



Introduction

COVID-19 is an illness that can affect your lungs and airways. It is caused by a type of virus called SARS-CoV-2 (coronavirus). This bulletin aims to provide a weekly update on the current situation relating to the virus in Northern Ireland. It presents high level data on key areas currently being used to monitor COVID-19 activity and highlights current issues and public health messages.

The data presented complements the current range of existing data available from other sources including the [PHA Monthly Epidemiological bulletin](#), [Department of Health COVID-19 Daily Dashboard](#) and [NISRA Deaths Registered Dashboard](#). It should be noted that the data included may be subject to change as systems are updated and comparisons with existing data sources may not be possible, for example, due to variations in data extraction and processing.

Key messages

The number of positive COVID-19 cases and clusters across Northern Ireland continues to rise in week 41 compared to the previous week and this increase is accompanied by increases in COVID-19 hospital admissions and intensive care cases.

Again, the highest rates are seen in Derry City and Strabane council area, where they are three times higher compared to the overall rate for Northern Ireland, followed by Belfast City and Mid Ulster council areas.

While the rates of positive cases continue to be highest among those aged 20-29 years, there is an indication that transmission of the virus is spreading among older age groups with rates of positive cases among those aged 50-69 years and 70+ years increasing by 75% and 89% respectively between week 40 and week 41.

[Further measures](#) will be introduced this week to slow down the increase in new positive cases. However, it is only with everyone's support that we can prevent the virus spreading. It's important to remember that you can spread the virus even if you don't have symptoms. Limiting your contact with others, self-isolating when advised, wearing face coverings where required and washing or sanitising your hands regularly will all help to prevent others becoming unwell.

Further information and advice is regularly updated and available from the [PHA website](#)

Incidence and prevalence

Estimated incidence (number of new cases in the seven days up to 11 October 2020)

The current incidence of positive laboratory cases is 324 per 100,000 of the Northern Ireland population (or 1 in 309 people)^{1,2}.

However, if we assume that there are 1.3 infected individuals for every laboratory confirmed case we know about, the estimated weekly incidence is 745 per 100,000 population (1 in 134)³.

Estimated prevalence

The prevalence of active cases, as of 11 October 2020, is estimated to be 647 per 100,000 population (1 in 154), assuming that 50% of cases experience no symptoms⁴; 381 per 100,000 population (1 in 263) if only 15% experience no symptoms⁵; and 1,619 per 100,000 population (1 in 62) if 80% experience no symptoms^{6,7,8}.

¹ Source: PHA Health Protection Directorate; 15 October 2020

² Rates calculated using 2019 Mid-Year Population Estimates for Northern Ireland <https://www.nisra.gov.uk/publications/2019-mid-year-population-estimates-northern-ireland>

³ Bohning D, Maruotti A, Rocchetti I, and Holling H. (2020). [Estimating the undetected infections in the Covid-19 outbreak by harnessing capture-recapture methods](#). International Journal of Infectious Diseases.

⁴ <https://hub.jhu.edu/2020/05/12/qiqi-gronvall-asymptomatic-spread-covid-19-immunity-passports/>

⁵ Mizumoto K, Kagaya K, Zarebski A, Chowell G. Estimating the asymptomatic proportion of coronavirus disease 2019 (COVID-19) cases on board the Diamond Princess cruise ship, Yokohama, Japan, 2020. Eurosurveillance. 2020;25(10):2000180.

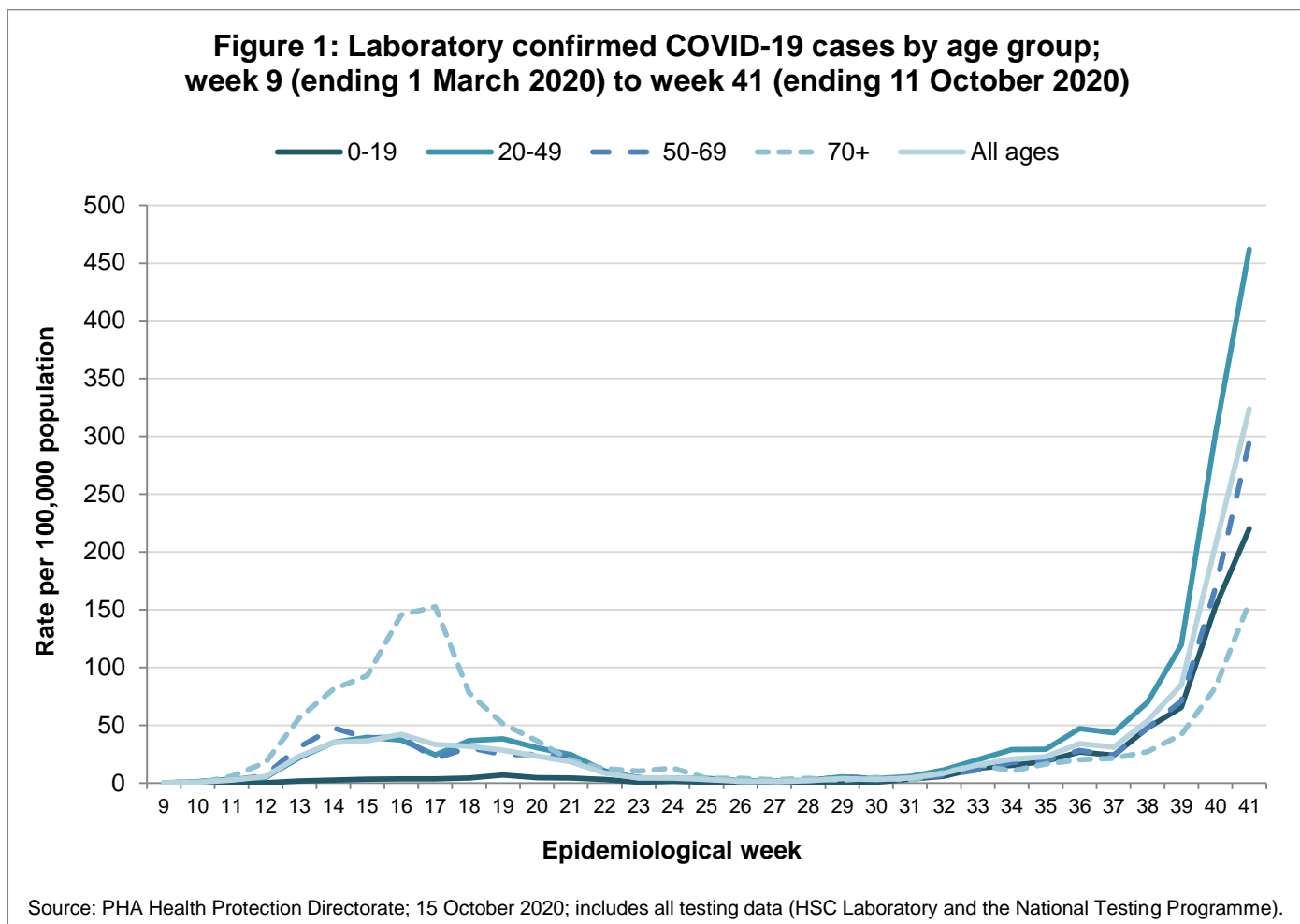
⁶ Lavezzo E, Franchin E, Ciavarella C, Cuomo-Dannenburg G, Barzon L, Del Vecchio C, Rossi L, Manganelli R, Loregian A, Navarin N, Abate D. Suppression of a SARS-CoV-2 outbreak in the Italian municipality of Vo'. Nature. 2020;30:1-5.

