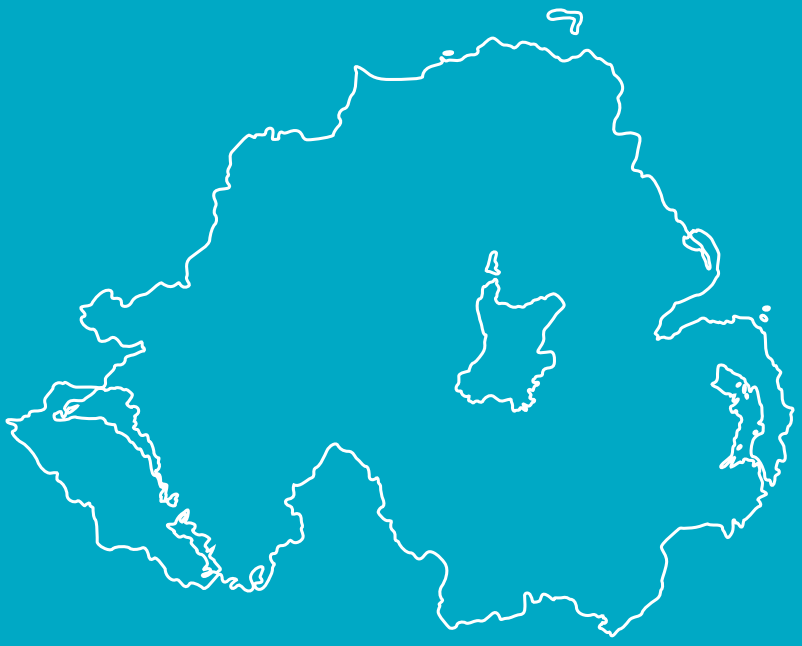
HSC Public Health Agency

Coronavirus (COVID-19)

Weekly Epidemiological Bulletin



Northern Ireland

Week 32 (09 - 15 August 2021)

Summary - Up to week 32 (15 August 2021)

To week 32, there have been a total of 174,157 laboratory confirmed cases[1] of COVID-19, including 3,046 registered COVID-19 deaths[2] in Northern Ireland (NI).

COVID-19 case epidemiology

- 174,157 laboratory confirmed cases (12.9% from HSC laboratories)
- 52.5% of total cases are female
- In week 32, those aged 15-44 had the highest case rate (735.6 per 100,000 population; 26.0% positivity)
- In week 32, Fermanagh and Omagh had the highest case rate (825.8 per 100,000 population; 27.0% positivity)

Confirmed COVID-19 care home outbreaks

- 728 confirmed COVID-19 outbreaks reported in total; includes 25 reported in week 32
- Involving 364 care homes (75.4% of all NI care homes)
- The highest proportion of outbreaks (84.6%) were reported from the Southern Trust area

Sentinel testing

- Testing started 27 April 2020
- Number of individuals tested in total: 1,321 (3.4% positivity)

[1] Virological reports and the National Testing Programme.

[2] NISRA; 2020-21 - up to 06 August 2021.

Critical care surveillance

- 685 confirmed COVID-19 individuals
- The majority of reported critical care cases were male (67.2%)
- Median age of cases was 60 years (range <1 – 90 years)

Schools Surveillance

- 2,612 COVID-19 incidents reported in 978 schools (66.1% of all NI schools)
- 53.1% of incidents have been single cases, 34.6% were clusters of 2-5 cases; 12.3% were clusters of 6 or more cases
- Since schools opened, the highest proportion of incidents have been reported in Derry and Strabane (79%)

Mortality surveillance

- In week ending 06 August 2021, the proportion of COVID-19 deaths registered was 9.1%. From the 19 March 2020 to week ending 06 August 2021 the proportion was 12.7%
- 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: 1,712,938 (10.2% positivity)
- Number of individuals tested in:
    - HSC laboratories: 506,772 (29.6% of total tests)

	○ National Testing Programme: 1,206,166 (70.4% 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 12 August 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 settings[3].

Comment:

Number of all clusters (open and closed) that have been recorded by the contact tracing service up to 12pm Sunday 15 August 2021.

There have been 163 new clusters since Monday 09 August 2021[4,5]. In total, up to 15 August 2021, a total of 662 clusters with greater than five people have been identified in the following council areas; Antrim and Newtownabbey (n=58), Ards and North Down (n=33), Armagh, Banbridge and Craigavon (n=80), Belfast (n=146), Causeway Coast and Glens (n=29), Derry and Strabane (n=63), Fermanagh and Omagh (n=32), Lisburn and Castlereagh (n=40), Mid and East Antrim (n=50), Mid Ulster (n=76) and Newry, Mourne and Down (n=55). In addition, there have been 2,738 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

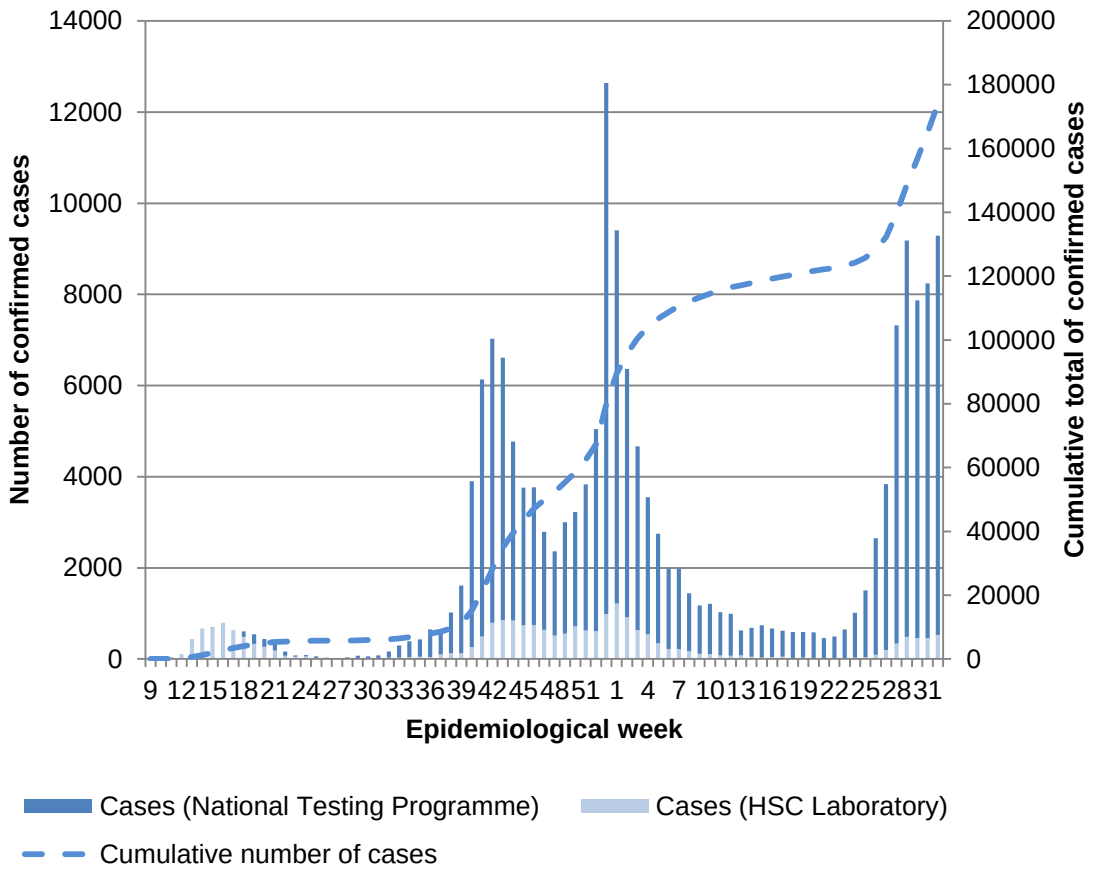


Figure 1. Laboratory confirmed COVID-19 cases by epidemiological week and source (HSC Laboratory testing and the National Testing Programme), 2020-21

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 was a general downward trend in the number of weekly cases from week 53 to week 21, followed by an increase in the number of weekly cases to week 29. There has now been an increase in the number of weekly cases since week 30.

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

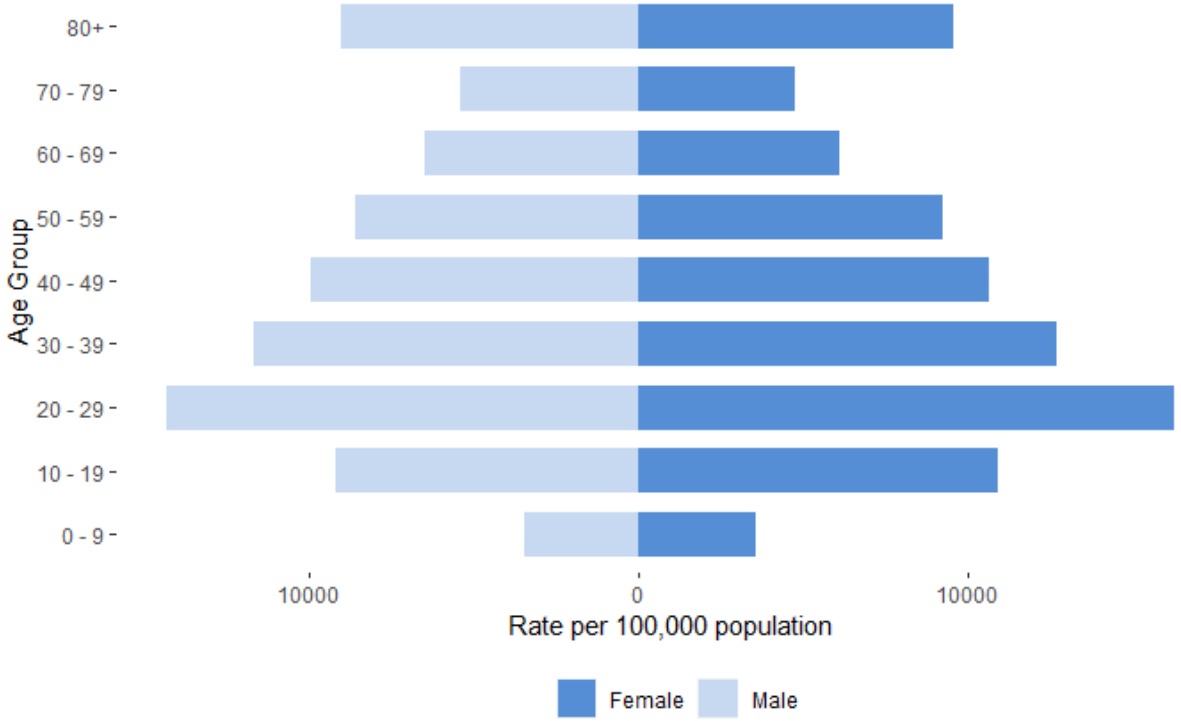


Figure 3. Laboratory confirmed cases per 100,000 population, by age and sex, for all testing data combined, 2020-21

Figure 4. Laboratory confirmed cases, by age, sex and source (HSC Laboratory testing and the National Testing Programme), for weeks 31 and 32

