# COVID-19 in Northern Ireland
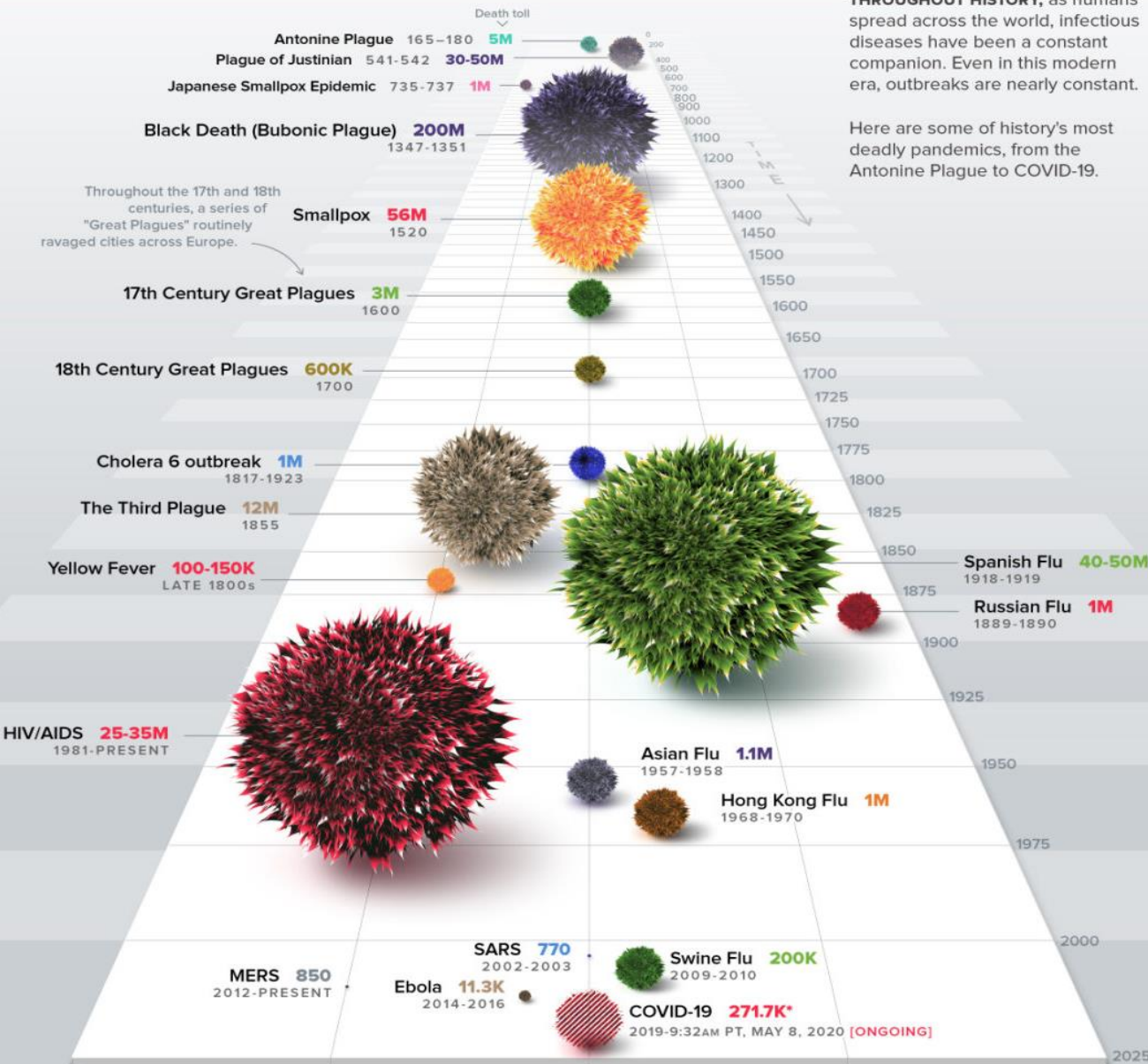
**Daily Dashboard Charts & Graphs: 17th April 2021**

INFORMATION ANALYSIS DIRECTORATE

Department of Health
An Roinn Sláinte
Männystrie O Poustie
www.health-ni.gov.uk

# HISTORY OF **PANDEMICS**

PAN·DEM·IC (of a disease) prevalent over a whole country or the world.

THROUGHOUT HISTORY, as humans spread across the world, infectious diseases have been a constant companion. Even in this modern era, outbreaks are nearly constant.

Here are some of history's most deadly pandemics, from the Antonine Plague to COVID-19.

Death toll

Antonine Plague 165–180 **5M**
Plague of Justinian 541-542 **30-50M**
Japanese Smallpox Epidemic 735-737 **1M**

Black Death (Bubonic Plague) **200M**
1347-1351

Throughout the 17th and 18th centuries, a series of "Great Plagues" routinely ravaged cities across Europe.

Smallpox **56M**
1520

17th Century Great Plagues **3M**
1600

18th Century Great Plagues **600K**
1700

Cholera 6 outbreak **1M**
1817-1923

The Third Plague **12M**
1855

Yellow Fever **100-150K**
LATE 1800s

Spanish Flu **40-50M**
1918-1919

Russian Flu **1M**
1889-1890

HIV/AIDS **25-35M**
1981-PRESENT

Asian Flu **1.1M**
1957-1958

Hong Kong Flu **1M**
1968-1970

MERS **850**
2012-PRESENT

SARS **770**
2002-2003

Ebola **11.3K**
2014-2016

Swine Flu **200K**
2009-2010

COVID-19 **271.7K***
2019-9:32AM PT, MAY 8, 2020 [ONGOING]

# Contents

# INTRODUCTION

The difficulties in controlling COVID-19 are due to several factors:

- Its incubation period is relatively long, some five to six days and longer for some.
- Those who are infected become infectious, and infect others, before they display any symptoms or become aware of the disease.
- A significant fraction of cases remain asymptomatic - they never develop symptoms, but they still infect others.

Certain parameters characterise the virus itself, these include:

- **Incubation period** - the time between contracting the infection and the appearance of symptoms
- **Virulence** - the severity of its health effects.
- **Reproduction number** (infectiousness) - the number of new infections each case typically generates, and
- **Case fatality** - the number of infected people that die from the infection

# UNDERSTANDING MEASURES TO 'FLATTEN THE CURVE'

COVID-19 infections, like many other viruses, grow exponentially. Fixed rate exponential growth means that the number of cases doubles in a defined amount of time. The doubling time is dynamic and informs us of the impact (or lack of impact) of interventions on epidemic growth. When we talk about '*flattening the curve'*, we mean lengthening the doubling period. Flattening the curve, or slowing the rate of growth of new infections, is crucial to the maintenance of capacity in the health sector.

A failure to moderate growth of infections rapidly overwhelms any nation's health systems, hence the need for radical social policy interventions. Flattening the curve, or increasing the doubling period, is achieved through official policies and social behaviours. These range from simple but effective practices such as:

- Washing hands correctly
- Social distancing practices (as recently introduced in many countries including Northern Ireland)
- Cessation of all non-essential activities, and stay-at-home policies (as seen in China & Italy).

All of these policies are designed to reduce the opportunity for transmission of infections – in effect aiming to slow the growth rate. The doubling period therefore is an important barometer of the effects of national policies and behaviours on the impact of the virus. Changes in the doubling period in effect, reflect policy effectiveness.

# THE DOUBLING PERIOD

The effect of **doubling period** is best illustrate by comparing for example numbers between Japan and Italy. On 23rd February, Italy reported 132 cases, and Japan reported 144: virtually the same. Japan's doubling period was close to eight days, Italy's was initially less than one day. Infections in Italy were therefore doubling at many times the rate of those in Japan. Eight days later, Italy reported 1,700 cases whilst Japan reported 254. One month later (23rd March), Italy reports more than 50 times the number of cases in Japan, at nearly 60,000 cases to Japan's 1,089.

While it is informative to know both the number of cases and deaths, it is their **growth rate** that matters most. The trajectory is what is most important. This shows the rise in confirmed cases and deaths since the outbreak began. South Korea spread slowed from initial pace and in fact has now plateaued. Northern Ireland Trajectory seems to be tracking similar to that of South Korea albeit with significantly fewer cases and deaths.

The **population of countries** differ significantly but we don't need to adjust for this. If for example we were to adjust for population size and to express confirmed cases or deaths as per million all that would happen is that we would just make larger countries look like their outbreaks aren't quite as bad, and smaller countries look like theirs are much worse. Since the virus spreads exponentially the population is not a limiting factor. Its spread will be determined by the behaviour of individuals and how they mix in their communities. It will tend to spread as the people in cities across the world interact with each other in a similar manner and at a similar rate.

# HOW DO WE TREAT CASES AND MANAGE TESTING?

There is the view that the number of **confirmed cases** in a country is a function of the number of tests it conducts. It is important to note despite the focus on testing large numbers of the population we do not actually know the number of people who have coronavirus in the population.

There may be a great many who are symptom free but nevertheless have the virus but just not ever been tested. It is for this reason that we plot laboratory confirmed cases and not simply refer to cases, the true number of which we do not know.

# 14 Day Mortality Lag

Case fatality rates (CFR) are based on the number of deaths divided by the number of confirmed cases, however, this isn't representative of the actual death rate, as patients who die on any particular day were infected much earlier. In other words, current deaths belong to the same group of patients that were infected sometime in the past. The maximum incubation period for COVID-19 is assumed to be up to 14 days, therefore the chart below recalculates mortality by dividing the number of cumulative deaths at a specific date by the number of confirmed COVID-19 cases 14 days before.

### COVID-19 Case Fatality & 14 Day Lag Chart

● Calculated with 14-day delay  ● Case fatality rate
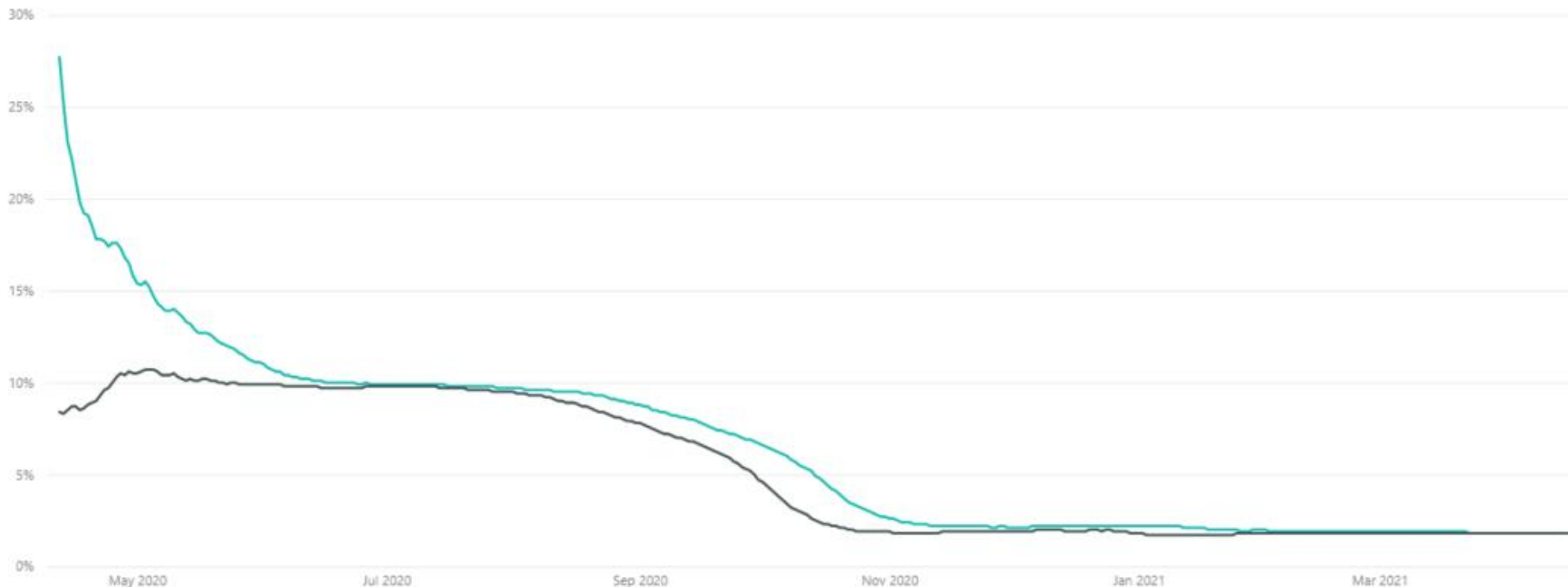


**Mortality rate estimates are often based on the number of deaths relative to the number of confirmed cases, however, this isn't representative of the actual death rate, as patients who die on any particular day were infected much earlier.** In other words, current deaths belong to the same group of patients that were infected in the past. The maximum incubation period for COVID-19 is assumed to be up to 14 days, therefore the chart below recalculates mortality by dividing the number of cumulative deaths at a specific date by the number of confirmed COVID-19 cases 14 days before.

# Doubling Time in the Last 7 Days and Confirmed Cases

The table below compares doubling times of **confirmed cases** in the last seven days with the doubling time in the seven days before; as well as the number of confirmed cases in the last seven days with the number of confirmed cases in the seven days before that. The 'change' column compares whether cases doubled faster or slower or remained about the same; or if countries reported more or less or about the same number of cases.

The number of confirmed cases in Northern Ireland is doubling at a faster rate (722.6 days) over the last 7 days compared with the doubling rate in the 7 days before that (919.3 days). Confirmed cases in Northern Ireland refers to individuals with a positive lab completed test.

## Doubling Rates & Case Numbers in the Last 7 Days

| Country | Doubling Time Last 7 Days | Doubling Time 7 Days Before That | Change in Doubling Time | New Cases Last 7 Days | New Cases 7 Days Before That | Change in New Cases |
|---|---|---|---|---|---|---|
| China | 3,195.7 | 2,321.4 | 874.4 | 155 | 213 | -58 |
| France | 86.7 | 119.4 | -32.6 | 282,144 | 195,317 | 86,827 |
| Germany | 103.6 | 131.5 | -27.9 | 143,384 | 108,368 | 35,016 |
| Ireland | 446.1 | 385.4 | 60.7 | 2,627 | 3,005 | -378 |
| Italy | 174.2 | 166.2 | 8.0 | 105,553 | 107,526 | -1,973 |
| Japan | 94.0 | 119.6 | -25.6 | 26,476 | 19,878 | 6,598 |
| Northern Ireland | 722.6 | 919.3 | -196.6 | 796 | 622 | 174 |
| South Korea | 119.9 | 123.1 | -3.2 | 4,499 | 4,209 | 290 |
| Spain | 274.2 | 287.0 | -12.8 | 59,771 | 56,118 | 3,653 |
| United Kingdom | 1,161.7 | 1,793.7 | -632.0 | 18,271 | 11,793 | 6,478 |
| US | 309.8 | 315.8 | -6.0 | 490,678 | 473,876 | 16,802 |

