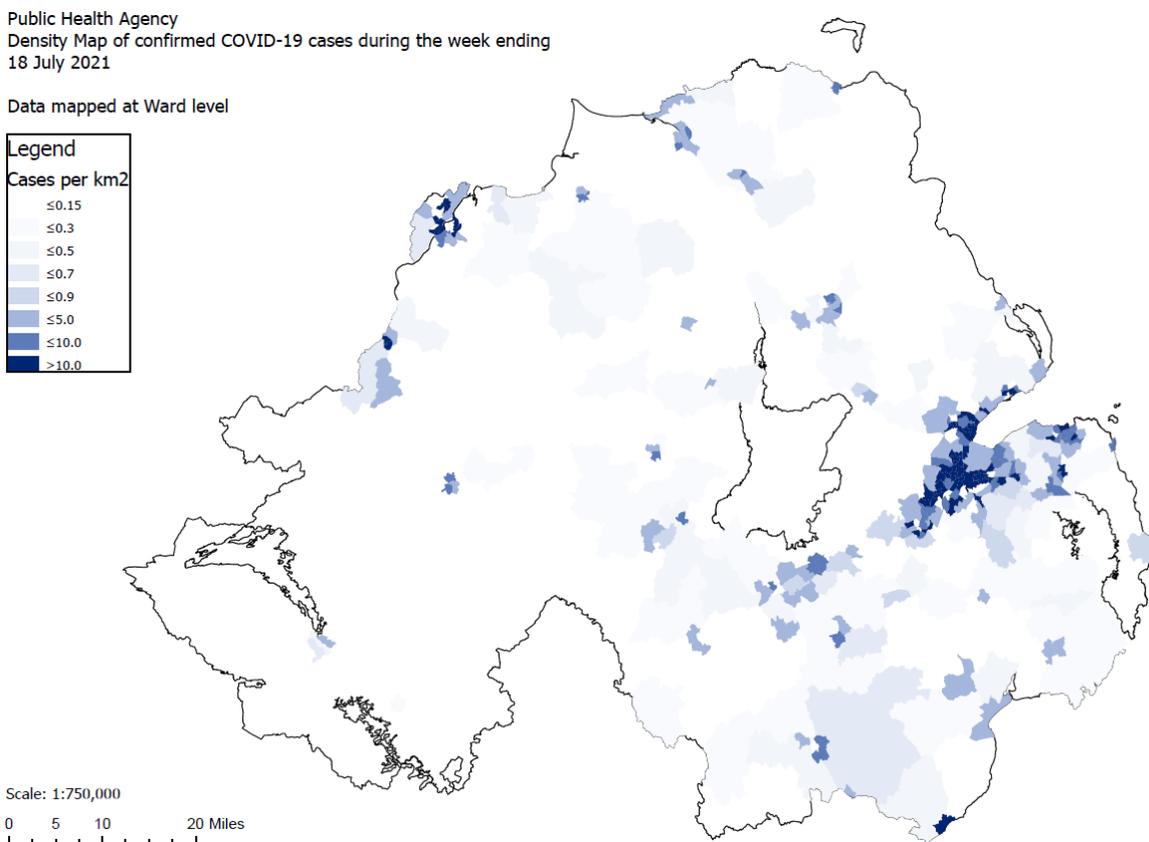


Figure 10. Density map of confirmed COVID-19 cases, for all testing combined, 2020-21

Figure 10 shows a density map based on the number of confirmed COVID-19 cases in week 28, in which data is aggregated at Ward level. The coloured shading on the map indicates density of cases, with the darkest shade of blue indicating where there is the greatest density of cases. However, information should be interpreted with caution as identified rates are based on testing which is not evenly spread across the region.

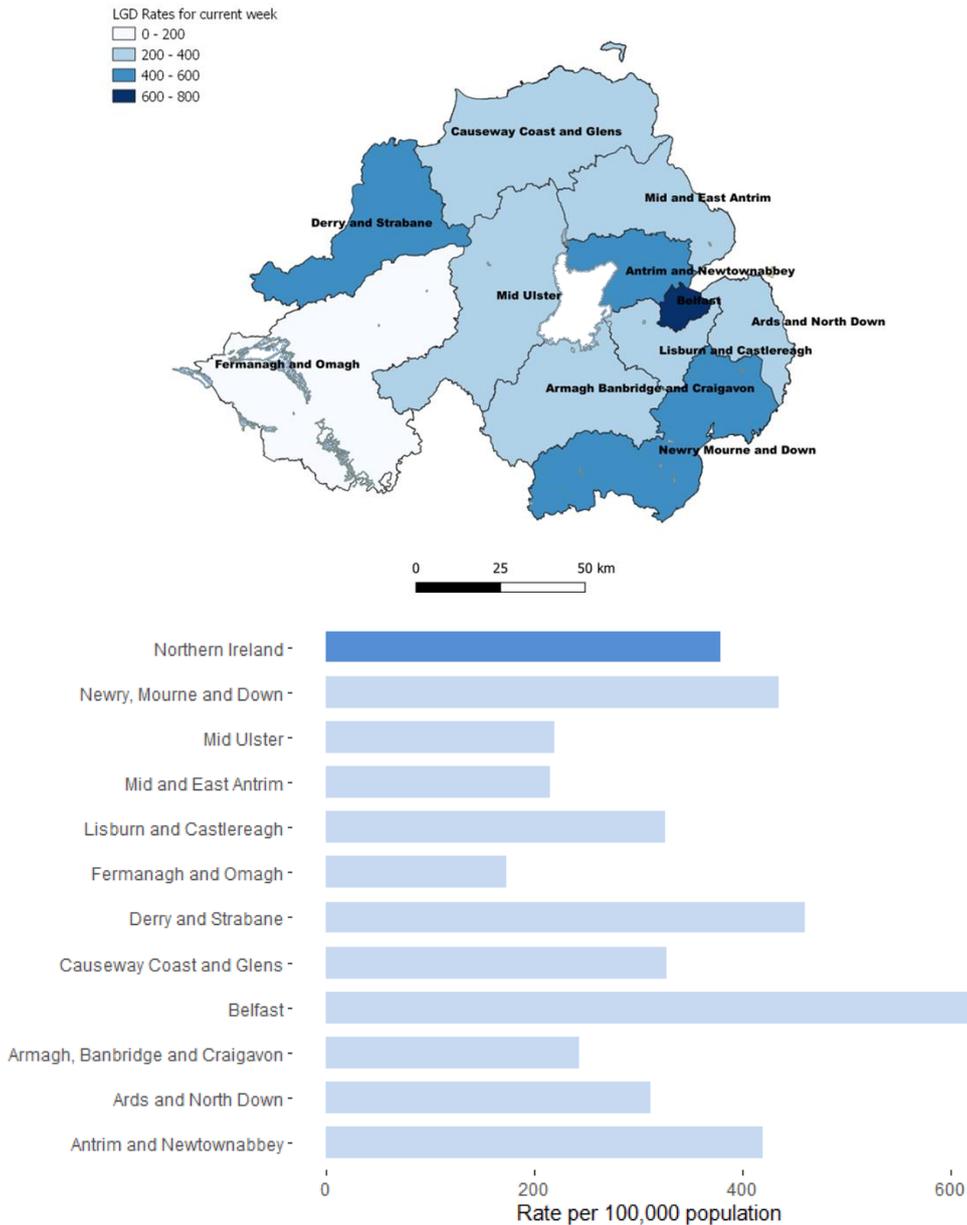
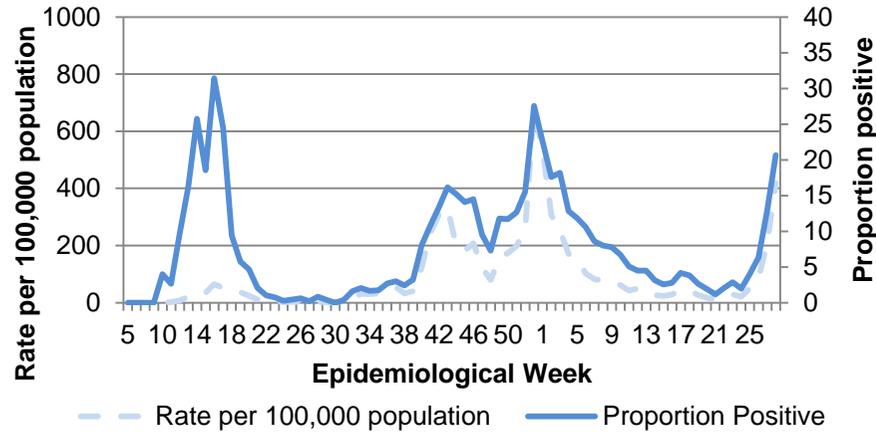
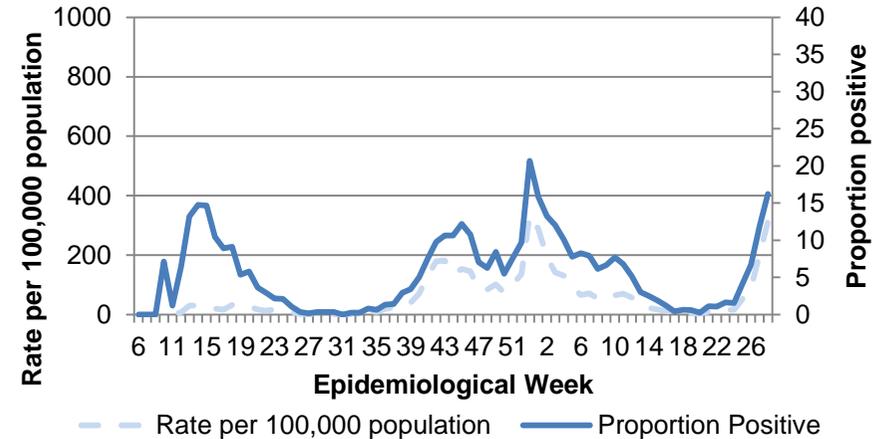


Figure 11. Total laboratory confirmed cases per 100,000 population, by Local Government District (LGD), for all testing data combined, week 28 (12 - 18 July 2021)

