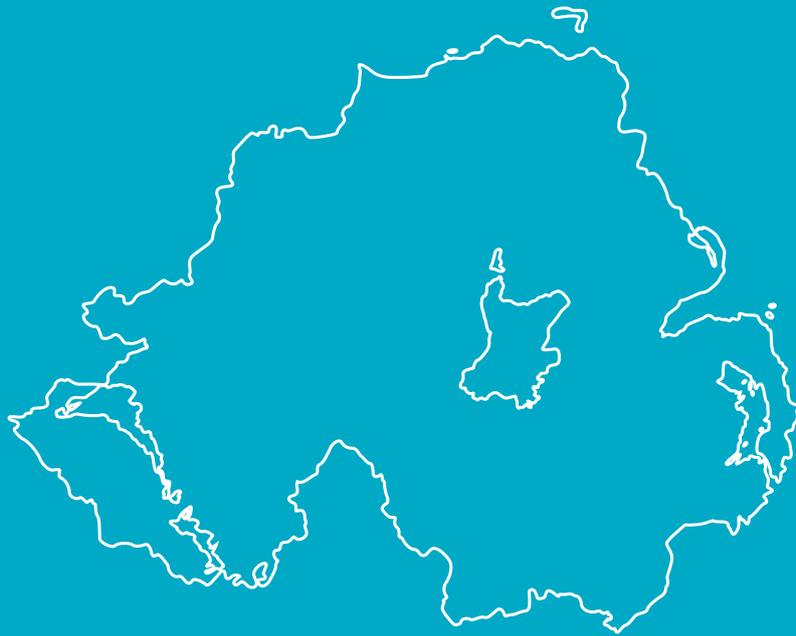


Coronavirus (COVID-19)

Monthly Epidemiological Bulletin



Northern Ireland

Summary - Up to week 25 (21 June 2020)

To week 25, there have been a total of 5,704 laboratory confirmed cases¹ of COVID-19, including 795 registered COVID-19 deaths² in Northern Ireland.

COVID-19 case epidemiology



- 5,704 laboratory confirmed cases (85% from HSC laboratories)
- 60% of total cases are female
- 23% of total cases reside in Belfast (Local Government District)

Care home outbreaks (suspected and confirmed)



- 172 suspected/confirmed COVID-19 outbreaks reported
- 36.8% of all Northern Ireland care homes have reported an outbreak
- The highest proportion of outbreaks reported (45.9%) were reported from the Southern Trust area

Primary care syndromic surveillance



- In week 25:
- In-hours Acute Respiratory Infections (ARI) and COVID-19 consultation rate: 18.1 per 100,000 population
 - Out-of-hours (OOH) ARI consultation rate: 16.6 per 100,000 population

¹ Virological reports and the National Testing Programme

² NISRA; 2020 - up to 12 June 2020

	<ul style="list-style-type: none"> • OOH COVID-19 consultation rate: 5.0 per 100,000 population • When samples from the flu spotter programme were tested retrospectively, none were positive for COVID-19: 96% were negative and the other 4% did not have sufficient sample remaining to be tested
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Critical care surveillance

	<ul style="list-style-type: none"> • 133 confirmed COVID-19 individuals reported to the PHA through the COVID-19 critical care online reporting system • The majority of reported critical care cases were male (71%) • The median age of cases was 57 years (range 26 – 81 years)
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Mortality surveillance

	<ul style="list-style-type: none"> • In week ending 12 June 2020, the proportion of COVID-19 deaths registered was 7%. From the beginning of 2020 to week ending 12 June 2020 the proportion was 10% • Excess deaths were reported in weeks 13-19; mainly in those over 65 years
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Testing surveillance virology

	<ul style="list-style-type: none"> • Number of individuals tested in total: 102,969 (5.5% positivity) • Number of individuals tested in; <ul style="list-style-type: none"> ○ HSC laboratories: 74,349 (72% of total tests) ○ National Testing Programme: 28,620 (28% of total tests)
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Introduction

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

The Public Health Agency (PHA) Health Protection team has developed this report with the primary focus of looking at the demographic characteristics (age, sex, geographical location, deprivation) of people affected by the virus. It also looks at some of the wider impact 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 Dashboard and *Deaths involving coronavirus in Northern Ireland* by the Northern Ireland Statistics and Research Agency). This report presents data from existing and newly developed PHA Health Protection surveillance systems that monitor COVID-19 activity in Northern Ireland 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. All updates will be documented in “what’s new” section below.

Unless otherwise stated, data is 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 comparisons not yet possible due to the recent emergence of this novel virus.

There is a large amount of data being regularly published regarding COVID-19 (for example, [Department of Health COVID-19 Daily Dashboard Updates](#) and [NISRA Deaths Registered Dashboard](#)). This bulletin complements the range of existing data currently available.

What's new

In this edition we have added information about:

1. The results from the National Testing Programme since it began in April 2020. The data has been included in the case epidemiology and virology testing surveillance sections. This data should be interpreted with caution, when interpreted alongside the HSC laboratory data, because it includes 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.
2. The roll-out of the contact tracing initiative, including links to up-to-date information and where to access more information.
3. An update on the sentinel GP Practice testing programme. Data relating to this will be included in due course.

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 18 June 2020) can be found [here](#)*

*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 temporary transitional discontinuity in figures. Data should not be compared with other published figures as they will not align. Due to current relatively small case numbers there may be high variability in daily activity data.