**Table 1: Comparison of doubling times of confirmed cases in the last seven days with the doubling time in the seven days before; as well as the number of confirmed cases in the last seven days with the number of confirmed cases in the seven days before that.** The 'change' column compares whether cases doubled faster or slower or remained about the same; or if countries reported more or less or about the same number of cases. The number of confirmed cases in Northern Ireland is doubling at a faster rate (722.6 days) over the last 7 days compared with the doubling rate in the 7 days before that (919.3 days).
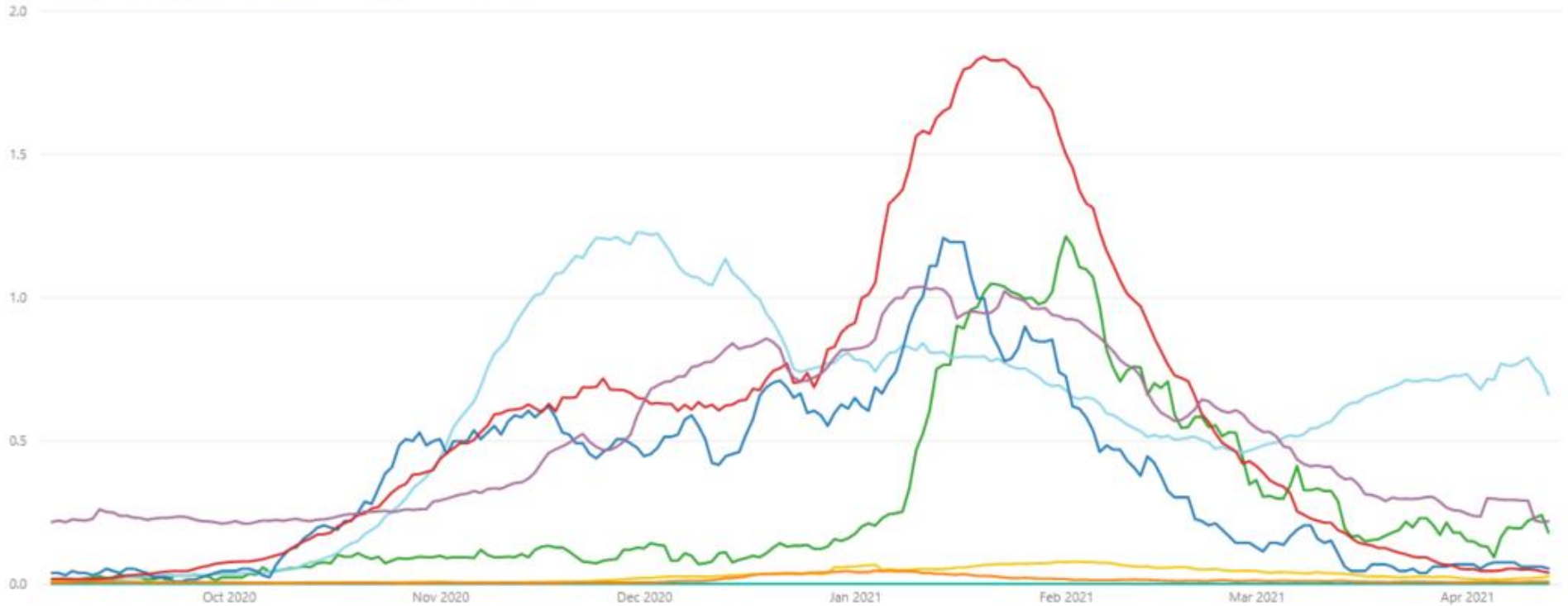
# COVID-19 New Cases Per 100k by Country

Information below refers to a 7 day rolling average of new confirmed cases of COVID-19 per 100,000 population. Confirmed cases in Northern Ireland refers to individuals with a positive lab completed test.

**7 Day Rolling Average of New COVID-19 Cases (per 100k)**

● China ● Ireland ● Italy ● Japan ● NI ● South Korea ● United Kingdom ● US
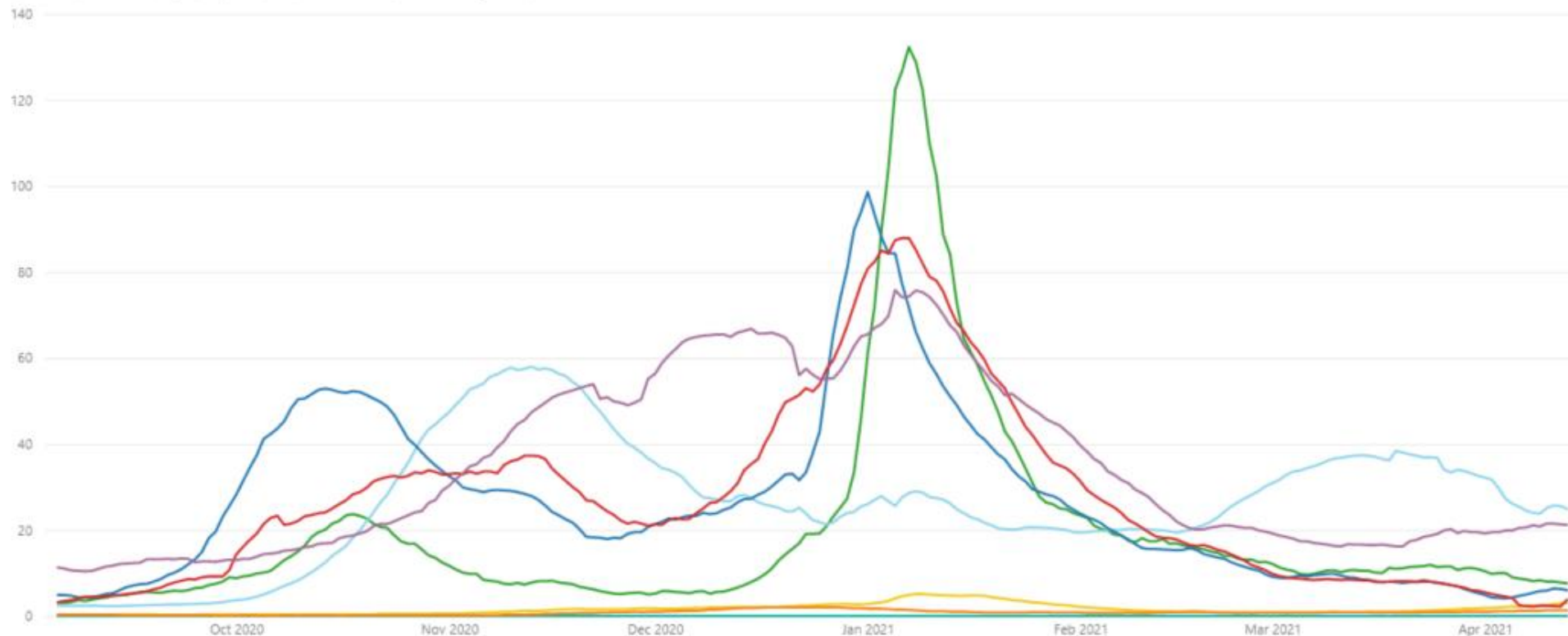


Information above refers to a 7 day rolling average of new confirmed cases of COVID-19 per 100,000 population. Confirmed cases in Northern Ireland refers to individuals with a positive lab completed test.

# COVID-19 New Deaths Per 100k by Country

Information below refers to a 7 day rolling average of new deaths attributed to COVID-19 per 100,000 population. Deaths in Northern Ireland refers to individuals who have had a positive test for COVID-19 and died within 28 days, whether or not COVID-19 was the cause of death.

**7 Day Rolling Average of New COVID-19 Deaths (per 100k)**

● China ● Ireland ● Italy ● Japan ● NI ● South Korea ● United Kingdom ● US



**Information above refers to a 7 day rolling average of new deaths attributed to COVID-19 per 100,000 population. Deaths in Northern Ireland refers to individuals who have had a positive test for COVID-19 and died within 28 days, whether or not COVID-19 was the cause of death.**

# COVID-19 Testing overview

## Total Tests

**2,003,891**

Includes tests carried out by both HSC Labs and National Initiative

## Individuals Tested

**917,767**

Includes tests carried out by both HSC Labs and National Initiative

## Individuals Tested Positive

**118,950**

Includes tests carried out by both HSC Labs and National Initiative

## Individuals Tested Positive in last 7 days

**796**

Includes tests carried out by both HSC Labs and National Initiative

### i. Pillar 1 - HSC Trust Laboratory Completed Tests

**16 April 2021**

| 595,260 | 265,445 | 20,715 |
|---|---|---|
| Total Lab Tests | Individuals Tested | Individuals Tested Positive |

**Daily Change**

| 1,974 | 565 | 8 |
|---|---|---|
| Total Lab Tests | Individuals Tested | Individuals Tested Positive |

### ii. Pillar 2- National Initiative Laboratory Completed Tests (From 29th April onwards)

**16 April 2021**

| 1,408,631 | 652,322 | 98,235 |
|---|---|---|
| Total Lab Tests | Individuals Tested | Individuals |

**Daily Change**

| 6,565 | 1,584 | 91 |
|---|---|---|
| Total Lab Tests | Individuals Tested | Individuals Tested Positive |

### Total Laboratory Completed Tests (Pillar 1 & 2)

**16 April 2021**

| 2,003,891 | 917,767 | 118,950 |
|---|---|---|
| Total Lab Tests | Individuals Tested | Individuals Tested Positive |

**Daily Change**

| 8,539 | 2,149 | 99 |
|---|---|---|
| Total Lab Tests | Individuals Tested | Individuals Tested Positive |

# COVID-19 Testing by LGD

Individuals with laboratory completed tests for the SARS-COV2 Virus in NI refers to both (i) **HSC Trust Labs (Pillar 1)** and (ii) **National Testing Centres (Pillar 2)** and is presented below by Local Government District. It is important to note that (i) Local Government Districts assigned as 'Not Known' refer to individuals with insufficient address / postcode details and (ii) the Change refers to the change in the cumulative number of individuals with a positive test between midnight 15 April and 16 April 2021, and is not comparable with data presented by Date of Specimen.

## Change in Cumulative Number of Individuals with a Positive Test by LGD

| Local Government District | Midnight 15 Apr 2021 | Midnight 16 Apr 2021 | Change |
|---|---|---|---|
| Antrim and Newtownabbey | 8,322 | 8,325 | 3 |
| Ards and North Down | 5,910 | 5,913 | 3 |
| Armagh City, Banbridge and... | 15,483 | 15,490 | 7 |
| Belfast | 22,340 | 22,353 | 13 |
| Causeway Coast and Glens | 7,274 | 7,280 | 6 |
| Derry City and Strabane | 11,961 | 11,985 | 24 |
| Fermanagh and Omagh | 5,827 | 5,832 | 5 |
| Lisburn and Castlereagh | 7,443 | 7,443 | 0 |
| Mid and East Antrim | 7,655 | 7,658 | 3 |
| Mid Ulster | 12,321 | 12,337 | 16 |
| Newry, Mourne and Down | 11,354 | 11,370 | 16 |
| Not Known | 2,961 | 2,964 | 3 |
| **Total** | **118,851** | **118,950** | **99** |

## Cumulative Number of Individuals with a Positive Laboratory Completed Test (Pillar 1 & 2) by LGD
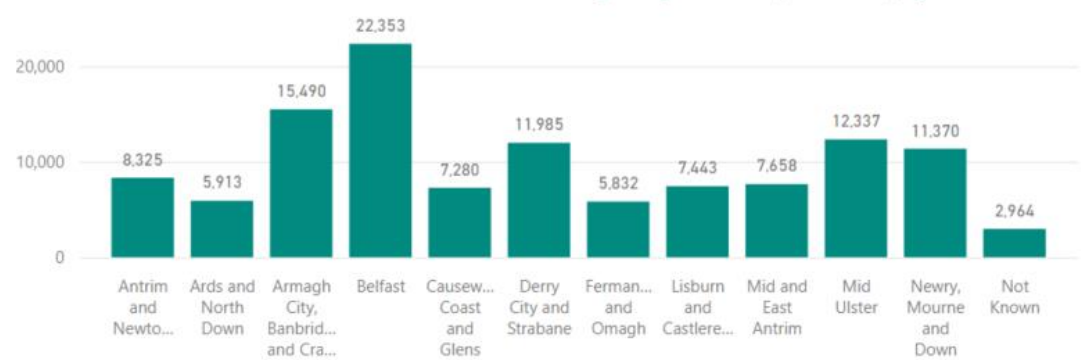


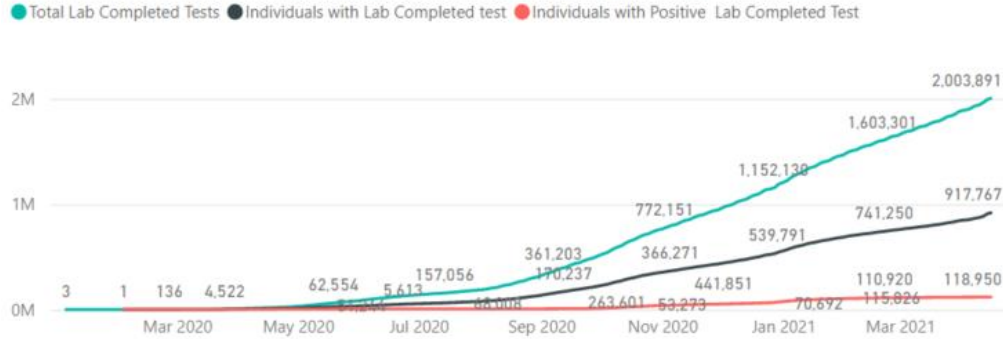## Change in Cumulative Number of Individuals with a Positive Test by LGD



## Cumulative Number of Individuals with a Laboratory Completed Test (Pillar 1 & 2) by LGD

| Local Government District | Total Individuals Tested | Individuals Tested Positive | Individuals Tested Negative | Individuals with Indeterminate Result | Positive Tests per 100k population |
|---|---|---|---|---|---|
| Antrim and Newtownabbey | 65,003 | 8,325 | 56,671 | 7 | 5,835 |
| Ards and North Down | 64,389 | 5,913 | 58,473 | 3 | 3,675 |
| Armagh City, Banbridge and Crai... | 100,399 | 15,490 | 84,905 | 4 | 7,249 |
| Belfast | 174,569 | 22,353 | 152,202 | 14 | 6,551 |
| Causeway Coast and Glens | 57,460 | 7,280 | 50,177 | 3 | 5,046 |
| Derry City and Strabane | 80,792 | 11,985 | 68,803 | 4 | 7,954 |
| Fermanagh and Omagh | 52,021 | 5,832 | 46,184 | 5 | 4,992 |
| Lisburn and Castlereagh | 66,863 | 7,443 | 59,415 | 5 | 5,127 |
| Mid and East Antrim | 57,483 | 7,658 | 49,823 | 2 | 5,525 |
| Mid Ulster | 72,243 | 12,337 | 59,904 | 2 | 8,363 |
| Newry, Mourne and Down | 85,458 | 11,370 | 74,077 | 11 | 6,310 |
| Not Known | 41,087 | 2,964 | 38,114 | 9 | |
| **Total** | **917,767** | **118,950** | **798,748** | **69** | **6,321** |

# COVID-19 Testing Details

Information below shows (i) the total number of lab completed tests, (ii) individuals with a lab completed test, and (iii) individuals with a positive lab completed test for both HSC & National Initiative.

## Cumulative Total of Laboratory Completed Tests by Date of Specimen (Pillar 1 & 2)

● Total Lab Completed Tests  ● Individuals with Lab Completed test  ● Individuals with Positive Lab Completed Test



Information below refers to individuals with a positive lab completed test in both HSC & National Initiative and is presented below by the date the specimen (sample / swab) had been taken at a testing location, and not the date the labortory test was completed.
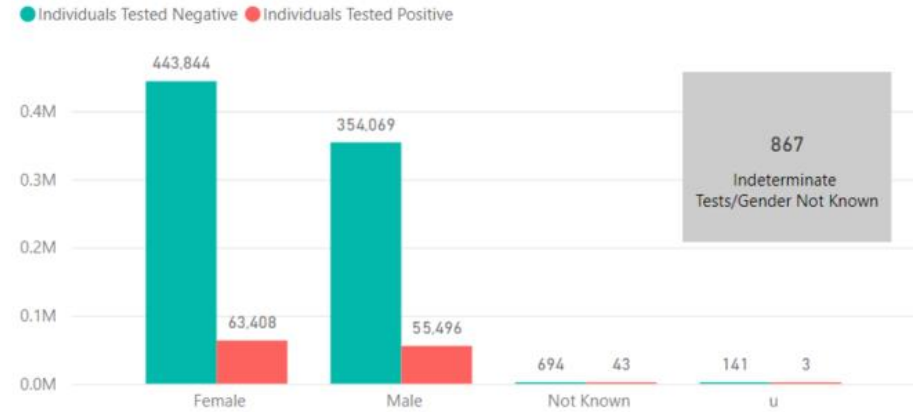
## Individuals with Positive Laboratory Completed Test by Pillar and Date of Specimen

● Pillar 1 (HSC)  ● Pillar 2 (National Initiative)
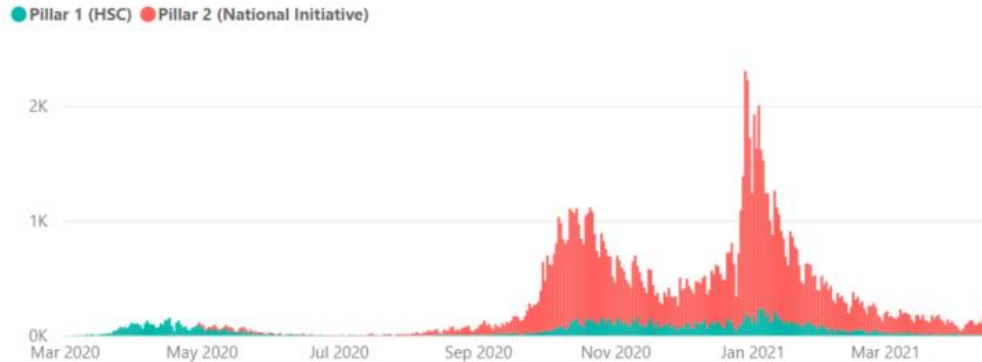


## Age Group of Individuals with a Laboratory Completed Test (Pillar 1 & 2)

● Individuals Tested Positive  ● Individuals Tested Negative



69 Indeterminate Tests

## Gender of Individuals with a Laboratory Completed Test (Pillar 1 & 2)

● Individuals Tested Negative  ● Individuals Tested Positive



867 Indeterminate Tests/Gender Not Known

# COVID Testing Last 7 Days - Postal District

## Positive Cases in my Local Area

To view information on the number of individuals with a positive COVID-19 test in a specific area during the last 7 days, enter your full postcode in the box below with no spaces.