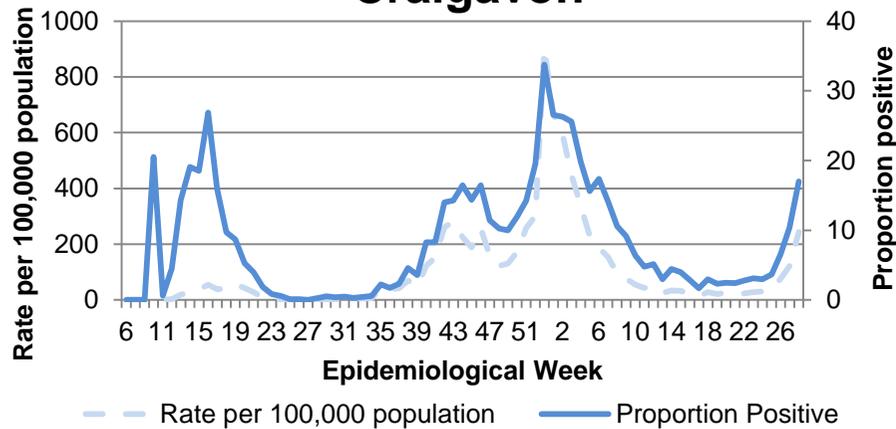
Antrim and Newtownabbey



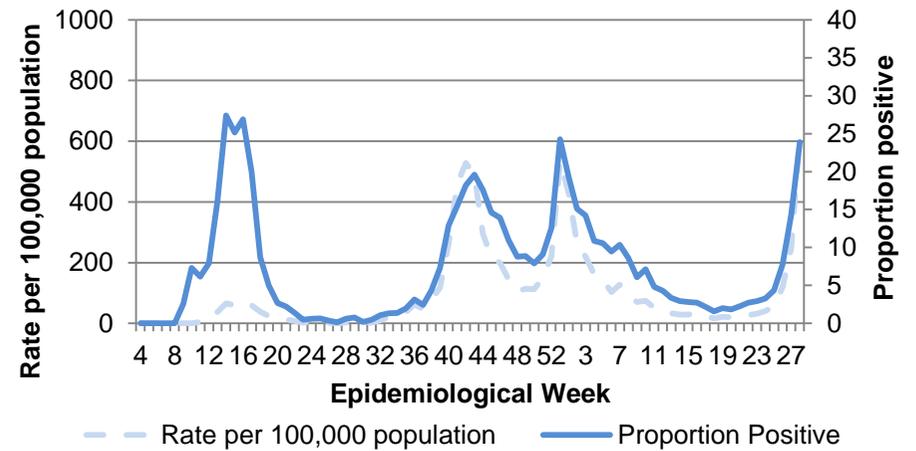
Ards and North Down



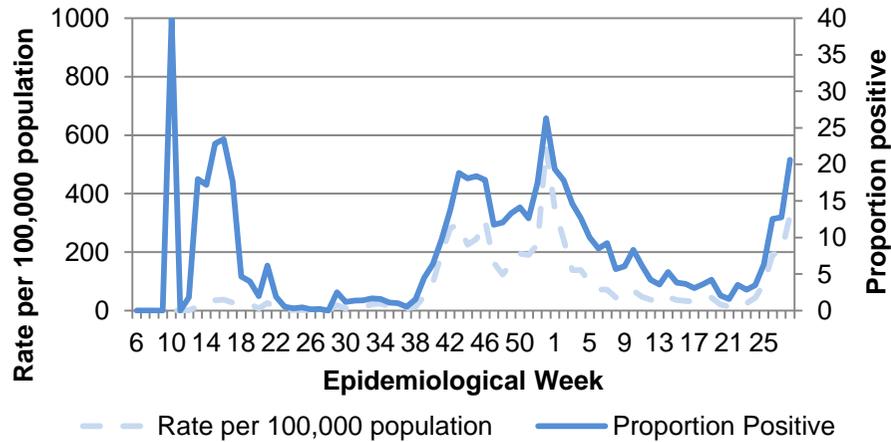
Armagh, Banbridge and Craigavon



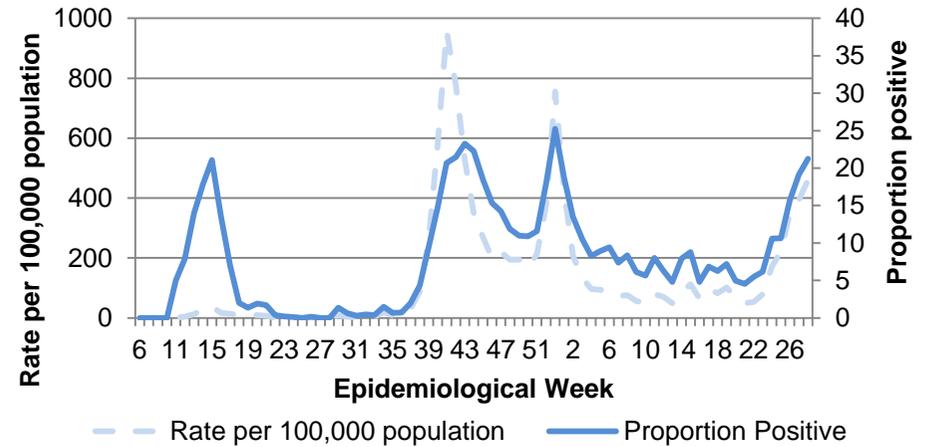
Belfast



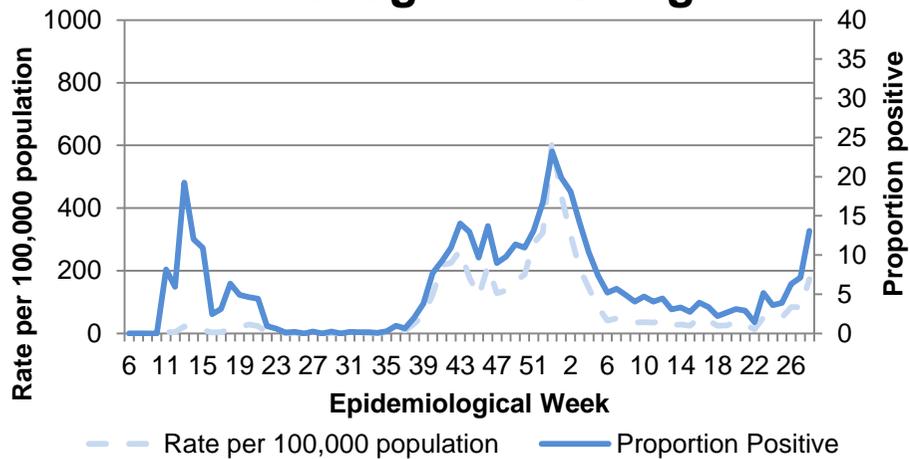
Causeway Coast and Glens



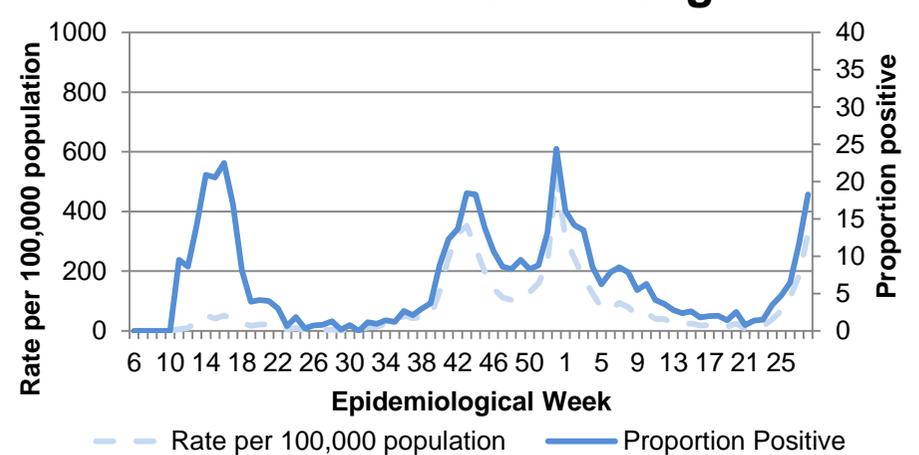
Derry and Strabane



Fermanagh and Omagh



Lisburn and Castlereagh



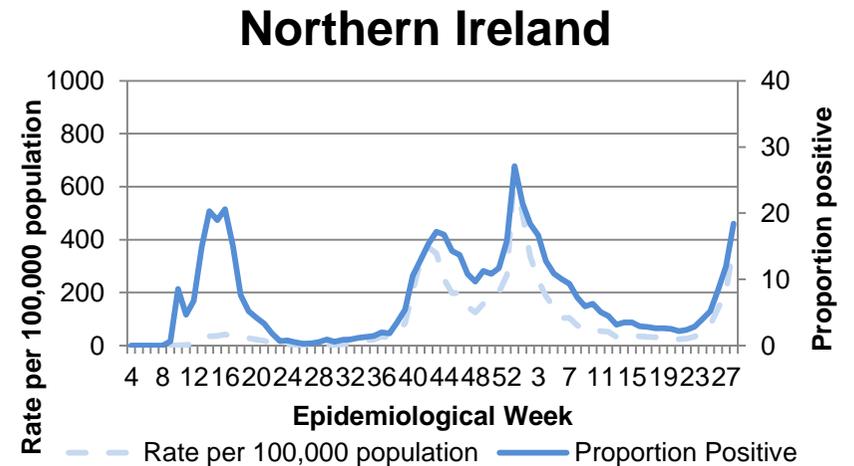
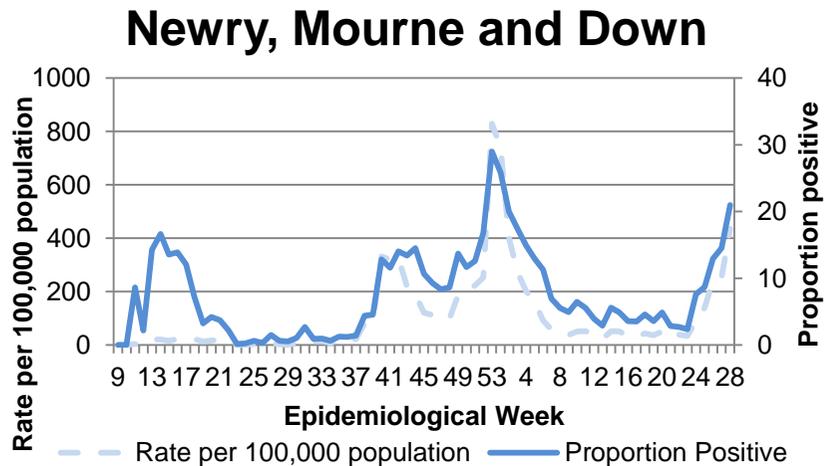
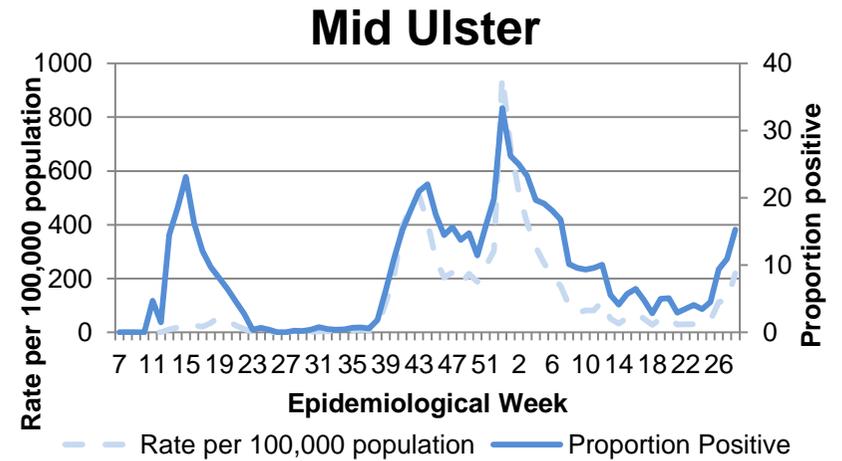
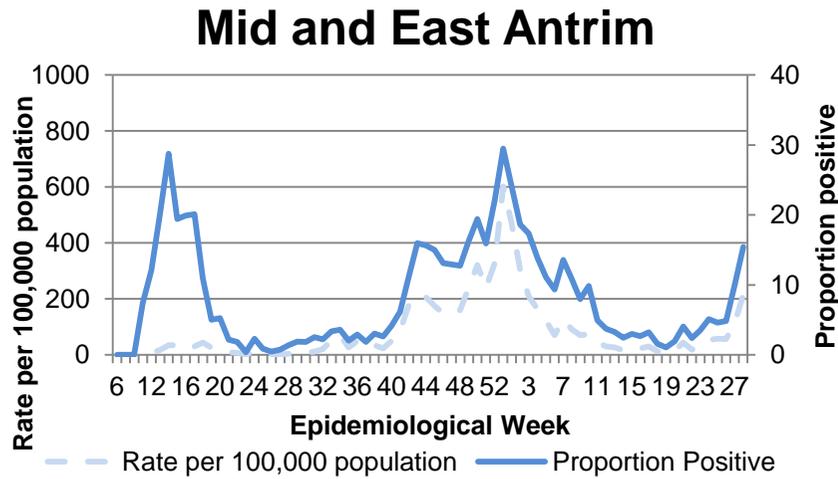