⁷ Day M. Covid-19: four fifths of cases are asymptomatic, China figures indicate. BMJ, 2020.

⁸ Ing AJ, Cocks C, Green JP. COVID-19: in the footsteps of Ernest Shackleton. BMJ Thorax. 2020.

COVID-19 testing by age group

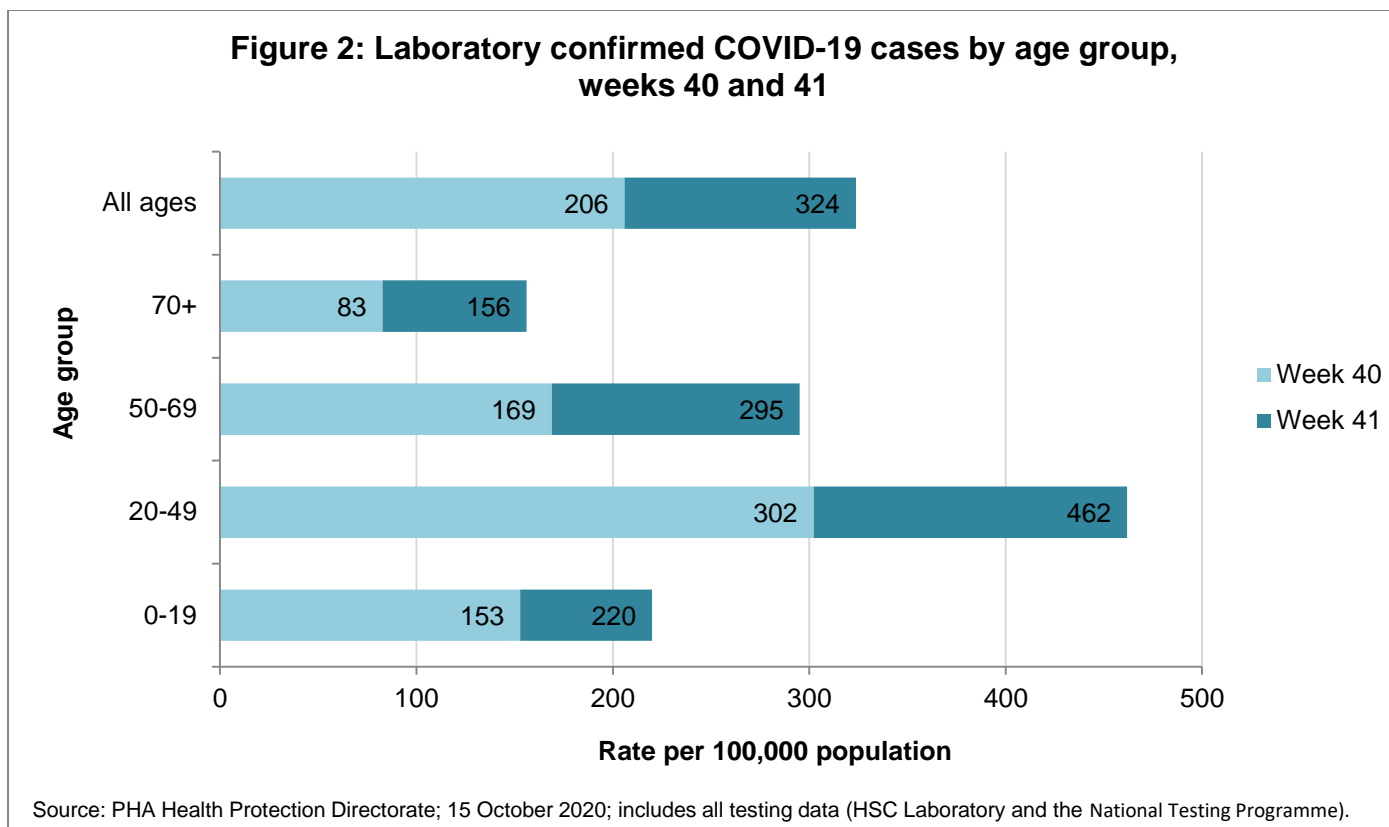
Figure 1 shows the trend in rates (per 100,000 population) of laboratory confirmed COVID-19 cases by age group and epidemiological week⁹ from week 9 (ending 1 March 2020) to week 41 (ending 11 October 2020).



Comment: The number of new laboratory confirmed COVID-19 cases continues to increase in week 41 (ending 11 October 2020). The highest rates are observed in the 20-49 year age group (462 per 100,000 population) followed by those aged 50-69 years (295 per 100,000 population), 0-19 years (220 per 100,000 population) and 70+ years (156 per 100,000 population).

⁹ Epidemiological week is a standardised method of counting weeks [Monday–Sunday] to allow for the comparison of data from year to year.