**Enter a Postcode in following format and click enter i.e.** BT221GB or BT34PP
*Click on the icon at the side to reset the map for each postcode search.*

Reset

| Search | 🔍 | ↩ |

**Scroll down table to view data for all postcode districts selected.**

### Individuals Tested during Last 7 Days (5 April - 11 April 21) by Postal District

| Postal_District | Positive Cases | Rate per 100K Pop. | Individuals Tested | Population |
|---|---|---|---|---|
| BT1 | 1 | 39.2 | 61 | 2,550 |
| BT10 | 4 | 31.5 | 277 | 12,680 |
| BT11 | 9 | 33.0 | 501 | 27,260 |
| BT12 | 8 | 27.0 | 455 | 29,590 |
| BT13 | 4 | 16.5 | 510 | 24,300 |
| BT14 | 9 | 26.6 | 627 | 33,780 |
| BT15 | 6 | 22.4 | 505 | 26,750 |
| BT16 | 4 | 22.5 | 439 | 17,760 |
| BT17 | 14 | 41.0 | 594 | 34,120 |
| BT18 | 2 | 14.7 | 385 | 13,650 |
| BT19 | 9 | 23.4 | 966 | 38,490 |
| BT2 | 0 | 0.0 | 42 | 1,120 |
| BT20 | 6 | 23.1 | 692 | 25,930 |
| BT21 | 2 | 25.3 | 274 | 7,890 |
| BT22 | 0 | 0.0 | 356 | 22,610 |
| **Total** | **717** | **37.9** | **41,258** | **1,893,680** |

## Information:

The map below provides a visualisation of the 7-day incidence rate of individuals testing positive for COVID-19 per 100,000 population within each postal district in Northern Ireland, and will be updated on a weekly basis (each Monday).

### Positive Cases in last 7 Days per 100K Pop. by Postal District (5 April - 11 April 21)



**Map Legend**
- ● < 50 per 100k pop.
- ● 50 - 99 per 100k pop.
- ● 100 - 149 per 100k pop.
- ● 150 - 199 per 100k pop.
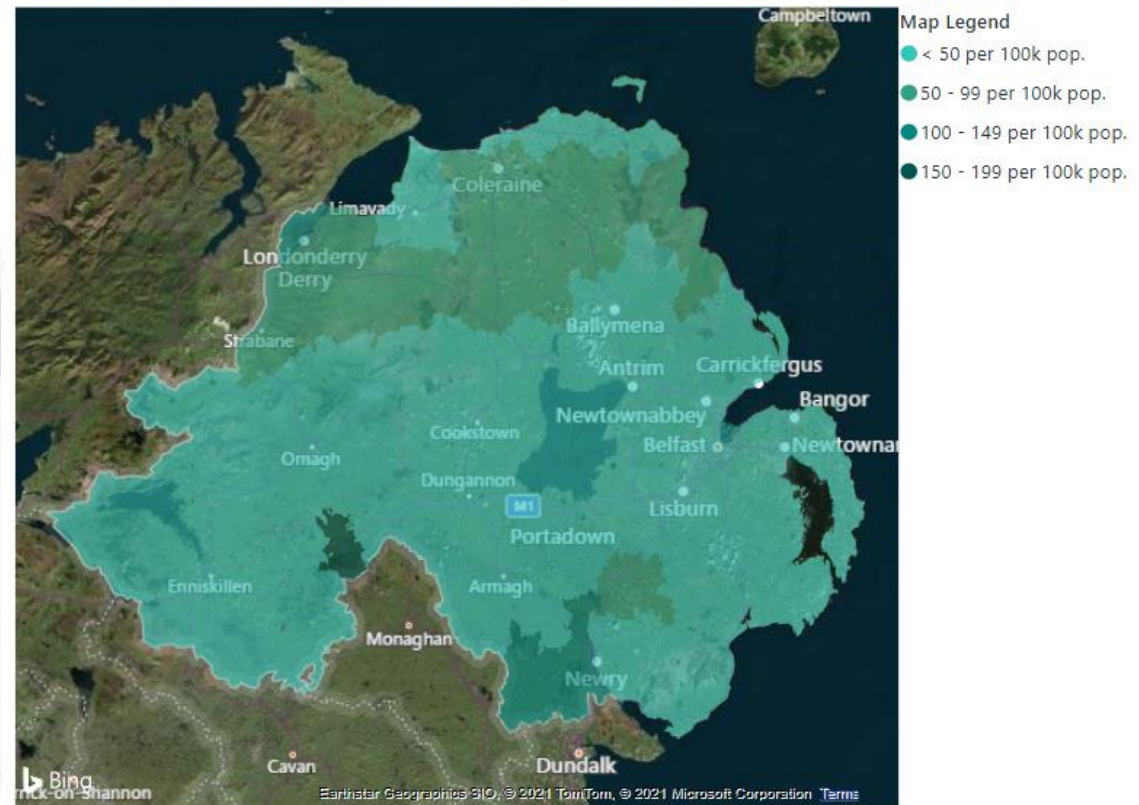
# COVID-19 Testing in the last 7 Days

Information below refers to the number of individuals with a positive laboratory completed test during the **last 7 days** (10 - 16 April 2021) compared with the **previous 7 days** (3 - 9 April 2021).
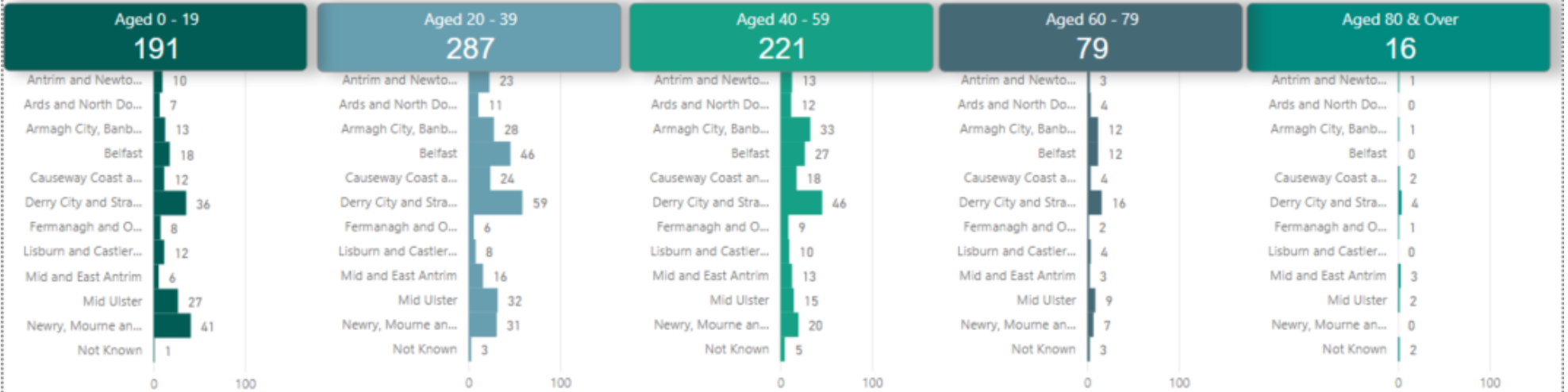
**Laboratory Completed Tests during Last 7 Days (10 - 16 April 2021) by LGD**

| Local Government District | +ve Cases Last 7 Days | Last 7 Day Rate per 100K | Individuals Tested Last 7 Days |
|---|---|---|---|
| Antrim and Newtownabbey | 50 | 35.0 | 3,082 |
| Ards and North Down | 34 | 21.1 | 4,322 |
| Armagh City, Banbridge and Crai... | 87 | 40.7 | 5,216 |
| Belfast | 103 | 30.2 | 7,822 |
| Causeway Coast and Glens | 60 | 41.6 | 2,978 |
| Derry City and Strabane | 162 | 107.5 | 3,224 |
| Fermanagh and Omagh | 26 | 22.3 | 2,468 |
| Lisburn and Castlereagh | 35 | 24.1 | 3,370 |
| Mid and East Antrim | 41 | 29.6 | 3,601 |
| Mid Ulster | 85 | 57.6 | 3,628 |
| Newry, Mourne and Down | 99 | 54.9 | 4,318 |
| Not Known | 14 | | 3,996 |
| **Total** | **796** | **42.3** | **48,025** |

**Laboratory Completed Tests during Previous 7 Days (3 - 9 April 2021) by LGD**

| Local Government District | +ve Cases Previous 7 Days | Previous 7 Day Rate per 100K | Individ. Tested in Previous 7 Days |
|---|---|---|---|
| Antrim and Newtownabbey | 30 | 21.0 | 1,380 |
| Ards and North Down | 43 | 26.7 | 1,534 |
| Armagh City, Banbridge and Craig... | 56 | 26.2 | 2,195 |
| Belfast | 103 | 30.2 | 3,528 |
| Causeway Coast and Glens | 54 | 37.4 | 1,276 |
| Derry City and Strabane | 105 | 69.7 | 1,593 |
| Fermanagh and Omagh | 26 | 22.3 | 924 |
| Lisburn and Castlereagh | 28 | 19.3 | 1,475 |
| Mid and East Antrim | 20 | 14.4 | 1,262 |
| Mid Ulster | 52 | 35.2 | 1,668 |
| Newry, Mourne and Down | 85 | 47.2 | 1,655 |
| Not Known | 19 | | 2,717 |
| **Total** | **621** | **33.0** | **21,207** |

**Positive Laboratory Completed Tests during the last 7 days (10 April - 16 April 2021) by LGD**

| | Aged 0 - 19 | Aged 20 - 39 | Aged 40 - 59 | Aged 60 - 79 | Aged 80 & Over |
|---|---|---|---|---|---|
| | **191** | **287** | **221** | **79** | **16** |

| LGD | Aged 0-19 | Aged 20-39 | Aged 40-59 | Aged 60-79 | Aged 80 & Over |
|---|---|---|---|---|---|
| Antrim and Newto... | 10 | 23 | 13 | 3 | 1 |
| Ards and North Do... | 7 | 11 | 12 | 4 | 0 |
| Armagh City, Banb... | 13 | 28 | 33 | 12 | 1 |
| Belfast | 18 | 46 | 27 | 12 | 0 |
| Causeway Coast a... | 12 | 24 | 18 | 4 | 2 |
| Derry City and Stra... | 36 | 59 | 46 | 16 | 4 |
| Fermanagh and O... | 8 | 6 | 9 | 2 | 1 |
| Lisburn and Castler... | 12 | 8 | 10 | 4 | 0 |
| Mid and East Antrim | 6 | 16 | 13 | 3 | 3 |
| Mid Ulster | 27 | 32 | 15 | 9 | 2 |
| Newry, Mourne an... | 41 | 31 | 20 | 7 | 0 |
| Not Known | 1 | 3 | 5 | 3 | 2 |

# Testing Trend Analysis of Individuals with a confirmed Laboratory completed test for SARS-COV2
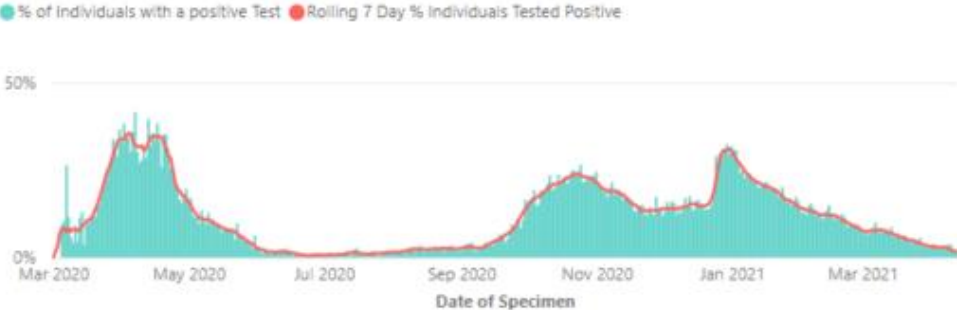
Information below refers to the number of laboratory completed tests (Both HSC & National Initiative) by the date on which the specimen (sample / swab) had been taken at a testing location, and not the date the laboratory test was completed. Whilst this gives the most accurate analysis of how cases progress over time it does mean that the latest days' figures are usually incomplete, so it shouldn't be seen as a sudden large drop in cases.

### Laboratory Completed Tests by Date of Specimen (Pillar 1 & 2)

● Pillar 1 Laboratory Completed Tests  ● Pillar 2 Laboratory Completed Tests
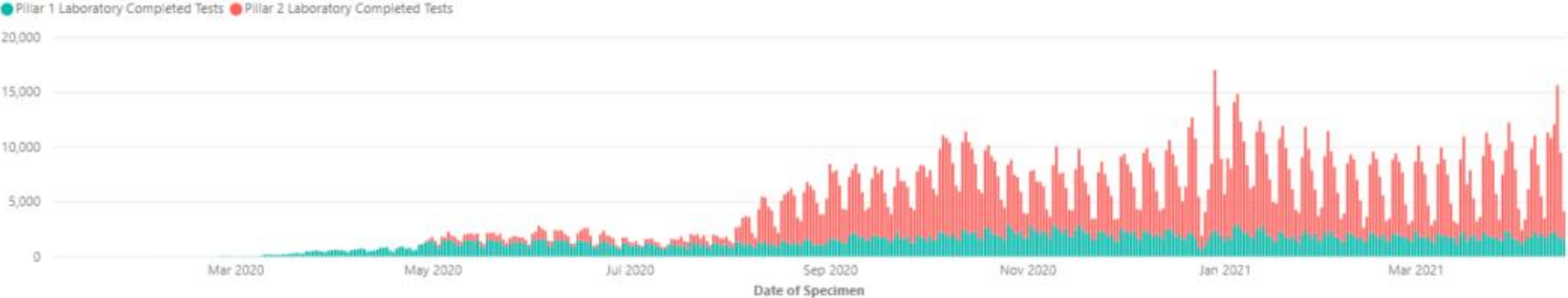


Information below shows the percentage of laboratory completed tests (Both HSC & National Initiative) which were identfiied as positive by the date the specimen (sample / swab) was taken at a testing location.

Information is presented below on the 7-day rolling average of individuals with a positive laboratory completed test (Both HSC & National Initiative), by the date specimen (sample / swab) was taken at a testing location.