Figure 12. Weekly laboratory confirmed cases per 100,000 population and proportion positive, by Local Government District (LGD) and Northern Ireland, for all testing data combined, 2020-2021

The case rates increased in all areas in week 28 compared to week 27. Belfast had the highest rate in week 28 compared to other Local Government Districts (621.8 per 100,000 population). The overall NI rate increased from 202.5 to 378.4 per 100,000 population between weeks 27 and 28.

The highest positivity occurred in Belfast (23.9%). NI's proportion positive in week 28 was 18.4%, an increase from 11.9% in week 27. This is lower than the peak positivity of 26.4% reported across NI in week 53 (27 December 2020 – 03 January 2021).

Source: HSC Trust laboratory reports and the National Testing Programme

Deprivation

An analysis of COVID-19 related health inequalities relating positive test cases and COVID-19 related admissions between the most and least deprived areas of NI, including variations across age, sex and urban and rural areas was [published](#) by Department of Health on 16 December 2020.

Care home outbreaks

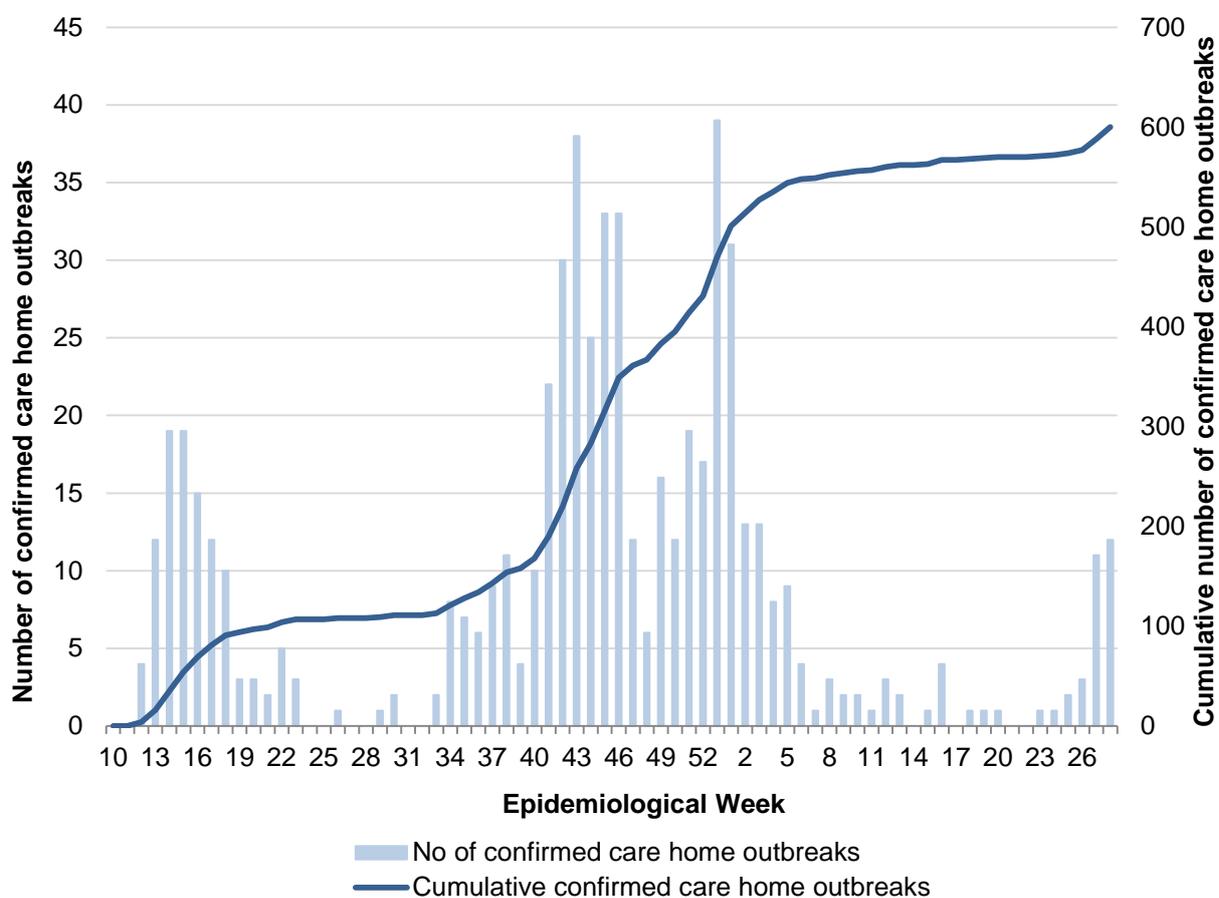


Figure 13. Confirmed COVID-19 care home outbreaks in Northern Ireland, 2020-21

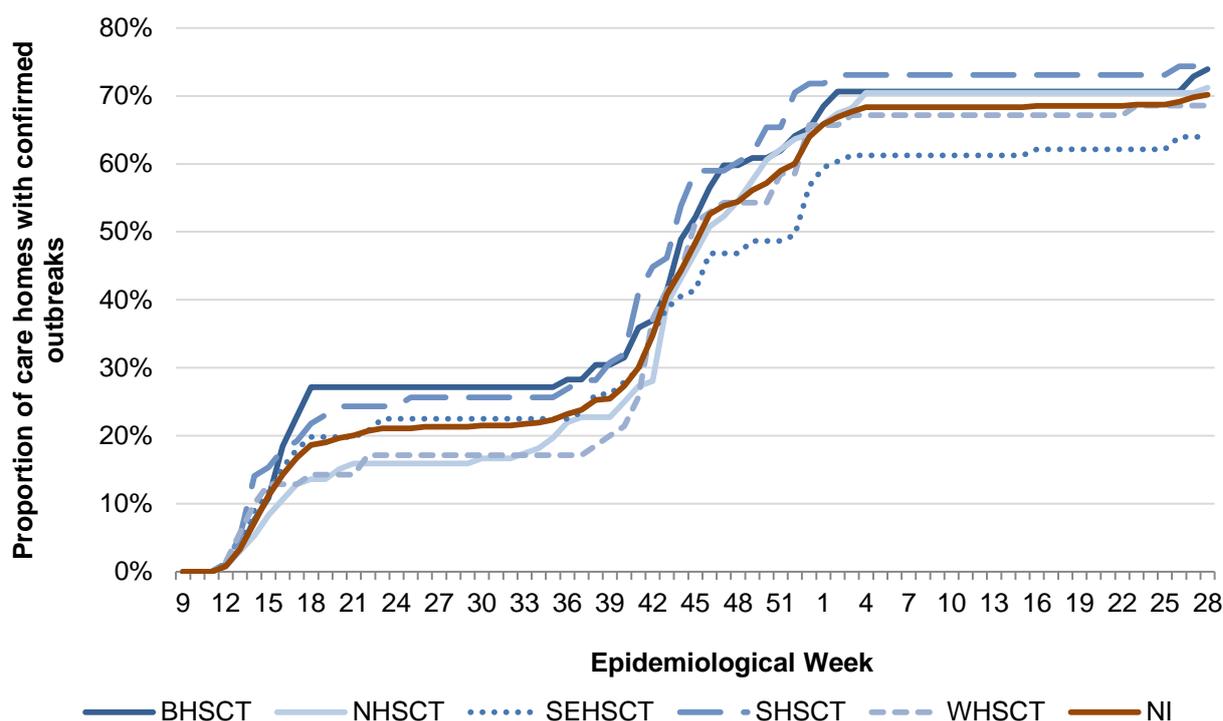


Figure 14. Proportion of care homes with confirmed COVID-19 in Northern Ireland by Trust area, 2020-21

| Table 3. Proportion of care homes with confirmed COVID-19 outbreaks in Northern Ireland, by Trust Area | | | |
|--|--|--------------------------------|----------------------------|
| Trust Area | Cumulative total of care homes with outbreaks in 2020-21 | % of care homes with outbreaks | Total number of care homes |
| Belfast | 68 | 73.9% | 92 |
| Northern | 94 | 71.2% | 132 |
| South Eastern | 71 | 64.0% | 111 |
| Southern | 58 | 74.4% | 78 |
| Western | 48 | 68.6% | 70 |
| Northern Ireland | 339 | 70.2% | 483 |

**Please note the total number of registered care homes are regularly updated and may differ when compared to previous weeks*

To week 28, a total of 600 confirmed COVID-19 care home outbreaks were reported, involving 339 care homes (70.2% of all NI care homes). The highest proportion of care homes with confirmed COVID-19 outbreaks (74.4%) were reported from the Southern Trust area.