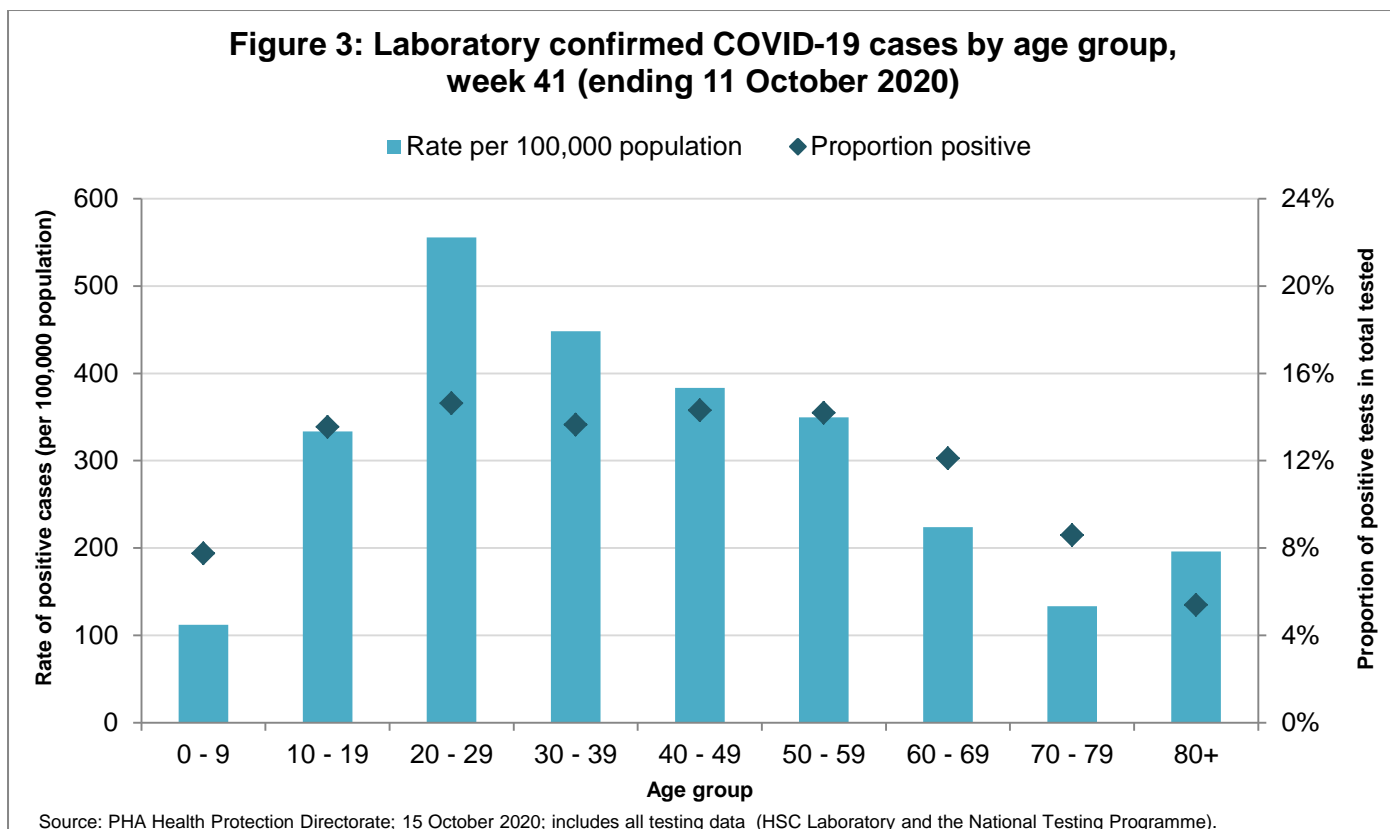
Figure 2 shows the rates of new laboratory confirmed COVID-19 cases by age group with a focus on weeks 40 (ending 4 October 2020) and 41 (ending 11 October 2020).



Comment: Between weeks 40 and 41 the rate of positive cases across Northern Ireland increased by 57% from 206 per 100,000 population to 324 per 100,000 population. Increasing rates were observed for all age groups with the largest increase for the 20-49 year age group, from 302 per 100,000 population to 462 per 100,000 population (a proportional increase of 53%).

However, while the rate of positive cases continues to be lower among the 70+ year age group, this increased by 89% from 83 per 100,000 population to 156 per 100,000 population.

Figure 3 provides further detail on rates of laboratory confirmed COVID-19 cases in week 41 (ending 11 October 2020) by ten year age group intervals.



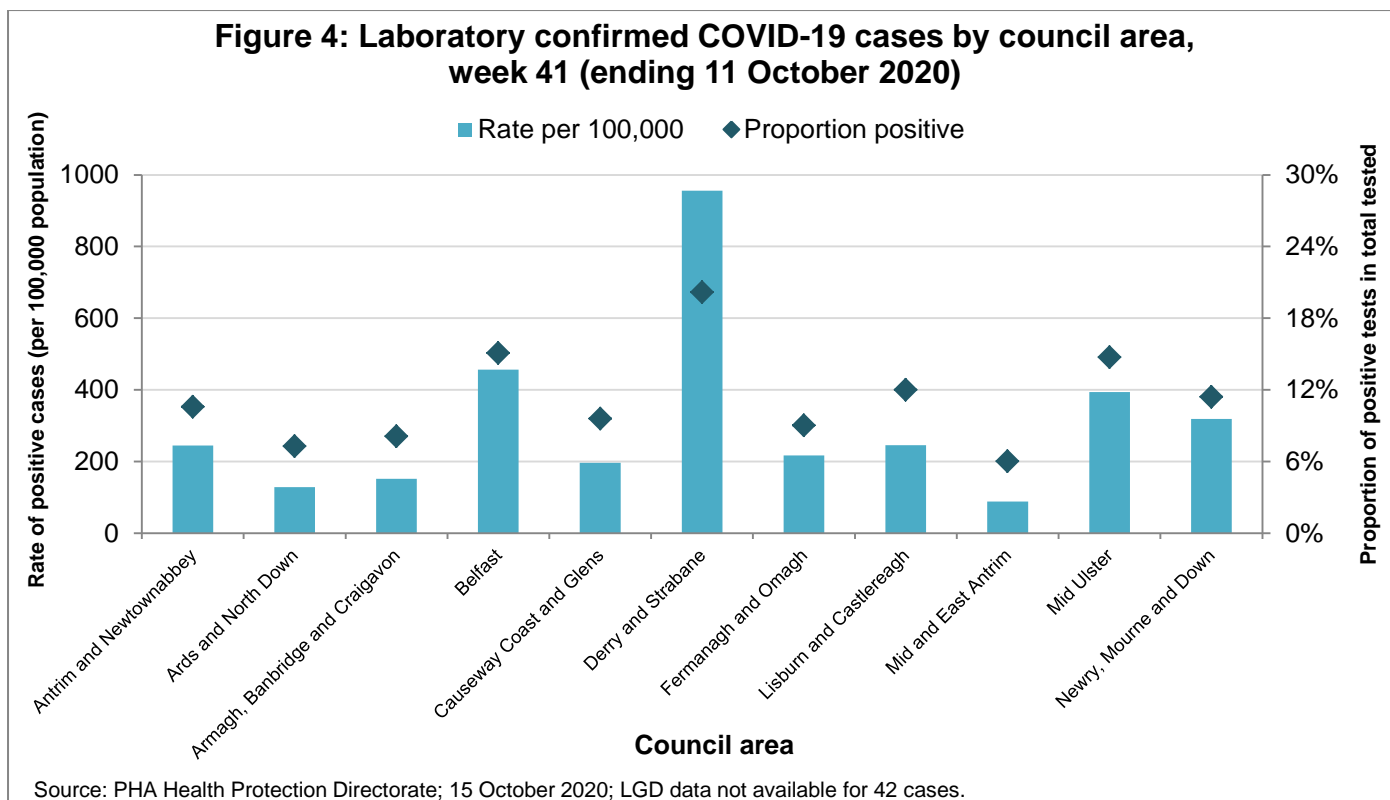
Comment: In week 41 (ending 11 October 2020) the highest rate of new COVID-19 cases was again seen in the 20-29 year age group (556 per 100,000 population), followed by the 30-39 (448 per 100,000 population) and 40-49 (383 per 100,000 population) year age groups.