### Proportion of Laboratory Completed Tests Identified as Positive by Date of Specimen (Pillar 1 & 2)

● % of Individuals with a positive Test  ● Rolling 7 Day % Individuals Tested Positive

### 7 Day Rolling Average (mean) of Individuals with Positive Laboratory Completed Tests by Date of Specimen (Pillar 1 & 2)
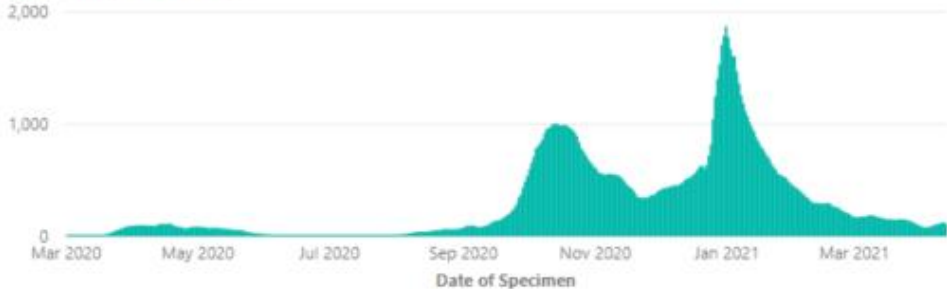




NOTE: Data is not yet available for the National Initiative between 4th - 28th April 2020 and this has resulted in a slight dip in the charts above between 19th - 29th April 2020.

# Weekly COVID-19 Testing

Information on this page refers to the number and percentage of individuals with a positive laboratory completed test during each week from February 2020. a week starts on a Monday and ends on a Sunday. An individual is counted only once in each week they were tested. with the first positive test in each week being counted. Note that information on this page will not match any data on previous testing pages.

**FILTER BY LOCAL GOVERNMENT DISTRICT (LGD):** Use drop down box below to filter by LGD. Reset the page, click the reset button on the left.

All ⌄    ↺ Reset Filter
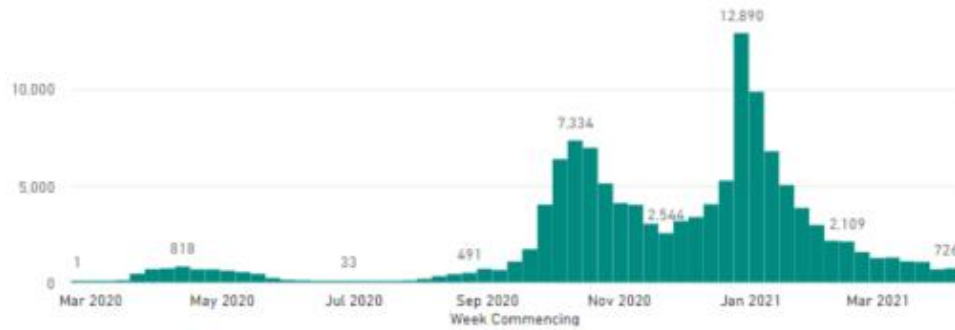
Click the icon ⤢ in the top right hand corner of each chart to enlarge the view.

Individuals Tested Positive each Week (All LGDs)



Percentage Tested Positive each Week (All LGDs)
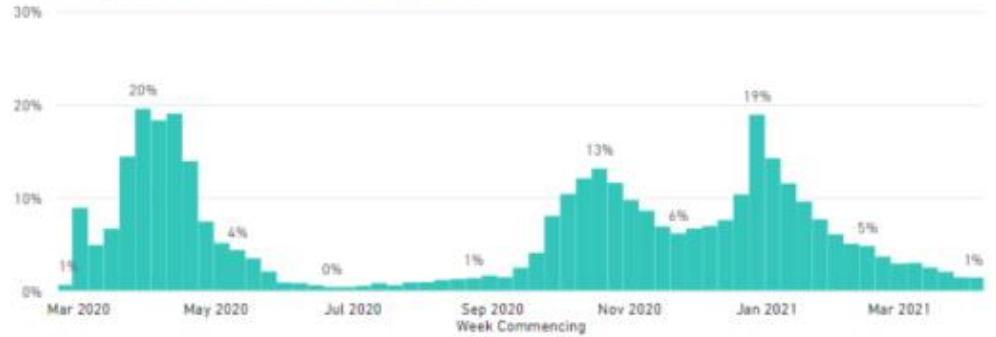


Individuals Tested Positive each Week by Age Group (All LGDs)

| Week Commencing | Individ Under 20 Tested | +ve Cases Aged Under 20 | Individ Aged 20-39 Tested | +ve Cases Aged 20-39 | Individ Aged 40-59 Tested | +ve Cases Aged 40-59 | Individ Aged 60-79 Tested | +ve Cases Aged 60-79 | Individ Aged 80+ Tested | +ve Cases Aged 80+ | Total Tested | Total +ve Tests |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W/C: 05/04/2021 | 8,695 | 160 | 15,998 | 284 | 16,050 | 210 | 7,882 | 56 | 3,541 | 16 | 52,168 | 726 |
| W/C: 29/03/2021 | 5,338 | 121 | 15,620 | 267 | 15,006 | 212 | 7,486 | 47 | 4,004 | 29 | 47,456 | 676 |
| W/C: 22/03/2021 | 8,902 | 253 | 16,408 | 388 | 15,849 | 311 | 8,060 | 83 | 3,561 | 24 | 52,802 | 1,059 |
| W/C: 15/03/2021 | 4,480 | 203 | 14,703 | 432 | 14,217 | 302 | 7,389 | 112 | 3,164 | 34 | 43,954 | 1,083 |
| W/C: 08/03/2021 | 3,877 | 186 | 14,899 | 518 | 14,220 | 395 | 7,104 | 148 | 3,087 | 37 | 43,188 | 1,284 |
| W/C: 01/03/2021 | 3,437 | 195 | 14,615 | 493 | 13,772 | 372 | 7,458 | 168 | 4,166 | 31 | 43,450 | 1,259 |
| W/C: 22/02/2021 | 3,489 | 214 | 14,958 | 635 | 13,890 | 473 | 7,204 | 178 | 3,453 | 68 | 42,996 | 1,568 |
| W/C: 15/02/2021 | 3,601 | 240 | 15,592 | 845 | 14,635 | 664 | 7,137 | 275 | 3,111 | 85 | 44,079 | 2,109 |
| W/C: 08/02/2021 | 3,572 | 241 | 15,255 | 793 | 14,011 | 690 | 6,770 | 308 | 3,174 | 117 | 42,784 | 2,150 |
| W/C: 01/02/2021 | 4,256 | 375 | 17,362 | 995 | 15,777 | 990 | 7,572 | 440 | 4,103 | 166 | 49,071 | 2,966 |
| W/C: 25/01/2021 | 4,466 | 466 | 18,479 | 1,318 | 16,329 | 1,221 | 7,545 | 583 | 3,553 | 260 | 50,375 | 3,848 |
| Total | 241,914 | 16,569 | 643,850 | 45,161 | 548,409 | 37,712 | 287,271 | 17,377 | 160,239 | 7,978 | 1,881,831 | 124,801 |

# Cumulative COVID-19 Deaths By Local Government District by Age, Gender and Previously Report Deaths and Deaths in Current Reporting Period by Date of Death

## Breakdown of Deaths During Current Reporting Period

**2,135**
COVID-19 Deaths reported up to 10:00am on 17 Apr 2021
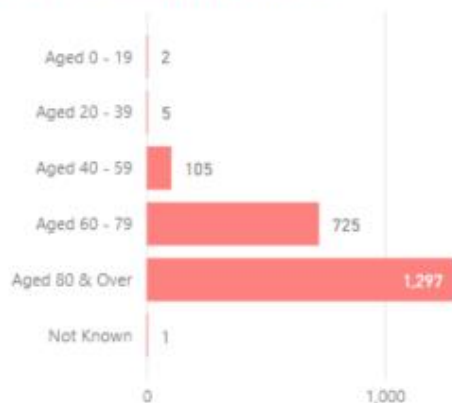
=

**2,133**
COVID-19 Deaths previously reported up to 10:00am on 16 Apr 2021

+

**2**
Deaths reported and occuring within current reporting period

+

**0**
Deaths reported, but not occuring within current reporting period

## COVID-19 Deaths by Gender

Not Known 1 (0%)
Female 1,008 (47%)
Male 1,126 (53%)

## COVID-19 Deaths by Local Government District

## COVID-19 Deaths by Age Group

| Age Group | Deaths |
| --- | --- |
| Aged 0 - 19 | 2 |
| Aged 20 - 39 | 5 |
| Aged 40 - 59 | 105 |
| Aged 60 - 79 | 725 |
| Aged 80 & Over | 1,297 |
| Not Known | 1 |

## COVID-19 Deaths by Local Government District

| District | Deaths |
| --- | --- |
| Belfast | 387 |
| Armagh City, B... | 285 |
| Mid and E... | 218 |
| Antrim and N... | 208 |
| Mid Ulster | 203 |
| Cause... Coast ... | 166 |
| Newry, Mour... | 165 |
| Lisburn and C... | 147 |
| Derry City a... | 135 |
| Ards and N... | 130 |
| Ferma... and O... | 85 |
| Not Known | 6 |

## Cumulative COVID-19 Deaths by Date of Death

Values: 1, 334, 534, 580, 811, 1,173, 1,740, 2,060, 2,135 (May 2020 – Mar 2021)

## Previously Reported Deaths and Deaths in Current Reporting Period by Date of Death

● Previously Reported Deaths  ● Deaths Reported in Current Reporting Period  ● Rolling 7 Day Avg.Deaths
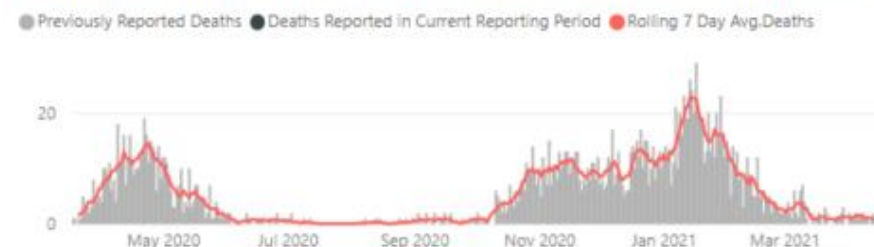
Note 1: Deaths in current reporting period include deaths which will have occurred in that period, along with deaths which have only been reported within that period. For example. A death may occur on Thursday 30th April but not be reported until Saturday 2nd May
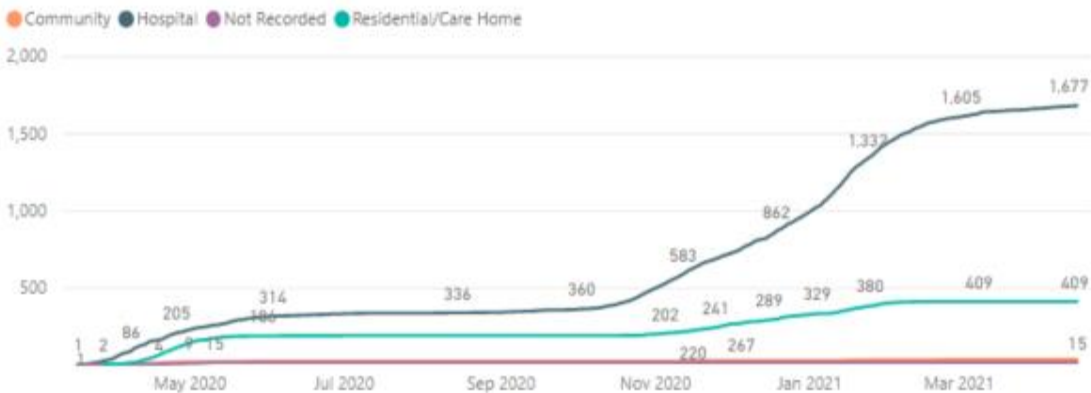
Note 2: Current Reporting Period = 10am on 16 April 2021 - 10am on 17 April 2021
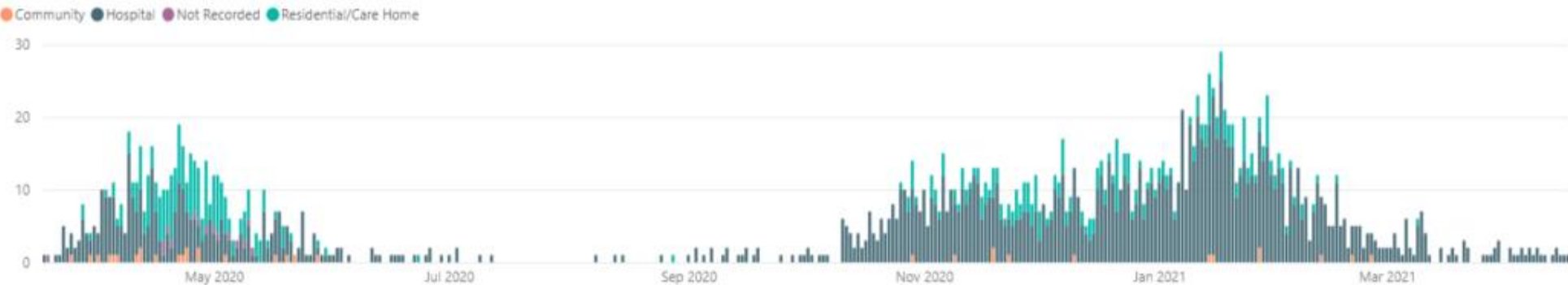
# Cumulative COVID-19 Deaths by Death Setting

## COVID-19 Deaths by Setting



| Setting | Deaths |
|---|---|
| Hospital | 1,677 |
| Residential/Care Home | 409 |
| Community | 34 |
| Not Recorded | 15 |

## Cumulative COVID-19 Deaths by Date of Death and Setting

● Community ● Hospital ● Not Recorded ● Residential/Care Home
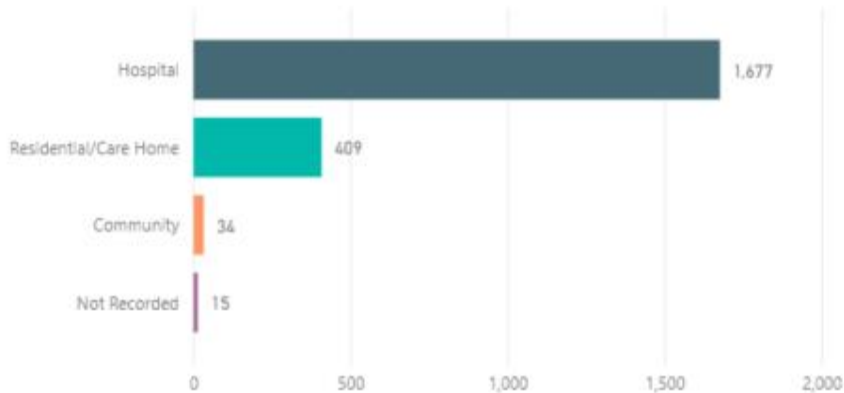


## COVID-19 Daily Deaths by Date of Death and Setting

● Community ● Hospital ● Not Recorded ● Residential/Care Home



**Note:** The Community setting includes deaths recorded as occuring in Community, Hospice and Other settings. Information displayed reflects deaths reported to the PHA up to the end of the current reporting period, and includes individuals who have had a positive test for COVID-19 and died within 28 days, whether or not COVID-19 was the cause of death. A broader picture on COVID-19 fatalities is provided in the weekly NISRA bulletin which details deaths across hospital and community settings. NISRA figures are derived from the formal process of death registration and may include cases where the doctor completing the death certificate diagnosed suspected cases of COVID-19.