Case epidemiology

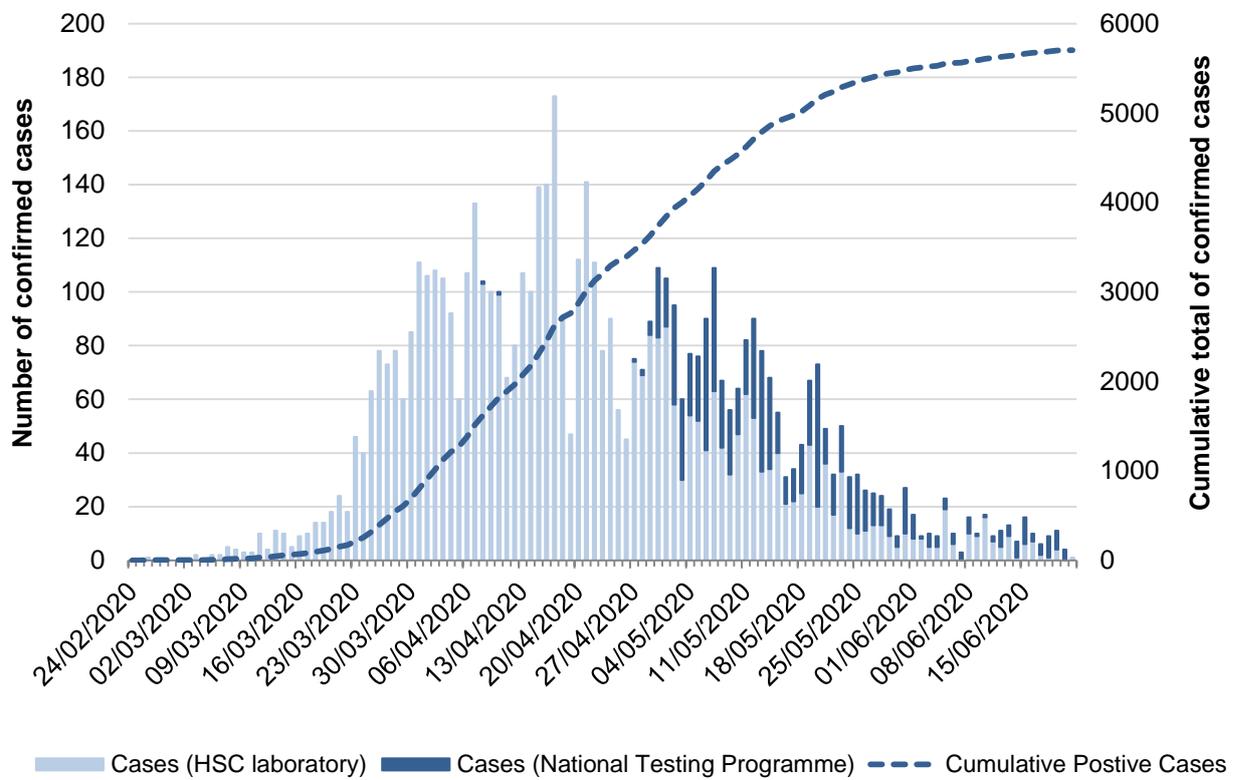


Figure 1. Laboratory confirmed COVID-19 cases by sample date and source (HSC Laboratory testing and the National Testing Programme), 2020

Figure 1 represents the number of new daily cases reported to the PHA (bars) and the cumulative number of cases (dashed line). Reporting is likely to be incomplete for the most recent days due to natural delays in samples reaching the labs, being tested and the information being reported.

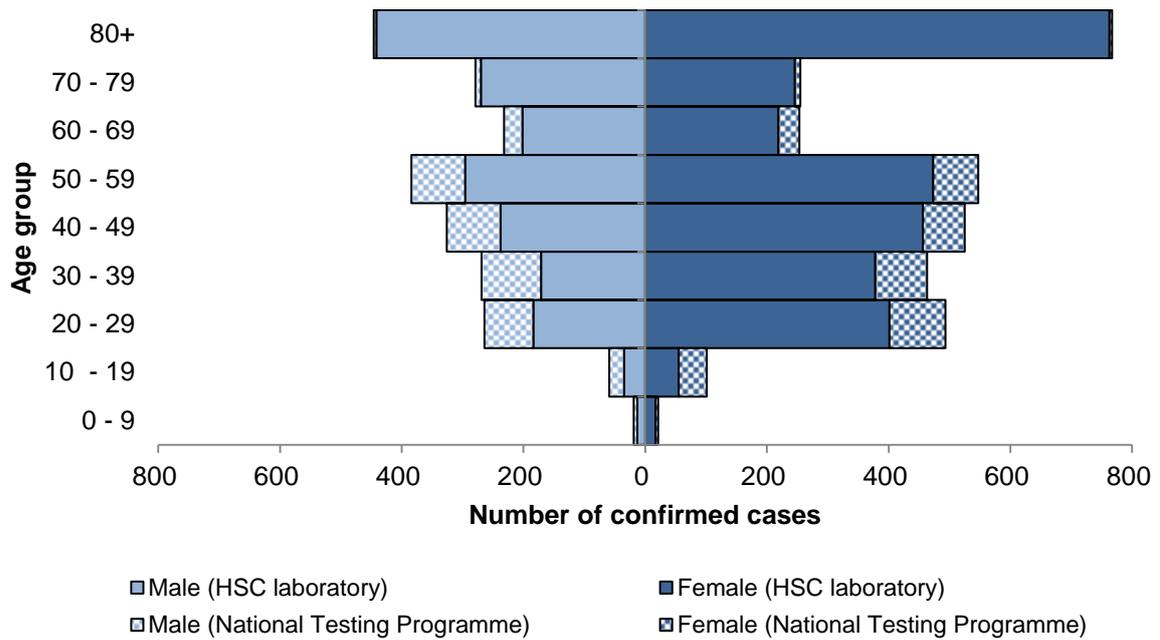


Figure 2. Laboratory confirmed cases, by age and sex and source (HSC Laboratory testing and the National Testing Programme), 2020

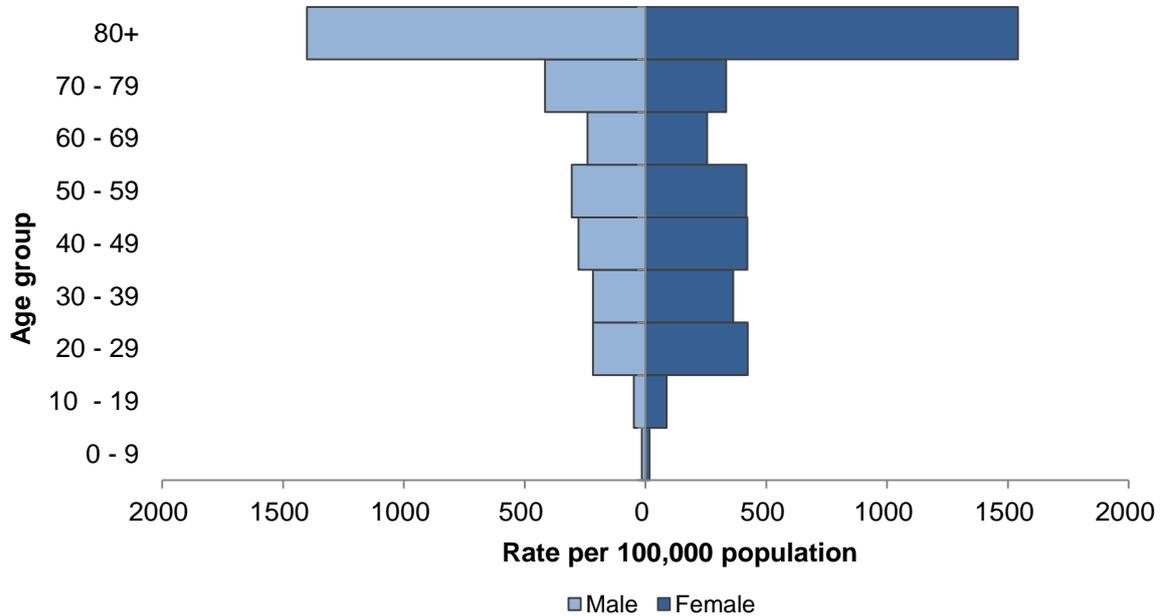


Figure 3. Laboratory confirmed cases per 100,000 population, by age and sex, for all testing data combined, 2020