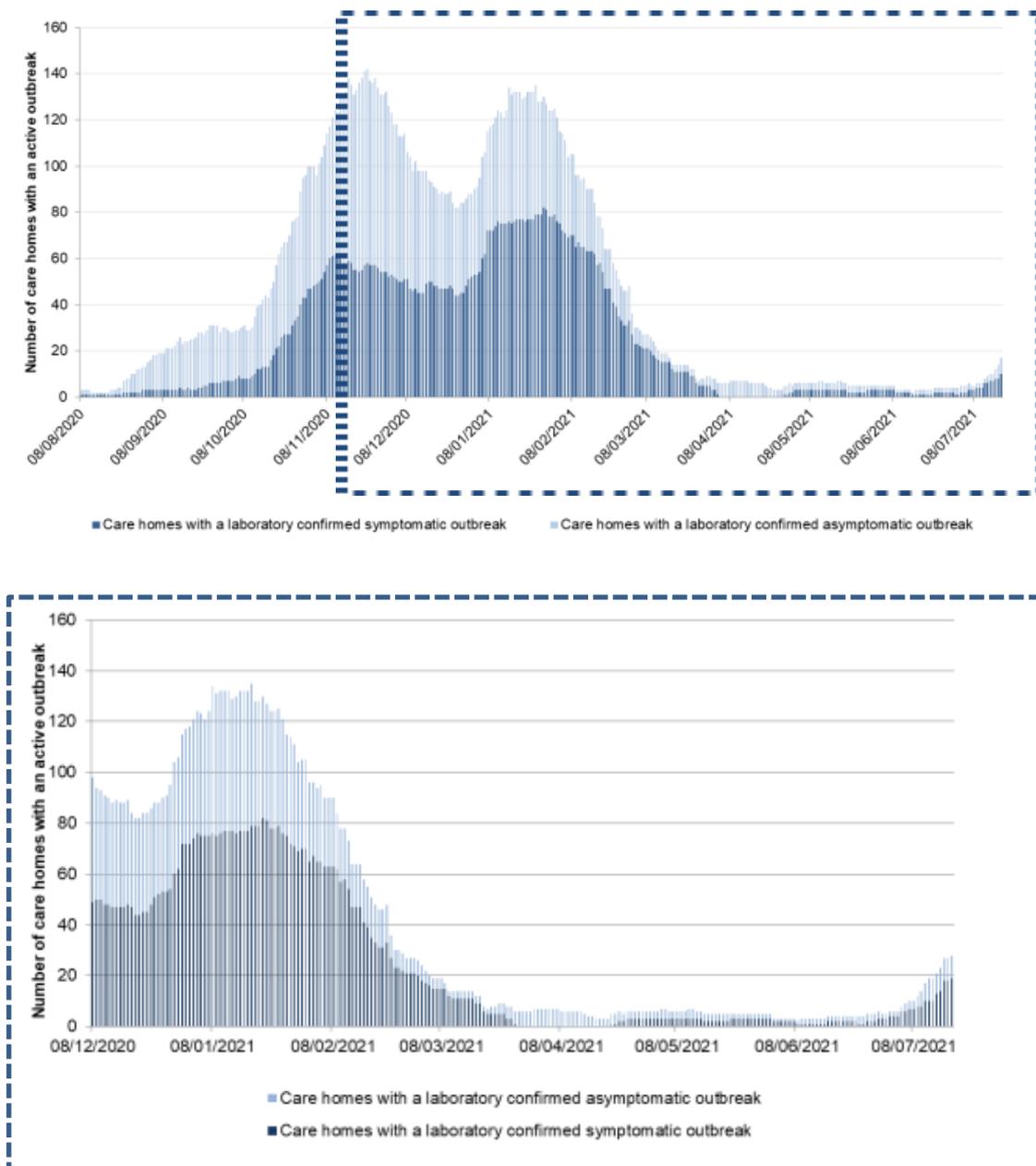


Figure 15. Number of care homes with a confirmed active symptomatic or asymptomatic COVID-19 outbreak⁶ in Northern Ireland, 2020-21

Source: PHA Health Protection duty room reports from care homes

⁶PHA began recording confirmed Covid-19 outbreaks as either symptomatic or asymptomatic on 1 August 2020. This means the numbers represented on the graph may not equal the total active confirmed COVID-19 outbreaks. Confirmed COVID-19 outbreaks reported prior to 1 August 2020 and are still ongoing are not included in this graph. Additionally, other respiratory outbreaks are not included.

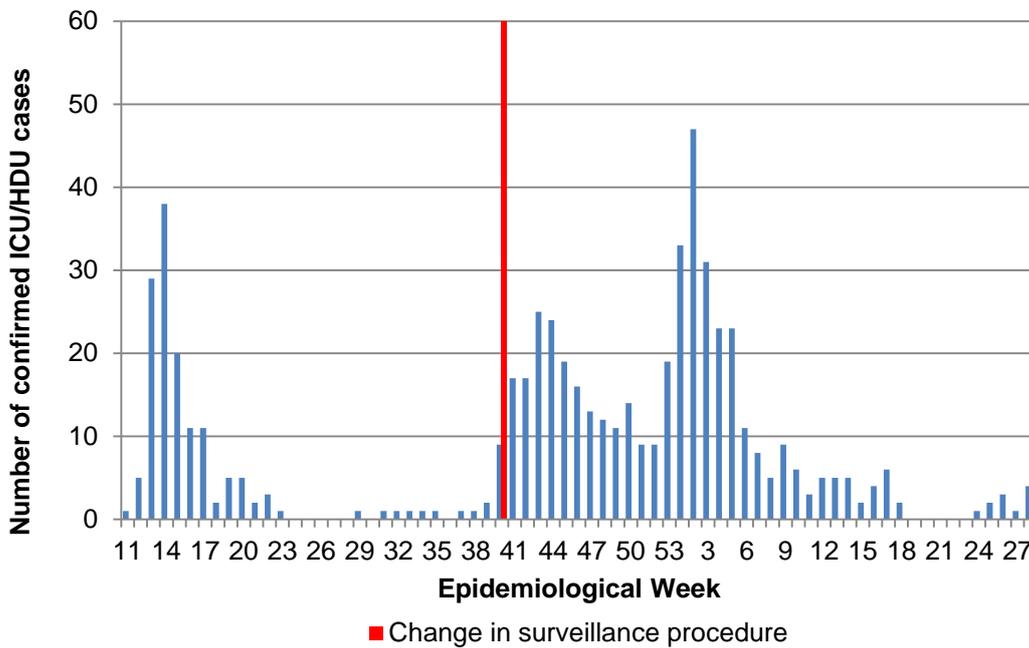
Sentinel testing

| Table 4. COVID-19 activity in Northern Ireland Sentinel GP Practices*, week 28, 2021 | | | |
|--|--------------------|-----------------|---------------------|
| Period | Individuals tested | Number positive | Proportion positive |
| Current week | 14 | 0 | 0% |
| Total | 1,215 | 40 | 3.3% |

*Sentinel testing started 27 April 2020; excludes care home residents and healthcare workers

Source: HSC Trust laboratory reports and the National Testing Programme

Critical care surveillance



*Since start of week 40 (28 September 2020), data collection for critical care surveillance has been streamlined to coincide with the well-established surveillance of influenza patients in critical care in conjunction with the Critical Care Network Northern Ireland (CaNNI). For weeks 11-40 in 2020, Epidemiological week refers to the week the positive specimen was obtained. Post week 40 it refers to the week in which the individual was admitted to ICU.

Figure 16. ICU/HDU COVID-19 cases by sample result week, 2020-21

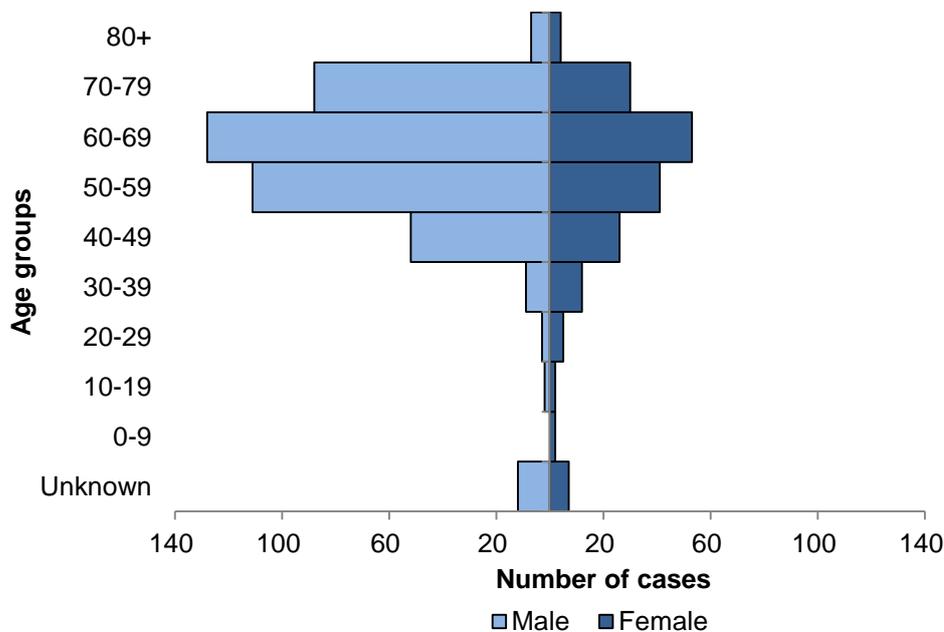


Figure 17. ICU/HDU COVID-19 cases, by age and sex, 2020-21

To week 28, there have been 596 individuals admitted to critical care with confirmed SARS-CoV2 reported to the PHA. Week 2 had the highest number of ICU reports with a positive result (n=47). Of the 596 individuals 69.1% (n=412) were male. The ages ranged from <1 year to 90 years, with a median age of 61 years.

Source: PHA COVID-19 critical care surveillance online reporting system and the Critical Care Network Northern Ireland (CaNNI)

The Intensive Care National Audit and Research Centre (ICNARC) publish a report on patients critically ill with COVID-19 (<https://www.icnarc.org/Our-Audit/Audits/Cmp/Reports>). There is also a specific report which can be downloaded presenting analysis of data on patients critically ill with confirmed COVID-19 reported to ICNARC up to 23:59 on 30 June 2021 from critical care units in NI participating in the Case Mix Programme (the national clinical audit for adult critical care).

School Surveillance

Information on school COVID-19 incidents is based on situations reported to PHA COVID-19 School Team.

These include:

- **Single confirmed case** of COVID-19 in a student or member of staff in the school setting.

The incident is closed after 14 days if there have been no further cases.

- **Cluster of two or more confirmed cases** of COVID-19 (in a student or member of staff in the school setting within a 14 day period).

The incident is closed after 14 days if there have been no further cases from the last case

The PHA COVID-19 School Team carries out contact tracing of cases that attend a school in collaboration with PHA Test and Trace Programme. Clusters are also further investigated by the School Team in liaison with local partners.

Data are collected on the number of COVID-19 school incidents reported to the PHA COVID-19 School Team since schools reopened on 24 August 2020.

The number of cases that have been reported by schools to the PHA School Team is also included in this section to provide high level information on cases broken down by pupil and staff status. It is important to note that the definitive source for the number of COVID-19 confirmed cases in school aged children is from the HSC Laboratory testing and the National Testing Programme. Direct comparisons should not be made with laboratory data as the School Team's figures may provide an underestimate of laboratory data.