# Confirmed COVID-19 Admissions by HSC Trust, Age Group & Patient Status: Covid-19 Admissions by Admission Date & Occupancy by Date
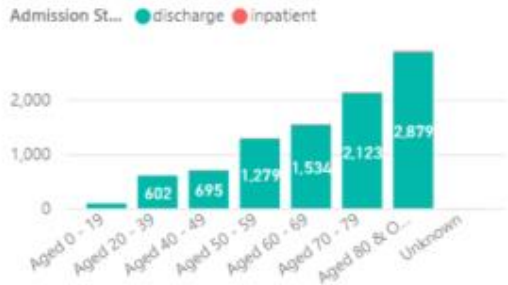
**9,272** Admissions

**9,202** Discharged

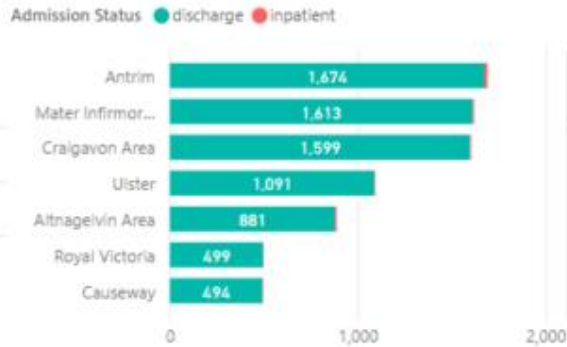**70** Inpatients

**25** Hospitals

## COVID-19 Admissions by Trust & Patient Status

Admission Status ● discharge ● Inpatient

| Trust | Value |
|---|---|
| Belfast | 2,362 |
| Northern | 2,258 |
| South Eastern | 1,236 |
| Southern | 2,113 |
| Western | 1,233 |

## COVID-19 Admissions by Age Group & Patient Status

Admission St... ● discharge ● inpatient

| Age Group | Value |
|---|---|
| Aged 0 - 19 | |
| Aged 20 - 39 | 602 |
| Aged 40 - 49 | 695 |
| Aged 50 - 59 | 1,279 |
| Aged 60 - 69 | 1,534 |
| Aged 70 - 79 | 2,123 |
| Aged 80 & O... | 2,879 |
| Unknown | |

## COVID-19 Admissions by Hospital & Patient Status

Admission Status ● discharge ● inpatient

| Hospital | Value |
|---|---|
| Antrim | 1,674 |
| Mater Infirmor... | 1,613 |
| Craigavon Area | 1,599 |
| Ulster | 1,091 |
| Altnagelvin Area | 881 |
| Royal Victoria | 499 |
| Causeway | 494 |

## COVID-19 Admissions by Admission Date & Patient Status

Admission Status ● discharge ● Inpatient



## COVID-19 Admissions, Discharges & Inpatients at Midnight for the Last 8 Days

| Date | Admissions | Discharged | Inpatients |
|---|---|---|---|
| 09 April 2021 | 9,248 | 9,154 | 94 |
| 10 April 2021 | 9,255 | 9,160 | 95 |
| 11 April 2021 | 9,257 | 9,164 | 93 |
| 12 April 2021 | 9,259 | 9,175 | 84 |
| 13 April 2021 | 9,264 | 9,184 | 80 |
| 14 April 2021 | 9,266 | 9,193 | 73 |
| 15 April 2021 | 9,268 | 9,199 | 69 |
| 16 April 2021 | 9,272 | 9,202 | 70 |

## Change in Admissions & Discharges by HSC Trust

| HSC Trust | Admissions in Last 7 Days | Discharges in Last 7 Days | Admissions in Last 14 Days | Discharges in Last 14 Days |
|---|---|---|---|---|
| Belfast | 6 | 11 | 12 | 17 |
| Northern | 5 | 17 | 16 | 41 |
| South Eastern | 1 | 5 | 3 | 10 |
| Southern | 6 | 5 | 10 | 17 |
| Western | 6 | 10 | 12 | 25 |
| Total | 24 | 48 | 53 | 110 |

Note 1: Discharges include: discharge under medical grounds, self-discharge or death.
Note 2: Admissions data is sourced from a live administrative system which is continually being amended and updated, as such previous days' admission data may be revised.
Note 3: Figures include patients admitted for other reasons but who subsequently test positive for COVID-19.

# COVID-19 Inpatients by HSC Trust: Confirmed COVID-19



Confirmed COVID-19 inpatients (All Trusts)

Confirmed COVID-19 inpatients (Belfast Trust)

Confirmed COVID-19 inpatients (Northern Trust)

Confirmed COVID-19 inpatients (South Eastern Trust)

Confirmed COVID-19 inpatients (Southern Trust)

Confirmed COVID-19 inpatients (Western Trust)
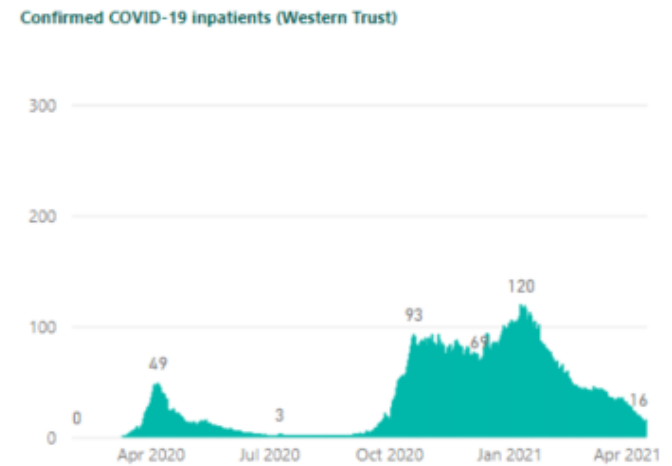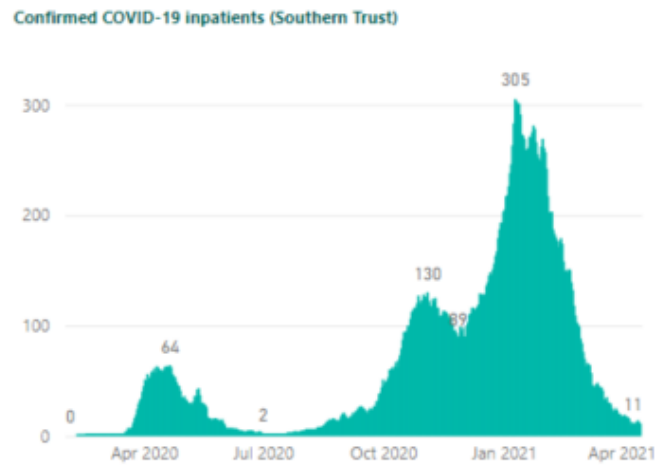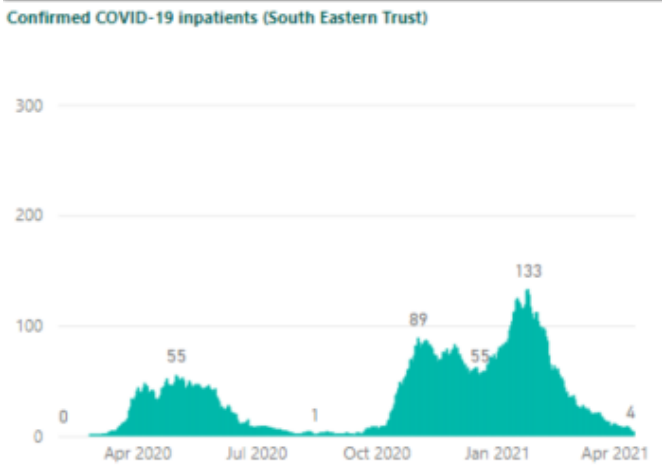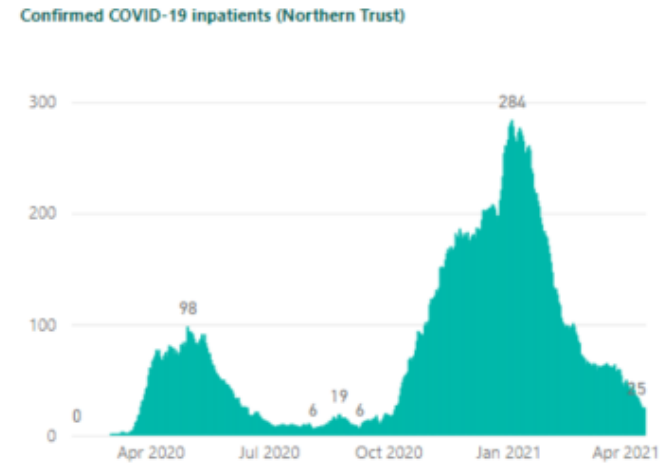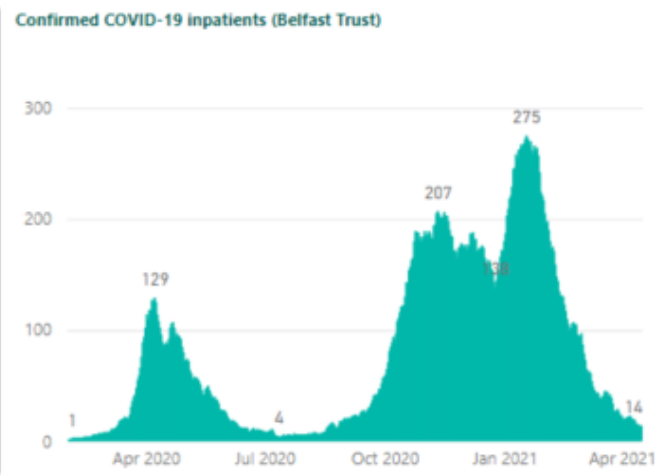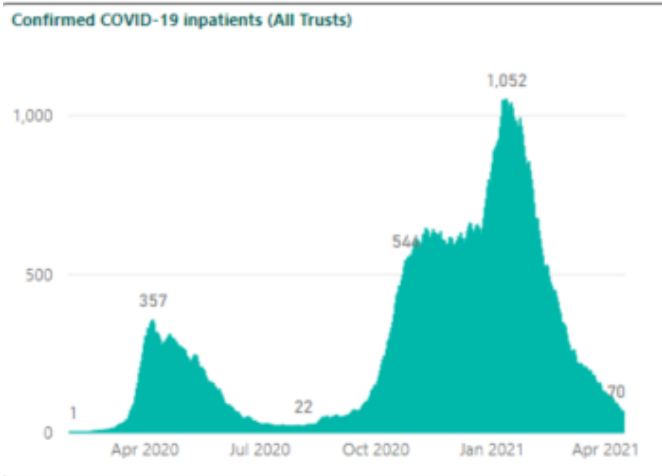
# Inpatients at Midnight

**Note:** Information on this page refers to the number of inpatients in hospital at midnight by age band, date, Health and Social Care Trust and sex. Please click on the buttons below to make a selection.

**SELECT SEX:**

- All
- Female
- Male
- Unknown

### Inpatients at Midnight by Age Band for All

● Aged 0 - 19　● Aged 20 - 39　● Aged 40 - 49　● Aged 50 - 59　● Aged 60 - 69　● Aged 70 - 79　● Aged 80 & Over　● Unknown
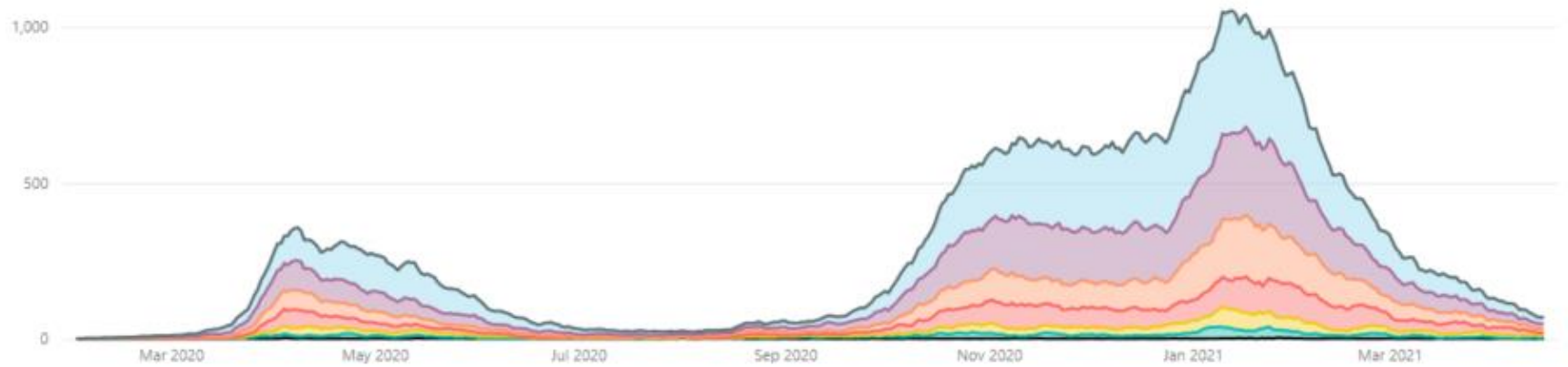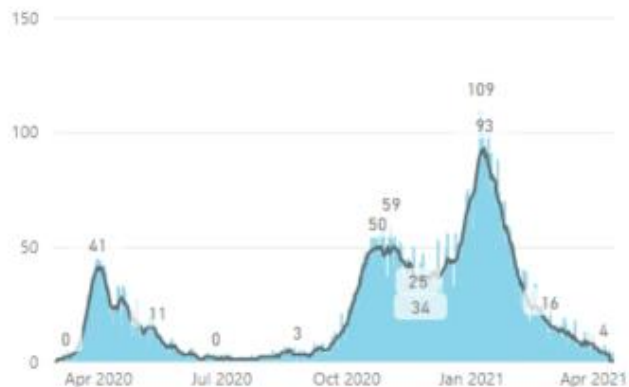


### Inpatients at Midnight by Trust for All

● Belfast　● Northern　● South Eastern　● Southern　● Western
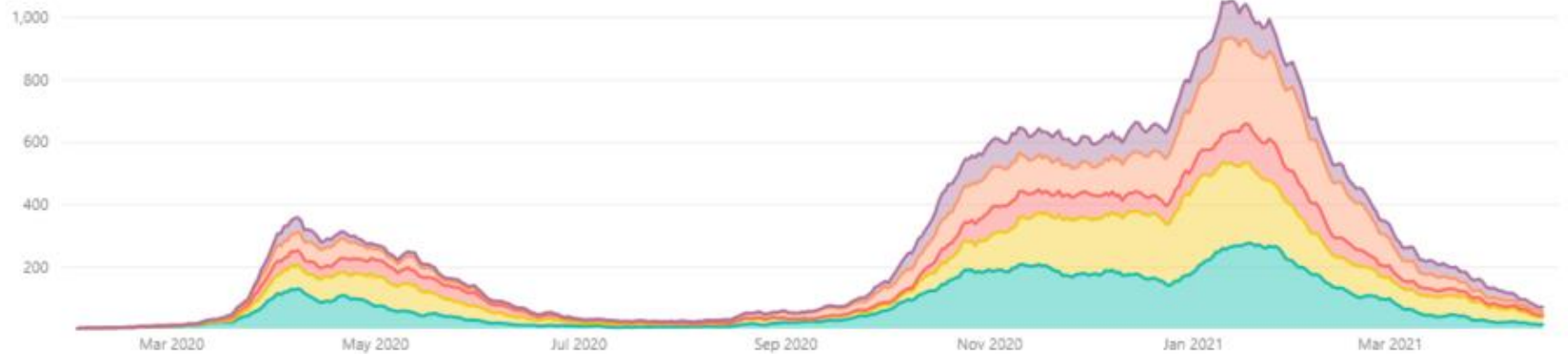
# Confirmed COVID-19 Daily Admissions by HSC Trust

## Confirmed COVID-19 daily admissions (All Trusts)
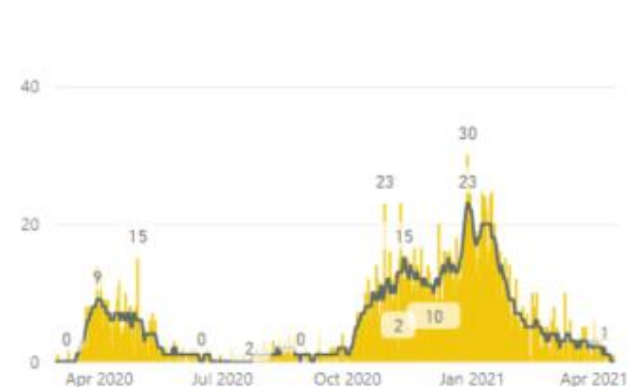
Number ● Rolling 7 Day Average