Presentation of rates per 100,000 enables monitoring of cases taking into account different population

Table 1. Laboratory confirmed COVID-19 cases, by sex, for all testing data combined			
Age Group	Sex		
	Male	Female	Total*
0 - 9	19	21	40
10 - 19	59	101	160
20 - 29	264	493	757
30 - 39	269	463	732
40 - 49	326	525	851
50 - 59	384	547	931
60 - 69	232	253	485
70 - 79	279	255	534
80+	446	767	1,213
Unknown	-	-	-
Total	2,278	3,425	5,703

*Unknown sex for one case

Table 2. Laboratory confirmed COVID-19 cases, by Trust, for all testing data combined	
Trust Area	Total cases
Belfast	1,339
Northern	736
South Eastern	810
Southern	726
Western	285
Other*	1,808
Unknown	-
Northern Ireland	5,704

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

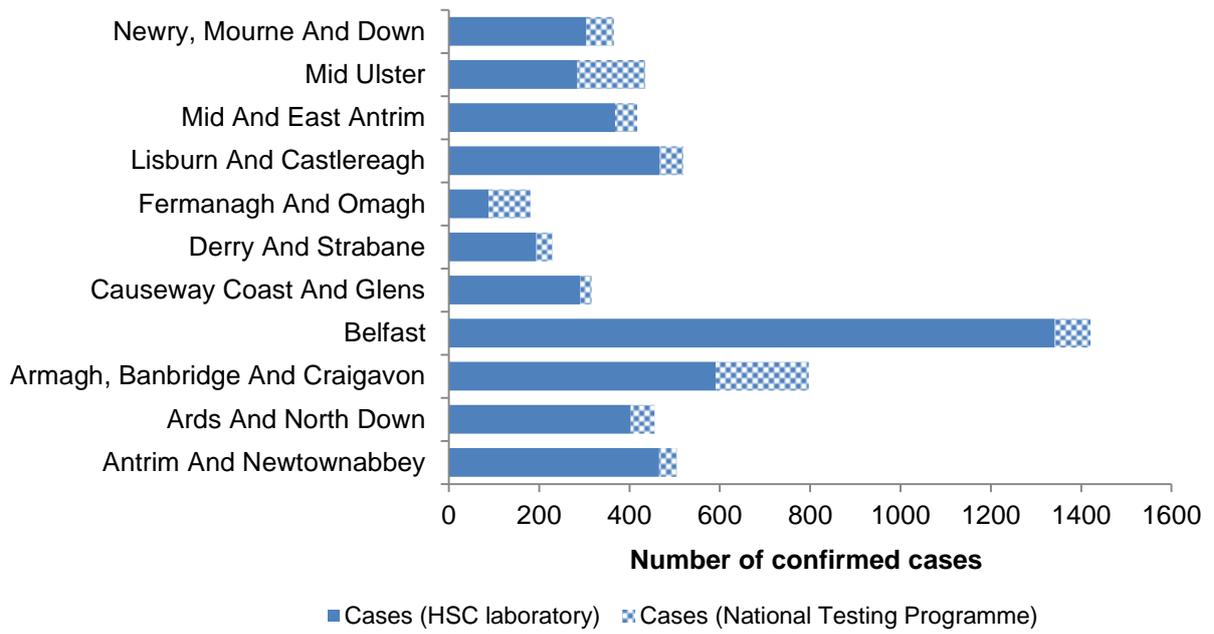


Figure 4. Laboratory confirmed cases, by Local Government District (LGD) and source (HSC Laboratory testing and the National Testing Programme), 2020

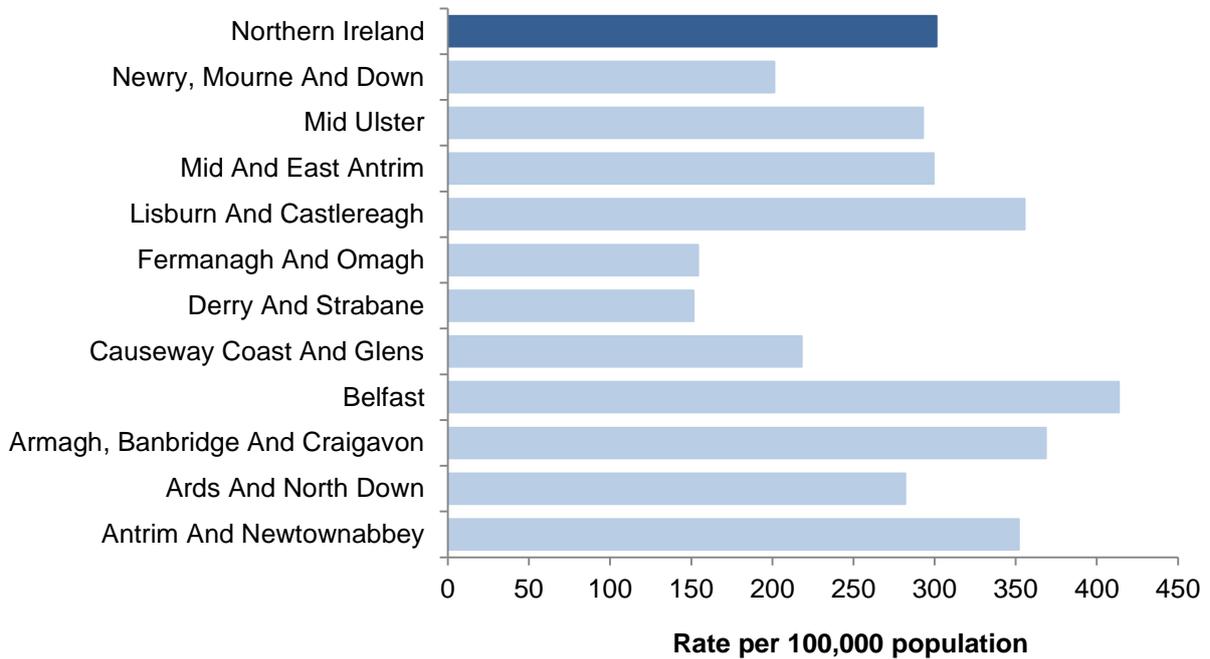
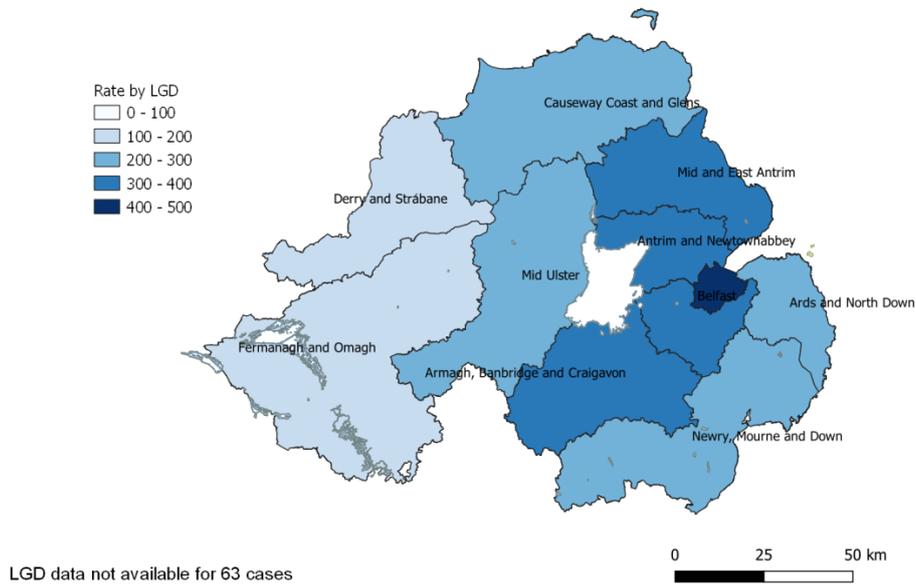


