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 new 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. It is anticipated that the bulletin will evolve in line with new information or data sources.

The data presented complements the current range of exising data available from other sources including the PHA Monthly Epidemiological bulletin, Department of Health COVID-19 Daily Dashboard and NISRA Deaths Registered Dashboard. However, it should be noted that the data included may be subject to change as systems are updated and comparisons with existing data source may not be possible, for example due to variation in times of accessing data.

Key messages

This week we are seeing increased activity in the number of cases and continue to see significant numbers of clusters. Across the UK we are seeing clusters associated with pubs, parties, sports clubs and certain industries.

We want to emphasise the messages that we need to ask everyone to wash their hands regularly and avoid parties or indoor gatherings where there is poor ventilation and not enough room to maintain social distance. It is vital that individuals self-isolate from when they **first** develop symptoms (a high temperature, a new continuous cough or a loss/change in sense of smell or taste) and arrange to be tested.

Further information and advice is regularly updated and available from the PHA website.

Incidence

During the course of the pandemic the rate of confirmed laboratory cases of COVID-19 rose steeply from March, reaching a peak of 42 per 100,000 population in mid April (week ending 19 April). Following implementation of the stay at home advice, infections declined to a low of 1.3 per 100,000 population (week ending 5 July). However, in recent weeks, with easing of some measures, there has inevitably been a slight increase in the number of new cases. The rise in new cases is primarily in those under 60 years, who are less likely to require admission to hospital.

Estimated incidence (number of new cases in the seven days up to 9 August 2020)

The current incidence of positive laboratory cases is 8 per 100,000 of the Northern Ireland population[1].

However, if we assume that there is 1.3 infected individuals for every laboratory confirmed case we know about, the estimated weekly incidence is 19 per 100,000 population (or 1 in 5,178 people)[2].

Estimated prevalence

The Department of Health Modelling Group is currently working with us on the development of an estimated prevalence of COVID-19 cases for Northern Ireland. It is anticipated that this information will be available in the weekly bulletin from next week.

COVID-19 testing by council area

Figure 1: Positive laboratory confirmed (per 100,000) cases of SARS-CoV-2 by Council area, for the 7 days up to 9 August 2020
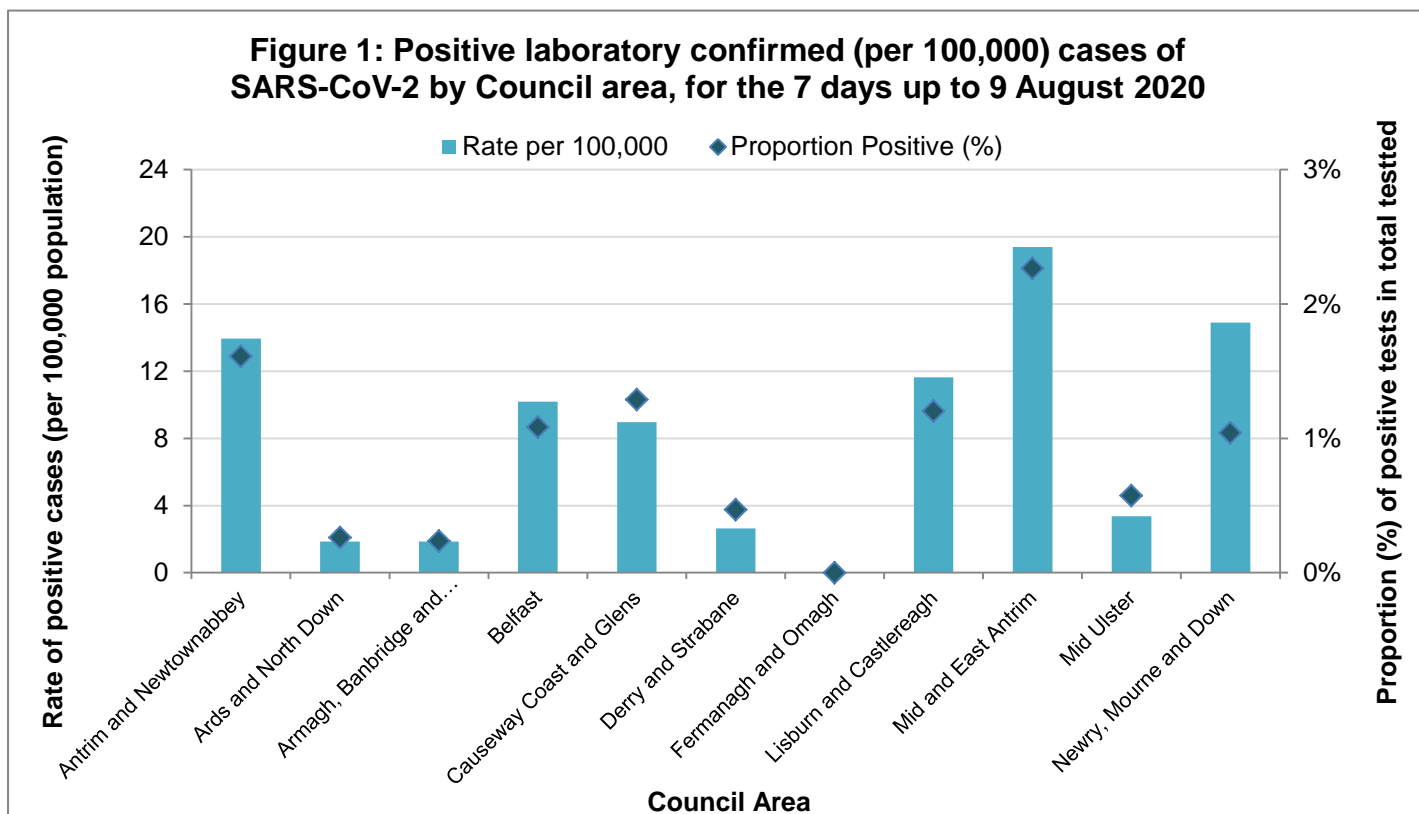
Comment: Over the course of the pandemic the rates of positive cases have varied by geographical area. In the 7 days up to 9 August 2020 the rate of positive cases across Northern Ireland was 8 per 100,000 population. Rates varied by council area with no positive cases confirmed in Fermanagh and Omagh council area to 19 per 100,000 population in Mid and East Antrim. The proportion of positive tests for Northern Ireland was 1%, ranging from zero in Fermanagh and Omagh in to 2% in Mid and East Antrim.