Compared to week 40 (ending 4 October 2020), in week 41 the greatest increases in rates were seen in the 30-39 year (from 278 per 100,000 population to 448 per 100,000 population), 20-29 year (from 401 per 100,000 population to 556 per 100,000 population) and 40-49 year (from 230 per 100,000 population to 383 per 100,000 population) age groups.

However, proportionally the largest increase was in the 80+ year age group where rates, while lower, more than doubled from 86 per 100,000 population to 196 per 100,000 population (a 129% increase).

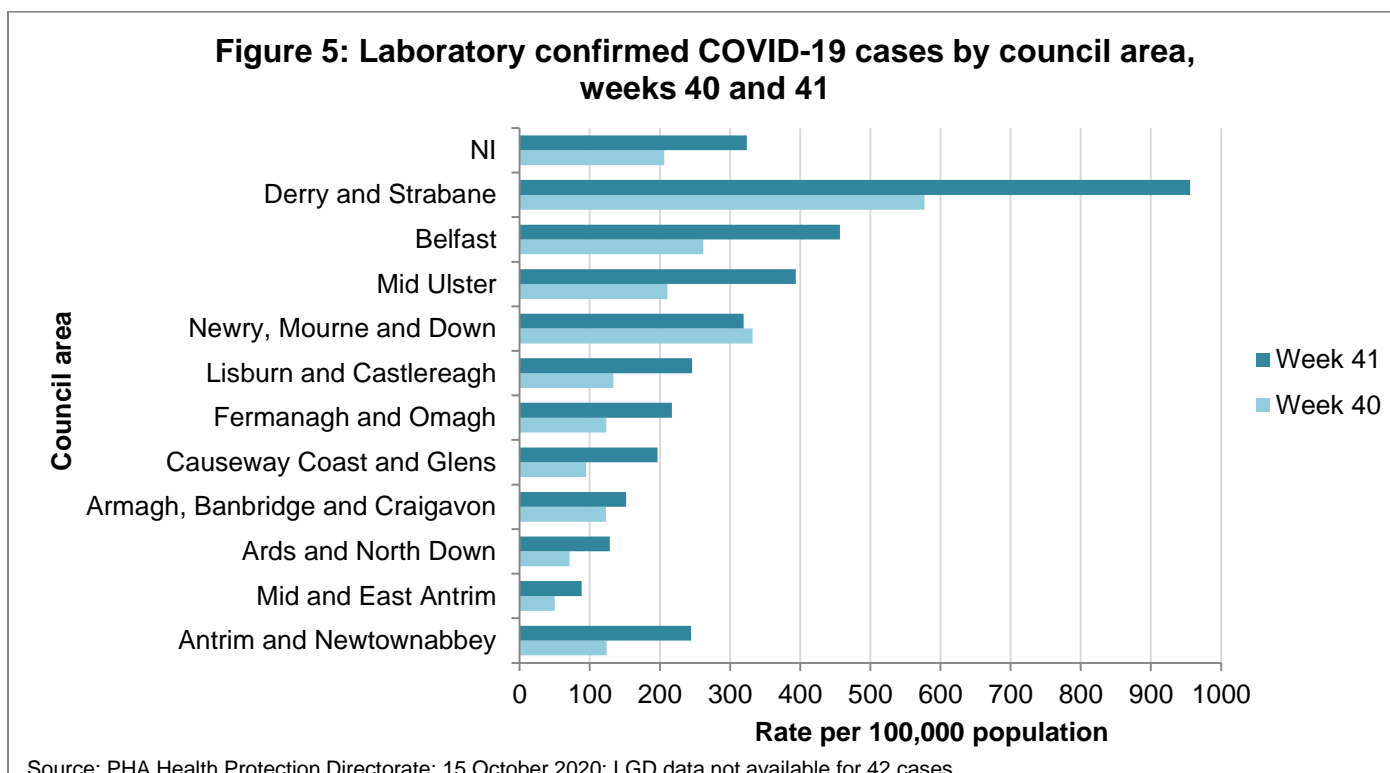
The proportion of positive tests for Northern Ireland in week 41 was 12.7%, with a range of 5.4% to 14.6% across all age groups.

COVID-19 testing by council area



Comment: In week 41 (ending 11 October 2020) the rates of laboratory confirmed COVID-19 cases varied from 88 per 100,000 population in Mid and East Antrim council area, up to 956 per 100,000 population in Derry and Strabane council area. The proportion of positive tests ranged from 6.0% in Mid and East Antrim council area to 20.2% in Derry and Strabane council area.

Figure 5 shows the rates of new laboratory confirmed COVID-19 cases by council area in weeks 40 and 41.