Figure 5. Laboratory confirmed cases per 100,000 population, by Local Government District (LGD), for all testing data combined, 2020

LGD data not available for 66 cases. Presentation of rates per 100,000 enables monitoring of cases taking into account different population sizes.

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 Northern Ireland, including variations across age, sex and urban and rural areas was [published](#) by Department of Health on 17 June 2020.

As at 26 May 2020, the infection rate in the 10% most deprived areas (379 cases per 100,000 population) was a fifth higher than the rate in the 10% least deprived areas (317 cases per 100,000) and two-fifths higher than the NI average (272 cases per 100,000). The admission rate for COVID-19 (confirmed or suspected cases) in the 10% most deprived areas (581 admissions per 100,000) was almost double the rate in the 10% least deprived areas (317 admissions per 100,000).

Care home outbreaks

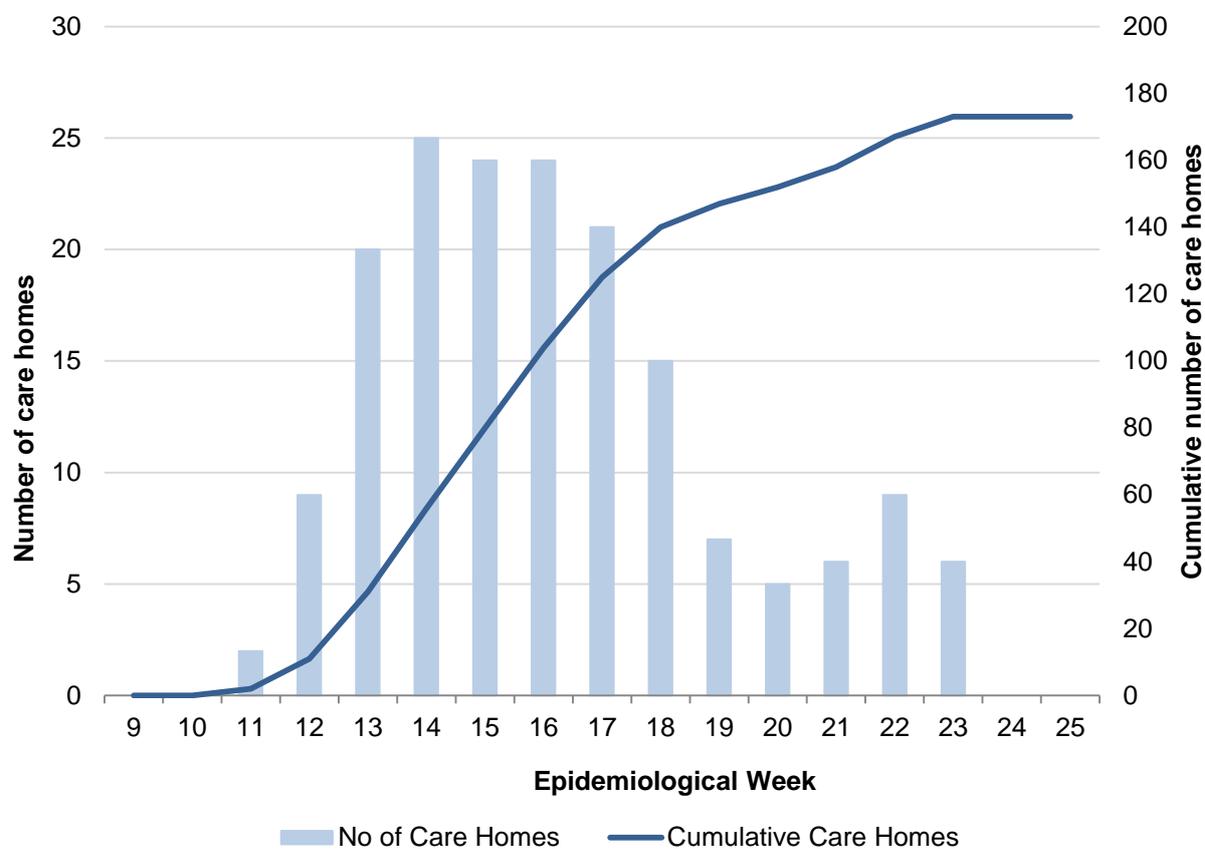


Figure 6. Confirmed and suspected COVID-19 care home outbreaks in Northern Ireland, 2020