Table 5 shows the number of school incidents by type of school that have been reported to the PHA School Team up to the end of week 28.

The figures are a snapshot of incidents recorded at the time of data extraction. A school may have had more than one incident since opening. Figures should not be compared from week to week as the number will include new reports and further cases of existing incidents.

| Table 5. Number of COVID-19 Incidents in Schools | | |
|---|----------------------|------------------------------------|
| School Type | Total to Date | Proportion of Total to Date |
| Preschool | 140 | 5.5% |
| Primary | 1,470 | 57.9% |
| Post Primary | 770 | 30.3% |
| Special | 161 | 6.3% |
| Total | 2,541 | |

Table 6 shows the number of school incidents by type of school and also type of incident i.e. single case in a 14 day period or cluster of cases within a 14 day period.

Clusters have been further broken down into those with 2 to 5 cases and 6 or more cases.

| Table 6. Number of Incidents by School and Incident Type | | | |
|---|---------------------|----------------------|-------------------|
| Incident Type | School Type | Total to Date | Proportion |
| Single Case | Preschool | 101 | 7.6% |
| | Primary | 850 | 63.6% |
| | Post Primary | 300 | 22.4% |
| | Special | 86 | 6.4% |
| | All | 1,337 | |
| Cluster(2-5 cases) | Preschool | 35 | 4.0% |
| | Primary | 501 | 56.5% |
| | Post Primary | 291 | 32.8% |
| | Special | 59 | 6.7% |
| | All | 886 | |
| Cluster(>5 cases) | Preschool | 4 | 1.3% |
| | Primary | 119 | 37.4% |
| | Post Primary | 179 | 56.3% |
| | Special | 16 | 5.0% |
| | All | 318 | |

Cumulative number of schools affected by at least one case of COVID-19

A school may have had more than one incident since opening on 24 August 2020. Table 7 shows the cumulative number of schools that have had at least one school incident up to the end of week 28.

The 2,541 school incidents have occurred in 971 schools in NI. Overall 65.6% of schools have had at least one COVID-19 case in a pupil or member of staff.

| School Type | No. Schools that have had at least one case | Total number of schools in Northern Ireland | Proportion of schools in Northern Ireland that have had at least one case |
|--------------|---|---|---|
| Preschool | 110 | 457 | 24.1% |
| Primary | 633 | 791 | 80.0% |
| Post Primary | 192 | 193 | 99.5% |
| Special | 36 | 39 | 92.3% |
| Total | 971 | 1,480 | 65.6% |

**Please note the total number of schools has been updated and may differ when compared to previous weeks*

Trend of school incidents

The following information includes the number of incidents in schools since they first reopened until the end of week 28 (18 July 2021).

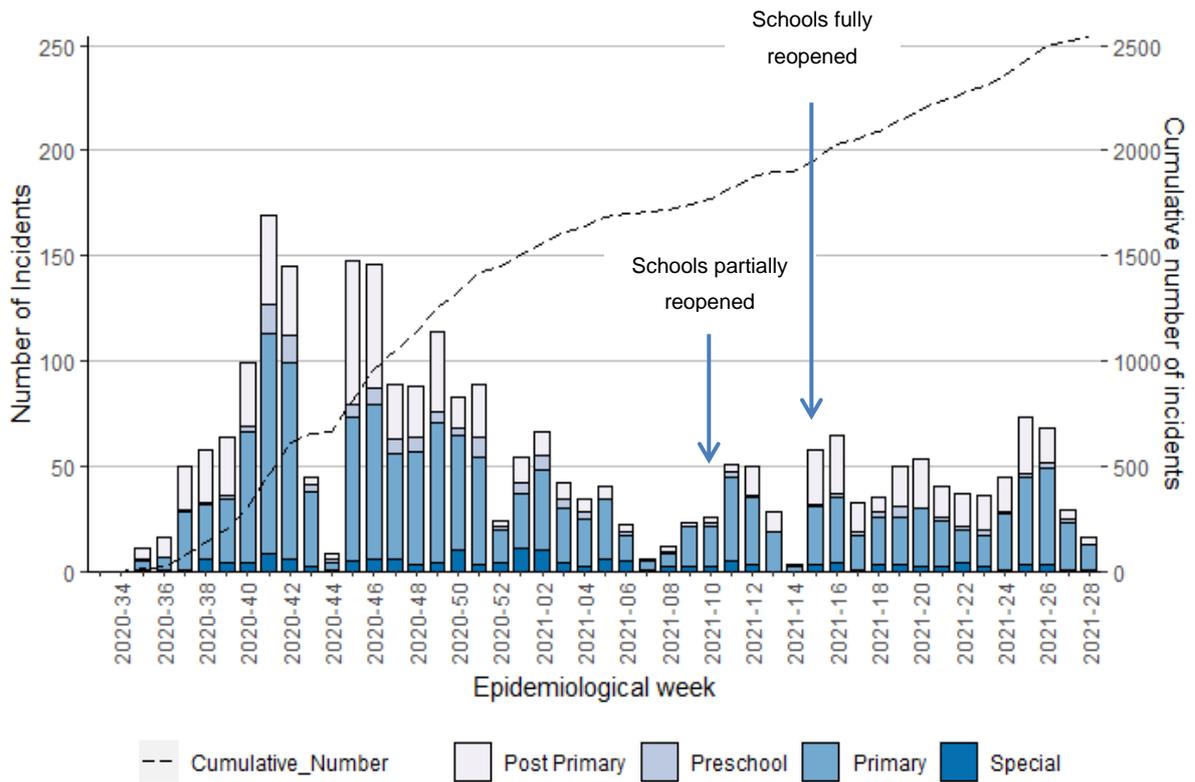


Figure 18. Number of COVID-19 incidents in schools, by school type, week 33 - 28

Cumulative School Incidents by Local Government District

The following information includes the cumulative number of incidents in schools by LGD since they first reopened until the end of week 28 (18 July 2021).

The cumulative community rate per 100,000 population is also shown in the figure.

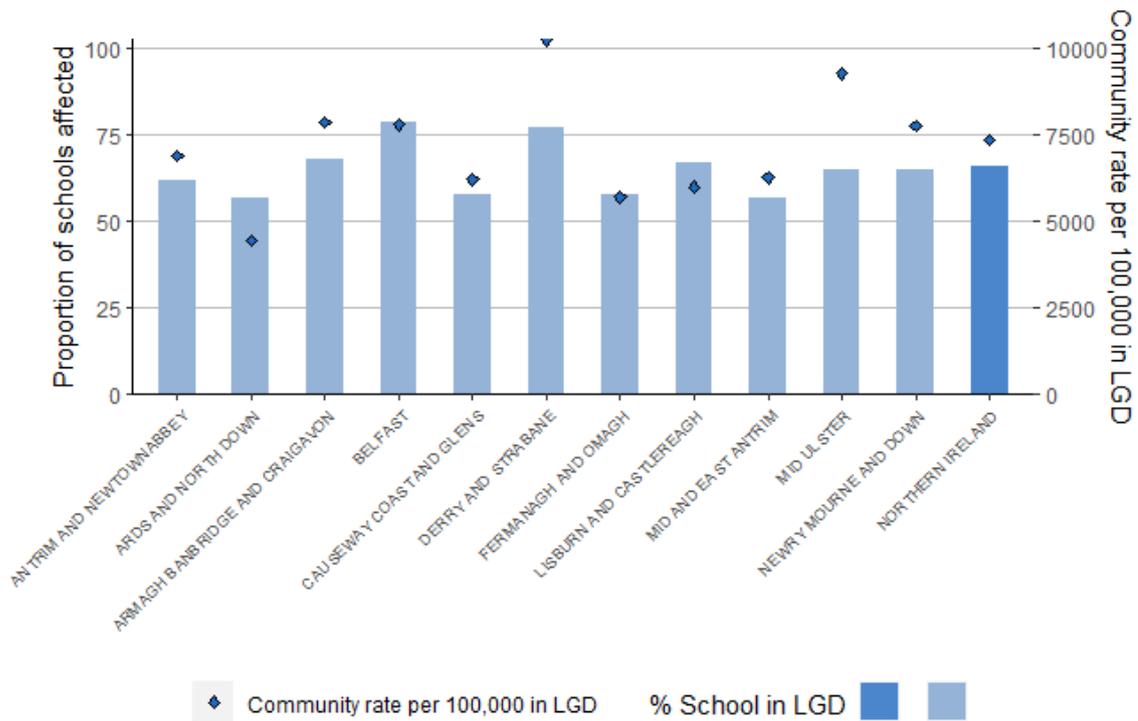


Figure 19. Proportion of schools with a COVID-19 incident and overall background community rate by 100,000 (2020-21) by Local Government District (LGD)

Cumulative number of COVID-19 cases reported by schools to PHA School Team

Since schools opening on 24 August 2020 until the end of week 28 2021, there have been 7,751 confirmed COVID-19 cases that occurred at any point during this time reported by schools to the PHA School Team.

The definitive source for the number of COVID-19 confirmed cases in school aged children is from the HSC Laboratory testing and the National Testing Programme. Direct comparisons should not be made with laboratory data.

Staff member includes teaching and non-teaching staff.

| School Type | Pupil Case | Staff Case | Total | Proportion of all cases that are pupils |
|--------------|--------------|--------------|--------------|---|
| Preschool | 105 | 123 | 228 | 46.1% |
| Primary | 2,270 | 1,236 | 3,506 | 64.7% |
| Post Primary | 2,891 | 732 | 3,623 | 79.8% |
| Special | 135 | 259 | 394 | 34.3% |
| Total | 5,401 | 2,350 | 7,751 | 69.7% |

| Table 9. Number of COVID-19 cases in school aged children reported by schools where information is available as a proportion of all school age children, up to week 28 | | |
|---|-------------------|---|
| School Type | Pupil Case | Proportion of all school aged pupils in Northern Ireland |
| Preschool | 105 | 0.03% |
| Primary | 2,270 | 0.66% |
| Post Primary | 2,891 | 0.84% |
| Special | 135 | 0.04% |
| Total | 5,401 | 1.58% |