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

Contact Tracing Service (CTS)[3]

Weekly activity (7 days up to 5 pm on 12/08/20)	Number
Positive tests reported	223
Positive cases requiring contact tracing[4]	196
Positive cases that have completed contact tracing	186
Contacts identified[5]	713
Contact successfully contacted and advised	695

Proportion of cases contacted within five attempts: above 80% target

Proportion of contacts contacted within five attempts: above 80% target

Cases

Figure 3: Number (n) of positive cases that required contact tracing and the proportion (%) contacted (n=196)
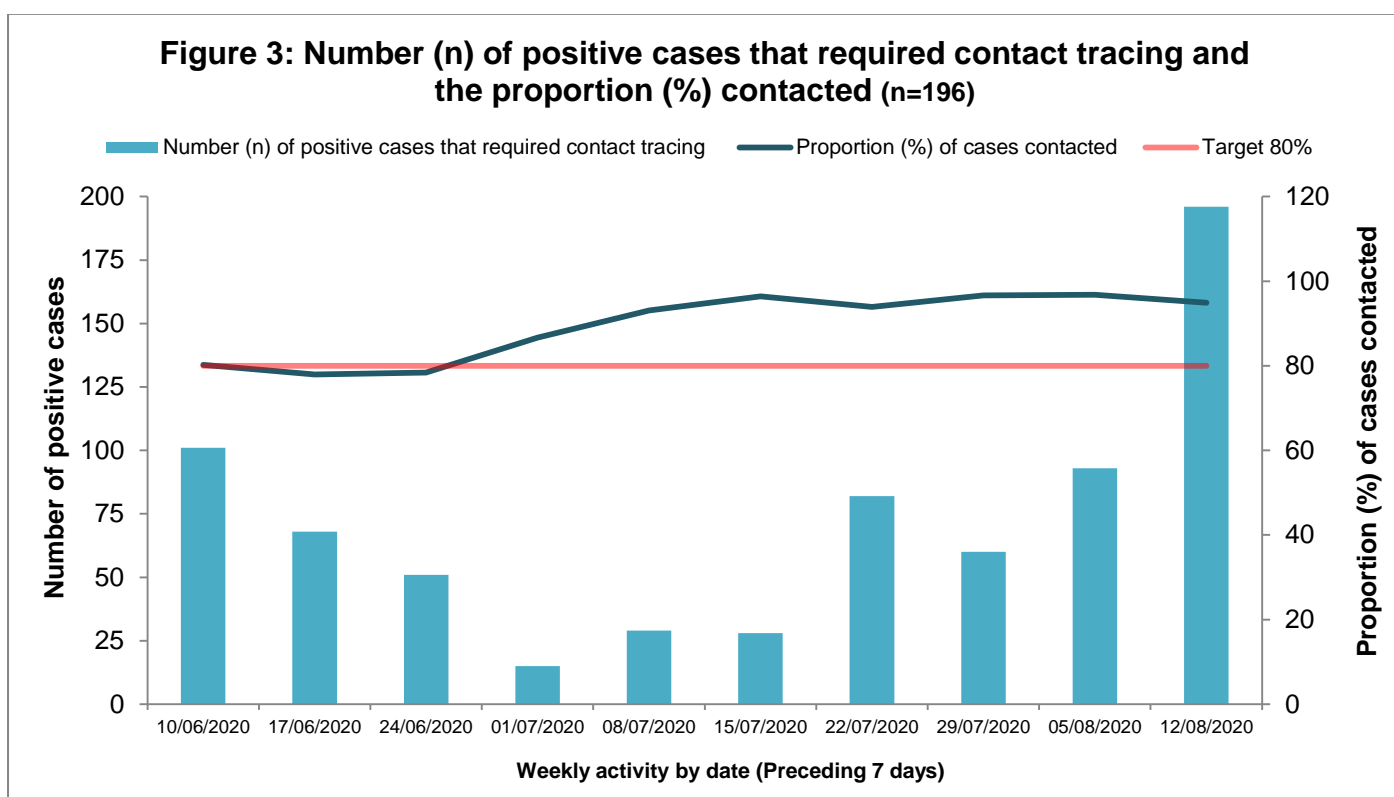
Comment: In the 7 days up to 12 August 2020, 223 positive tests were reported to the CTS, an increase from 109 in the previous week. One hundred and ninety six (n=196) required follow up and of these, 95% (n=186) were successfully contacted within 5 attempts. The target of 80% continues to be met.

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[3] Based on information manually recorded and data extracted from current CTS. Automatic reporting in future may create a temporary transitional discontinuity in figures. This data provides 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 and consequently this information will not be complete. Reporting methods and parameters may change over time.
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.
[4] The number of positive tests reported is not the same as the number of cases added as the CTS aims to deduct duplicates and cases where no contact details are available.Care home residents who test positive are followed up under separate health protection arrangements and are not included in this information.
[5] This does not include staff and patient contacts in a hospital/Trust setting, as these are managed by the relevant Health and Social Care Trust.