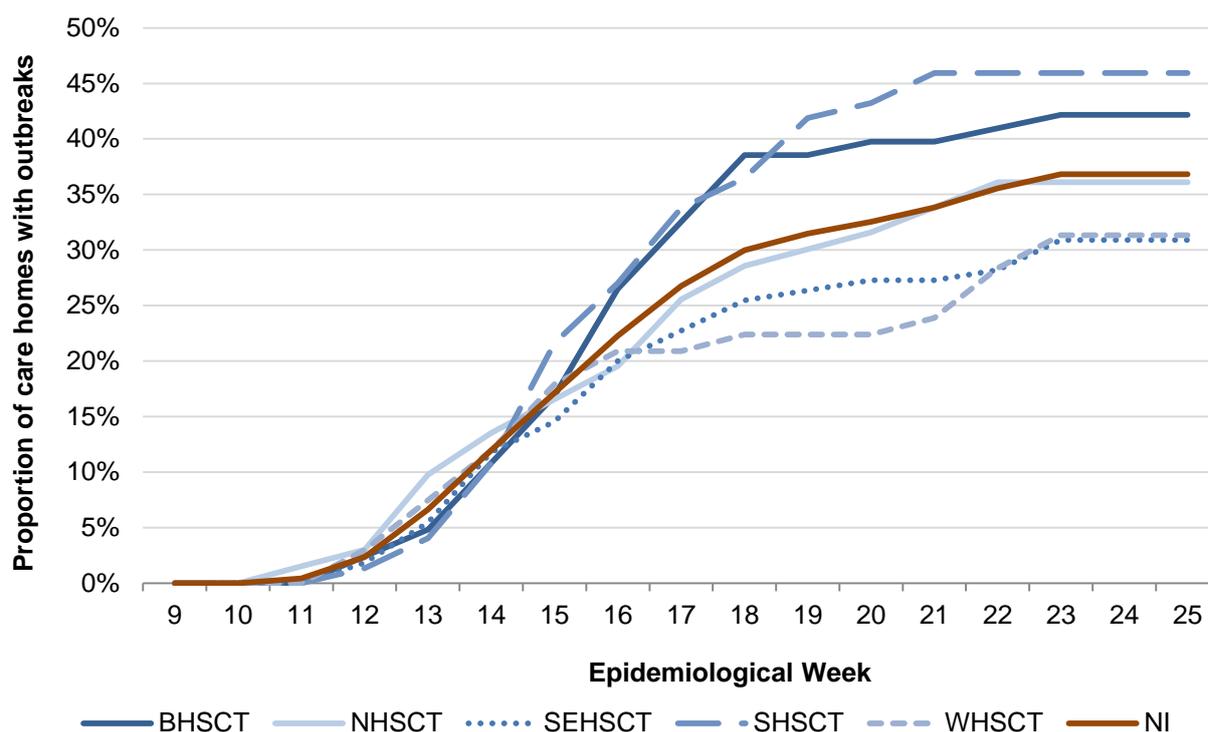


Figure 7. Proportion of care homes with confirmed/suspected COVID-19 in Northern Ireland by Trust, 2020

Trust Area	Cumulative total of outbreaks in 2020	Total number of care homes	% of care homes with outbreaks
Belfast	35	83	42.2%
Northern	48	133	36.1%
South Eastern	34	110	30.9%
Southern	34	74	45.9%
Western	21	67	31.3%
Northern Ireland	172	467	36.8%

To week 25, 36.8% of all Northern Ireland care homes reported a suspected/confirmed COVID-19 outbreak. The highest proportion of care homes with suspected/confirmed COVID-19 outbreaks (45.9%) were reported from the Southern Trust area.

Source: PHA Health Protection duty room reports from care homes

Primary care syndromic surveillance

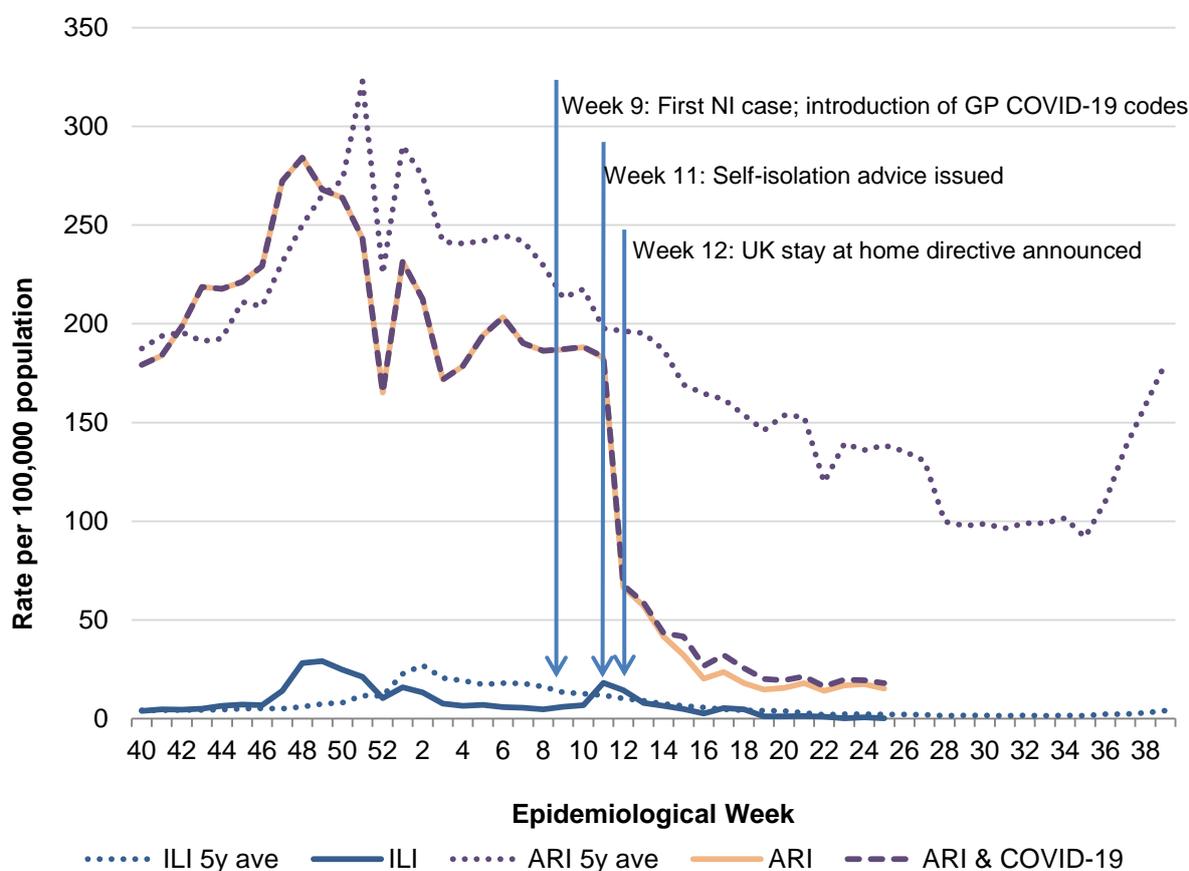


Figure 8. In-hours consultation rates for influenza- like illness (ILI), acute respiratory infections (ARI) and COVID-19

The ARI consultation rate trend during 2019/20 increased from week 40 to a peak in week 48 (284.1 per 100,000 population), before declining. The trend pattern for ILI is similar although rates are much smaller. The peak occurred earlier than the previous five year average reflecting the earlier 2019/20 influenza season.

In week 11 ARI consultation rates dramatically fell from 182.8 per 100,000 to 66.6 per 100,000 in week 12, which coincides with the introduction of self-isolation advice, the stay at home directive (“lockdown”) and a change to primary care delivery in managing COVID-19 cases.