Source: PHA COVID-19 School Team, Department of Education school statistics

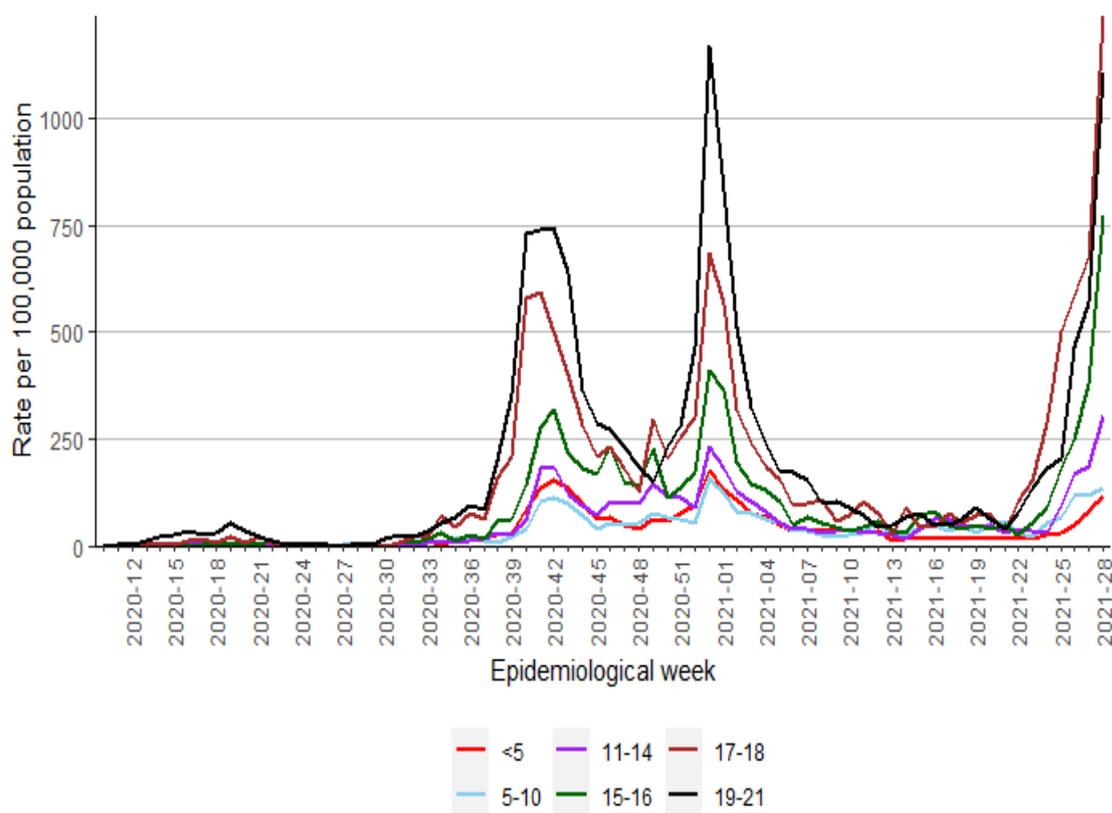


Figure 20. Weekly COVID-19 laboratory confirmed case rates per 100,000 population, by age group, for all testing data combined, in those aged 21 and under, 2020-21

Compared to week 27, in week 28 case rates for all age groups increased. The 17-18 age group had the highest case rates (1239.1 per 100,000), followed by the 19-21 age group (1106.2 per 100,000).

Source: HSC Trust laboratory reports and the National Testing Programme

Mortality Surveillance

Medical Certificate of Cause of Death for confirmed / suspected COVID-19

The Northern Ireland Statistics and Research Agency (NISRA) provide the weekly number of **registered respiratory and COVID-19 deaths each Friday ([here](#))**. In week ending 02 July 2021, the proportion of COVID-19 deaths registered was 0.4%, and from 19 March 2020 to week ending 02 July 2021 the proportion of COVID-19 deaths registered was 13.2%.

Weekly published data are provisional and is based on registrations of deaths, not occurrences. The majority of deaths are registered within five days in NI. Respiratory deaths include any death where terms directly relating to respiratory causes were mentioned anywhere on the death certificate (this includes COVID-19 deaths). This is not directly comparable to the ONS figures relating to 'deaths where the underlying cause was respiratory disease'. Figures relate to all deaths registered up to 02 July 2021 with a mention of COVID-19 on the death certificate. Please note: Where COVID-19 is mentioned in part 1 it may not be the underlying cause of death. COVID-19 deaths include any death where Coronavirus or COVID-19 (suspected or confirmed) was mentioned anywhere on the death certificate. NISRA quarterly statistics provide detail of underlying cause following coding to ICD-10 rules; figures are available [here](#). Figures may be impacted by General Registration Office closures over public holidays.

Data for week 27 unavailable at time of publication.

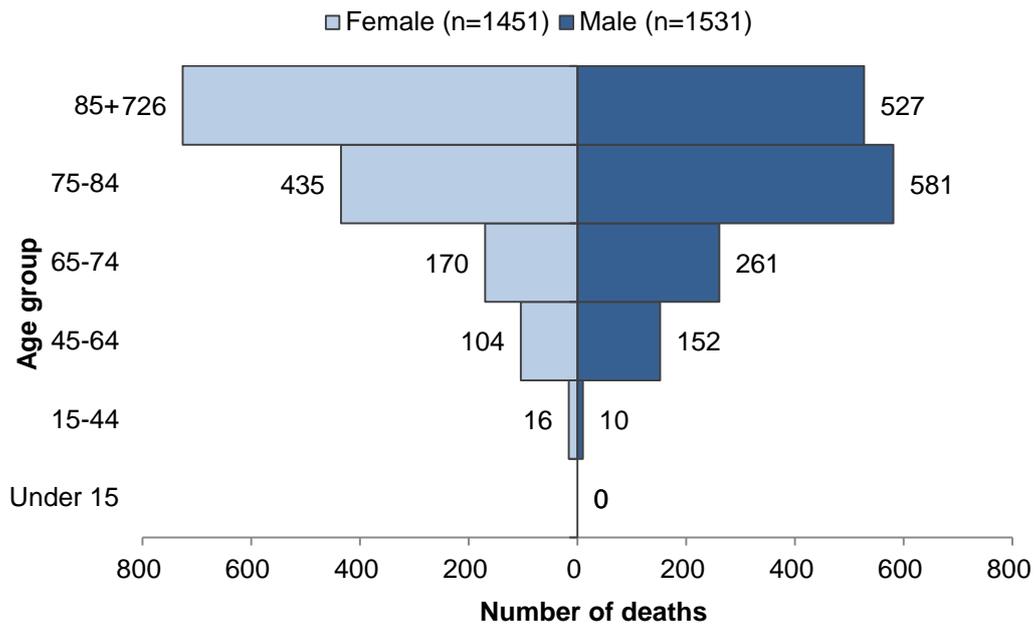
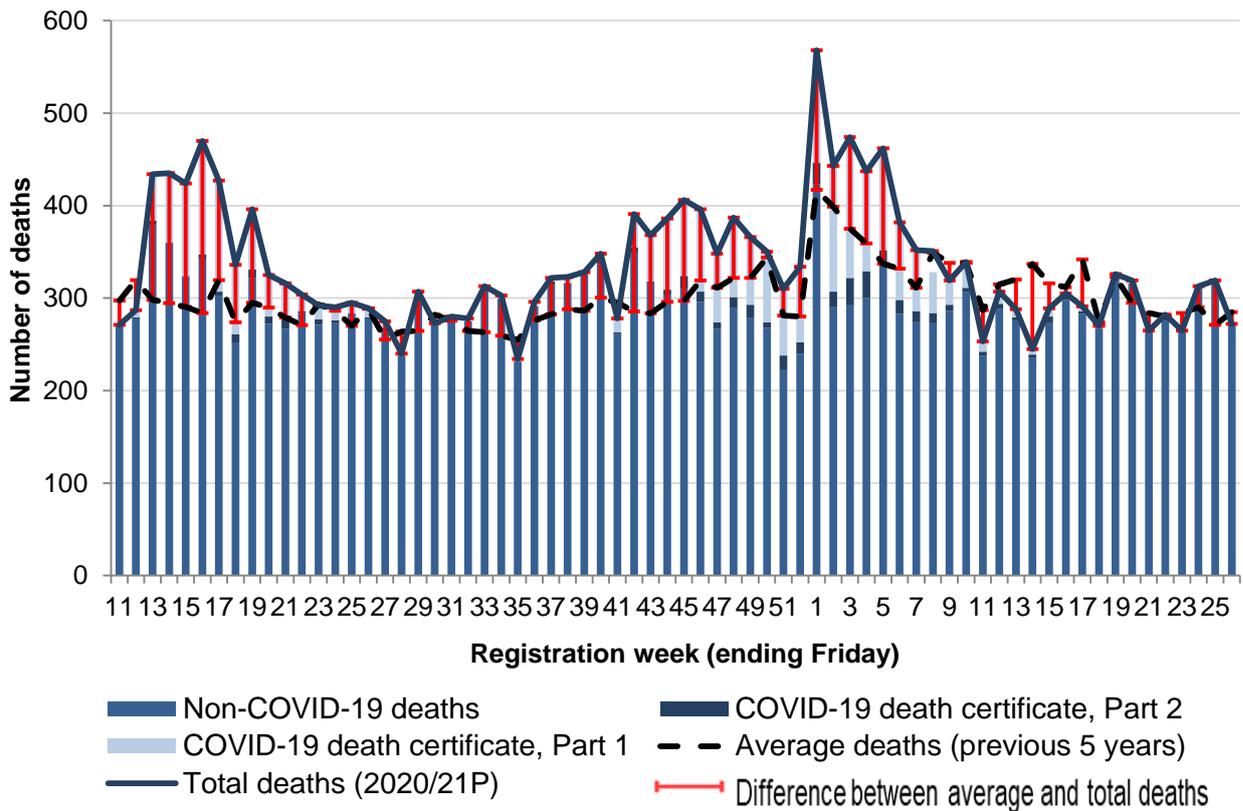


Figure 21. NISRA registered COVID-19 deaths by sex and age group, up to week ending 02 July 2021



Up to week 52, the Average deaths (previous 5 years) period ranged from 2015-2019. From 2021 week 1 onwards, this period ranges from 2016-2020

Figure 22. Northern Ireland registered deaths, including COVID-19 associated deaths, Week 11 (ending 20 March 2020) to Week 26 (ending 02 July 2021)