Contacts

Figure 3: Number (n) of contacts identified for follow up and the proportion (%) contacted
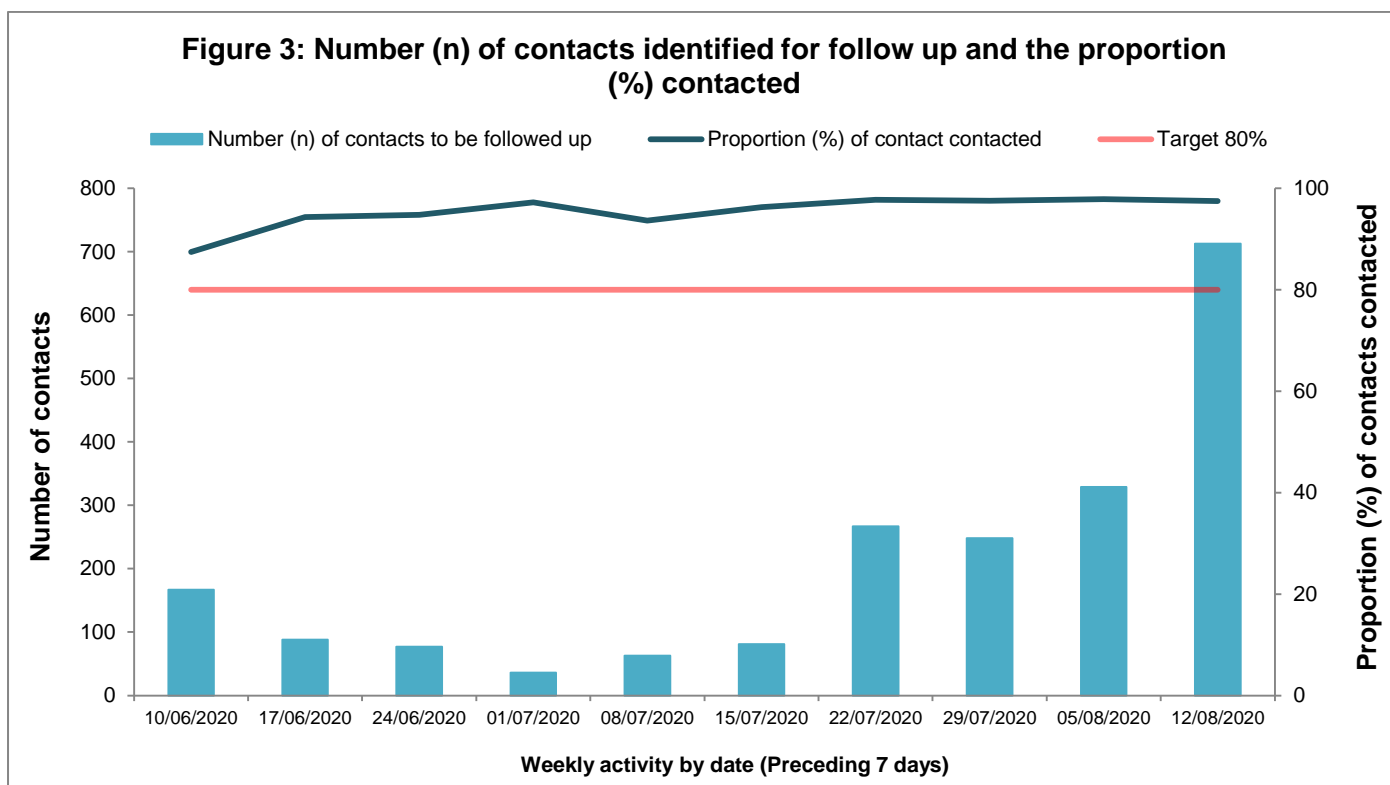
Comment: From the 196 positive cases, a total of 713 contacts were identifed and of these, 98% (n=695) were followed up within 5 attempts. The target of 80% continues to be met. It is important to note that the number of contacts per case continues to rise with an increased complexity of case and contact relationship. The average number of contacts per case is understandably increasing slightly as restrictions are gradually reduced.

Clusters

A cluster is currently defined as two or more laboratory confirmed cases of COVID-19 among individuals associated with a key setting, with illness onset dates within a 14 day period. Key settings in which clusters have occurred in recent weeks include: workplaces, retail and hospitality premises, house parties and sporting settings[6].

Up to 12 August 2020, a total of 11 clusters with greater than five people have been identified in the following council areas; Newry, Mourne and Down (n=4), Mid and East Antrim (n=3), Antrim and Newtownabbey (n=1) Ards and North Down (n=1), Armagh City, Banbridge and Craigavon (n=1) and Causeway Coast and Glens (n=1).

In addition, there have been 20 clusters across Northern Ireland with fewer than five people.

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

Primary Care[7,8]