## Confirmed COVID-19 daily admissions (Belfast Trust)
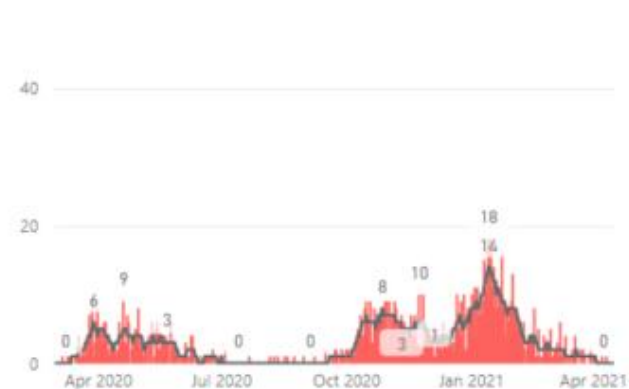
Number ● Rolling 7 Day Average
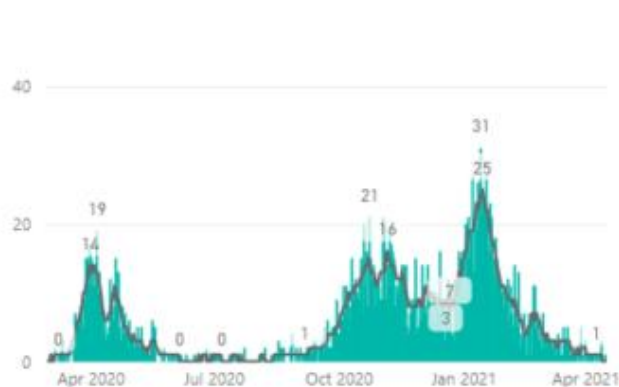


## Confirmed COVID-19 daily admissions (Northern Trust)
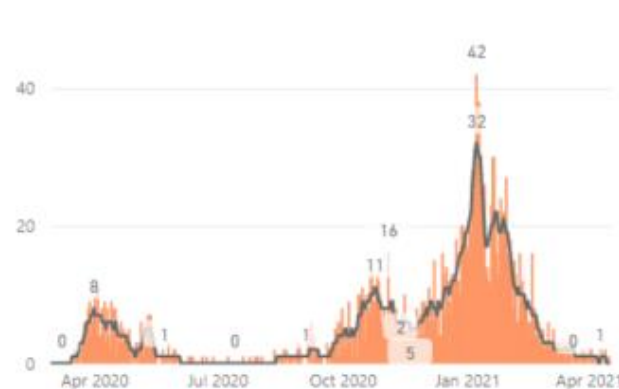
Number ● Rolling 7 Day Average



## Confirmed COVID-19 daily admissions (South Eastern Trust)
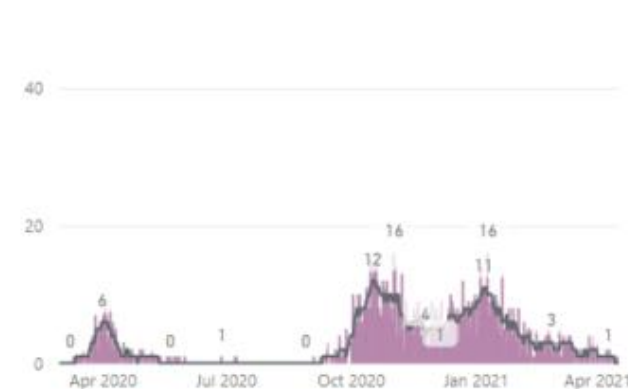
Number ● Rolling 7 Day Average



## Confirmed COVID-19 daily admissions (Southern Trust)

Number ● Rolling 7 Day Average



## Confirmed COVID-19 daily admissions (Western Trust)
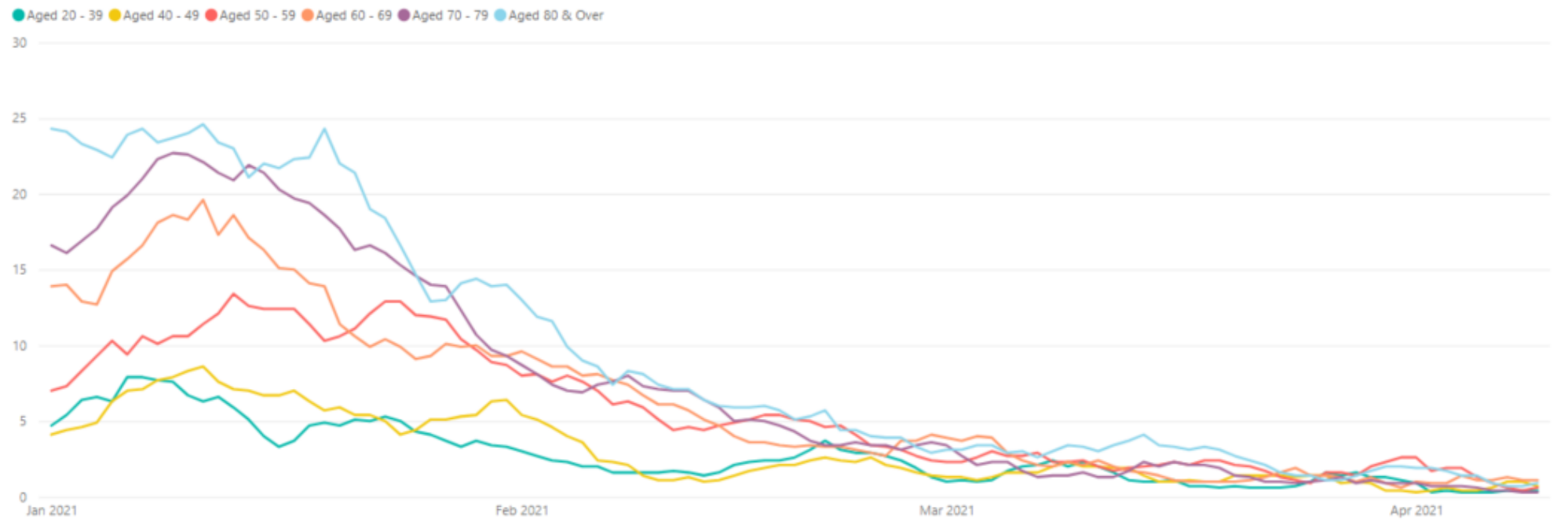
Number ● Rolling 7 Day Average

# COVID-19 Admissions – 7 Day Rolling Average Change

The number and percentage change in admissions from 1st January 2021 is detailed in the boxes below. Ages 0 - 19 and unknown ages are excluded.

| -4 | -3 | -6 | -13 | -16 | -23 | -67 |
|---|---|---|---|---|---|---|
| -91% | -83% | -91% | -92% | -98% | -96% | -94% |
| Aged 20 - 39 | Aged 40 - 49 | Aged 50 - 59 | Aged 60 - 69 | Aged 70 - 79 | Aged 80 & Over | All Ages |

**7 Day Rolling Average of Daily Admissions**

● Aged 20 - 39 ● Aged 40 - 49 ● Aged 50 - 59 ● Aged 60 - 69 ● Aged 70 - 79 ● Aged 80 & Over
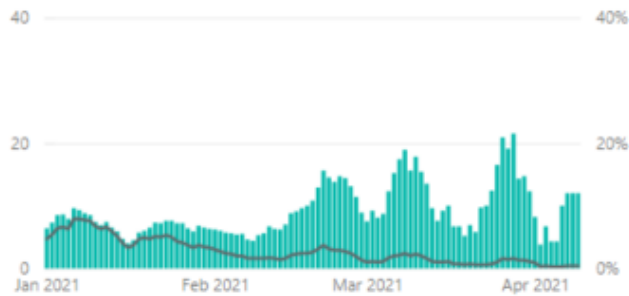
# COVID-19 Admissions – 7 Day Rolling Average by Age Group

Information below details a 7 day rolling average of hospital admissions. Lines indicate the rolling average (number), whilst the bars represent the percentage for each age group of the total admissions. Ages 0 - 19 and unknown ages are excluded.

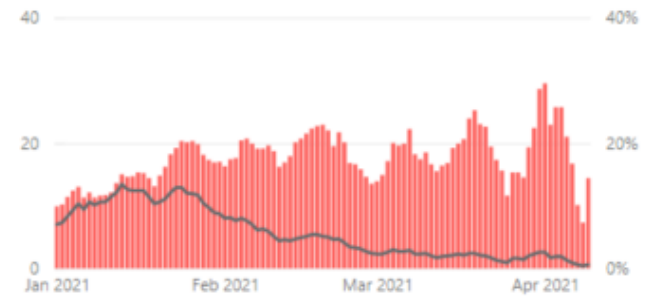## Daily Admissions Aged 20 - 39
● % Aged 20 - 39 — Number Aged 20 - 39



## Daily Admissions Aged 40 - 49
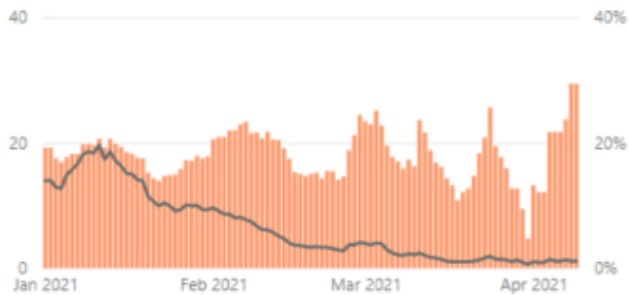● % Aged 40 - 49 — Number Aged 40 - 49



## Daily Admissions Aged 50 - 59
● % Aged 50 - 59 — Number Aged 50 - 59
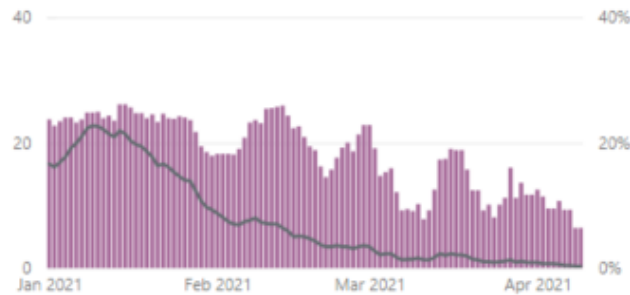


## Daily Admissions Aged 60 - 69
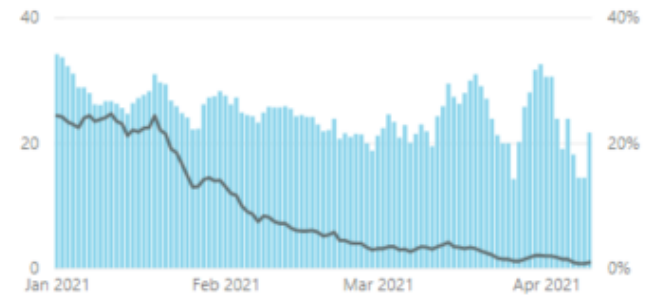● % Aged 60 - 69 — Number Aged 60 - 69



## Daily Admissions Aged 70 - 79
● % Aged 70 - 79 — Number Aged 70 - 79



## Daily Admissions Aged 80 & Over
● % Aged 80 & Over — Number Aged 80 & Over

# ICU Bed Capacity: ICU COVID-19 suspected and positive, ICU Other and ICU Beds Available, ICU 5-day Rolling Average and Ventilator Use in ICU.

**102**
Total ICU Beds

**8**
ICU Covid Occupied

**64**
Other ICU Occupied

**30**
Unoccupied Beds

**44**
Total Ventilated Patients

**5**
Covid-19 Ventilated

**39**
Non Covid-19 Ventilated

### % of ICU Beds Covid-19 Occupied, Other Occupied and Unoccupied Today

● Covid-19 ICU Occupied  ● Other ICU Occupied  ● ICU Unoccupied



### % of ICU Beds Covid-19 Occupied, Other Occupied and Unoccupied
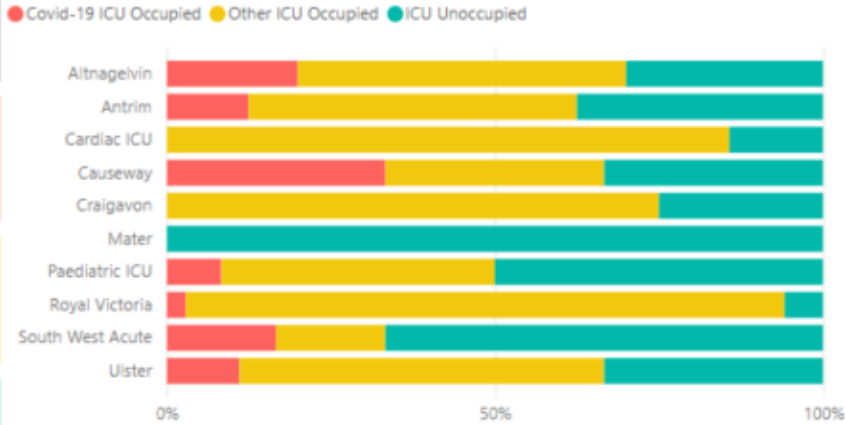
● Covid-19 ICU Occupied  ● Other ICU Occupied  ● ICU Unoccupied
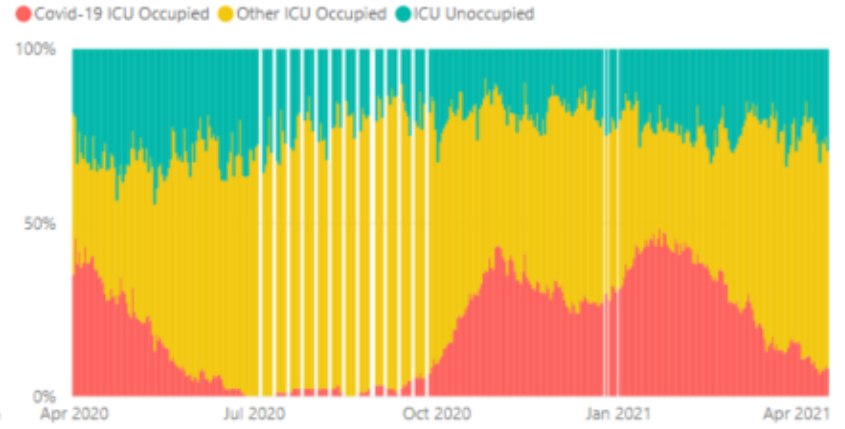


### Covid-19 ICU Bed Occupancy : 5 Day Rolling Average



### Covid-19 Ventilated Patients and Other Ventilated Patients

● Covid-19 Ventilated Patients  ● Other Ventilated Patients

# General Bed Capacity: Available & Occupied Beds and COVID-19 Bed Occupancy

| 54 Covid-19 Occupied Beds | + | 2,756 Other Occupied Beds | + | 109 Awaiting Admission | = | 2,919 Total Occupied Beds | ÷ | 3,008 Total Available | = | 97% % Beds Occupied | | 89 Beds Available |

Following the introduction of a more representative measurement of general bed occupancy levels. data reported prior to 18th October should not be compared with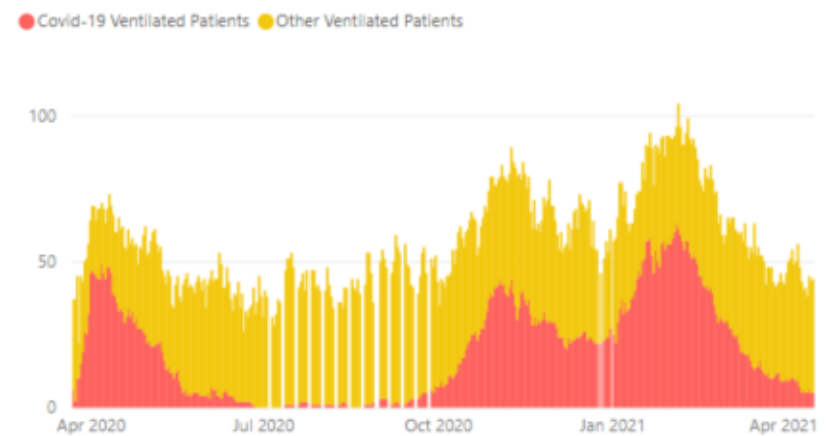 data reported from this date. The revised method is intended to provide a more accurate indicator of the operational bed pressures. Further information on this change in methodology can be found in the occupancy notes section at the end of this dashboard.