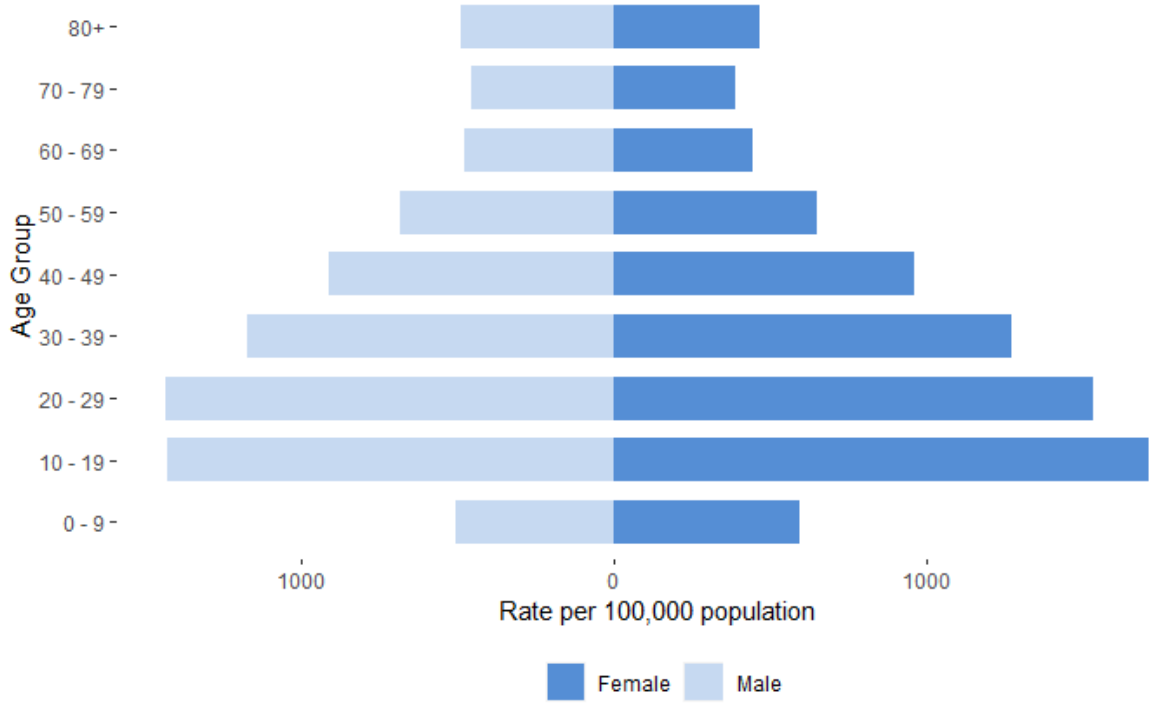


Figure 5. Laboratory confirmed cases per 100,000 population, by age and sex, for all testing data combined, for weeks 31 and 32

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 higher case rates in younger 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

	Sex		
Age Group	Male	Female	Total*
0 - 9	4,351	4,247	8,598
10 - 19	11,298	12,650	23,948
20 - 29	17,017	18,403	35,420
30 - 39	14,414	16,170	30,584
40 - 49	11,586	13,187	24,773
50 - 59	10,855	12,171	23,026
60 - 69	6,360	6,188	12,548
70 - 79	3,701	3,701	7,402
80+	2,928	4,793	7,721
Unknown	0	3	3
Total	82,510	91,513	174,023

**Unknown sex for 134; these are not included in the total figures*

Table 2. Laboratory confirmed COVID-19 cases, by Trust				
	Epidemiological Week			
Trust Area	30	31	32	Total
Belfast	174	153	168	6,702
Northern	66	63	117	4,606
South Eastern	65	80	51	2,833
Southern	58	74	66	3,540
Western	46	54	51	1,970
Other*	7,454	7,816	8,831	154,404
Unknown	5	1	4	102
Northern Ireland	7,868	8,241	9,288	174,157

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

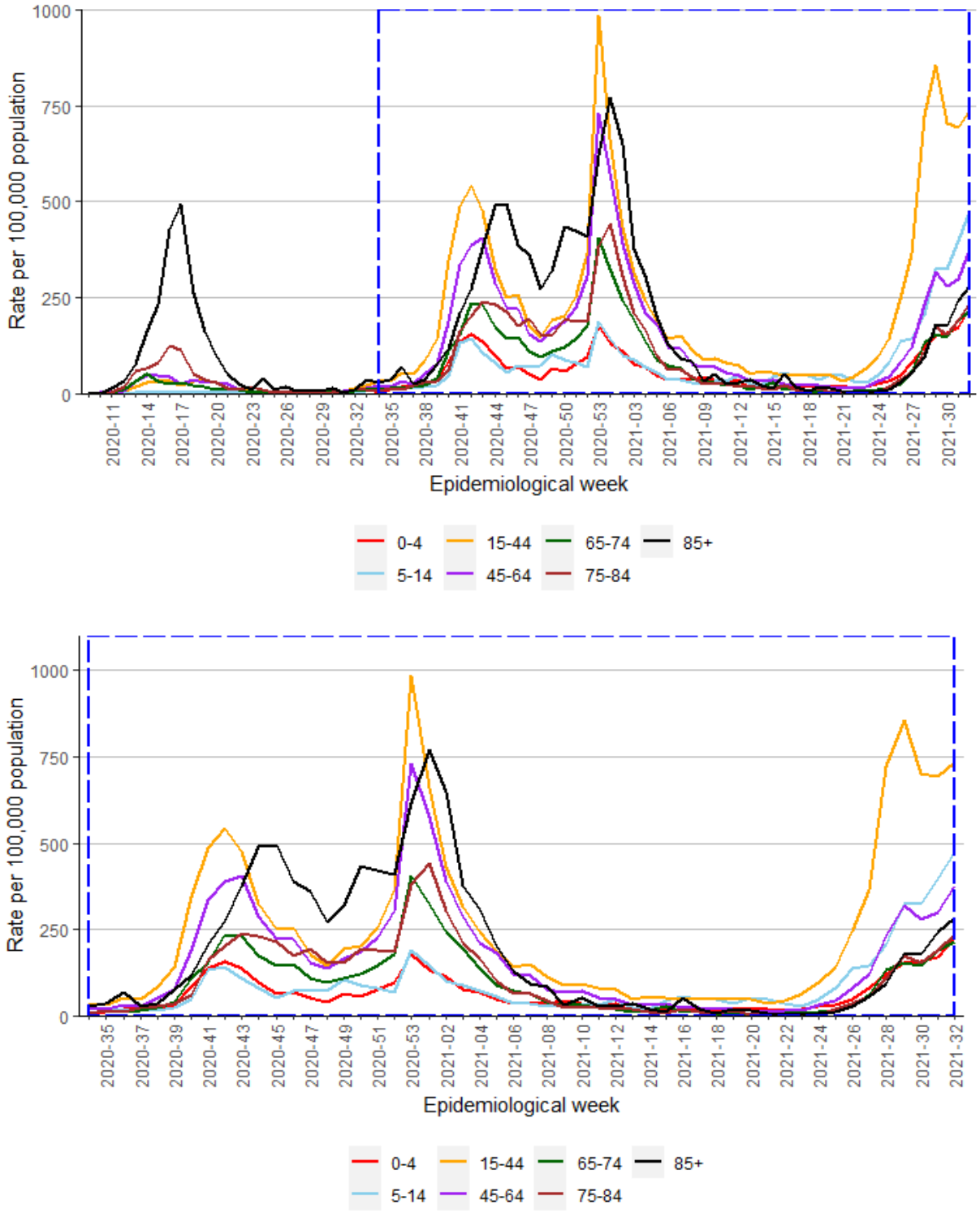


Figure 6. Weekly laboratory confirmed case rates per 100,000 population, by age group, for all testing data combined, 2020-21

The case rates increased in week 32 compared to the previous week in all age groups. The highest case rates were seen in the 15-44 age group (735.6 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 32, positivity was highest in the 5-14 age group (34.3%). The lowest positivity was observed in the 85+ age group (7.6%).

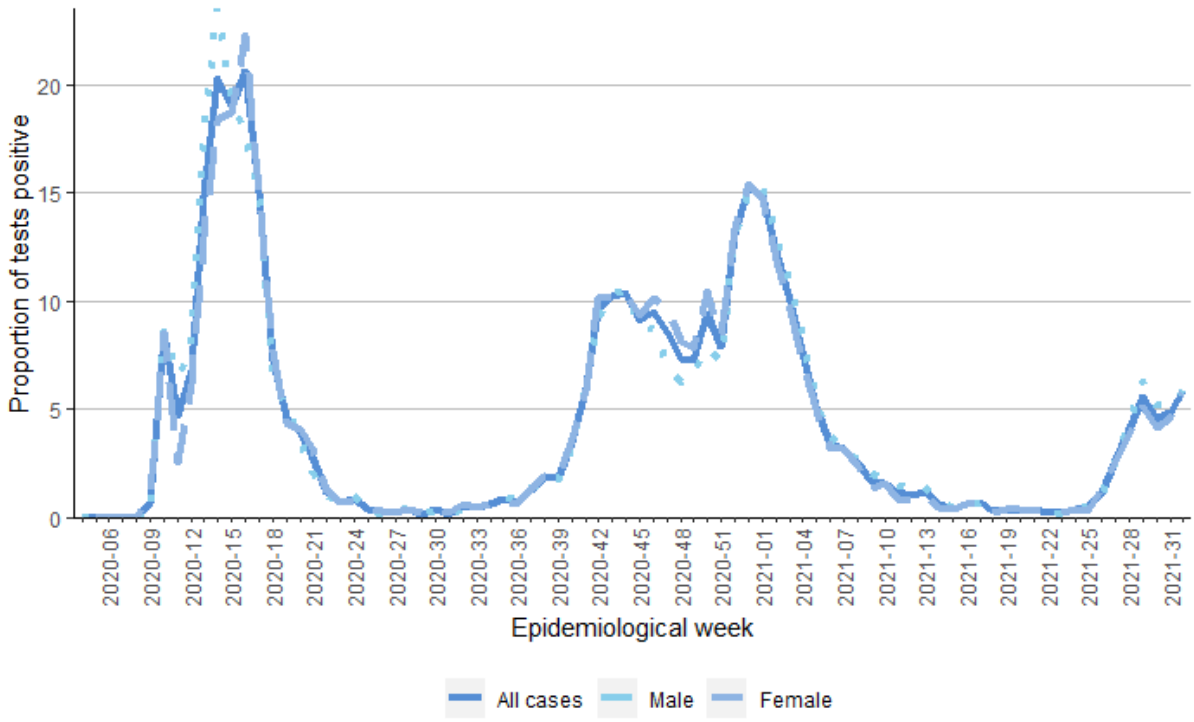


Figure 7. Positivity (%) of laboratory confirmed COVID-19 cases by epidemiological week, overall and by sex (HSC Laboratory testing), 2020-21