Figure 4: In hours consultation rates for influenza like illness (ILI) acute respiratory infections (ARI) and COVID-19
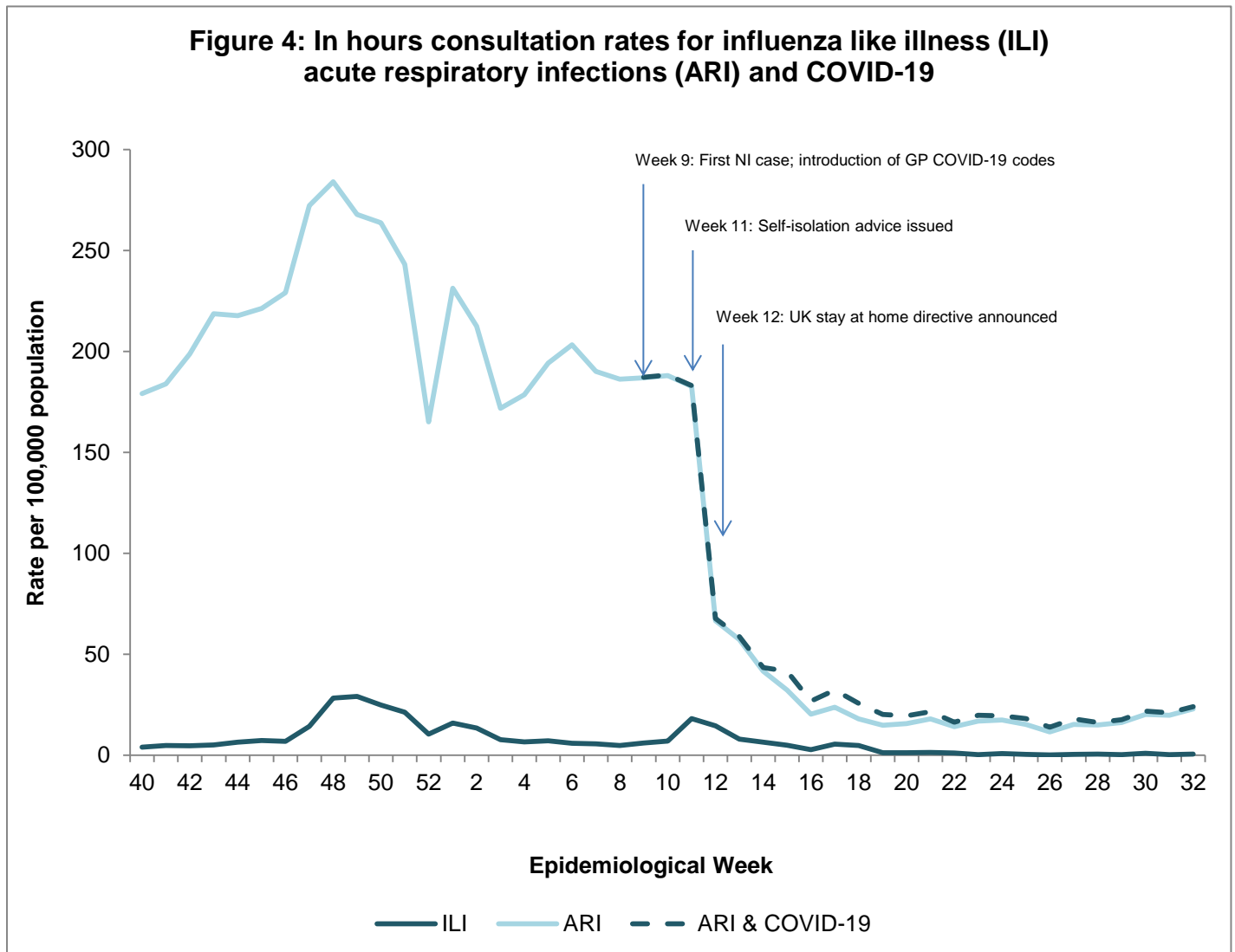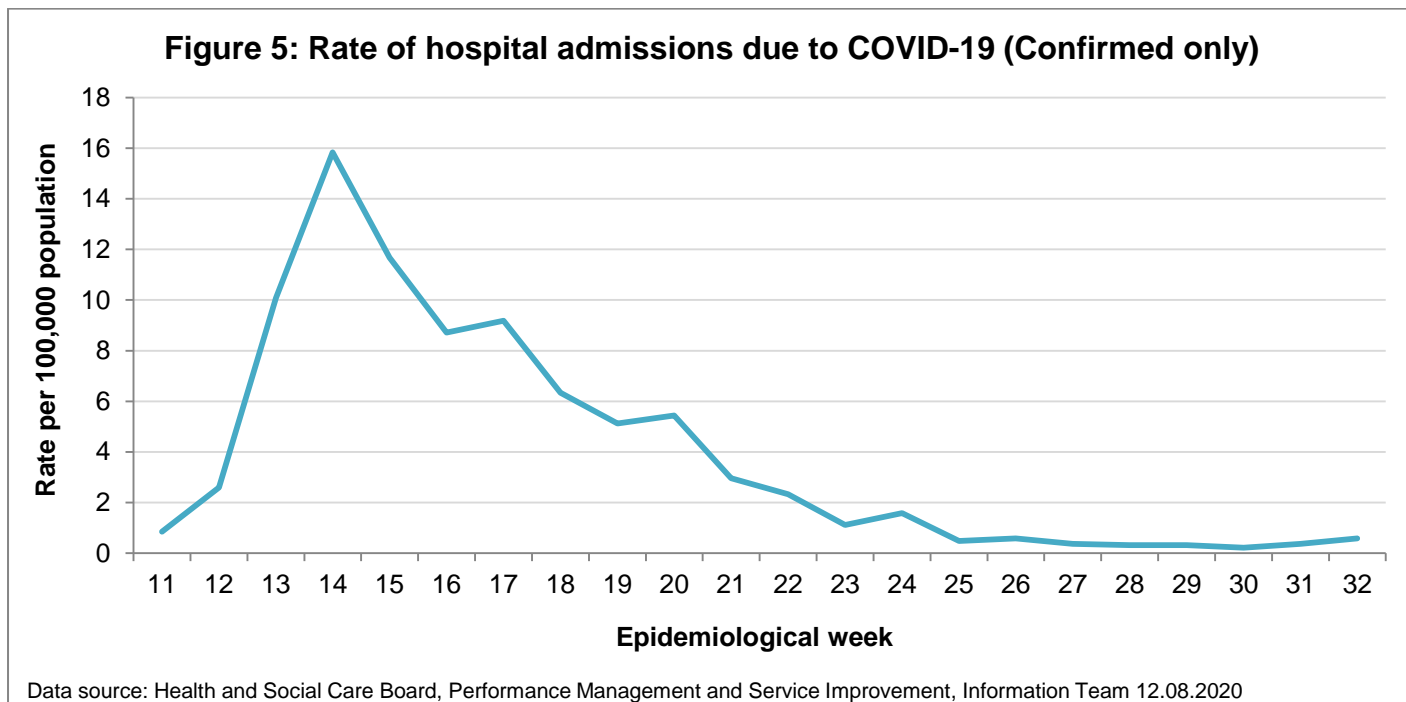
Comment on the trend: ARI consultation rates fell from 182 per 100,000 population in week 11 