Table 10.1 Northern Ireland registered deaths, including COVID-19 associated deaths, Week 11 (ending 20 March 2020) to Week 52 (ending 01 January 2021)

| Registration week (ending Friday) | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| COVID-19 death certificate, Part 1 | 0 | 8 | 50 | 75 | 100 | 123 | 120 | 75 | 65 | 45 | 35 | 18 | 15 | 14 | 11 | 10 | 7 | 0 | 6 | 1 | 4 | 3 | 4 | 3 | 2 | 5 | 4 | 7 | 1 | 6 | 15 | 36 | 50 | 77 | 82 | 89 | 74 | 86 | 73 | 76 | 72 | 82 |
| COVID-19 death certificate, Part 2 | 1 | 1 | 5 | 1 | 1 | 5 | 4 | 9 | 9 | 8 | 14 | 2 | 6 | 3 | 1 | 1 | 2 | 2 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 2 | 4 | 2 | 1 | 5 | 2 | 6 | 1 | 5 | 14 | 11 | 7 | 12 | 14 | 6 | 16 | 12 |
| Non-COVID-19 deaths | 270 | 278 | 379 | 359 | 323 | 342 | 303 | 252 | 322 | 272 | 267 | 284 | 271 | 273 | 283 | 278 | 266 | 238 | 300 | 272 | 275 | 274 | 307 | 299 | 231 | 289 | 314 | 314 | 326 | 337 | 261 | 349 | 317 | 304 | 310 | 296 | 267 | 289 | 279 | 268 | 222 | 240 |
| Average deaths (previous 5 years) | 297 | 320 | 298 | 295 | 290 | 284 | 320 | 274 | 295 | 290 | 279 | 271 | 293 | 286 | 270 | 288 | 255 | 264 | 265 | 282 | 276 | 265 | 263 | 259 | 255 | 276 | 282 | 288 | 286 | 300 | 295 | 286 | 284 | 296 | 297 | 319 | 311 | 322 | 322 | 344 | 281 | 280 |
| Total deaths (2020) | 271 | 287 | 434 | 435 | 424 | 470 | 427 | 336 | 396 | 325 | 316 | 304 | 292 | 290 | 295 | 289 | 275 | 240 | 307 | 273 | 280 | 278 | 313 | 303 | 234 | 296 | 322 | 323 | 328 | 348 | 278 | 391 | 368 | 386 | 406 | 396 | 348 | 387 | 366 | 350 | 310 | 334 |

Table 10.2 Northern Ireland registered deaths, including COVID-19 associated deaths, Week 1 (ending 08 January 2021) to Week 26 (ending 02 July 2021)

| Registration week (ending Friday) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11* | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| COVID-19 death certificate, Part 1 | 122 | 136 | 152 | 108 | 110 | 84 | 66 | 44 | 26 | 28 | 11 | 16 | 9 | 6 | 9 | 4 | 5 | 2 | 4 | 3 | 2 | 1 | 1 | 1 | 0 | 1 |
| COVID-19 death certificate, Part 2 | 23 | 17 | 30 | 29 | 16 | 15 | 12 | 11 | 7 | 4 | 4 | 3 | 3 | 3 | 7 | 3 | 3 | 1 | 3 | 1 | 1 | 1 | 1 | 0 | 2 | 0 |
| Non-COVID-19 deaths | 423 | 290 | 292 | 300 | 336 | 283 | 274 | 273 | 286 | 307 | 238 | 288 | 276 | 236 | 273 | 298 | 283 | 267 | 319 | 315 | 263 | 280 | 263 | 312 | 317 | 271 |
| Average deaths (previous 5 years) | 417 | 399 | 375 | 359 | 337 | 332 | 311 | 349 | 338 | 338 | 287 | 315 | 320 | 337 | 316 | 312 | 342 | 274 | 323 | 295 | 284 | 280 | 284 | 290 | 271 | 285 |
| Total deaths (2021P) | 568 | 443 | 474 | 437 | 462 | 382 | 352 | 351 | 319 | 339 | 253 | 307 | 288 | 245 | 289 | 305 | 291 | 270 | 326 | 319 | 265 | 282 | 265 | 313 | 319 | 272 |

Source: Northern Ireland Statistical Research Agency (NISRA)

All-cause excess deaths

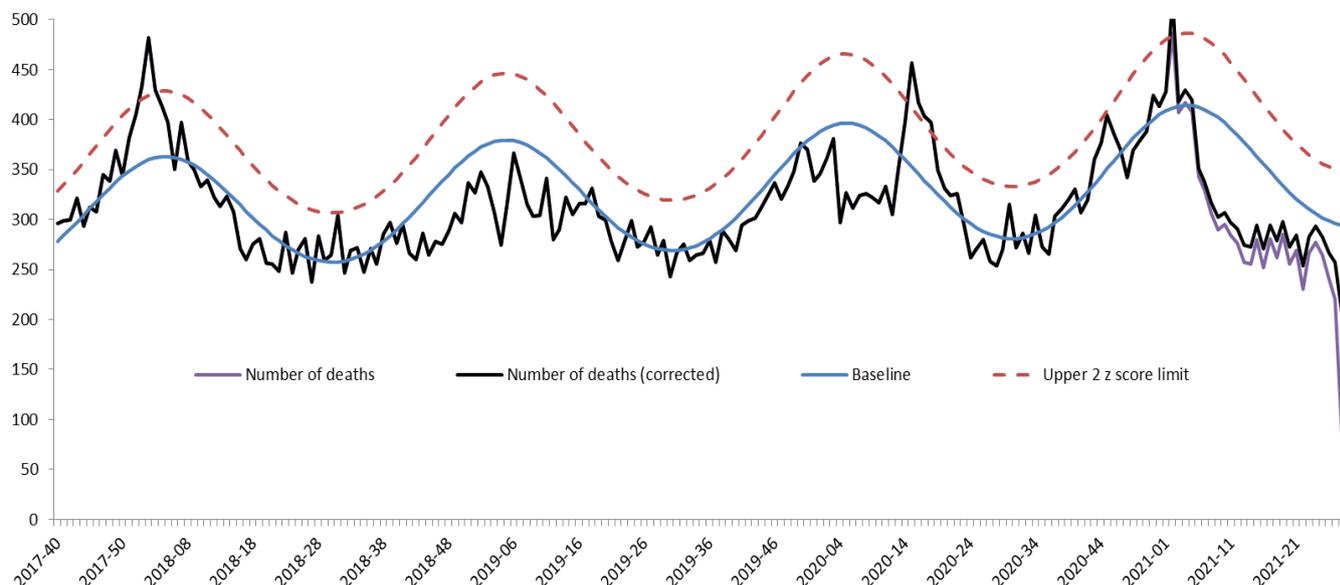
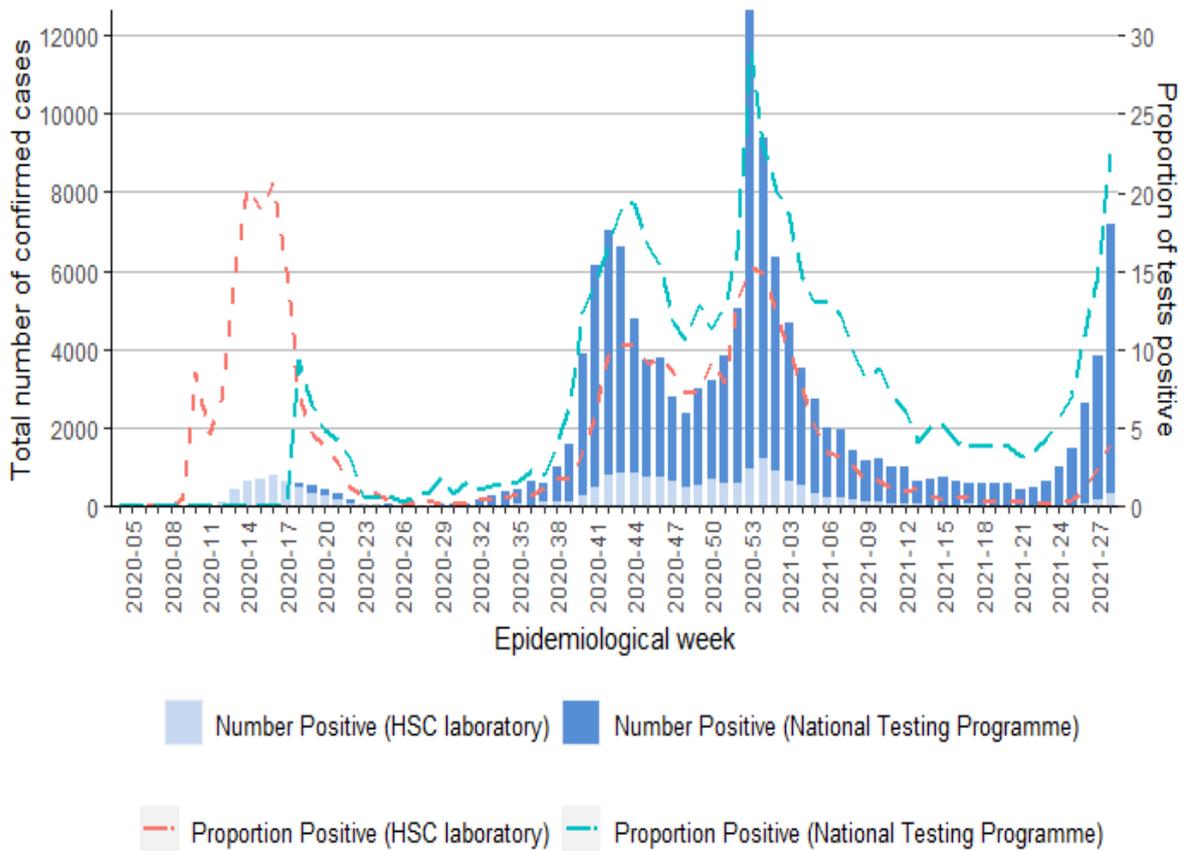


Figure 23. Weekly observed and expected number of all-cause deaths in all ages, week 40 2017 - week 28 2021

In 2020, excess all-cause deaths were reported in epidemiological weeks 13 to 20, week 22 and 45. During 2021, excess deaths were reported in week 2 (11 – 17 January). This increase in deaths happened outside the influenza season and at a time when we know flu was not circulating ([here](#)).

While these more recent excesses have occurred within the flu season, [reports](#) show flu was not widely circulating. This suggests the excess mortality may in part be related to COVID-19 deaths and to a fall in presentation to hospital with other conditions (data not shown). Excess deaths were mainly in those over 65 years, which is in line with the age profile of COVID-19 deaths. Despite delay correction, reported mortality data are still provisional due to the time delay in registration and observations which can vary from week to week; not all registrations for the current week will have been included this bulletin.

Virology testing surveillance



Total individuals tested include those that were reported as indeterminate

Figure 24. Weekly number of individuals tested for COVID-19 and proportion positive, by source (HSC Laboratory testing and the National Testing Programme), 2020-21

Table 11. COVID-19 activity in Northern Ireland, for all testing data combined, week 28, 2021

| Period | Individuals tested | Number positive | Proportion positive |
|--------------|--------------------|-----------------|---------------------|
| Current week | 39,907 | 7,173 | 18.4% |
| Total | 1,545,406 | 139,429 | 9.0% |

Table 12. COVID-19 activity in Northern Ireland (HSC laboratory), week 28, 2021

| Period | Individuals tested | Number positive | Proportion positive |
|--------------|--------------------|-----------------|---------------------|
| Current week | 8,416 | 335 | 4.0% |
| Total | 470,130 | 20,561 | 4.4% |

Table 13. COVID-19 activity in Northern Ireland (National Testing Programme), week 28, 2021

| Period | Individuals tested | Number positive | Proportion positive |
|--------------|--------------------|-----------------|---------------------|
| Current week | 30,491 | 6,838 | 22.4% |
| Total | 1,075,276 | 118,868 | 11.1% |

Source: HSC Trust laboratory reports and the National Testing Programme

To week 28, the total number of individuals tested was 1,545,406 and positivity was 9.0%. Overall, more individuals have now been tested as part of the National Testing Programme, and positivity is now higher (11.1%) compared to HSC laboratories (4.4%).