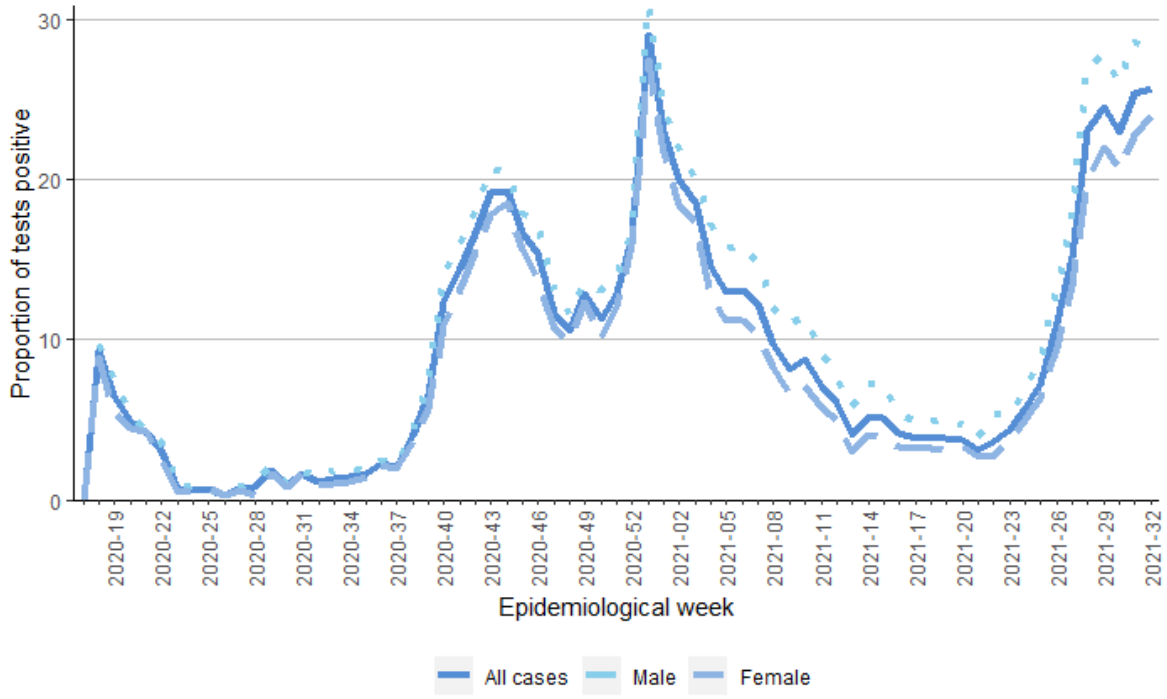


Figure 8. Positivity (%) of laboratory confirmed COVID-19 cases by epidemiological week, overall and by sex (National Testing programme), 2020-21

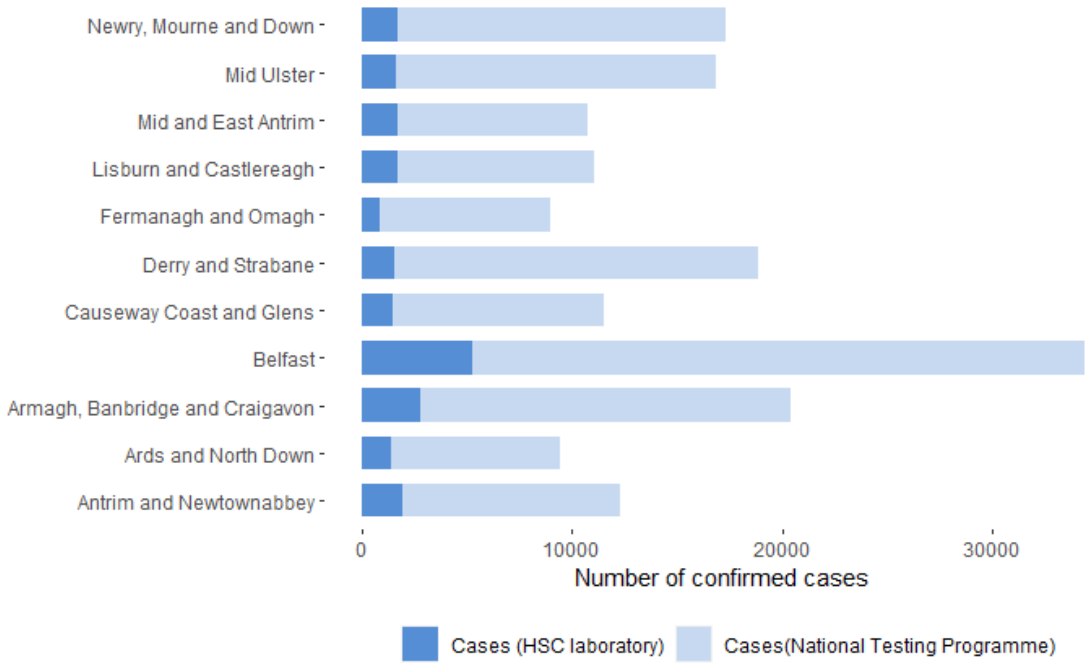


Figure 9. Total laboratory confirmed cases, by Local Government District (LGD) and source (HSC Laboratory testing and the National Testing Programme), 2020-21

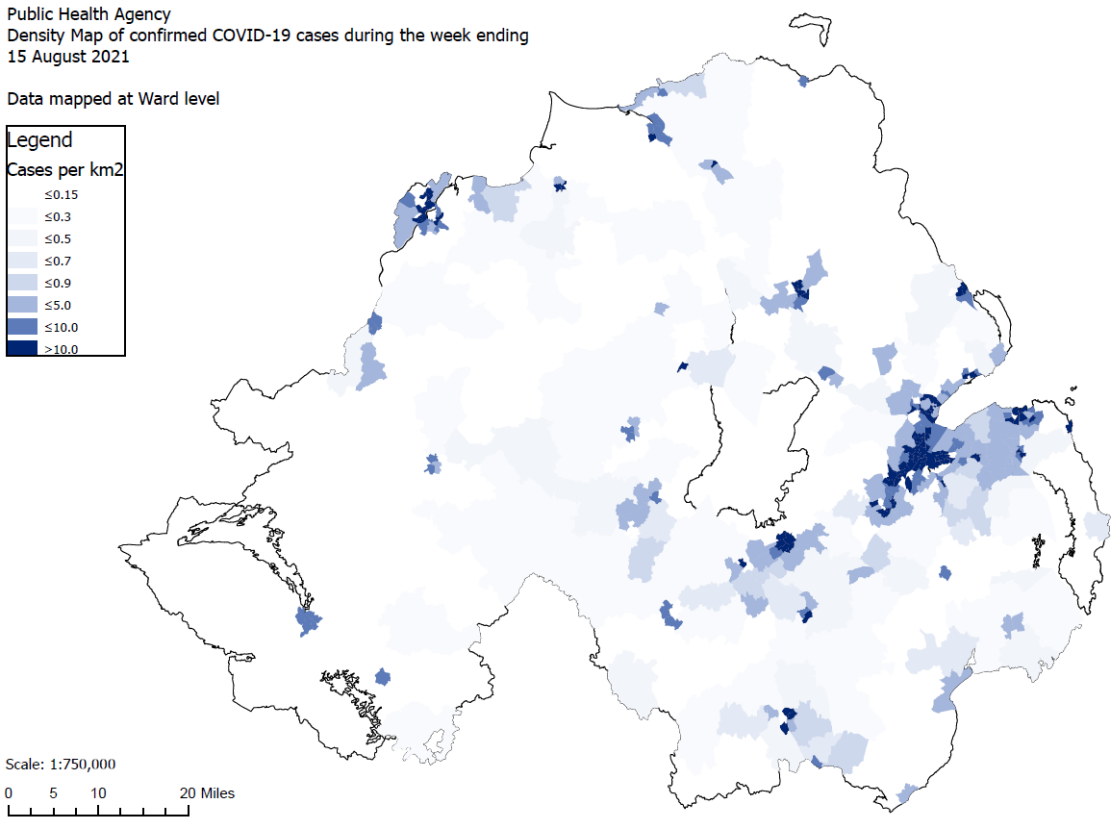


Figure 10. Density map of confirmed COVID-19 cases, for all testing combined, 2020-21

Figure 10 shows a density map based on the number of confirmed COVID-19 cases in week 32, 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.