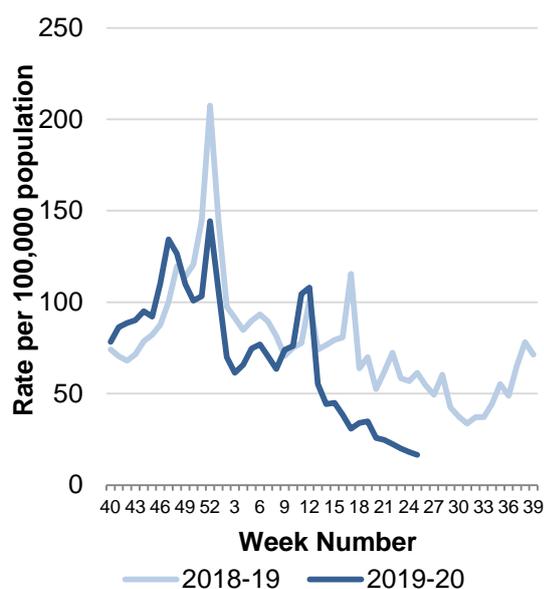


Figure 9. Out-of-hours (OOH) consultation rates for ARI, 2018/19 – 2019/20

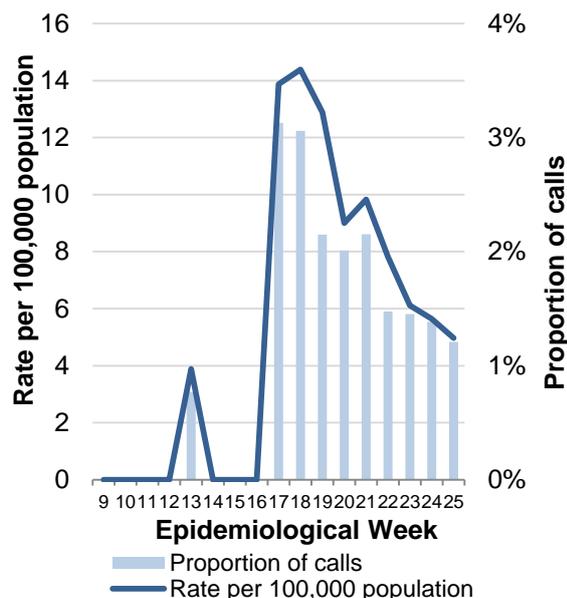


Figure 10. Out-of-hours (OOH) consultation rates for COVID-19, 2020

The ARI consultation rate in primary care out-of-hours (OOH) trend during 2019/20 increased from week 40 to a peak in week 52 (144.2 per 100,000 population), before declining. In week 10 ARI consultation rates in OOH increased from 76.0 to 108.1 per 100,000 by week 12, before dramatically falling again to 55.2 per 100,000 in week 13. This follows a similar trend to in-hours consultations.

The COVID-19 consultation rate in OOH centres during 2020 started increasing from week 17. It peaked in week 18 at 14.4 per 100,000 before declining. A similar trend was seen in terms of proportion of calls related to COVID-19, though this proportion has so far remained small. This trend coincides with the introduction of GP COVID-19 codes and the change from using established respiratory codes, such as ARI, to COVID-19.

Sentinel Testing

As part of pilot work for the COVID-19 sentinel testing programme, 71 samples from the flu spotter programme were tested retrospectively (swabbed between 27 December 2019 and 12 March 2020). None were positive for SARS-CoV2: 96% were negative and the other 4% did not have sufficient sample remaining to be tested. This would suggest that it is unlikely that SARS-CoV2 was circulating undetected in Northern Ireland before the first case was confirmed in February 2020.