to 67 per 100,000 population in week 12, coinciding with the introduction of self-isolation advice and a change to primary care delivery in managing COVID-19 cases. ARI consultation rates continued to decline until week 26 when the rate was 11 per 100,000 population. However, recent weeks have seen an increasing trend with a rate of ARI consultations of 24 per 100,000 population in the week up to 9 August 2020.
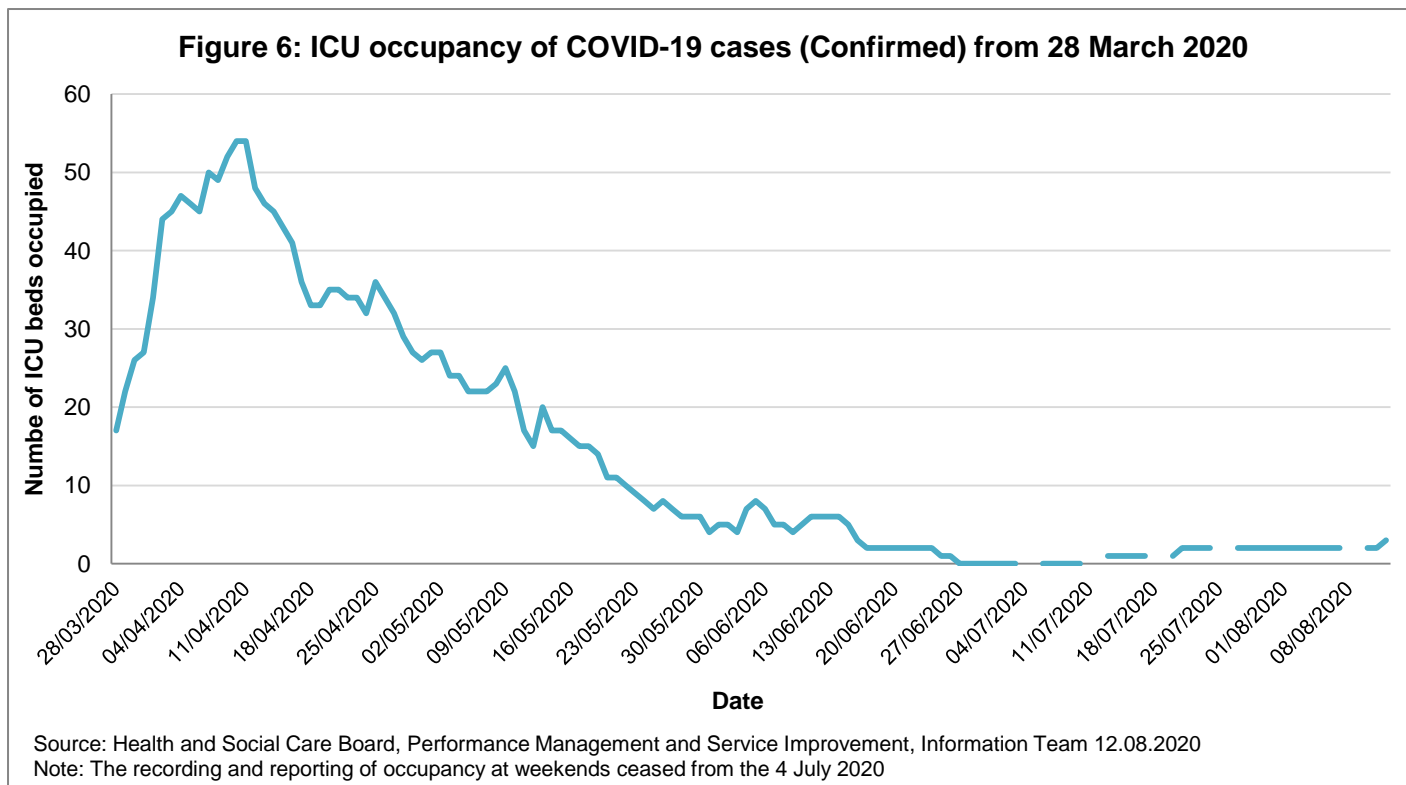
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[7] GP coding for COVID-19 data was not available before week 14 of 2020.