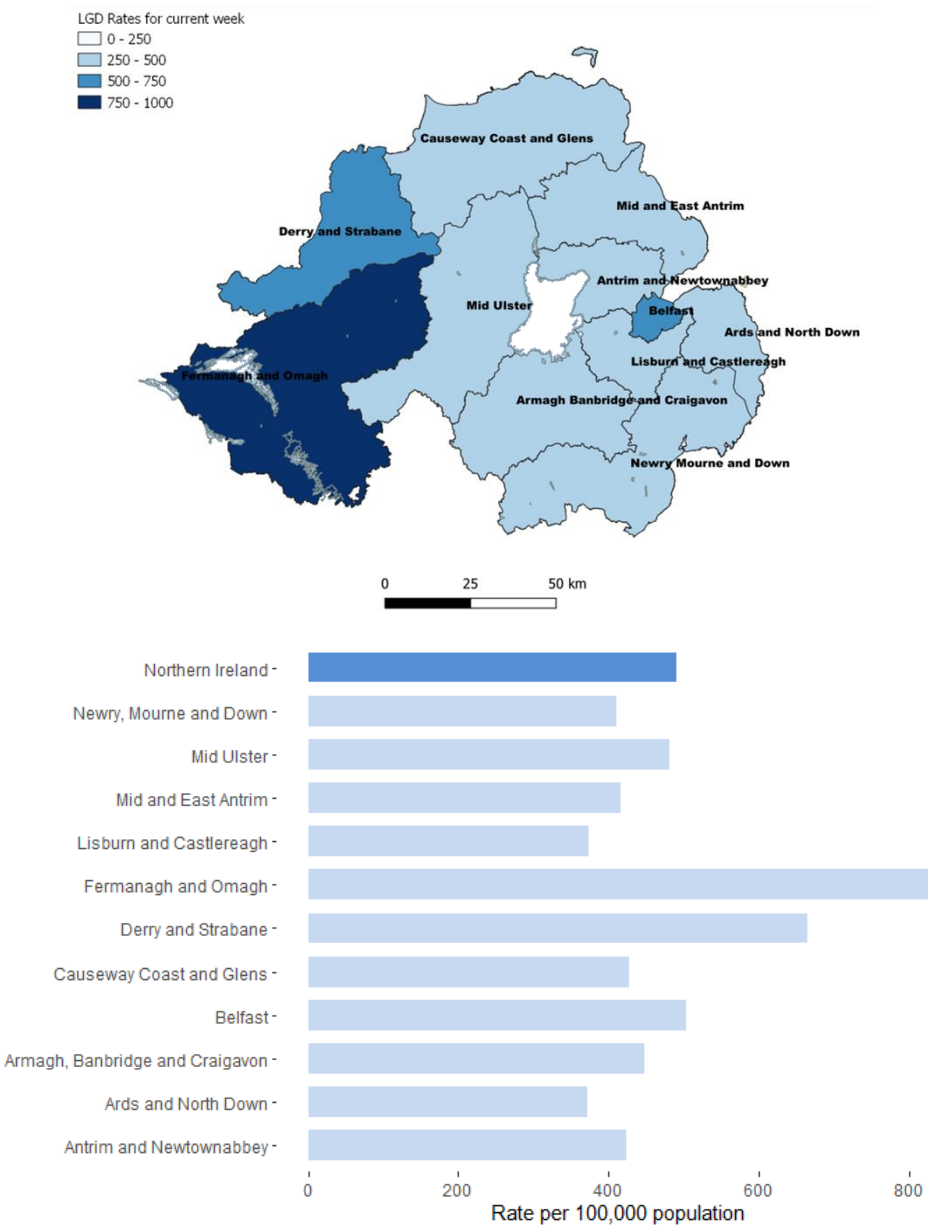
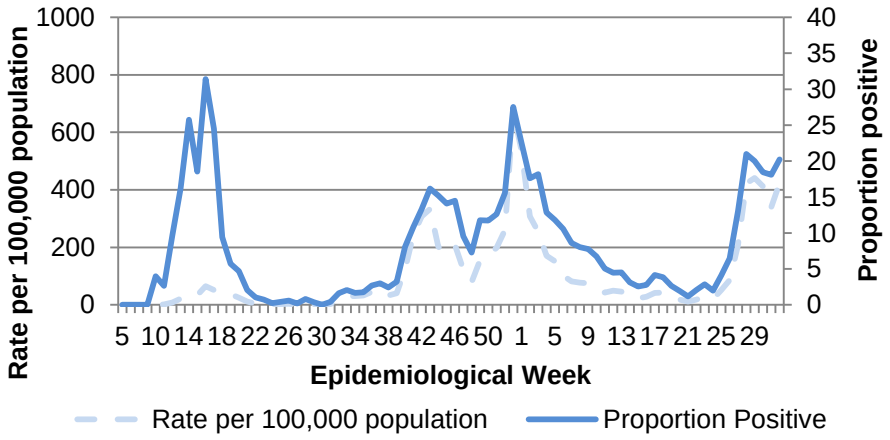
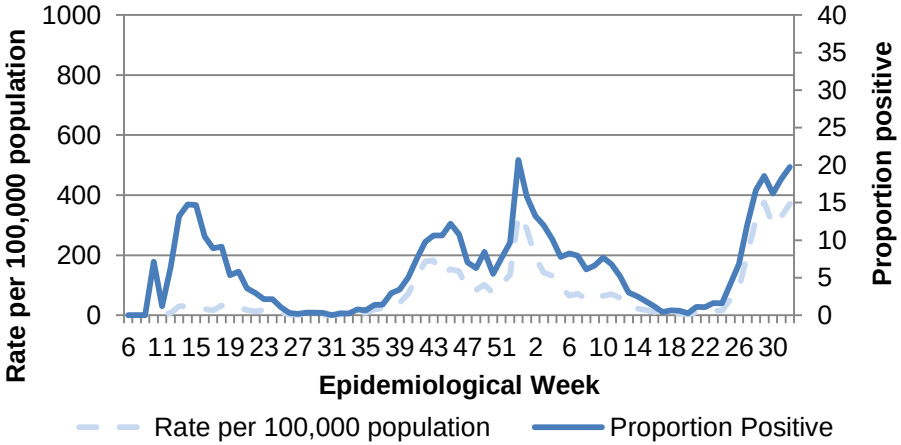


Figure 11. Total laboratory confirmed cases per 100,000 population, by Local Government District (LGD), for all testing data combined, week 32 (09 – 15 August 2021)