Source: Apollo; Wellbeing Software & flu spotter programme

Critical care surveillance

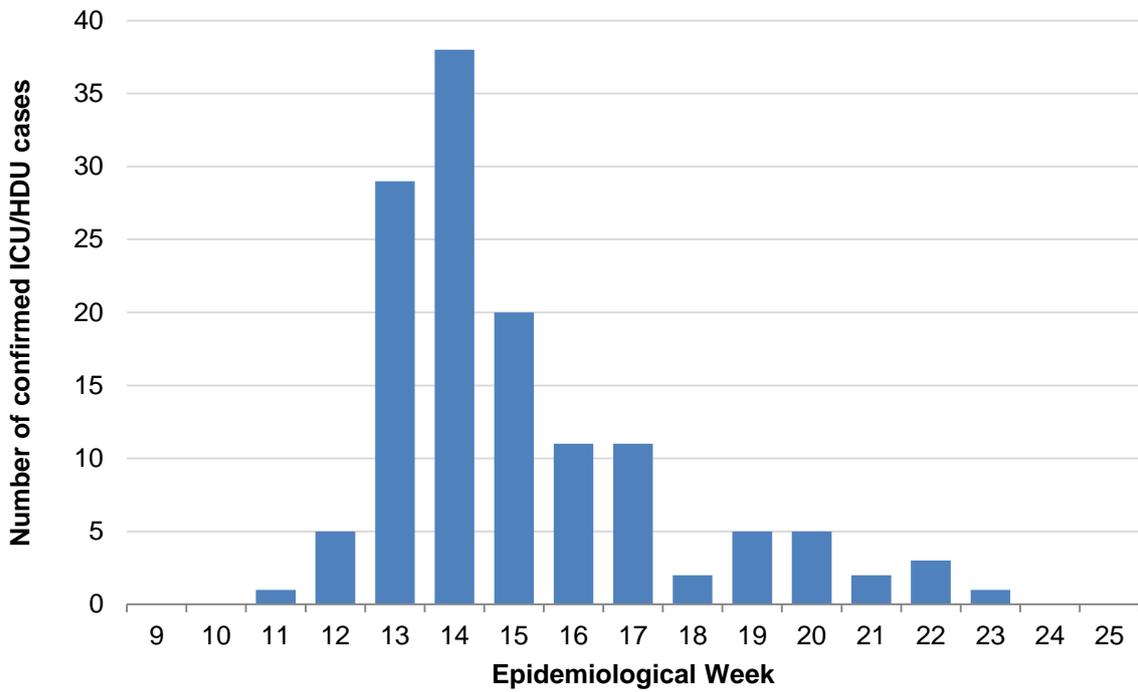


Figure 11. ICU/HDU COVID-19 cases by sample result week, 2020

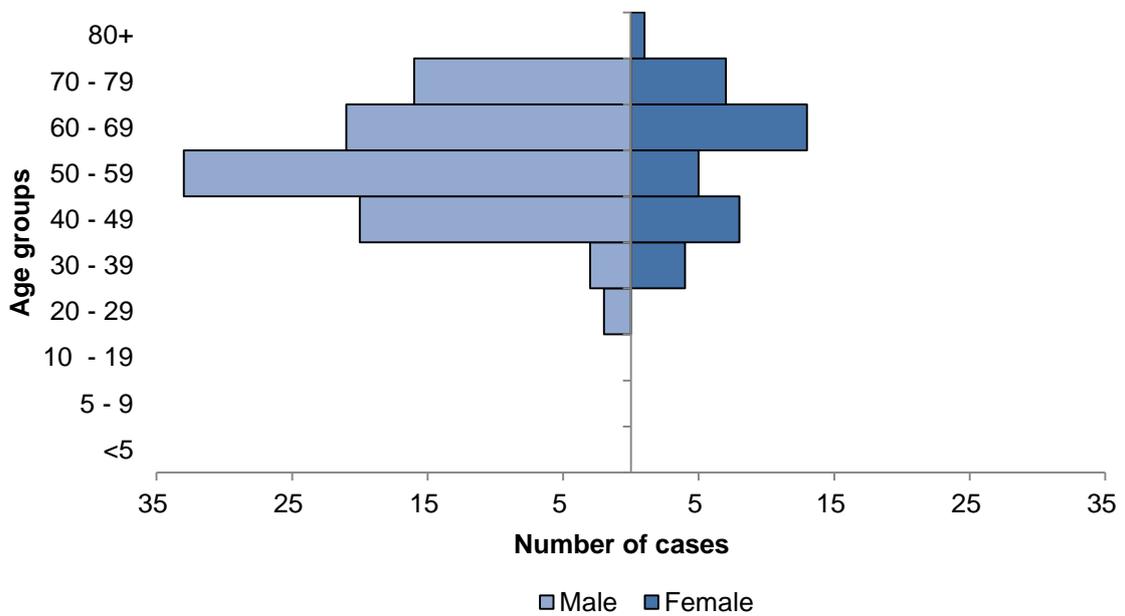


Figure 12. ICU/HDU COVID-19 cases, by age and sex, 2020

To week 25, there have been 133 individuals admitted to critical care with confirmed SARS-CoV2 reported to the PHA. Week 14 saw the highest number of ICU reports with a positive result (n=38).

Of the 133 individuals, 71% (n=95) were male. The ages ranged from 26 years to 81 years, with a median age of 57 years.

Source: PHA COVID-19 critical care surveillance online reporting system

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 12 June 2020, the proportion of COVID-19 deaths registered was 7%, and from the beginning of 2020 to week ending 12 June 2020 the proportion of COVID-19 deaths registered was 10%.

All-cause excess deaths

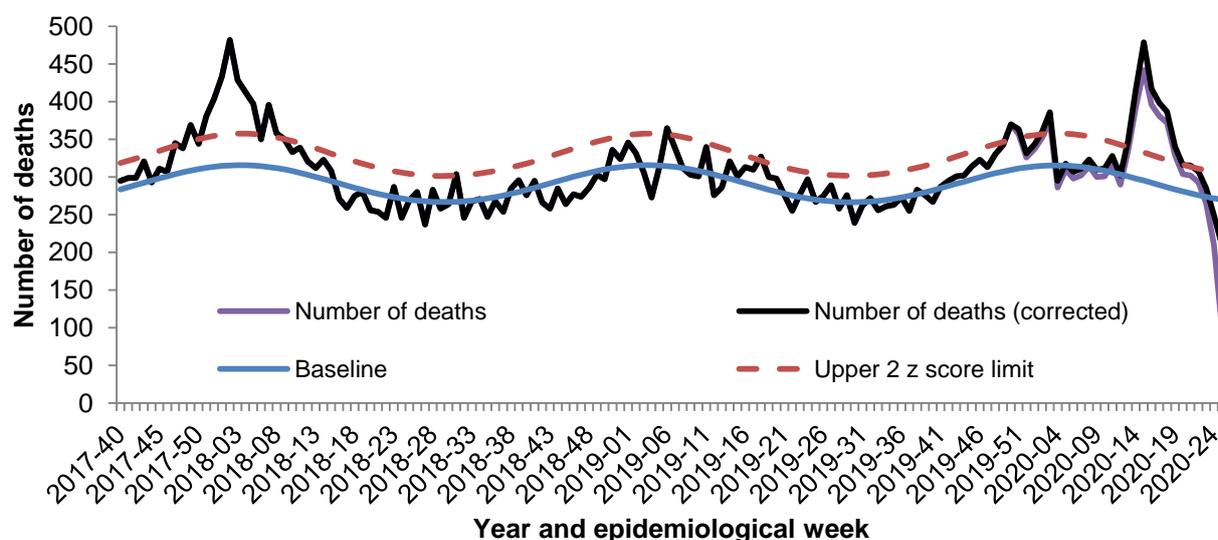


Figure 13. Weekly observed and expected number of all-cause deaths in all ages, week 40 2017 - week 20 2020

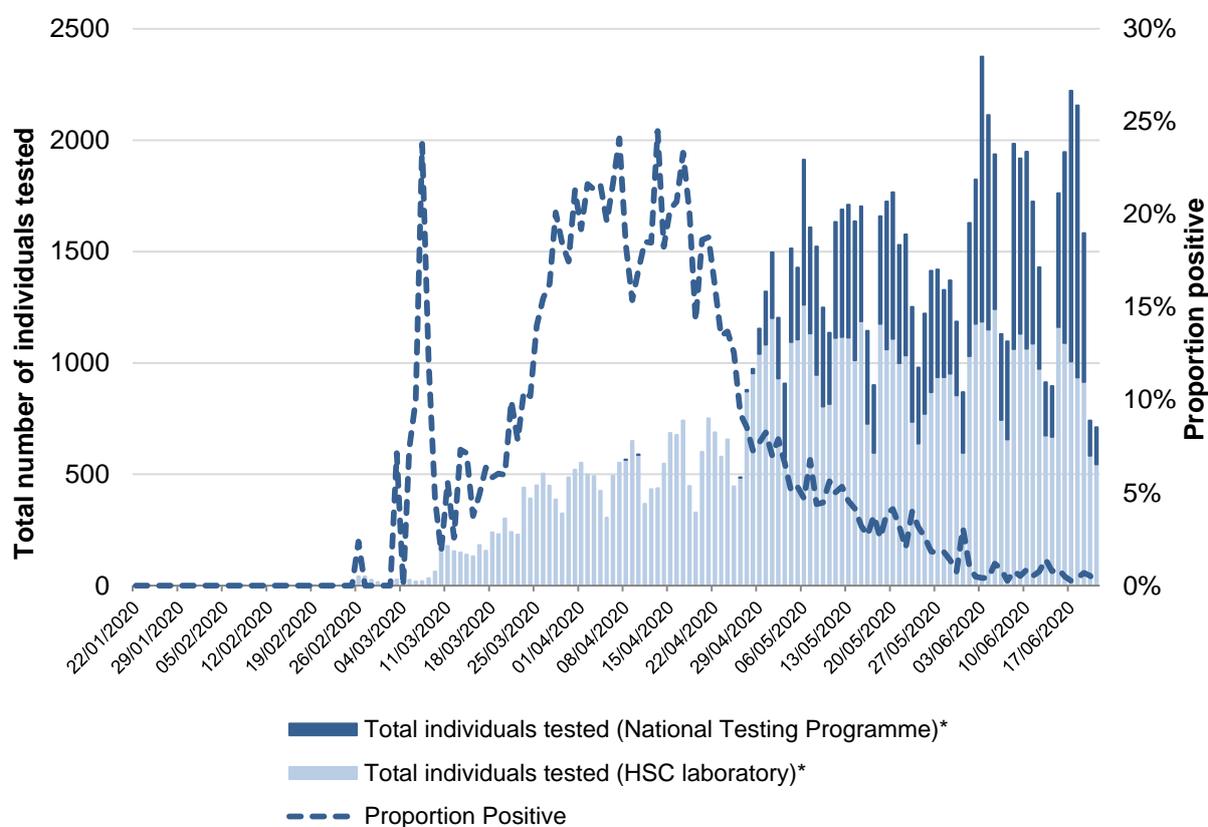
In 2020, excess all-cause deaths were reported in epidemiological weeks 13-19 and 21. This increase in deaths happened outside the influenza season and at a time when we know flu was not circulating ([here](#)). This suggests the excess mortality was likely driven by COVID-19 deaths. Excess deaths were mainly in those over 65 years, which is