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

Secondary Care

Figure 5: Rate of hospital admissions due to COVID-19 (Confirmed only)

Data source: Health and Social Care Board, Performance Management and Service Improvement, Information Team 12.08.2020

Comment on the trend: The rate of confirmed hospital admissions for COVID-19 peaked in week 14 at 16 per 100,000 population declining to 0.2 per 100,000 in week 30. A rate of 0.6 per 100,000 population was observed in week 32 (ending 9 August 2020).

Figure 6: ICU occupancy of COVID-19 cases (Confirmed) from 28 March 2020

Source: Health and Social Care Board, Performance Management and Service Improvement, Information Team 12.08.2020
Note: The recording and reporting of occupancy at weekends ceased from the 4 July 2020
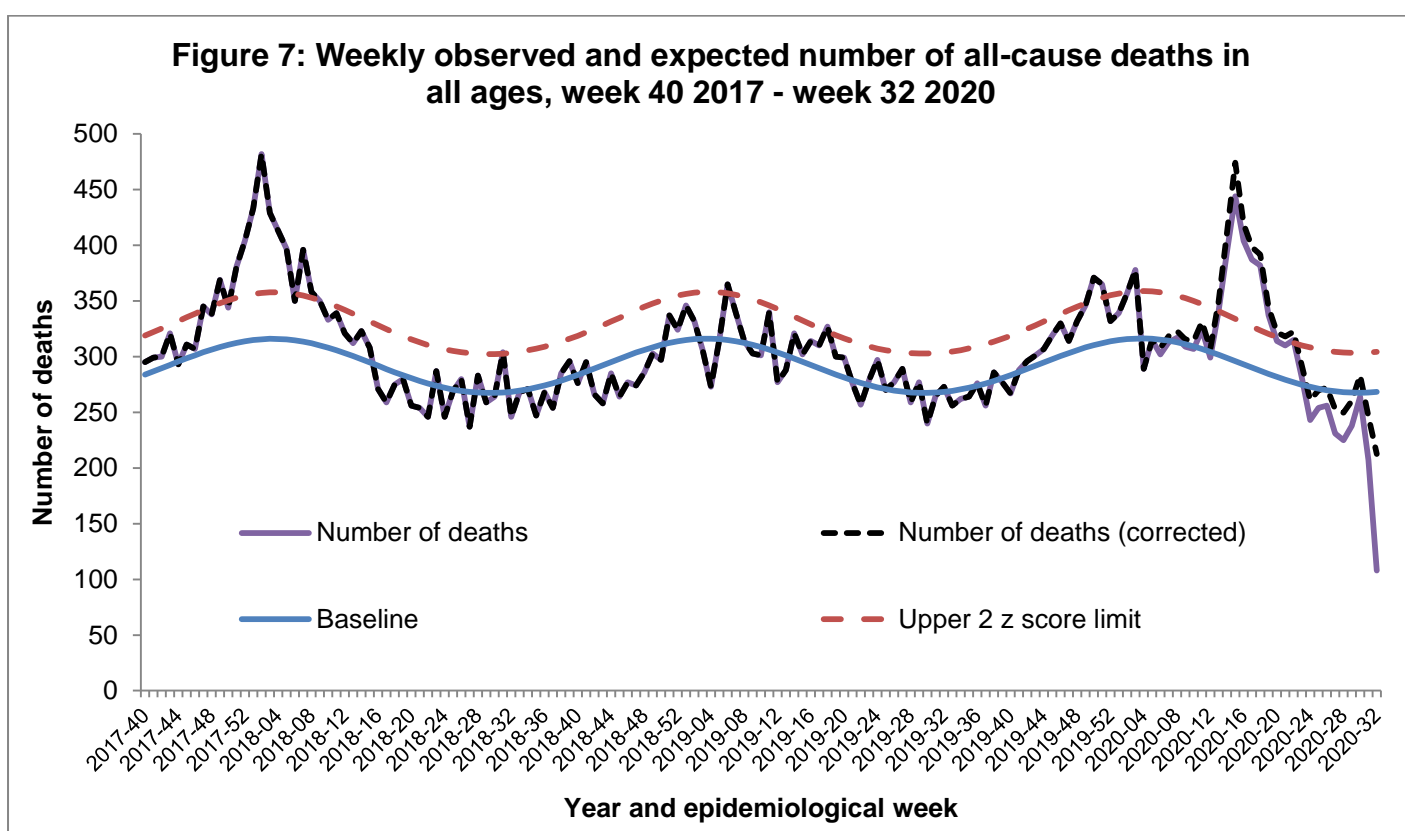
Comment on the trend: ICU occupancy for COVID-19 confirmed cases reached a peak on 10 April 2020 (n=54). Following on from this there has been continual decline in ICU occupancy.

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**. In week ending 31 July 2020, one COVID-19 death was registered. From the beginning of 2020 to week ending 31 July 2020 the proportion of COVID-19 deaths registered was 8%.

All-cause excess deaths

Figure 7: Weekly observed and expected number of all-cause deaths in all ages, week 40 2017 - week 32 2020

Comment on the trend: In 2020, excess all-cause deaths were reported in epidemiological weeks 13 to 22. This increase in deaths happened outside the influenza season and at a time when flu rates in Northern Ireland were low. Excess deaths were mainly in those over 65 years, which is in line with the age profile of COVID-19 deaths.

Appendix

Incidence and Prevalence
Data provided jointly with the Department of Health COVID-19 Modelling Group.

COVID-19 testing by council area
Data are sourced from the PHA Health Protection Directorate laboratory surveillance system. The system collates SARS-CoV2 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

Contact Tracing Service (CTS)
This data provides a snapshot of contact tracing activity in a live operational system which includes case and contact activity in progress or in a queue. Reporting methods and parameters may change over time. This data should not be compared with other published figures as they will not necessarily align due to the use of different time frames for reporting data.

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 & Service Improvement, Information Team.

ICU Occupancy
Data are sourced from the Patient Administration System through the Health and Social Care Board Performance Management and Service Improvement, Information Team. Data are included from 28 March 2020, when identified as separate figures; includes Adults, Paediatrics and Cardiac Intensive Care Units.

All-cause excess deaths
The PHA Health Protection Directorate reports the weekly number of excess deaths from any cause for Northern Ireland using the Mortality Monitoring in Europe (EuroMOMO) model. Further information is available here. 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. Further details on collation and analysis of this data are available from the PHA Monthly Epidemiological bulletin

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

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