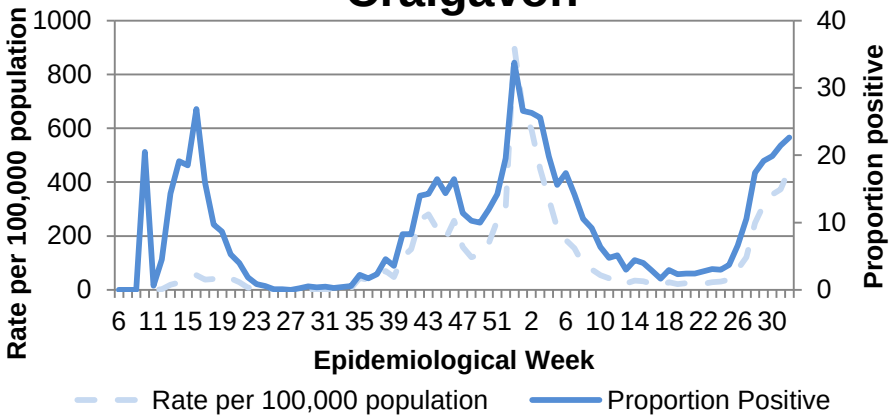
Antrim and Newtownabbey



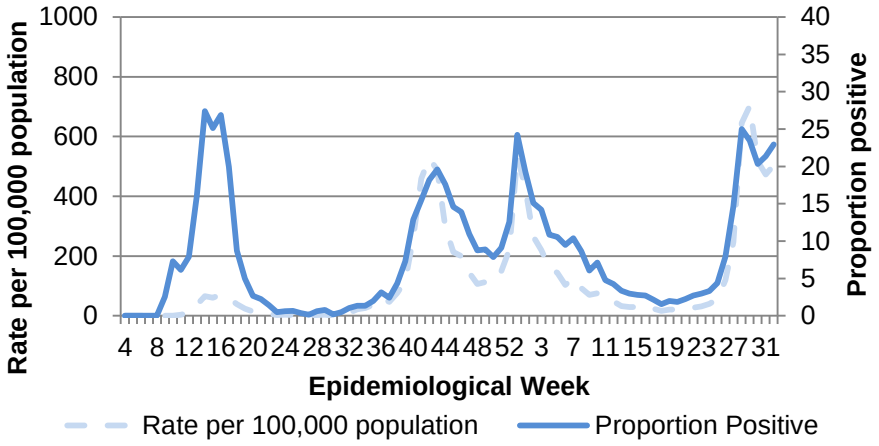
Ards and North Down



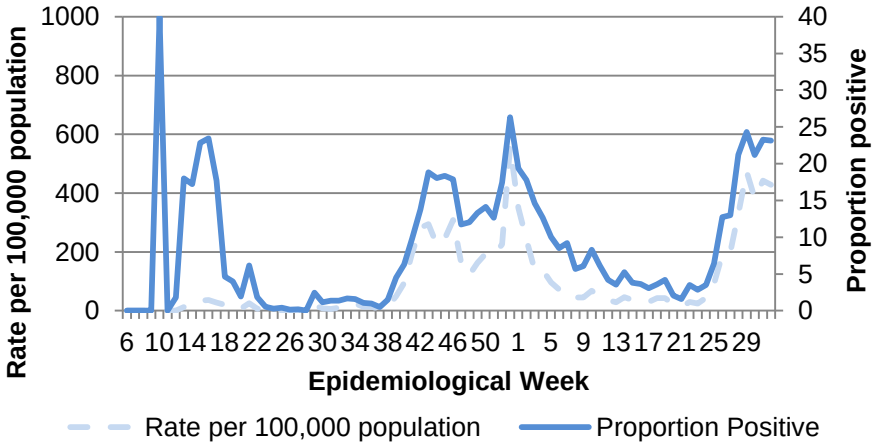
Armagh, Banbridge and Craigavon



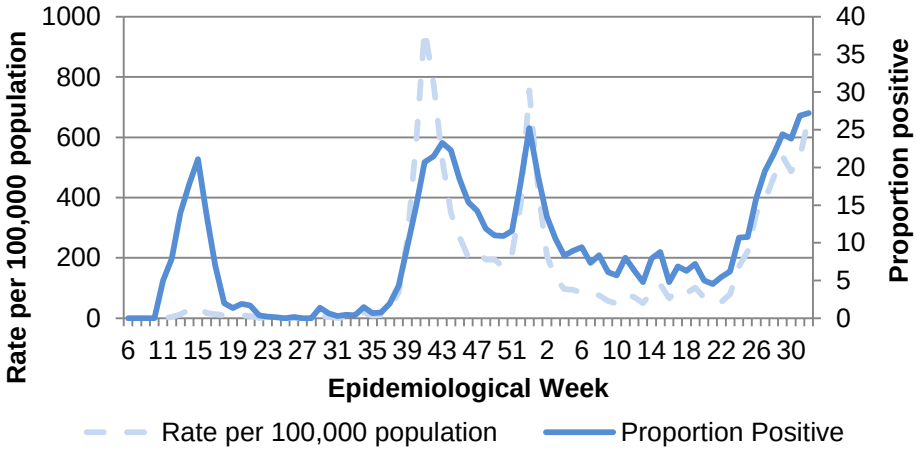
Belfast



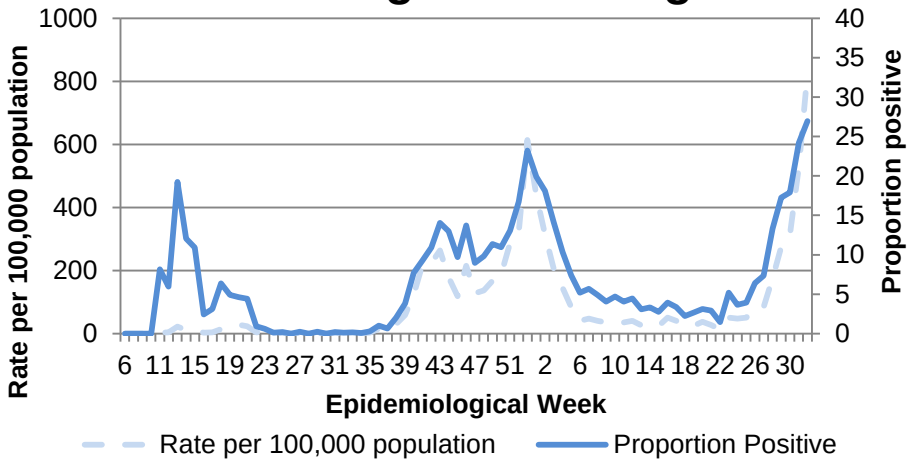
Causeway Coast and Glens



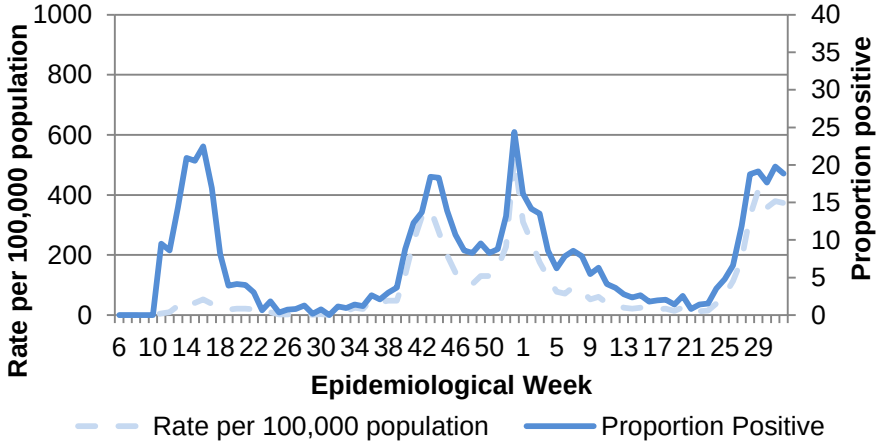
Derry and Strabane



Fermanagh and Omagh



Lisburn and Castlereagh



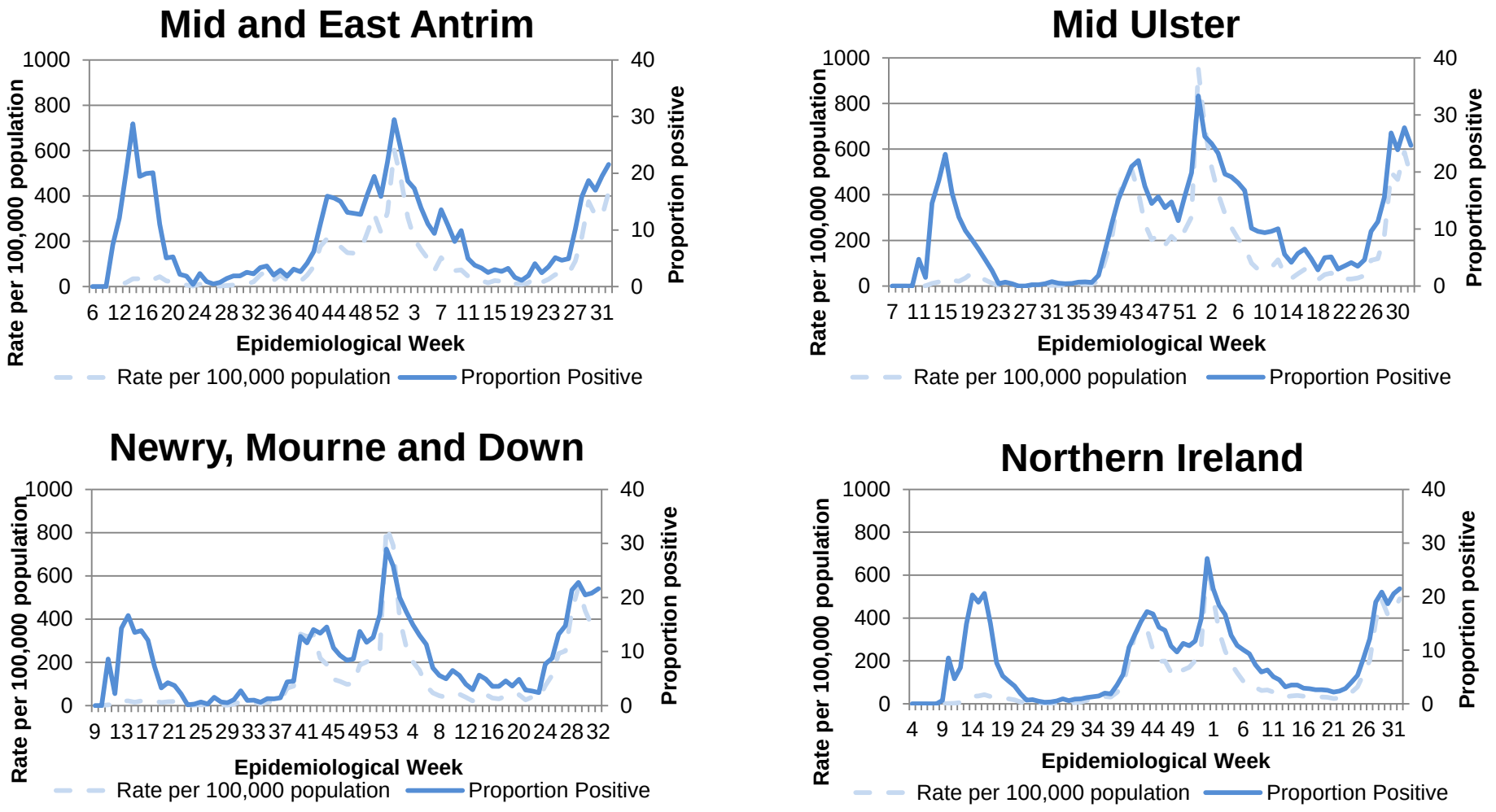


Figure 12. Weekly laboratory confirmed cases per 100,000 population and proportion positive, by Local Government District (LGD) and Northern Ireland, for all testing data combined, 2020-2021

The case rates decreased in Causeway Coast and Glens, Lisburn and Castlereagh and Mid Ulster in week 32 compared to week 31. All other areas saw an increase. Fermanagh and Omagh had the highest rate in week 32 compared to other Local Government Districts (825.8 per 100,000 population). The overall NI rate increased from 434.8 to 490.0 per 100,000 population between weeks 31 and 32.

The highest positivity occurred in Derry and Strabane (27.2%). NI's proportion positive in week 32 was 21.5%, an increase from 20.5% in week 31. 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

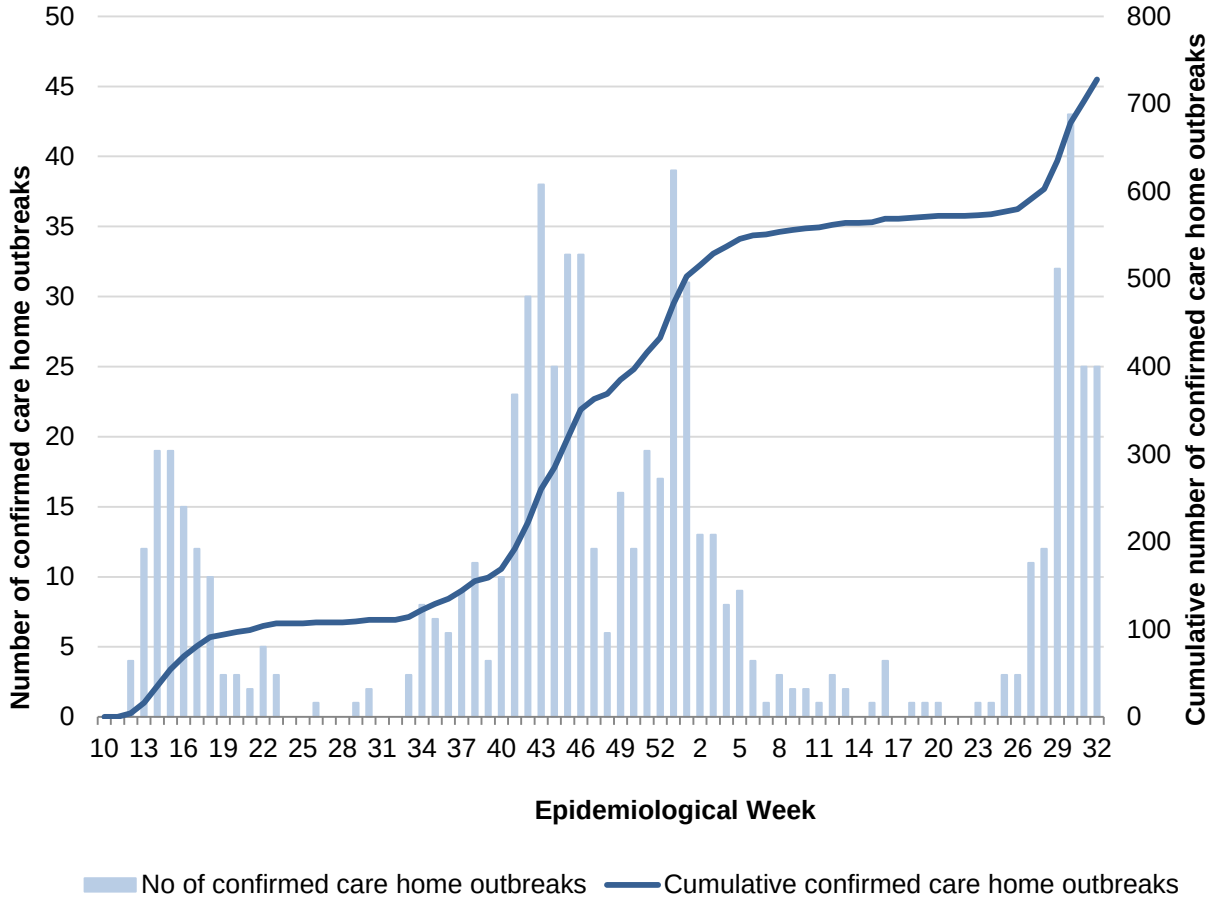


Figure 13. Confirmed COVID-19 care home outbreaks in Northern Ireland, 2020-21

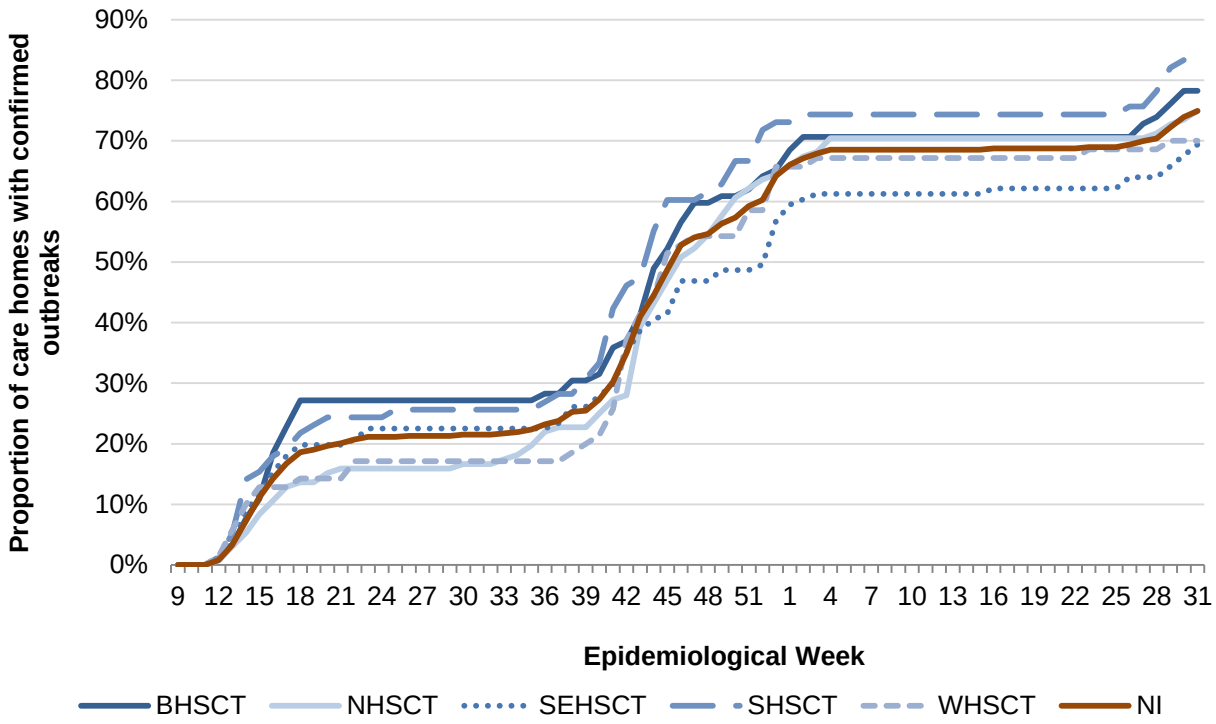


Figure 14. Proportion of care homes with confirmed COVID-19 in Northern Ireland by Trust area, 2020-21

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	72	78.3%	92
Northern	99	75.0%	132
South Eastern	78	70.3%	111
Southern	66	84.6%	78
Western	49	70.0%	70
Northern Ireland	364	75.4%	483

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

To week 32, a total of 728 confirmed COVID-19 care home outbreaks were reported, involving 364 care homes (75.4% of all NI care homes). The highest proportion of care homes with confirmed COVID-19 outbreaks (84.6%) were reported from the Southern Trust area.