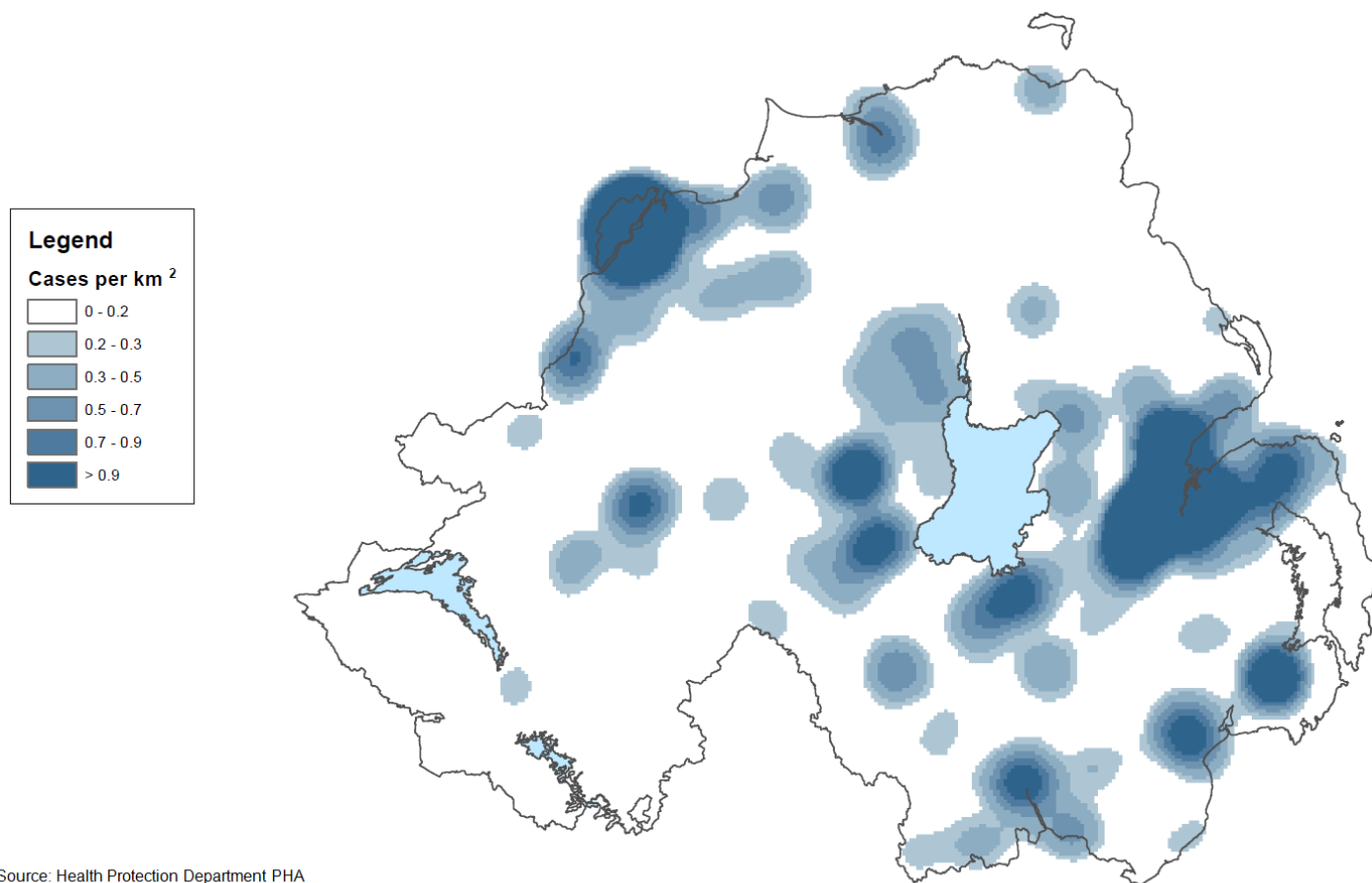


Comment: Between week 40 (ending 4 October 2020) and week 41 (ending 11 October 2020) the rate of new COVID-19 cases across Northern Ireland increased from 206 per 100,000 population to 324 per 100,000 population.

The largest increase in rates were seen in Derry and Strabane (from 577 per 100,000 population to 956 per 100,000 population), Belfast (from 262 per 100,000 population to 457 per 100,000 population) and Mid Ulster (from 211 per 100,000 population to 394 per 100,000 population) council areas. However, while the overall rates were lower, proportionally large increases were seen in other council areas, for example, Causeway Coast and Glens and Antrim and Newtownabbey where the rates increased by 108% and 97% respectively. The rate of new COVID-19 cases decreased in Newry, Mourne and Down council area by 4%.

Figure 6 shows a contour density map based on the number of confirmed COVID-19 cases in week 41 (ending 11 October 2020). The contour lines on the map indicate increasing density of cases, with the darkest shade of blue indicating where there is the greatest density of cases.

Figure 6: Density map of confirmed COVID-19 cases for the week ending 11 October 2020



Source: Health Protection Department PHA
Produced on behalf of Health Intelligence PHA (14/10/2020)
Reproduced with the permission of Land and Property Services under delegated authority from
the Controller of Her Majesty's Stationery Office. © Crown copyright and database rights NIMA ES&LA 210.4.

From data extracted on 14th October 2020

Note: The scale used for mapping may be adjusted in line with disclosure control and may not be directly comparable with previous weeks.

Comment: In line with the increasing number of positive cases, the map indicates ten areas with a density of COVID-19 cases greater than 0.9 per square kilometre in week 41 (ending 11 October 2020). However, information should be interpreted with caution as identified rates are based on testing which is not evenly spread across the region.

Clusters

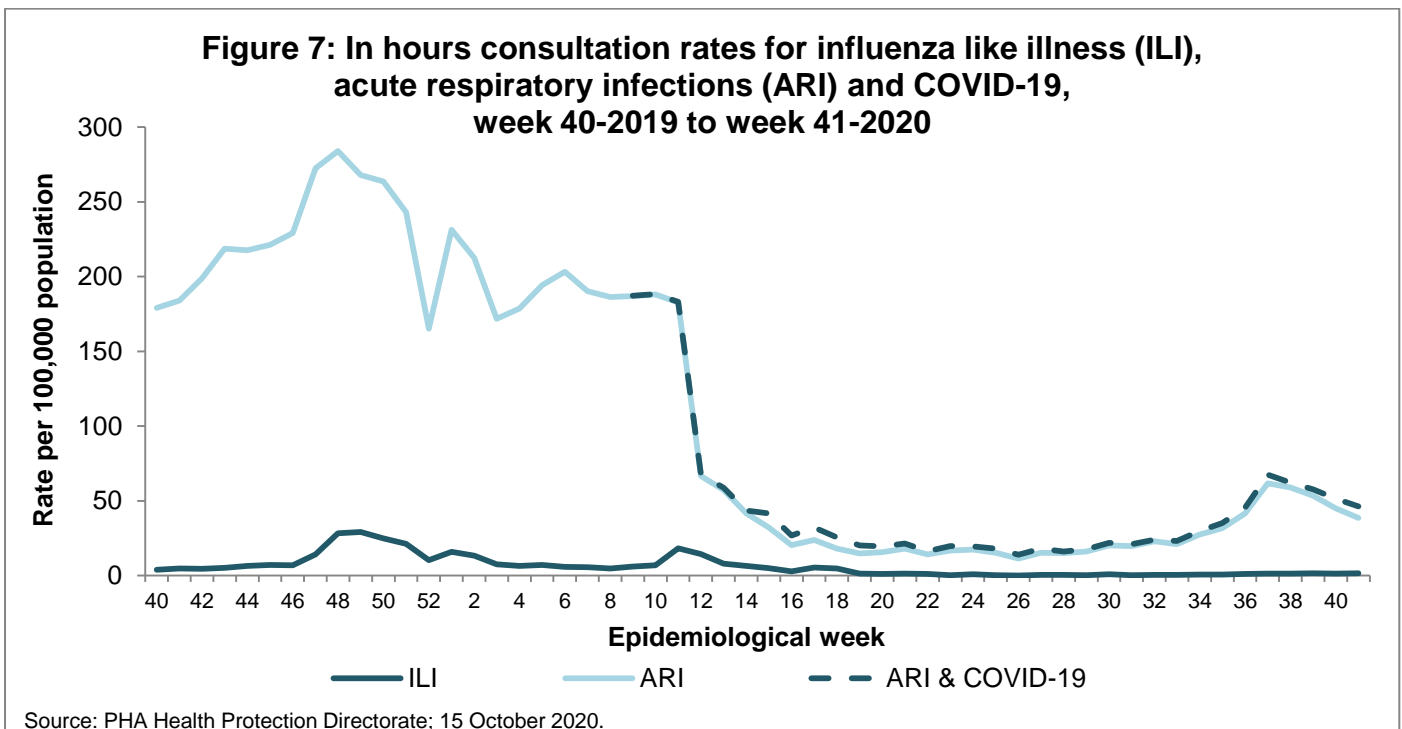
Definition: A cluster is currently defined as two or more laboratory confirmed cases of COVID-19 among individuals associated with a key setting, who have illness onset dates within a 14 day period. Key settings in which clusters have occurred include: workplaces, retail, hospitality and leisure premises¹⁰.