## % of Beds Covid-19 Occupied, Other Occupied and Unoccupied

● Covid Occupied  ● Other Occupied  ● Awaiting Admission Today  ● Unoccupied  ● % Over Capacity
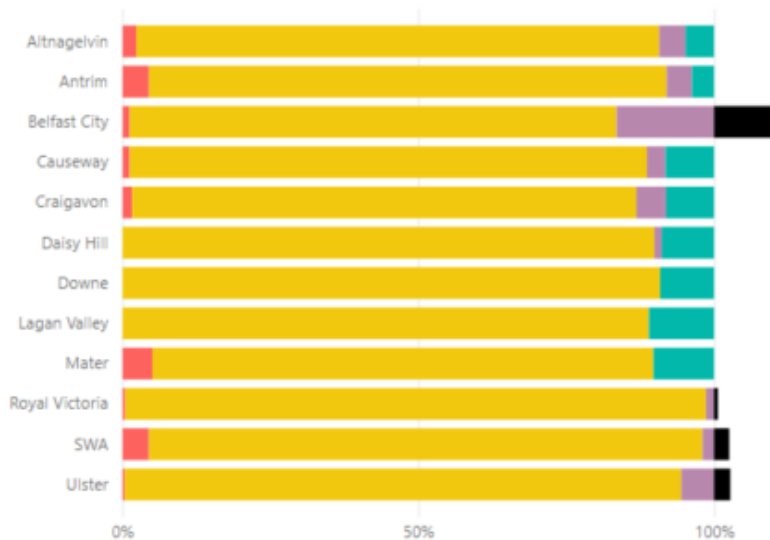


## Bed Occupancy - % Occupied and Unoccupied

● Covid Occupied  ● Other Occupied  ● Awaiting Admission  ● Unoccupied  ● % Over Capacity



**Any hospital site displaying an occupancy capacity beyond 100% indicates that the hospital is operating beyond it's current available bed capacity. Whilst individual hospitals may display unoccupied beds, the Northern Ireland position may be over capacity when the total Northern Ireland bed availability is calculated.**

### Covid-19 Bed Occupancy : 5 Day Rolling Average by Date

# COVID-19 Care Home Total Acute Respiratory Outbreaks:
# Active Cases Confirmed COVID-19, Suspected COVID-19 and Closed Outbreaks.

## Active Outbreaks

**4**
Confirmed COVID-19

**1**
Other Respiratory

An outbreak relates to two or more cases of the same disease e.g. COVID-19 in a facility, within a 14-day period among either residents or staff in the care home. This includes all registered care homes, both Trust managed and independent.

## Outbreaks Since 15 March 2020

**647**
Outbreaks Concluded

**652**
Total Acute Respiratory

An outbreak can be declared concluded when there have been no new cases for 14 days after symptom onset of the most recent case and when an outbreak concluded notification has been submitted to the PHA following a terminal clean of the facility. These figures are cumulative totals from the onset of the pandemic.

## Of the 4 Active Confirmed COVID-19 Outbreaks

**3**
Asymptomatic

**1**
Symptomatic

**0**
Unknown

Information on asymptomatic or symptomatic outbreaks in care homes at the time of the test is available for outbreaks reported since August 3rd 2020. This does not currently include Trust managed care homes. This will be included in the future subject to data availability.

### Care Homes with a Confirmed COVID-19 and Other Respiratory (Non-Covid) Outbreaks by Reporting Date

● Confirmed COVID-19   ● Other Respiratory (Non-Covid)
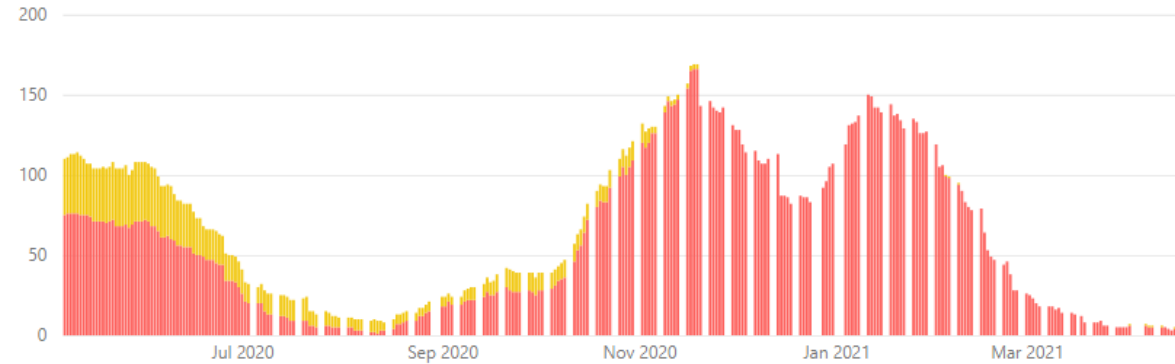


### Care Homes with an Asymptomatic or Symptomatic Confirmed COVID-19 Outbreak by Reporting Date

● Symptomatic Confirmed Outbreak   ● Asymptomatic Confirmed Outbreak

# COVID-19 Care Home Outbreaks by Geographic Area

## Outbreaks as at 08 April 2021

**5**

Confirmed COVID-19

An outbreak relates to two or more cases of the same disease e.g. COVID-19 in a facility, within a 14-day period among either residents or staff in the care home. This includes all registered homes, both Trust managed and independent.
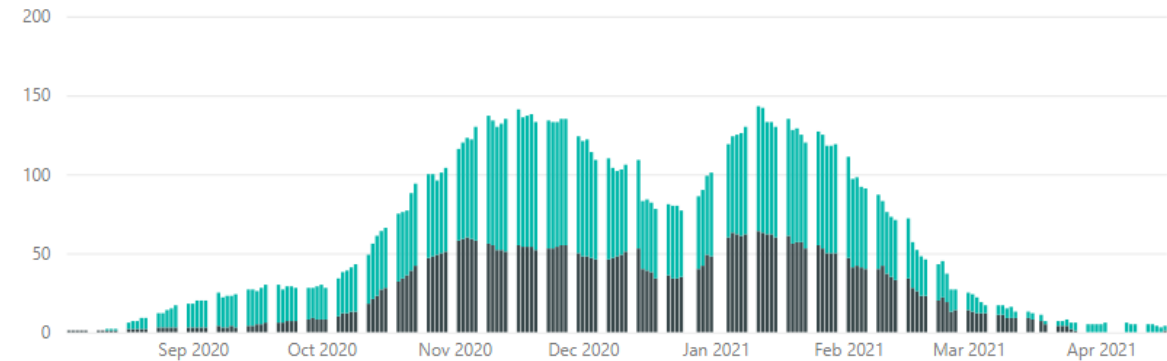
| Geographic Area ▲ | Number of Outbreaks in Care Homes | Number of Care Homes |
|---|---:|---:|
| Belfast | <10 | 91 |
| Northern | <10 | 132 |
| South Eastern | <10 | 110 |
| Southern | <10 | 77 |
| Western | <10 | 71 |
| **Total** | **<10** | **481** |

Information on outbreaks by geographic area is available on a weekly basis and as such will not be comparable to the number of active outbreaks presented in other areas of the dashboard. Statistical disclosure controls are applied when the number of outbreaks in a particular geographic area are less than 10.

# TECHNICAL NOTES: COVID-19 TESTING (1)

COVID-19 cases are identified by taking specimens from people at testing centres across Northern Ireland and sending these specimens to laboratories to be tested. If the test is positive, this is a referred to as a Laboratory Completed Test. The information reported by DoH from 24th June 2020 refers to the number of laboratory completed tests for the SARS-COV2 virus carried out at (i) HSC Laboratories (Pillar 1) and (ii) National Initiative (Pillar 2) at midnight each day.

## HSC Trusts (Pillar 1)
Prior to 24th June 2020 information on laboratory completed tests was only reported for the 5 HSC Trust laboratories listed below.
- Regional Virus Laboratory (Belfast);
- Antrim Testing Laboratory (commenced 23/03/2020);
- Craigavon Area Testing Laboratory (commenced 28/03/2020);
- Altnagelvin Area Testing Laboratory (commenced 03/04/2020); and,
- Ulster Testing Laboratory (commenced 15/05/2020).

## National Initiative (Pillar 2)
Alongside testing by HSC Trust laboratories, there is a programme of testing for the SARS-COV2 virus being carried out at National Testing Centres (mainly for Health Care / Key Workers) by appointment only. Information on laboratory completed tests for the National Initiative are available from 28th April 2020; although, we are waiting for additional data to be provided for the period 4th April - 28th April. Information refers to samples / specimens taken at regional testing centres (below), mobile testing units, and by patients in their own homes.

## DATA PROVISION
Data on laboratory completed tests completed and authorised by each HSC laboratory and the National Initiative are refreshed in the Regional Data Warehouse at 4am each day and refer to the position at the end of the previous working day. DoH extract this information at 9am each day.

## DATA QUALITY
Quality assurance of this data is undertaken by the DoH using a combination of automated and semi-automated programmes, with manual checking both before and post processing. Data from each source are merged and duplicate reports are generated to identify any duplicate test records based on 'Specimen Number' (RVL) or 'Ascension Number' for other laboratories. Duplicate tests are then removed from the data at this stage.

Data quality issues around completeness of Health Care Number, Date of Birth, and Postcode have limited our ability to identify both duplicate tests and individuals tested. However, this has improved over recent weeks and the information from the start of February 2020 is refreshed each day to take account of this.

It is also important to note that the information being reported by the DoH are derived from data extracts of LIVE Laboratory systems, and may therefore be revised or updated in subsequent data extracts. These revisions may improve issues around the completeness of the recording of the key variables above, but they may also provide information on additional tests for an individual that produced a positive laboratory completed result, having previously tested negative. For these cases, the positive result will now be included and any previous negative results excluded from the report on individuals tested.

# TECHNICAL NOTES: COVID-19 TESTING (2)

**DATA REPORTING**

Information provided by each HSC Trust (Pillar 1) Laboratory and the National Initiative (Pillar 2) enables the DoH to report on the following:

- Number of individuals with a laboratory completed test for SARS-COV2 Virus;
- Number of individuals with a laboratory completed positive test for SARS-COV2 Virus;
- Number of individuals with a laboratory completed negative test for SARS-COV2 Virus; and,
- Total number of laboratory completed tests for SARS-COV2 Virus.

**Daily Change in Cumulative Testing Figures (Page 3)**

The daily change reported on the COVID-19 Testing page (page 3) refers to the change in the cumulative number of (i) laboratory completed tests, (ii) individuals with a laboratory completed test, and (iii) individuals with a positive completed test reported today and yesterday. It is important to note that the daily change may refer to samples taken over the last week, and not just over the last 24 hours, and therefore SHOULD NOT be compared with data on other testing pages that is presented by the Date of Specimen. It is also important to note that the daily change in tests and individuals tested are de-duplicated back to the start of the outbreak and not just the last 24 hours, so for example if the daily change in tests was 1,000 and the daily change in individuals tested was 750, it doesnt mean that 250 people were tested twice. It is simply that 250 individuals had a previous test, and as we only count the most recent test, the previous test is excluded whilst the new test is included, resulting in the cumulative number of individuals tested to remain the same.

**Data Presented by Date of Specimen**

Apart from the daily change in cumulative numbers, all other testing information is presented by the date the specimen (swab) was taken from the individual being tested, rather than the date the laboratory tested, completed and authorised the result. Whilst this gives the most accurate analysis of how cases progress over time it does mean that the latest days' figures are usually incomplete, so it shouldn't be seen as a sudden large drop in cases. It is also important to note that most testing to date has been offered to those in hospital with a medical need as well as HSC key workers, rather than the general population, many with mild symptoms. So completed cases represent the typical population of people with severe disease, rather than all of those who get infected.

# TECHNICAL NOTES: COVID-19 TESTING (3)

**Weekly Cumulative Testing (Page 8 & 9)**

The weekly testing information reported on pages 8 and 9 of the dashboard refer to the number of individuals with a laboratory completed test during each week from February 2020, where a week starts on a Monday and ends on a Sunday. An individual is counted only once in each week they were tested, with the first positive test in each week being counted. If an individual did not receive a positive laboratory completed test in a week, then the first negative laboratory completed test will be reported. In essence, an individual will be counted in the information for each week that they received a laboratory completed test. The day on which an individual was tested is based on the date their specimen (swab) was taken. The percentage of individuals tested positive during each week is based on the number of individuals with a positive laboratory completed test in each week as a proportion of the total number of individuals with a laboratory completed test each week. As indicated an individual will ONLY be counted once during each week (Monday to Sunday).

**Local Government District (LGD)**

Laboratory completed tests are aggregated to Local Government Districts, though a number of cases cannot be matched to this geographical are due to missing / incorrect postcodes. For this reason the LGD count will not add up to the total number of individuals tested for Northern Ireland.

# TECHNICAL NOTES: COVID-19 TESTING (4)

**KEY TERMS USED**

**Individuals Tested**

Refers to the number of individuals who have had a laboratory completed test for the SARS-COV2 Virus since February 2020. If an individual has had more than one test for the SARS-COV2 Virus, only the **most recent** laboratory completed positive test result will be reported, with all other results of laboratory completed tests excluded, regardless of when the test took place.

**Cumulative Individuals Tested**

Refers to the total number of individuals who have had a laboratory completed test for the SARS-COV2 Virus since February 2020. This information is presented by the date the specimen (sample / swab) had been taken at a testing location, and does not refer to the date on which the laboratory completed and authorised the result of the test.

**Total Tests**

Refers to the total number of laboratory completed tests for the SARS-COV2 Virus. If an individual has had more than one laboratory completed test, each result will be counted.

**Cumulative Total Tests**

Refers to the total number of completed authorised laboratory tests for the SARS-COV2 Virus since February 2020. This information is presented by the date the specimen (sample / swab) had been taken at a testing location, and does not refer to the date on which the laboratory completed and authorised the result of the test.

**Laboratory Completed Test**

Refers to the final stage of the testing process, whereby a specimen / sample (swab) has been taken at a testing location, the specimen / sample has been booked and processed by a laboratory, and a result been completed and authorised by a laboratory technician.

Laboratory completed results for are listed as one of the following; with only positive, negative and indeterminate results being included in individuals tested and total tests.

- Positive;
- Negative;
- Indeterminate;
- Not Tested (not included in individuals tested and total tests); or,
- Invalid (not included in individuals tested and total tests).

*It should be noted that results identified as 'Void' are removed.*

# TECHNICAL GUIDANCE ON COVID-19 DEATHS

Death extracts are provided daily to the DOH detailing the count of deaths reported to the PHA where the deceased has had a positive test for COVID-19 and died within 28 days, whether or not COVID-19 was the cause of death. PHA sources include reports by healthcare workers (e.g. HSC Trusts, GPs) and information from local laboratory reports. Local Government Districts are defined by the deceased's residential setting. Interpretation of the figures should take into account that totals by date of death, particularly for recent prior days, are likely to be updated in future releases.

**DATA QUALITY**

Data is refreshed each day to include any deaths that have been reported during the current reporting period (from 10.00 am one day previous until 10.00 am on the day of reporting). Deaths submitted by HSC Trusts after 10.00am will be reported in the Daily COVID report for the following day. There may also be deaths reported to the PHA a number of days after the death occurred. Data will be refreshed and revisions to previous reported figures by date of death will be provided in the latest report.

**DATA REPORTED**

Data is reported in the following ways:
· Total number of deaths reported up to the end of the current reporting period
· Total number of deaths reported in the current reporting period
· Total number of deaths reported up to the end of the current reporting period, split by Local Government District (LGD)
· Total number of deaths reported up to the end of the current reporting period, split by Gender
· Total number of deaths reported up to the end of the current reporting period, split by Age Group
· Daily updated counts of deaths reported split by date of death

# TECHNICAL NOTES: ADMISSIONS

The Patient Administrative System (PAS) is a patient level administrative data source that provides information on patient care delivered by health and social care hospitals in Northern Ireland. Data from PAS are routinely uploaded to the Regional Data Warehouse, which is managed by the Business Service Organisation (BSO).

## DATA QUALITY

The Department sources data on COVID-19 admissions and inpatients from the Regional Data Warehouse. Up to the 1st December 2020, a daily download was taken at 08:30 from the Admissions & Discharges universe of the Regional Data Warehouse reflecting admissions as of midnight prior to the download date. From 2nd December 2020 two additional daily downloads are taken from; (i) Recent Admissions & Discharges universe which includes data for the two most recent days, and (ii) Admissions & Discharges Specialty universe which is used to identify a number of inpatients in the Belfast HSC Trust. Data from each of these sources are merged and duplicate records are removed from the data.