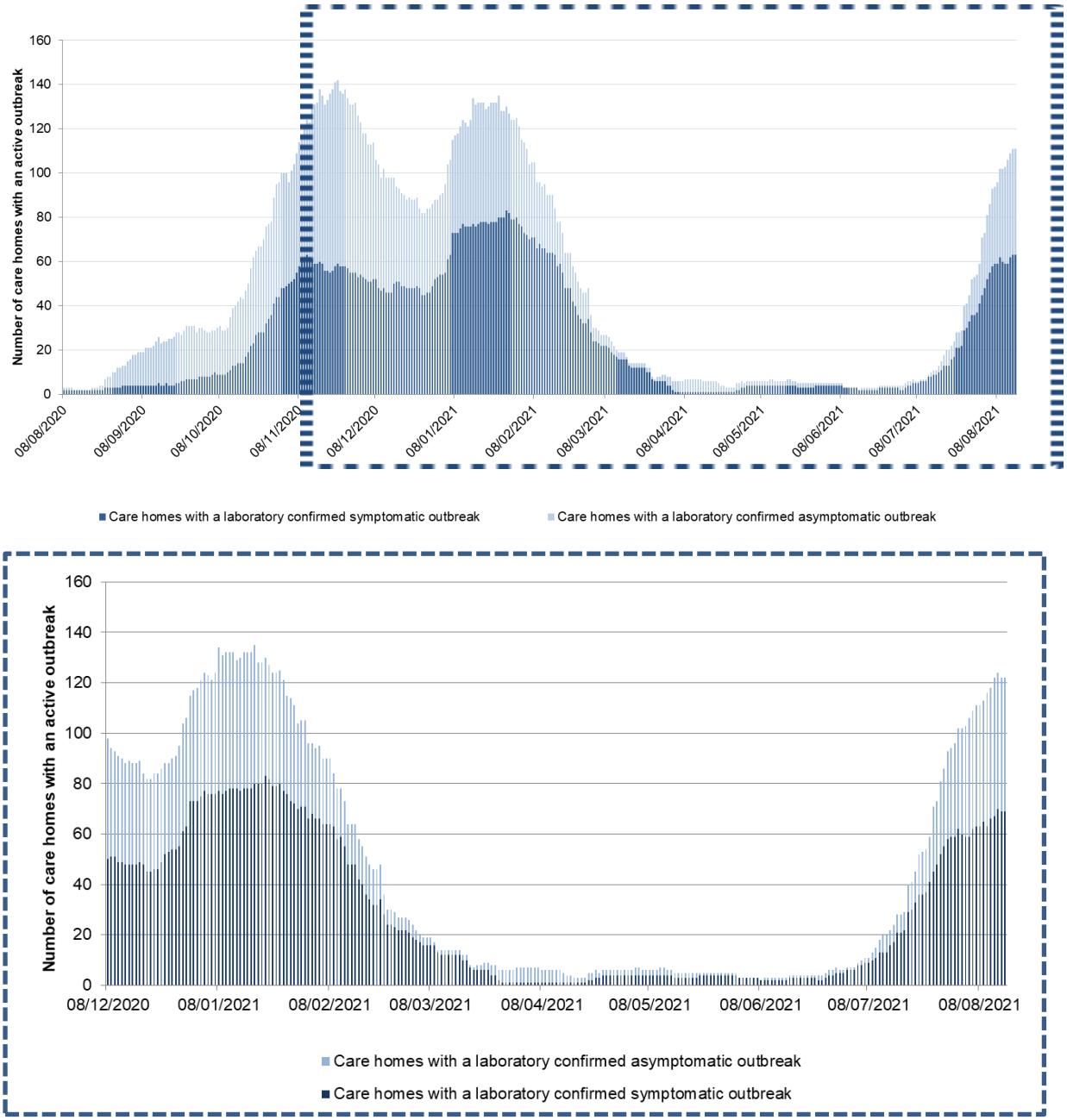


Figure 15. Number of care homes with a confirmed active symptomatic or asymptomatic COVID-19 outbreak[6] in Northern Ireland, 2020-21

Source: PHA Health Protection duty room reports from care homes

[6] PHA 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.

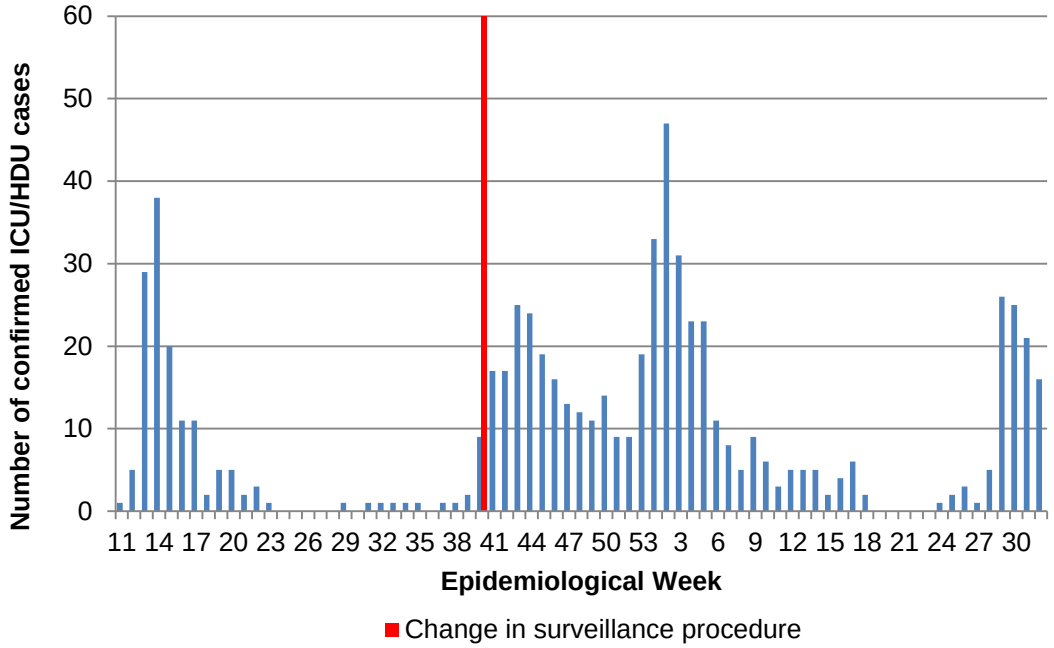
Sentinel testing

Table 4. COVID-19 activity in Northern Ireland Sentinel GP Practices*, week 32, 2021			
Period	**Individuals tested**	**Number positive**	**Proportion positive**
Current week	27	0	0%
Total	**1,321**	**45**	**3.4%**

**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

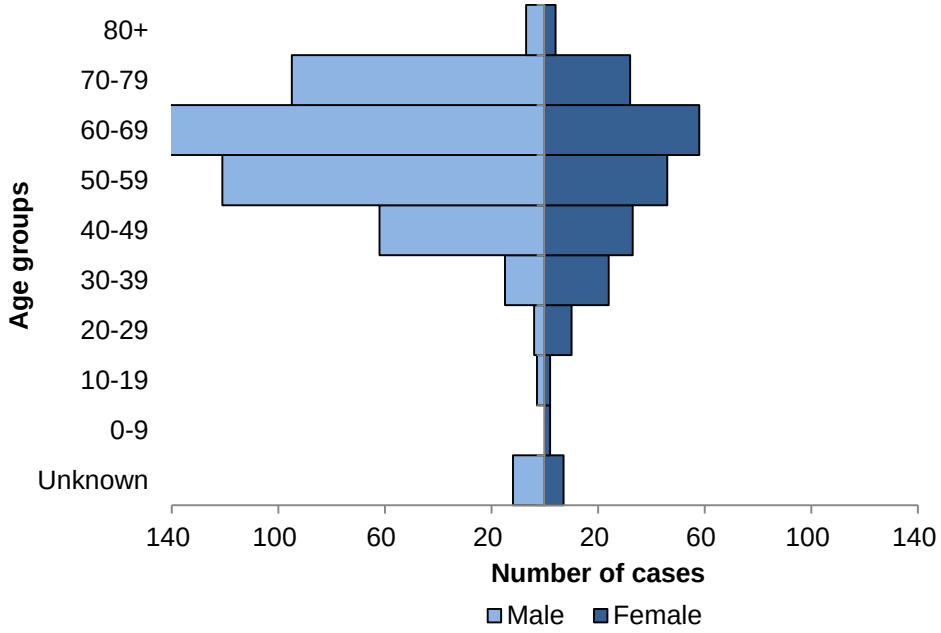


Figure 17. ICU/HDU COVID-19 cases, by age and sex, 2020-21

To week 32, there have been 685 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 685 individuals 67.2% (n=460) were male. The ages ranged from <1 year to 90 years, with a median age of 60 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 12 August 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 32.

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	143	5.5%
Primary	1,511	57.8%
Post Primary	789	30.2%
Special	169	6.5%
Total	2,612	

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	104	7.5%
	Primary	884	63.7%
	Post Primary	310	22.4%
	Special	89	6.4%
	All	1,387	
Cluster(2-5 cases)	Preschool	35	3.9%
	Primary	507	56.1%
	Post Primary	298	33.0%
	Special	64	7.1%
	All	904	
Cluster(>5 cases)	Preschool	4	1.2%
	Primary	120	37.4%
	Post Primary	181	56.4%
	Special	16	5.0%
	All	321	

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 32.

The 2,612 school incidents have occurred in 978 schools in NI. Overall 66.1% of schools have had at least one COVID-19 case in a pupil or member of staff.