Comment: Since 6 October 2020 there have been 100 new clusters recorded (up to 12.00pm on 13 October 2020).^{11,12,13}

In total, up to 13 October 2020, 316 clusters have been identified. Of these, 44 clusters with greater than five people have been identified in the following council areas:

Belfast (n=12), Newry, Mourne and Down (n=9), Mid and East Antrim (n=4), Mid Ulster (n=4), Antrim and Newtownabbey (n=3), Armagh City, Banbridge and Craigavon (n=3), Derry City and Strabane (n=3), Fermanagh and Omagh (n=2), Lisburn and Castlereagh (n=2), Ards and North Down (n=1) and Causeway Coast and Glens (n=1). In addition, there have been 272 clusters across Northern Ireland with fewer than five people.

Primary Care



Comment: In week 41 (ending 11 October 2020) the rate of consultations for ARI & COVID-19 was 46 per 100,000 population, a slight decrease compared to week 40 (51 per 100,000 population).

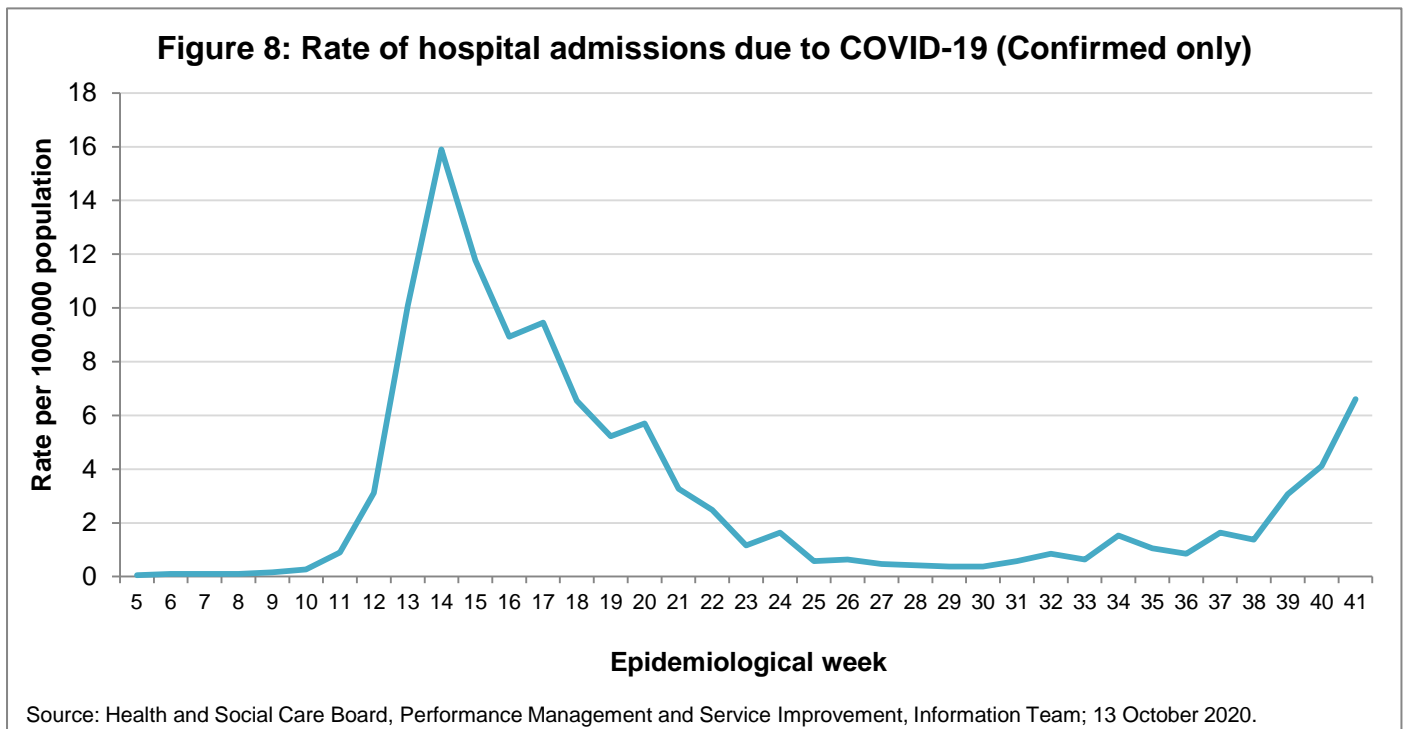
¹⁰ COVID-19 transmission is most common in household settings and the number of affected households is not reported. Data also exclude Trust, educational settings and nursing homes.

¹¹ The reporting period for cluster information has changed and information will now be reported weekly on Tuesday.

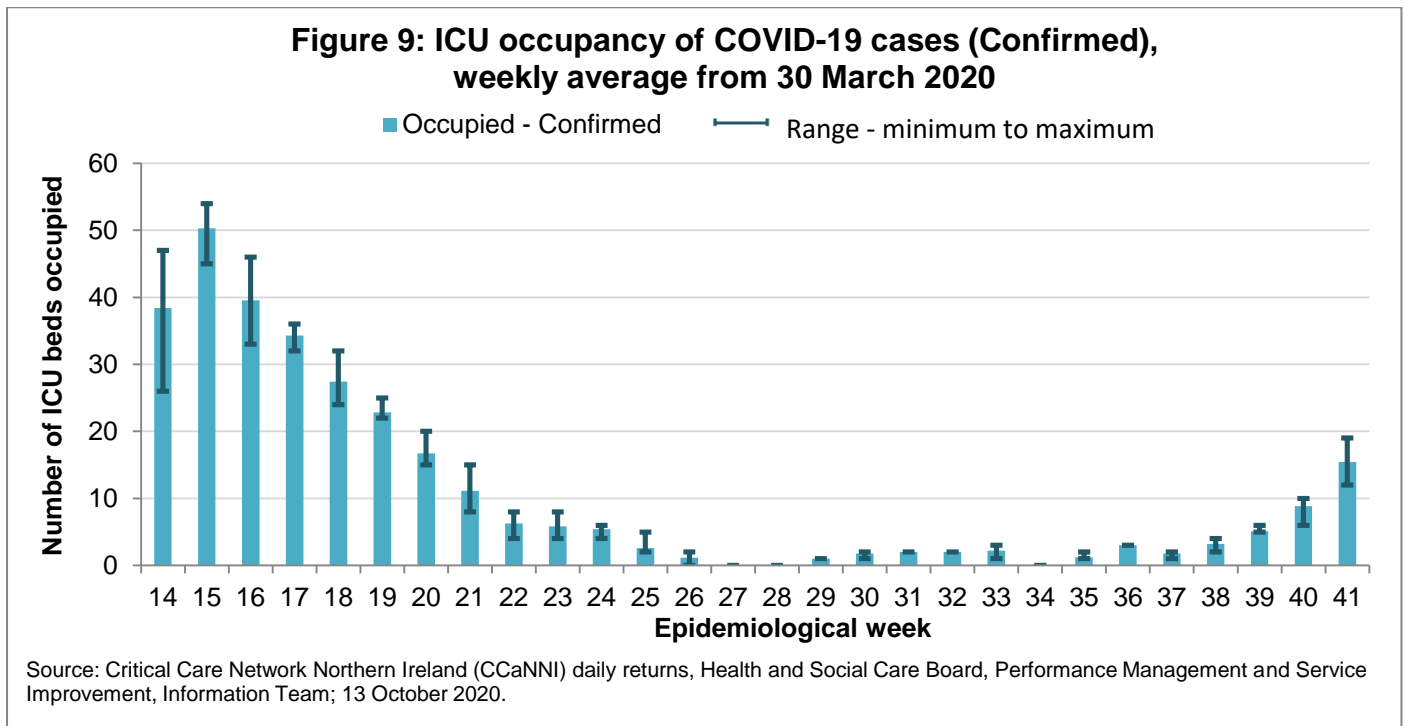
¹² Number of all clusters (open and closed) that have been recorded by the contact tracing service up to 12.00pm Tuesday 13 October 2020. Note: the reporting period for cluster data is slightly different to the remainder of the report in order to provide the most up to date cluster information at the time of the bulletin. Some clusters may overlap (larger clusters may contain or overlap with several smaller clusters).