in line with the age profile of COVID-19 deaths.

Despite delay correction, reported mortality data is 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.

Source: Northern Ireland Statistical Research Agency (NISRA)

Virology testing surveillance



* Total individuals tested include those that were reported as indeterminate

Figure 14. Daily number of individuals tested for SARS-CoV2 and proportion positive, by source (HSC Laboratory testing and the National Testing Programme), 2020

To week 25, the total number of individuals tested was 102,969; positivity 5.5%. The daily proportion testing positive remains low, going from a high of 24.5% in week 16 to <1% in week 25.

Table 4. COVID-19 activity in Northern Ireland, for all testing data combined, week 25, 2020			
Period	Individuals tested	Number positive	Proportion positive
Current week	11,120	57	0.5%
Total	102,969	5,704	5.5%

Table 5. COVID-19 activity in Northern Ireland (HSC laboratory), week 25, 2020			
Period	Individuals tested	Number positive	Proportion positive
Current week	6,236	21	0.3%
Total	74,349	4,860	6.5%

Table 6. COVID-19 activity in Northern Ireland (National Testing Programme), week 25, 2020			
Period	Individuals tested	Number positive	Proportion positive
Current week	4,884	36	0.7%
Total	28,620	844	2.9%

Global situation

Globally, up to 21 June 2020, [WHO](#) has been notified of 8,708,008 confirmed cases of COVID-19, including 461,715 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 Northern Ireland. 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.³ The episode length used nationally is 6 weeks (42 days), and is being reviewed as more data becomes available.

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. The exception to this is if the first result is negative which is followed by a positive result on a second occasion, the positive

³ 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]

result will be recorded rather than the negative. 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.

All laboratories report a standardised data set which includes individual demographics, test result and source (location) at the time the specimen was taken. Data is 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 Northern Ireland and at HSC Trust or Local Government District level, overall and by age and sex.

National Testing Programme

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

Everyone over five years of age in Northern Ireland with symptoms of coronavirus is now eligible for testing.

Testing is prioritised through the website [gov.uk](https://www.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](https://www.nhs.uk).

Testing for non-HSC essential workers and the general public is currently conducted in drive-through sites operating in Belfast, Enniskillen, Derry/Londonderry and Portadown. In addition there is a mobile testing unit currently operating within Northern Ireland.

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. This data should be interpreted with caution, when interpreted alongside the HSC laboratory data, because it includes 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

A 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 independent sector owned.

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.

Currently, care homes with multiple facilities, i.e. nursing and residential, but the same name may be reported as one outbreak, rather than two (if both units are affected) which may underestimate the number of care homes affected.

Primary care surveillance

a. GP in-hours respiratory syndromic surveillance

The GP in-hours respiratory-related syndromic surveillance system collects and analyses anonymised respiratory-related data from over 320 GP practices via the Apollo GP Flu Surveillance System (Wellbeing Software), hereafter referred to as Apollo. This covers approximately 98% of the population.

Based on standardised definitions and extracted using READ codes in the GP Clinical Systems, respiratory-related data is collected on:

- Influenza Like Illness (ILI)
- Acute Respiratory Infections (ARI)
- Suspected COVID-19 (introduced late March 2020).

Data is analysed on a weekly basis to produce trends of ARI, ILI and COVID-19 consultation rates for Northern Ireland and at HSC Trust level.

GP out-of-hours syndromic surveillance

The GP respiratory-related syndromic surveillance system collects and analyses anonymised ARI, ILI and COVID-19 data from five OOH practices via Apollo. This system covers 100% of the population and complements the existing GP surveillance systems that cover in-hours consultations.

Data is analysed on a weekly basis to produce trends of ARI, ILI and COVID-19 consultation rates for Northern Ireland and at HSC Trust level. The system also monitors the number of unscheduled visits and calls to GPs every day during evenings, overnight, on weekends and on public holidays.

b. 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

The PHA Health Protection COVID-19 critical care online reporting system captures 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 Northern Ireland by the Intensive Care National Audit and Research Centre (iCNARC) ([here](#)).

Data is collected on all individuals admitted to an Intensive Care Unit (ICU) or High Dependency Unit (HDU) with a positive SARS-CoV2 result, from either before or during the ICU/HDU admission.

As the online reporting system is newly developed, the quality of the data will continue to improve as it is validated against other information sources.

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 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 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.

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. 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.

Suspected case of COVID-19 (as of 18 May 2020)

Patients who meet the following criteria (inpatient definition):

- requiring admission to hospital (a hospital practitioner has decided that admission to hospital is required with an expectation that the patient will need to stay at least one night) **AND**
- have either clinical or radiological evidence of pneumonia **OR**
- acute respiratory distress syndrome **OR**
- influenza like illness (fever $\geq 37.8^{\circ}\text{C}$ and at least one of the following respiratory symptoms, which must be of acute onset: persistent cough (with or without sputum), hoarseness, nasal discharge or congestion, shortness of breath, sore throat, wheezing, sneezing **OR**
- a loss of, or change in, normal sense of taste or smell (anosmia) in isolation or in combination with any other symptoms

Patients who meet the following criteria and are well enough to remain in the community

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

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.

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 Northern Ireland with a pre-existing positive result for SARS-CoV2, or received a positive result for SARS-CoV2 post-admission to ICU/HDU.

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

NISRA define a death associated with COVID-19 as one where COVID-19 or suspected COVID-19 was mentioned anywhere on the death certificate, including in combination with other health conditions.

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