Table 7. Number of Schools with a COVID-19 Incident

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	111	457	24.3%
Primary	643	791	81.3%
Post Primary	188	193	97.4%
Special	36	39	92.3%
Total	978	1,480	66.1%

**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 32 (15 August 2021).

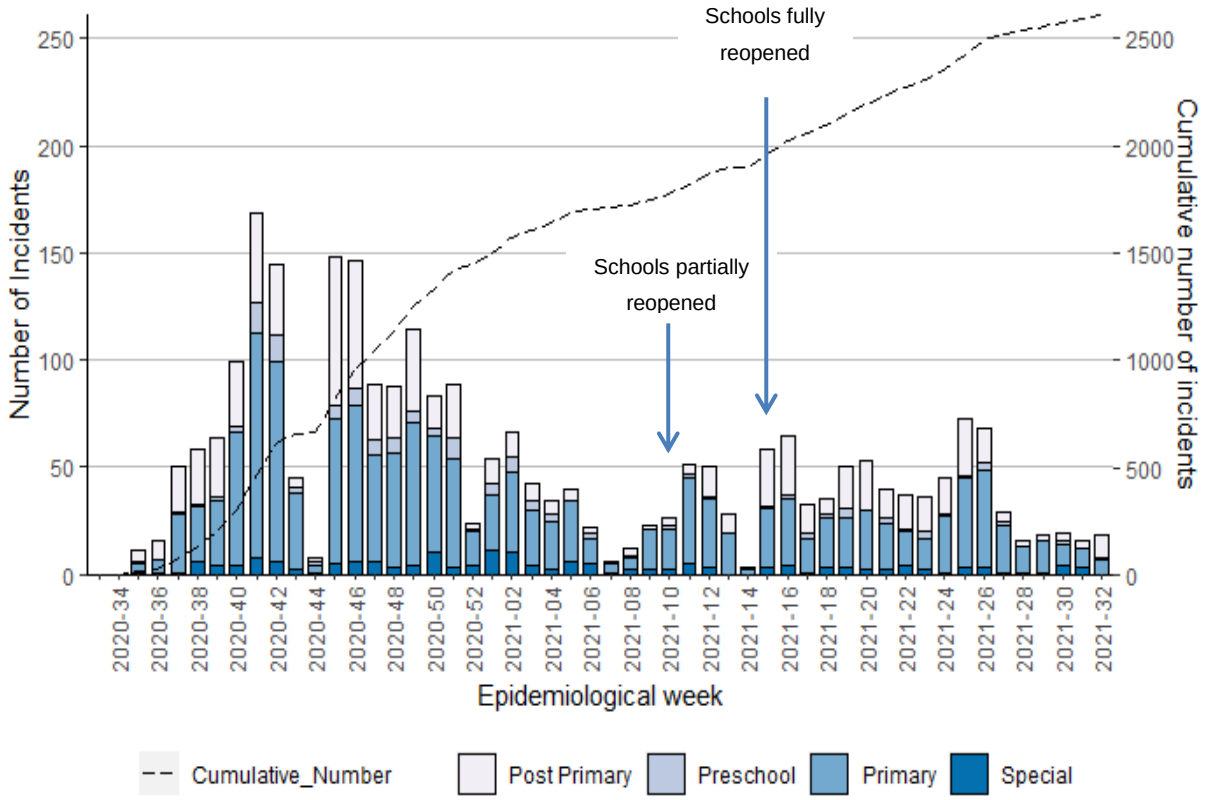


Figure 18. Number of COVID-19 incidents in schools, by school type, week 33 2020 – week 32 2021

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 32 (15 August 2021).

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

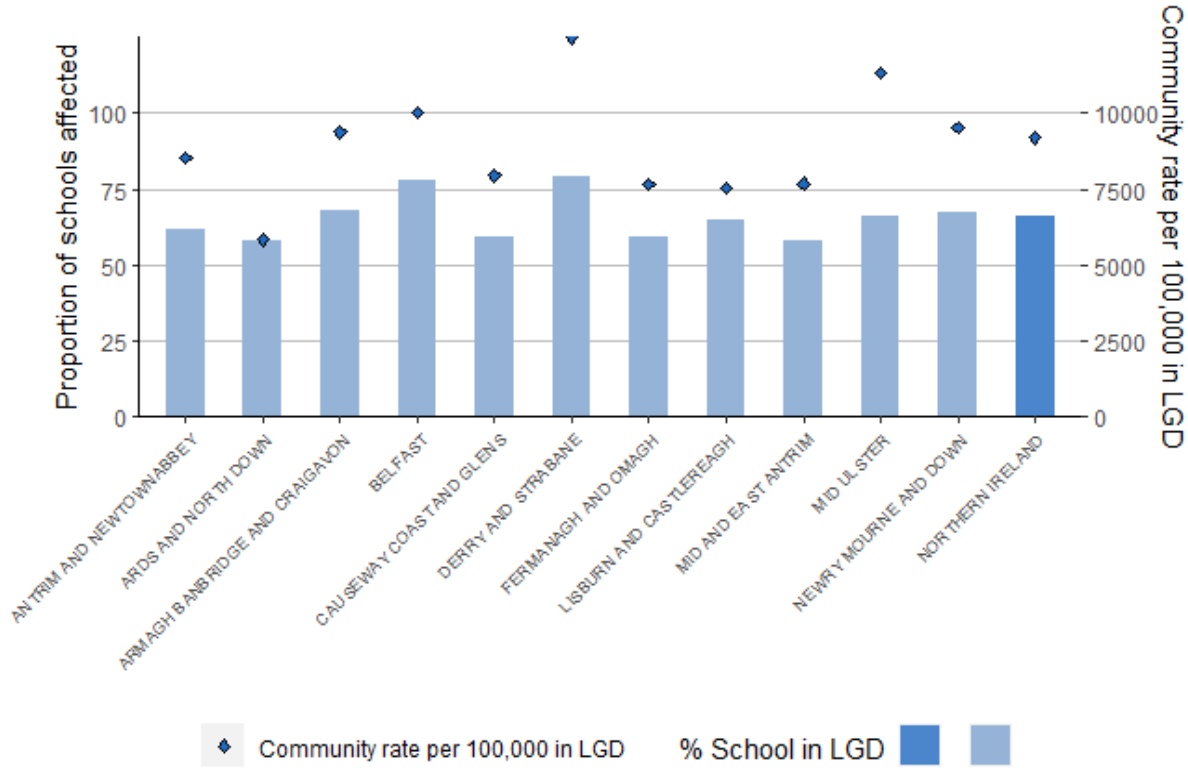


Figure 19. Proportion of schools with a COVID-19 incident and overall background community rate by 100,000 (2020-21) by Local Government District (LGD)

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 32 2021, there have been 7,866 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.

Table 8. Number of COVID-19 cases reported by schools where information is available on pupil / status, up to week 32

School Type	Pupil Case	Staff Case	Total	Proportion of all cases that are pupils
Preschool	106	125	231	45.9%
Primary	2,314	1,248	3,562	65.0%
Post Primary	2,925	739	3,664	79.8%
Special	141	268	409	34.5%
Total	5,486	2,380	7,866	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 32		
School Type	**Pupil Case**	**Proportion of all school aged pupils in Northern Ireland**
Preschool	**106**	**0.03%**
Primary	**2,314**	**0.67%**
Post Primary	**2,925**	**0.85%**
Special	**141**	**0.04%**
Total	**5,486**	**1.60%**

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

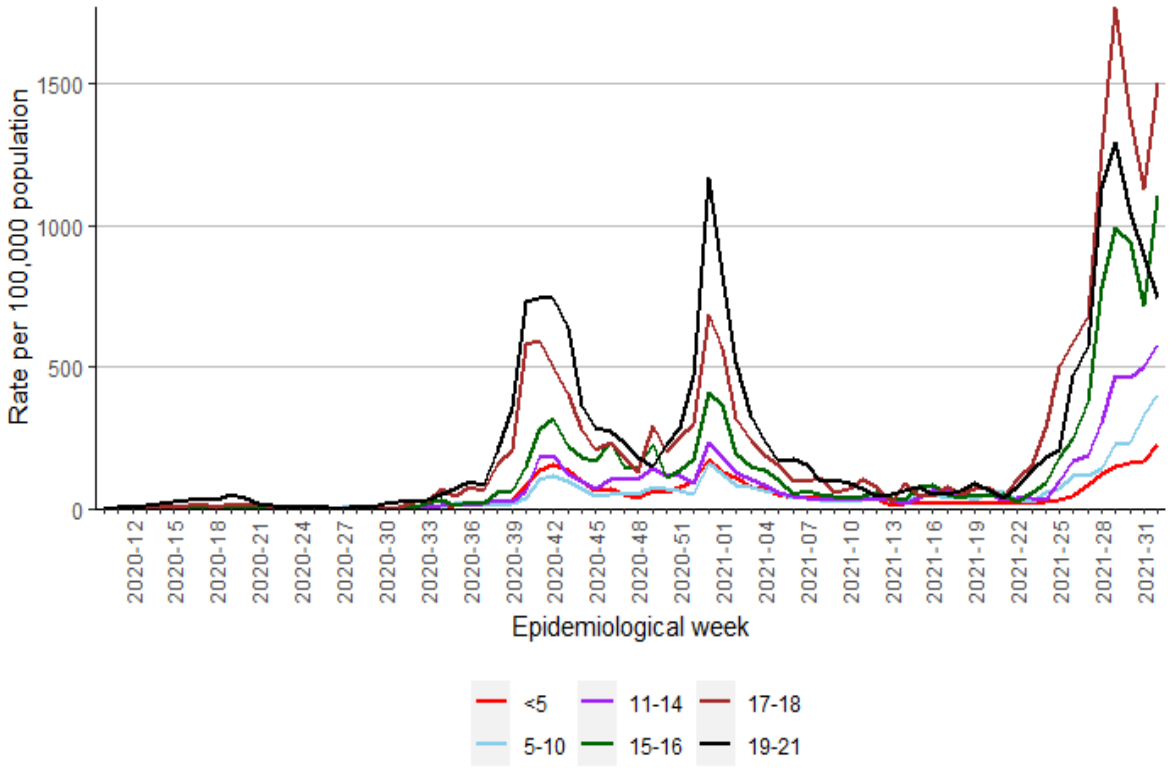


Figure 20. Weekly COVID-19 laboratory confirmed case rates per 100,000 population, by age group, for all testing data combined, in those aged 21 and under, 2020-21

Compared to week 31, in week 32 case rates increased in all age groups apart from the 19-21 age group which saw a decrease. The 17-18 age group had the highest case rates (1505.3 per 100,000), followed by the 15-16 age group (1106.1 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 06 August 2021, the proportion of COVID-19 deaths registered was 9.1%, and from 19 March 2020 to week ending 06 August 2021 the proportion of COVID-19 deaths registered was 12.7%.

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 06 August 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.