¹³ 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.

Secondary Care



Comment: In week 41 (ending 11 October 2020) the rate of confirmed hospital admissions for COVID-19 was 6.6 per 100,000 population, an increase from 4.1 per 100,000 in the previous week. The increasing trend in confirmed hospital admissions for COVID-19 may be expected to continue as positive COVID-19 cases continue to increase.



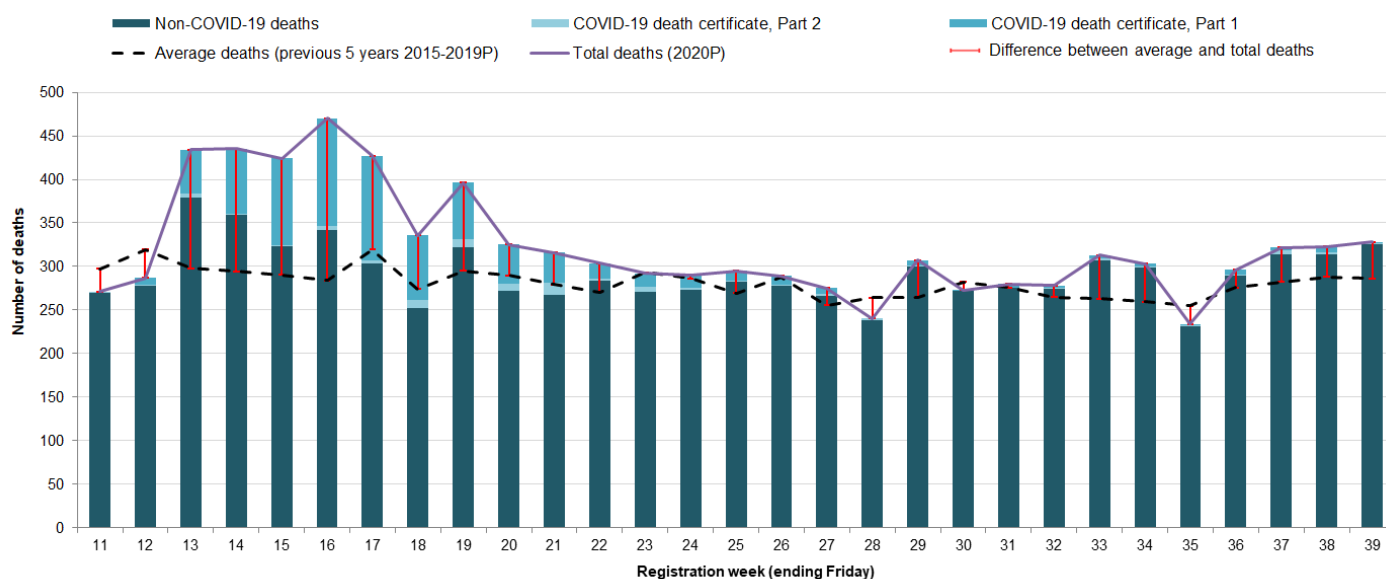
Comment: On the 11 October 2020 there were 19 confirmed COVID-19 cases in ICU. During week 41 (ending 11 October 2020) the average ICU occupancy for COVID-19 confirmed cases was 15, and ranged from 12 to 19 during this time. The increasing trend in ICU cases may be expected to continue with increasing hospital admissions for COVID-19.

Mortality surveillance

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

The Northern Ireland Statistics and Research Agency (NISRA) provide a [weekly update](#) on the number of **registered respiratory and COVID-19 associated deaths each Friday**. Figure 10 highlights the total weekly number of deaths registered¹⁴ in Northern Ireland since week 11 (ending 20 March 2020) and compares these to the average number of deaths registered in the corresponding week for the five year period 2015-2019¹⁵. It also highlights the weekly breakdown of registered deaths that were non-COVID-19 related and those associated with COVID-19.¹⁶

Figure 10: Northern Ireland registered deaths[^], including COVID-19 associated deaths, Week 11 (ending 20 March 2020) to Week 39 (ending 2 October 2020)



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
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
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
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
Average deaths (previous 5 years 2015-2019P)	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
Total deaths (2020P)	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

Source: NISRA; Figures relate to all deaths registered up to 2 October 2020 with a mention of COVID on the death certificate; P Weekly published data are provisional; ^ This data is based on registrations of deaths, not occurrences. The majority of deaths are registered within five days in Northern Ireland. Please note: Where COVID is mentioned in part 1 it may not be the underlying cause of death. NISRA quarterly statistics provide detail of underlying cause following coding to ICD-10 rules; figures are available up to Q1 at <https://www.nisra.gov.uk/statistics/registrars-general-quarterly-report/registrars-general-quarterly-tables> and Q2 were published on 17 September 2020.

Comment: In week 39 (ending 2 October 2020), two COVID-19 related deaths were registered, a decrease of seven from the previous week. From week 11 (ending 20 March 2020) to week 39 there have been 902 deaths associated with COVID-19. Over the same period 1,199 ‘excess deaths’ (ie deaths above the average for the corresponding weeks in previous years) have been registered in Northern Ireland.

From the beginning of 2020 to 2 October 2020 the proportion of COVID-19 deaths registered was 7% of the total number of registered deaths; one quarter (24.7%; 902/3,646) of respiratory¹⁷ deaths registered have been associated with COVID-19.