Global situation

As of 21 July, [WHO](#) has been notified of 190,860,860 confirmed cases of COVID-19, including 4,101,414 related deaths.

Appendix

PHA Health Protection COVID-19 surveillance systems

The PHA Health Protection Directorate has established the following surveillance systems to monitor COVID-19 activity across the spectrum of community and health care settings. As new systems are developed they will be added to this report.

Case epidemiology

SARS-CoV2 testing was first developed by the National Reference Laboratory (Public Health England) for all of the United Kingdom on 24 January 2020. On 7 February 2020, SARS-CoV2 testing was developed locally by the Regional Virus Laboratory, Belfast Health and Social Care (HSC) Trust and performed testing across NI. Since 23 March, 28 March, 3 April and 13 May respectively, Northern HSC Trust, Southern HSC Trust, Western HSC and South Eastern HSC Trust laboratories, have been performing SARS-CoV2 testing.

The PHA Health Protection Directorate laboratory surveillance system collates SARS-CoV2 laboratory data on all tests from HSC Trust laboratories.

As an individual may have more than one test for clinical purposes, the laboratory data is then collated to enable monitoring of individuals rather than tests performed by laboratories. This is done using the Organism-Patient-Illness-Episode (OPIE) principle, a standard approach used across the UK.⁷ The episode length used nationally is 6 weeks (42 days), and is being reviewed as more data becomes available.

⁷ Public Health England. 2016. Laboratory reporting to Public Health England: A guide for diagnostic laboratories. [ONLINE] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/739854/PHE_Laboratory_Reporting_Guidelines.pdf. [Accessed 21 April 2020]

If an individual is infected on two separate occasions by the same organism (within the episode of infection) they will be represented by one distinct record. It is still unclear to what extent second infections occur in COVID-19. The exception to this is where the first result is negative and is then followed by a positive result on a second occasion. In such circumstances, the later positive result will be recorded rather than the earlier negative one. If an individual is infected on two separate occasions by the same organism (outside the episode of infection with recovery implied) they will be represented by two distinct records, regardless of the test result. This is a standard approach which is taken across a range of infectious diseases.

All laboratories report a standardised data set which includes individual demographics, test result and source (location) at the time the specimen was taken. Data are collated to produce information on the number and trend of individuals tested at HSC Trust laboratories and the number and trend of confirmed cases in NI.

National Testing Programme

The National Testing Programme in NI consists of drive through (regional test sites), mobile test unit sites, home testing and satellite testing of nursing homes.

Everyone in NI with symptoms of COVID-19 is eligible for testing. Close contacts of COVID-19 positive individuals will also be contacted to book a test.

Testing is prioritised through the website gov.uk for essential workers who are self-isolating because they are symptomatic, or have household members who are symptomatic, to help enable essential workers to return to work as soon as safe.

Testing is available for the general public through the website nhs.uk.

The StopCOVID NI contact tracing app is now [available](#) from the Google or Apple App store.

Testing for non-HSC essential workers and the general public is currently conducted in drive-through sites operating in Belfast,

Enniskillen, Craigavon, Derry/Londonderry and Antrim. In addition there are also mobile testing units currently operating within NI, and walk through test sites operating in Omagh, Newry, Lisburn, Ballymena and on Ulster University and Queen's University campuses.

Home testing can be requested by any individual meeting the criteria with a test kit(s) being mailed to the individual and household contacts.

Tests are processed in laboratories outside the normal health and social care network and data fed back to the Public Health Agency via the Business Services Organisation.

The data has been included in the case epidemiology and virology testing surveillance sections. These data should be interpreted with caution when interpreted alongside the HSC laboratory data, because they include testing undertaken as part of the outbreak response i.e. possibly asymptomatic people with a certain age, gender or area profile. Testing numbers may be skewed to different local government districts depending on whether an outbreak was detected and managed.

For more information, see [here](#).

Care home outbreak surveillance

Care home is a term that includes all nursing homes and residential homes in Northern Ireland that are registered with the Regulation and Quality Improvement Agency (RQIA) and can either be HSC Trust or independently owned. There are 472 active care homes in NI.

All care homes have a requirement to notify the PHA Health Protection duty room of suspected outbreaks of any infectious disease. A suspected outbreak of COVID-19 occurs when two or more residents and/or staff meet the case definitions for suspected COVID-19, confirmed COVID-19, influenza-like illness or worsening shortness of breath.

The PHA Health Protection Directorate care home outbreak surveillance system collects and collates data on all initial notifications of suspected COVID-19 outbreaks from the duty room clinical records.

The care home COVID-19 outbreak surveillance system is updated every day to reflect public health management. If the risk assessment subsequently excludes an outbreak of the initial notification then the surveillance data will be updated.

Primary care surveillance

Sentinel testing

The GP sentinel testing surveillance system builds on the existing flu sentinel testing system where 36 general practices ('spotter' practices), representing approximately 11% of practices across Northern Ireland, are commissioned to carry out flu testing in suspected influenza-like illness.

Individuals registered at a spotter practice with symptoms of suspected COVID-19 and who are well enough to self-care in their own home are referred to a Trust testing facility for testing. The service commenced in 13 spotter practices in Belfast and South Eastern HSC Trust locality at the end of April and is currently being rolled out to the other 23 practices in Northern, Southern and Western HSC Trust localities.

Laboratories reports from spotter practices are identified from the laboratory (virology) surveillance and are collated to produce information on the number of individuals tested and the number of confirmed cases.

Critical care surveillance

Until 28 September 2020, the PHA Health Protection COVID-19 critical care online reporting system captured the incidence of COVID-19 infections in critical care and aims to improve the understanding of severe disease.

This system should complement critical care data collected by the Health and Social Care Board for service planning purposes and the publicly available reports on COVID-19 in critical care NI by the Intensive Care National Audit and Research Centre (iCNARC) ([here](#)).

Since 28 September 2020, data collection for critical care surveillance has been streamlined to coincide with the well-established surveillance

of influenza patients in critical care in conjunction with the Critical Care Network Northern Ireland (CaNNI).

Data is collected on all individuals admitted to an Intensive Care Unit (ICU) or High Dependency Unit (HDU) with a positive COVID-19 result, from either before or during the ICU/HDU admission.

School Surveillance

Information on school COVID-19 incidents is based on situations reported to PHA COVID-19 School Team. These include:

- **Single confirmed case** of COVID-19 in a student or member of staff in the school setting. The incident is closed after 14 days if there have been no further cases.
- **Cluster of two or more confirmed cases** of COVID-19 in a student or member of staff in the school setting within a 14 day period. The incident is closed after 14 days if there have been no further cases from the last case

PHA COVID-19 School Team carries out contact tracing of cases that attend a school in collaboration with PHA Test and Trace Programme. All clusters are also investigated by the School Team in liaison with local partners.

Data are collected on the number of COVID-19 school incidents reported to the PHA COVID-19 School Team since schools reopened on 24 August 2020.

Mortality surveillance

Medical Certificate of Cause of Death for confirmed/suspected COVID-19

The traditional method for examining the number of deaths, and the range of causes of death, takes information from death certificates that are reported to the General Registrar's Office (GRO). The death certificate contains two parts. Part 1 describes the immediate causes of death and Part 2 provides information on related conditions that may also have contributed to death. The numbers of deaths from COVID-19 are based on COVID-19 being recorded on any part of the death certificate (i.e. Part 1 or Part 2).

These include all deaths in which a doctor feels that COVID-19 was either a direct or indirect cause of death. It includes confirmed cases (deaths with a positive laboratory result) and probable or suspected cases, where a doctor assesses that COVID-19 was a cause of death but there is either no lab test or the test was negative. It captures deaths in all settings, such as hospitals, care homes, hospices and the community. It takes up to five days for most deaths to be certified by a doctor, registered and the data processed, meaning these deaths will be reported on about a week after they occurred.

Inclusion of references to COVID-19 in Part 2 of the death certificate may slightly over estimate the number of individuals where COVID-19 is a significant contributor to death.

All-cause excess deaths

The PHA Health Protection Directorate reports the weekly number of excess deaths from any cause for NI using the Mortality Monitoring in Europe (EuroMOMO) model. EuroMOMO provides a coordinated, timely and standardised approach to monitoring and analysing mortality data across the UK and Europe, to ensure that signals are comparable between countries. Further information is available [here](#).

Based on mortality data supplied by NISRA, EuroMOMO produces the number of expected and observed deaths every week, corrected for reporting delay and standardised for the population by age group and region. Excess mortality is reported if the number of observed deaths exceeds the number of expected deaths, and is defined as a statistically significant increase in the number of deaths reported over the expected number for a given point in time.

Case definitions

Case definitions are determined by Public Health England, on the advice of the New and Emerging Respiratory Virus Threats Advisory Group (NERVTAG). As the pandemic evolves and more evidence emerges the definitions will change to ensure individuals are appropriately identified.

Possible case of COVID-19 (as of 28 September 2020)

As of 02 October, case definitions for inpatient and community settings were consolidated into one list. Unusual presentations are also highlighted.

Individuals with

- new continuous cough **OR**
- high temperature **OR**
- a loss of, or change in, normal sense of smell (anosmia) or taste (ageusia)

Individuals with any of the above symptoms but who are well enough to remain in the community should follow the [stay at home guidance](#) and [get tested](#).

Clinicians should be alert to the possibility of atypical presentations in patients who are immunocompromised.

Alternative clinical diagnoses and epidemiological risk factors should be considered.

A wide variety of clinical symptoms have been associated with COVID-19.

Patients with acute respiratory infection, influenza-like illness, clinical or radiological evidence of pneumonia, or acute worsening of underlying respiratory illness, or fever without another cause should have a COVID-19 test, whether presenting in primary or secondary care.

In addition, the following situation should prompt clinicians to consider COVID-19 testing:

- Onset of delirium (acute confusion) in older people, or in those with dementia or cognitive impairment. New infections in people with dementia may manifest as delirium.

Confirmed case of COVID-19

An individual with clinical symptoms and a positive SARS-CoV2 specimen result.

Critical care COVID-19 case

A case that has either been admitted to an ICU/HDU in NI with a pre-existing positive result for SARS-CoV2, or received a positive result for SARS-CoV2 post-admission to ICU/HDU.

Influenza-like Illness (ILI)

Acute respiratory disease with sudden onset of symptoms and:

- at least one systemic symptom (fever $\geq 37.8^{\circ}\text{C}$, myalgia, malaise, headache) AND
- at least one respiratory symptom: cough (with or without sputum), shortness of breath (and/or wheezing), sore throat, nasal discharge, sneezing or congestion

Further Information

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