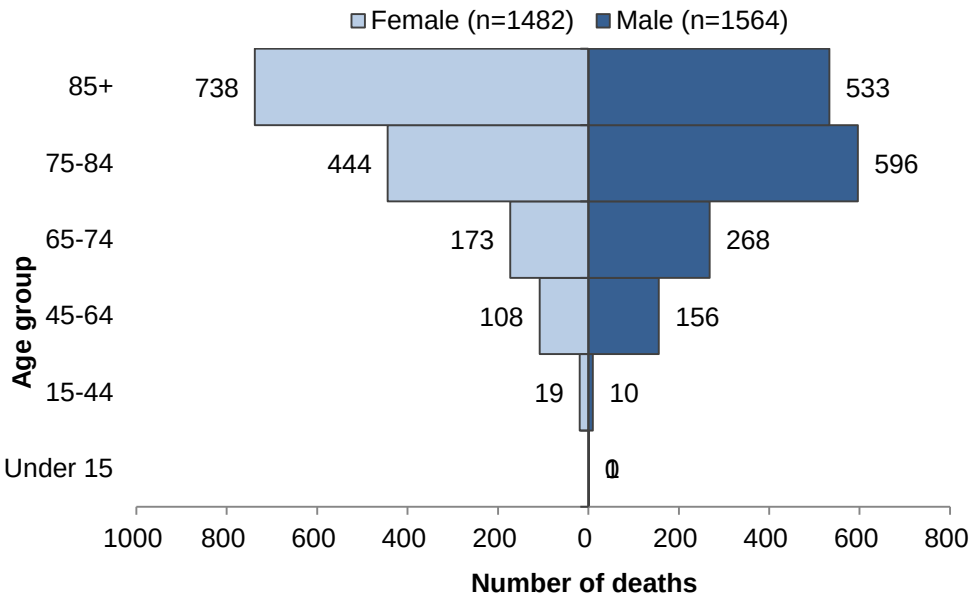
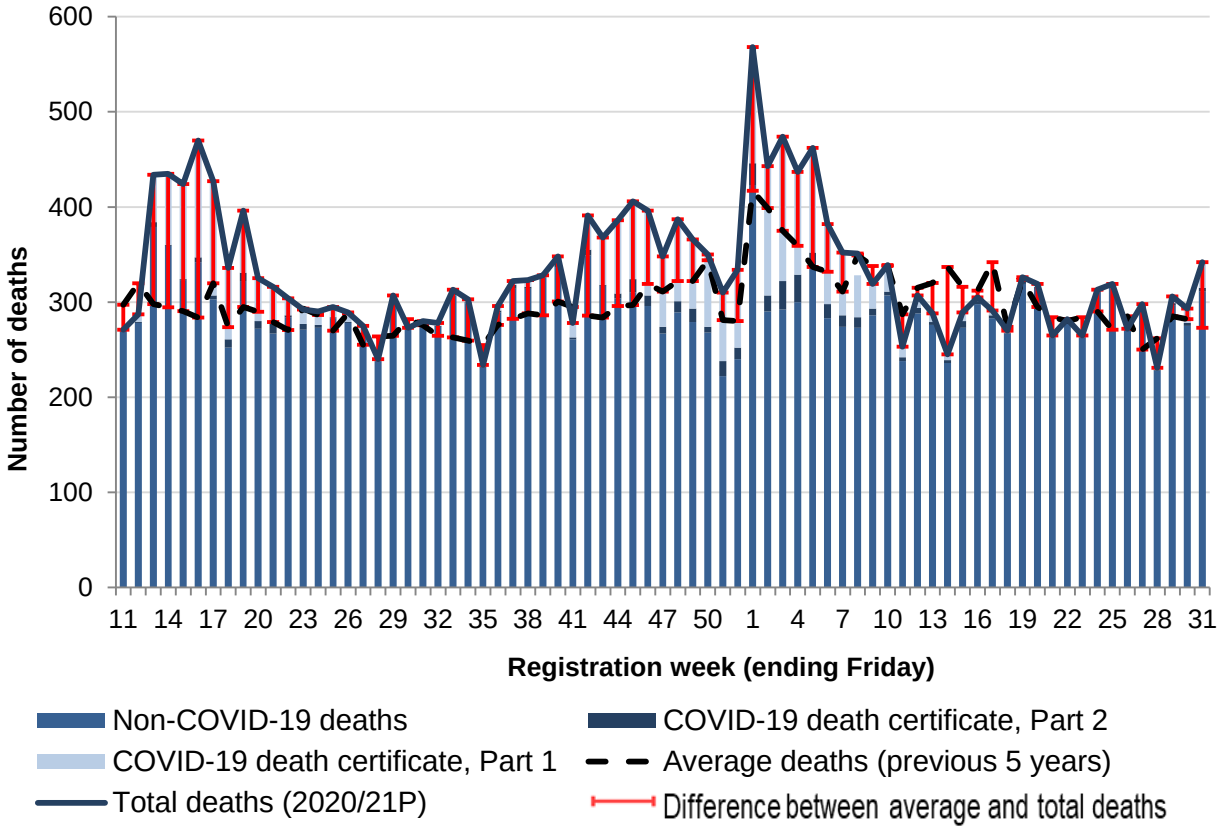


Figure 21. NISRA registered COVID-19 deaths by sex and age group, up to week ending 06 August 2021



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 31 (ending 06 August 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 31 (ending 06 August 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	27	28	29	30	31
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	2	2	7	15	27
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	1	1	2	3	4
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	295	228	297	275	311
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	250	262	285	282	273
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	298	231	306	293	342

Source: Northern Ireland Statistical Research Agency (NISRA)

All-cause excess deaths

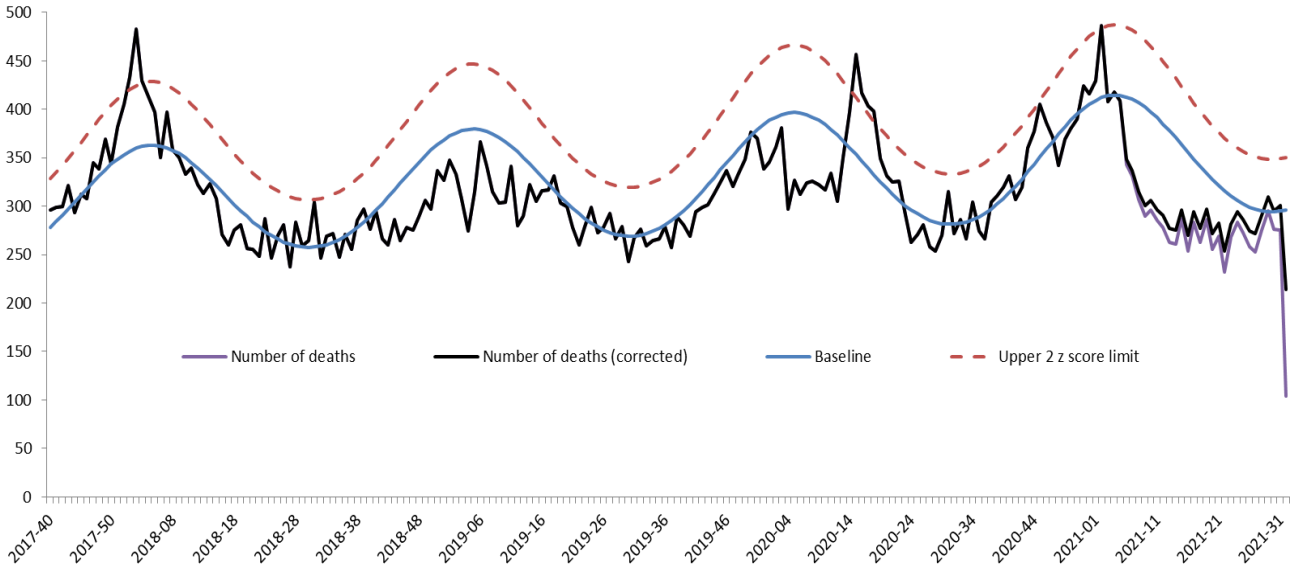
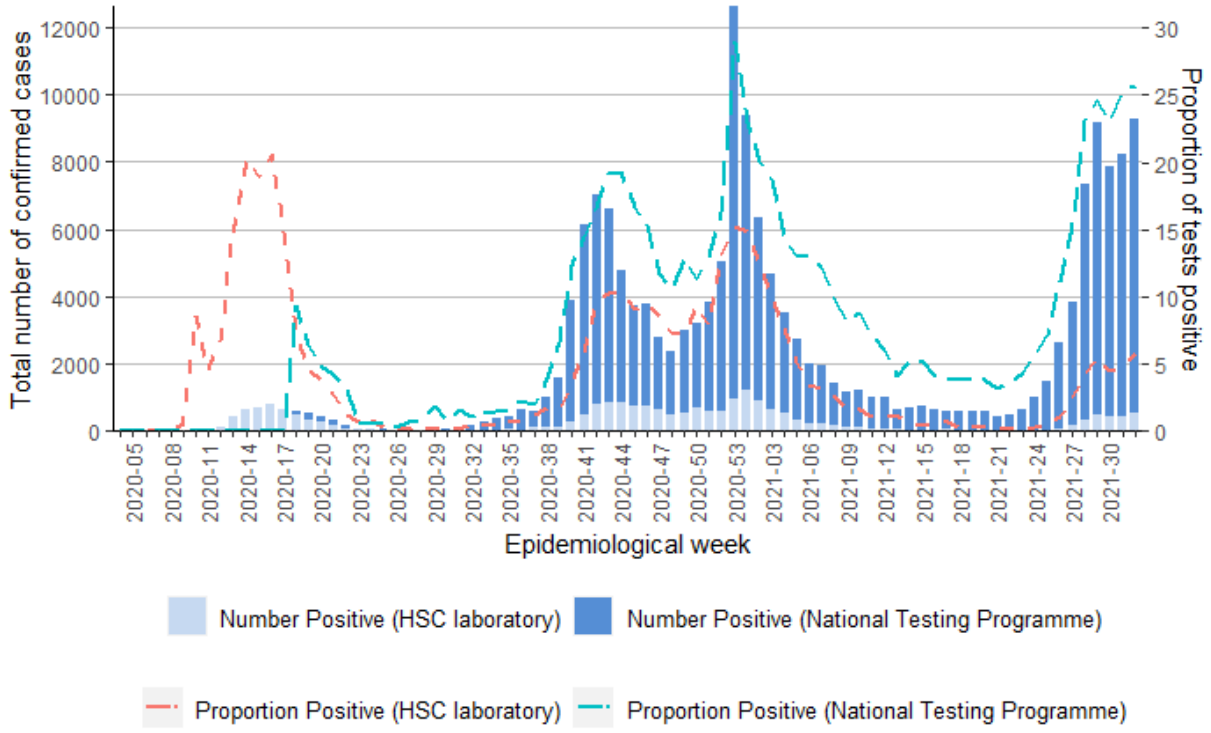


Figure 23. Weekly observed and expected number of all-cause deaths in all ages, week 40 2017 - week 32 2021

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 32, 2021			
Period	**Individuals tested**	**Number positive**	**Proportion positive**
Current week	43,248	9,288	21.5%
Total	**1,712,938**	**174,157**	**10.2%**

Table 12. COVID-19 activity in Northern Ireland (HSC laboratory), week 32, 2021			
Period	**Individuals tested**	**Number positive**	**Proportion positive**
Current week	9,083	528	5.8%
Total	**506,772**	**22,494**	**4.4%**

Table 13. COVID-19 activity in Northern Ireland (National Testing Programme), week 32, 2021			
Period	**Individuals tested**	**Number positive**	**Proportion positive**
Current week	34,165	8,760	25.6%
Total	**1,206,166**	**151,663**	**12.6%**

Source: HSC Trust laboratory reports and the National Testing Programme

To week 32, the total number of individuals tested was 1,712,938 and positivity was 10.2%. Overall, more individuals have now been tested as part of the National Testing Programme, and positivity is now higher (12.6%) compared to HSC laboratories (4.4%).

Global situation

As of 17 August, WHO has been notified of 207,784,507 confirmed cases of COVID-19, including 4,370,424 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 heath 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 ≥37.8°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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