¹⁴ P Weekly published data are provisional and subject to change.

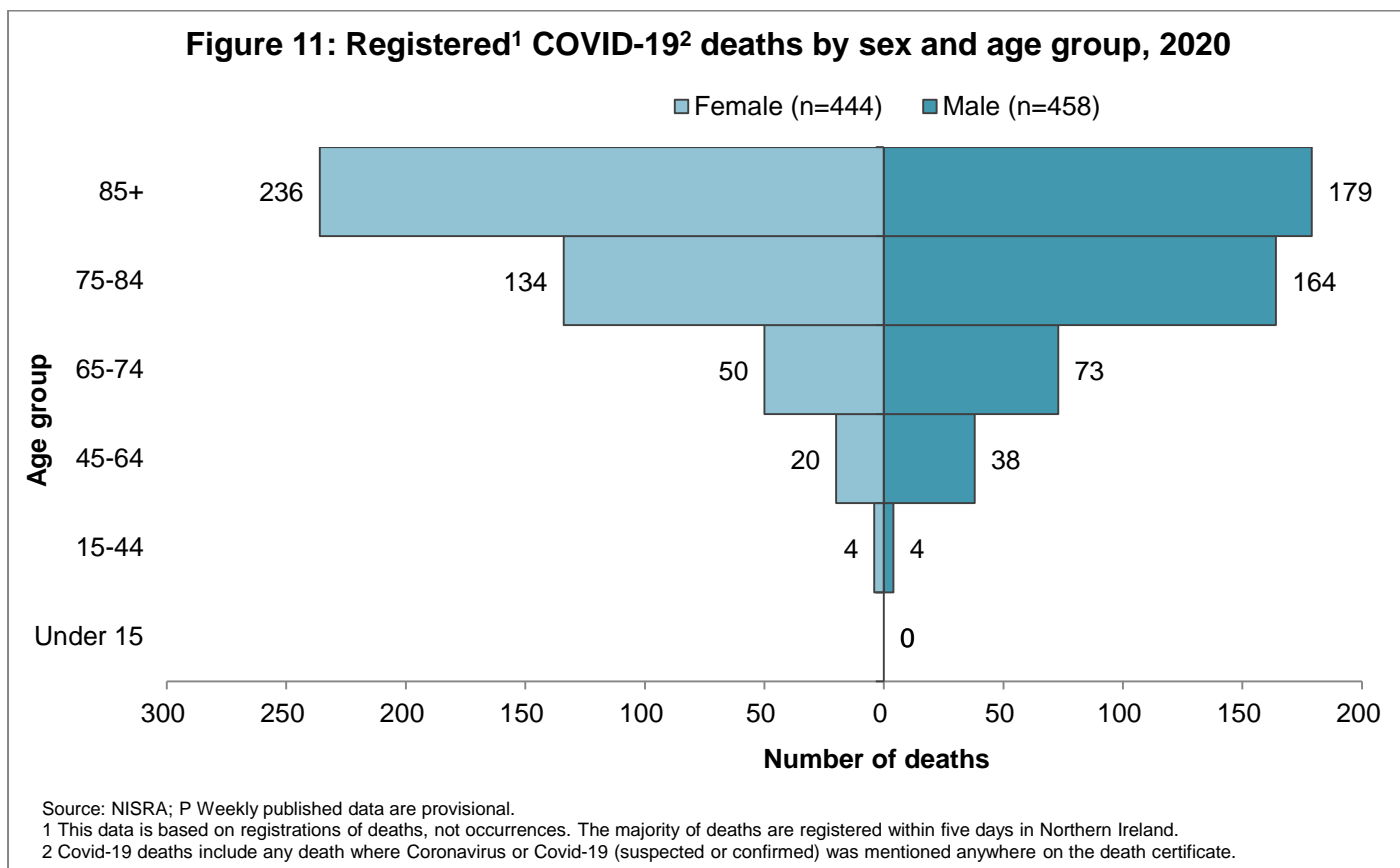
¹⁵ The five-year average is not a whole number so comparisons with 2020 week-on-week can vary by up to one death due to rounding.

¹⁶ COVID-19 deaths include any death where coronavirus or COVID-19 (suspected or confirmed) was mentioned anywhere on the death certificate (Part 1 or Part 2). Part 1 includes the diseases or conditions that led directly to death while Part 2 includes other conditions that were not part of the main cause of death but may have contributed in hastening death.

¹⁷ 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’.

COVID-19 deaths by age and sex

Figure 11 shows the number of registered COVID-19 deaths by sex and age group up to week 39 (ending 2 October 2020).



Comment: More than three quarters of registered COVID-19 deaths have been in those aged 75 years and over (79%; males 75% and females 83%). The disproportionate effect of age on the death rate is illustrated by the fact that there have only been a total of 66 deaths under the age of 65 years from COVID-19 associated infections during the pandemic.

Appendix

Incidence and prevalence

Data provided jointly with the Department of Health COVID-19 Modelling Group. Estimates presented are based on data sourced from the PHA Health Protection Directorate laboratory surveillance system.

COVID-19 testing by age group and council area

Data are sourced from the PHA Health Protection Directorate laboratory surveillance system. The system collates SARS-CoV-2 laboratory data on all tests from HSC Trust laboratories and data from the National Testing Programme in Northern Ireland. Further detail on collation and analysis of this data is available from the [PHA Monthly Epidemiological bulletin](#)

Clusters

Data are sourced from the Contact Tracing Service/PHA Health Protection Service. Cluster data provided from 22 September 2020 onwards no longer includes information on schools, which will be reported separately.

Primary Care

GP in-hours respiratory syndromic surveillance data is extracted from the Apollo GP Flu Surveillance System (Wellbeing Software) and is sourced by the PHA Health Protection Surveillance team. Data are analysed to produce trends of ARI, ILI and COVID-19 consultation rates. Further details on collation and analysis of this data is available from the [PHA Monthly Epidemiological bulletin](#)

Admissions

Data are sourced from the Patient Administration System through the Health and Social Care Board, Performance Management and Service Improvement, Information Team.

ICU Occupancy

Data are sourced from daily Critical Care Network Northern Ireland (CCaNNI) report and provided by the Health and Social Care Board, Performance Management and Service Improvement, Information Team. Data are included from 30 March 2020; includes Adults, Paediatrics and Cardiac Intensive Care Units. The recording and reporting of occupancy at weekends which had ceased from 4 July 2020 recommenced on 26 September 2020.

Mortality surveillance

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

Data are sourced from the Northern Ireland Statistics and Research Agency (NISRA). NISRA provide a [weekly update](#) on the number of **registered** respiratory and COVID-19 associated deaths each Friday. Additional analyses of death data, for example on COVID-19 related deaths **occurring** (March-August) may also be referenced.

This bulletin is produced by the Health Intelligence Team on behalf of the Director of Public Health.

© Public Health Agency: 15 October 2020