Patients admitted with confirmed COVID-19 are identified using the specific Method of Admission Codes (CC, CE or CS) or Specialty Code (COVC). These codes are used for any patient admitted to hospital with confirmed COVID-19. If an inpatient tests positive for COVID-19 the Method of Admission code is revised to one of the confirmed coronavirus codes above. If an inpatient tests positive for COVID-19 and then subsequently tests negative the Method of Admission code remains as one of the confirmed coronavirus codes above.

Information is constantly being revised as records are updated by HSC Trusts and therefore figures for historical dates may change. When technical issues arise or errors in the data are discovered, the HSCB email to inform DOH.

## ADMISSIONS / DISCHARGES

A patient may be admitted more than once, for example:

· Admitted on two or more separate occasions
· Admitted to hospital A within one HSC Trust and later transferred and admitted to hospital B _in a different HSC Trust_. The admission to hospital B will be recorded as a new admission.

Consequently, patients may also be discharged more than once and these discharges will be included in the discharge total.

# TECHNICAL NOTES: ADMISSIONS

## INTERNAL TRANSFERS

If a patient confirmed COVID-19 is transferred between hospitals within the same HSC Trust they are admitted using the CC, CE or CS Method of Admission Codes. The Method of Discharge is recorded as ID – Internal Discharge.

The Belfast Trust identifies confirmed COVID-19 patients by using the specialty code (COVC). Any internal transfers will be admitted using the IA Method of Admission Code.

Internal transfers are not counted as new admissions and only the first admission record will be counted for these patients.

### INPATIENTS / HOSPITALISATIONS

Number of people currently in hospital with confirmed COVID-19 at midnight, taking into account new admissions and subtracting deaths and discharges.

### DISCHARGES + INPATIENTS ≠ ADMISSIONS

Inpatients are counted according to the hospital the patient is physically present in, this can lead to the total inpatient figure and the total discharge figure not summing to the total admissions figure. For example,
a patient is admitted to hospital A and later discharged from hospital A and transferred to hospital B within the same HSC Trust. This is an internal transfer, therefore an admission and discharge would be counted for hospital A but no admission or discharge would be counted for hospital B. The patient may however be counted as an inpatient at hospital B. Consequently the admissions total for hospital B will not be equal to the sum of discharges and inpatients for hospital B.

The alternative to this would be to count all internal admissions but this double counts patients if / when they are transferred between hospitals and would provide an inflated figure for admissions and discharges.

# TECHNICAL NOTES: ADMISSIONS

**DEFINITIONS**

**Admission:** Any person admitted to hospital with confirmed COVID-19, excluding internal admissions.
**Inpatient / Hospitalisation:** Any person admitted to hospital with confirmed COVID-19 that has not been discharged or died.
**Discharge:** Any person admitted to hospital with confirmed COVID-19 that has subsequently been discharged or died., excluding internal transfers.
**Date/Time Stamp:** Midnight
**Specialty**: COVC: Confirmed COVID-19
**Method of Admission:** CC: Confirmed COVID-19

There is a lag of up to eight months in the clinical coding of diagnoses on patient records. Therefore, at the start of the pandemic two new admission codes were created which did not need to be clinically coded to enable the identification of and reporting on all COVID-19 patients admitted to hospital. Any patient presenting with COVID-19 like symptoms was coded as CR – Suspect COVID, and swabbed for testing. Once a positive test result was obtained the code was changed to CC – Confirmed COVID-19. HSC Data Standards Guidance on the topic was shared with Trusts. As well as facilitating reporting, these codes were also used
operationally on wards to make sure staff were aware of symptomatic patients. If a CR patient's lab result was negative they remained coded as CR on the hospital system in order to continue to alert staff to the nature of their symptoms. In many cases, these patients did not actually have COVID-19, meaning that the CR code over-represented the actual number of patients.

The views of clinical and operational colleagues based in hospitals who provided input and feedback to the dashboard was that the use of the CR codes may not be helpful to the public understanding of the true number of COVID-19 patients in hospital because, despite guidance, the CR code was not always used consistently across wards and hospitals and was not changed once a patient had a negative test.

Given that all patients admitted to hospital are **now swabbed and there is better coding of confirmed cases much earlier in the process than at the beginning of the pandemic**, on 27th May the decision was taken that it was no longer appropriate to include the CR codes and that reporting of them should cease. New pages focusing only on confirmed (CC) cases were developed and these were presented together with the confirmed/suspected combined charts and tables for a short transition period to maintain transparency and to enable users to see the relationship between the two sets of data. This commenced on 1st June and this addition to the dashboard was welcomed by clinical colleagues and other users. Following this transition period it was announced on the 8th June on the notes section of the dashboard that reporting of suspected cases (CR) cases would cease from 10 June. From 10 June reporting focused on confirmed cases only.

# TECHNICAL NOTES: BED OCCUPANCY

The Department sources data on Intensive Care Units from the CCANI network each day. CCaNNI provide the data to the Department as an excel spreadsheet, providing the ICU and ventilation position for each Intensive Care Unit as of the morning of reporting. The ICU capacity presented includes additional surge capacity available on the day of reporting. The spreadsheet includes for each Unit (including Paediatric and Cardiac ICU):

§ the number of available ICU beds;
§ the number of beds occupied by COVID-19 confirmed patients;
§ the number of beds occupied by COVID-19 suspected patients; and
§ the total number of beds occupied.

Prior to 18th October, the Department sourced data on General Beds Occupancy from the Health and Social Care Board (HSCB) each day. Trusts were required to submit information on the number of beds occupied, available and closed within each of their hospital sites to the HSCB at 11am each morning to reflect data as at the previous midnight. Within this return, Trusts provided the total bed complement of the hospital site, the number of beds closed, the number occupied by lab confirmed COVID-19 patients, non-lab confirmed (suspected) COVID-19 patients, the total number of beds occupied and the number of beds still available.

From 18th October onwards, the methodology for calculating bed occupancy has changed. Previously, the General Beds data displayed a static picture of beds which were physically occupied at a given point in time. This did not however take into account the dynamic nature of bed modelling and the flow of patients in and out of hospital over the course of a day. The revised methodology now includes patients where a 'Decision to Admit' (DTA) has been made, e.g. from an Emergency Department, thereby projecting more accurate occupancy levels across hospital sites. Trusts are also being asked to provide additional Admissions data as at 9am on the morning of reporting to help assess operational pressures which are impacting upon bed occupancy. The revised methodology now includes adult only acute and geriatric inpatient beds at the 12 main hospital sites as presented on the Dashboard; it excludes Paediatric, Obstetric, Mental Health and Day Beds, as well as beds in smaller hospital sites which may have been included in the previous returns submitted by Trusts. Data prior to 18th October should not be compared with data from this date, however the time series has been retained to demonstrate the trend in COVID-19 occupancy levels.

# TECHNICAL NOTES: BED OCCUPANCY

General Beds Occupancy data presents the current daily position, with variables as follows:

- total number of available general beds across Northern Ireland;
- % occupancy = (current number of beds occupied + beds awaiting admission today) / total available beds;
- total number occupied = current number of beds occupied + beds awaiting admission today;
- the number of general beds occupied by confirmed COVID-19 patients;
- the number of general beds occupied by non COVID-19 patients = total number currently occupied - number occupied by COVID-19 patients;
- total number awaiting admission today across the region;
- number of unoccupied beds = total number of beds available - total number of beds occupied; where this number is a minus,, a zero will be displayed and the number above capacity will instead be shown
- number above/below capacity = total number of beds occupied - total number of beds available

It is important to note that individual hospital sites may have spare capacity as demonstrated on the hospital level chart, however as a region the total number occupied plus those awaiting admission across Northern Ireland may outweigh the total number available, leading to an overall unoccupied capacity of zero.

## DATA QUALITY

Quality assurance of this data is undertaken by the DoH using a combination of automated and semi-automated programmes, with manual checking both before and post processing. When occupancy data is received into the Department, a member of staff checks that the figures presented in both files appear complete. Any discrepancies are raised with the data supplier to seek clarification or revision. Data files are then appended to relevant 'master' files which contain a record of previous returns. Sense checks are undertaken to ensure internal consistency and clarification is sought from the supplier if data looks missing or erroneous. Data for ICU is reported based on the date that the CCaNNI network collated the information and data for general beds is based on the occupancy position on the day prior to reporting.

Given that the information is collated from teams in each Trust responsible for the management of ICU beds, it is believed to be an accurate reflection of ICU capacity on any given day. It presents a static picture at a point in time and is not revised retrospectively unless an error is discovered in the data or a change to the methodology used to produce the information is required. Any such changes will be alerted to users.

General beds occupancy is based on data submitted from Trust Control Rooms daily and is intended to be an indicator of operational bed pressures as at 9am.

# TECHNICAL NOTES: BED OCCUPANCY

Prior to the change in methodology on 18th October, data provided by HSCB was re-run for three consecutive days for each day of reporting to capture any updates to the Patient Administration System (PAS), however the data presented within this Dashboard is based on the initial run date of the data and therefore doesn't include updates made to PAS on subsequent days.

Both data sources are considered to be management information and are therefore provisional and subject to revision.

**DATA REPORTING**

Information provided by the CCaNNI network and HSCB enables the Department to report on the number of patients occupying ICU and general beds each day, how many patients are ventilated, how many of these patients have suspected or confirmed COVID-19 and how many beds are still available across the region. Charts are presented to show the daily occupancy levels as well as 5 day rolling averages which help to smooth the variations in daily data. From Wednesday 24th June onwards, all general and ICU beds data displayed on this dashboard refer to confirmed COVID-19 patients only. Prior to 13th April 2020, ventilator data presented includes both suspected and confirmed covid-19 patients. From 13th April onwards, ventilator data includes confirmed COVID-19 patients only. There is a break in the time series for general bed occupancy levels from 18th October onwards and data prior to this date should not be compared with data prior to this date.

# TECHNICAL NOTES: CARE HOMES

Data on care home outbreaks are provided daily on weekdays to the DOH detailing the count of outbreaks reported to the PHA.

**DATA REPORTED**

**Possible Case of COVID-19***
Any resident (or staff) with symptoms of COVID-19 (high temperature, new continuous cough or loss of taste/smell), or new onset of influenza like illness or worsening shortness of breath.
*Symptoms may be more nuanced in older people with co-morbidities in care homes who may present with Flu Like Illness (FLI), respiratory illness, new onset confusion, reduced alertness, reduced mobility, or diarrhoea and sometimes do not develop fever. This may be true for COVID-19, so such changes should alert staff to the possibility of new COVID infection. All possible cases will be tested for COVID-19 to confirm diagnosis.

**Confirmed Case of COVID-19**
Any resident (or staff) with laboratory confirmed diagnosis of COVID-19. Confirmed COVID-19 cases are further categorised into two subcategories:
Symptomatic Confirmed COVID-19 case
A symptomatic laboratory-confirmed case is a person infected with COVID-19 who has symptoms of COVID-19 at the time of the test.
Asymptomatic Confirmed COVID-19 case
An asymptomatic laboratory-confirmed case is a person infected with COVID-19 who does not have symptoms of COVID-19 at the time of the test.

**Outbreak Definition**
Two or more cases of the same disease e.g. COVID-19 in a facility, within a 14-day period among either residents or staff in the care home.

**Declaring the End of an Outbreak/Outbreak Concluded**
An outbreak can be declared over when there are no new cases for 14 days after symptom onset of most recent case.

**All Respiratory Outbreaks**
All respiratory outbreaks that are reported to duty room and includes both COVID-19 confirmed and other respiratory outbreaks.

# TECHNICAL NOTES: CARE HOMES

**Confirmed COVID-19 Care Home Outbreak**
Identification of two or more confirmed COVID-19 cases (both symptomatic and asymptomatic detection), among either residents or staff in the care home, within a 14-day period.

Confirmed COVID-19 outbreaks are further categorised into two subcategories:
<u>Symptomatic Confirmed COVID-19 outbreaks</u>
Identification of two or more confirmed COVID-19 symptomatic cases among either residents or staff in the care home, within a 14-day period.
<u>Asymptomatic Confirmed COVID-19 outbreaks</u>
Identification of two or more confirmed COVID-19 asymptomatic cases among either residents or staff in the care home, within a 14-day period.

**Other Respiratory Outbreaks**
Identification of two or more cases, among either residents or staff in the care home, within a 14-day period but who tested negative for COVID-19.

**Concluded Outbreaks**
An outbreak can be declared over when there have been no new cases for 14 days after symptom onset of the most recent case.

**Active Outbreaks**
A care home with an outbreak that has not yet completed the 14 days symptom free period.

**DATA QUALITY**

**Symptomatic/Asymptomatic Breakdown**
Information on asymptomatic or symptomatic outbreaks in care homes is available from August 3rd 2020. Any outbreaks declared before this date are not included in the figures. This does not currently include Trust managed care homes. This will be included in the future subject to data availability.

# TECHNICAL NOTES: DASHBOARD UPDATES

**Announced 8th May 2020**
From 8th May Admissions and Inpatient numbers will be broken down into confirmed and suspected COVID-19 cases.

**Announced 11th May 2020**
From 11th May additional charts on a rolling 5 day average occupancy rate in G&A / ICU Beds are now available.

**Announced 13th May 2020**
From 13th May, information on the rate of positive lab completed tests per 100,000 population has been included.

**Announced 28th May 2020**
From 28th May information on COVID-19 death settings and historical trend analysis of COVID-19 care home outbreaks have been added to the dashboard.

**Announced 1st June 2020**
From 1st June, additional pages have been added for COVID-19 testing trend analysis (7 day rolling average of positive tests & percentage of all tests identified as positive) and additional information on COVID-19 admissions. Ongoing validation of admissions data has resulted in revised figures being published from 1st June.

**Announced 9th June 2020**
From 10th June 2020 data on suspected COVID-19 patient admissions and inpatients will be removed from the dashboard and reporting will focus on confirmed cases only.

**Announced 12th June 2020**
From 15th June 2020, information will be presented on the numbers of ventilated COVID / Non-COVID patients. We will also include a breakdown of COVID / Non COVID general bed occupancy.

**Announced 23rd June 2020**
From 25th June all beds and ventilation data will focus on confirmed COVID-19 cases only.

**Announced 23rd June 2020**
From 26th June reporting will commence on the outcomes of laboratory completed tests at National Testing Centres.

**Announced 26th June 2020**
Change to Reporting Frequency-From week commencing 29th June the COVID-19 dashboard will no longer be updated at weekends.

# TECHNICAL NOTES: DASHBOARD UPDATES

**Announced 6th July 2020**
From 6th July a page detailing deaths reported on the Saturday and Sunday of each weekend will be added. This will be updated each Monday on the dashboard.

**Announced 26th August 2020**
From 26th August information on admissions and discharges within the last 7 and 14 days has been added to page 10 of the dashboard.

**Announced 3rd September 2020**
From 2nd September an additional page was added on laboratory completed tests by LGD during the most recent and previous 7 days, and a breakdown of positive tests by age group and LGD.

**Announced 28th September 2020**
From 28th September the methodology used to create admissions, discharges and inpatients data was updated. A number of internal transfers that had been doubled counted were removed, this resulted in a slight decrease in historical admission, discharge and inpatients figures.

**Announced 13th October 2020**
From 13th October additional information was added on the daily change in the cumulative number of individuals tested positive by LGD.

**Announced 16th October 2020**
From 16th October an additional page was added on laboratory completed tests during last 7 days by postal district, including a postcode search.

**Announced 19th October 2020**
From 19th October, the methodology for computing occupancy levels has been changed. Data on ICU and General Beds Occupancy is also now presented at Hospital level.

**Announced 13th November 2020**
From 13th November the doubling case rate was updated from a five comparison to a seven day comparison.

**Announced 2nd December 2020**
On 2nd December 2020, two additional pages were added on the number of individuals tested for COVID-19 during each week from March 2020 by LGD and Age Group. In addition to this, the Care Home page was amended to include information on asymptomatic or symptomatic outbreaks in care homes from August 3rd 2020.

**Announced 11th December 2020**
On 11th December 2020, an additional page was added on the number of inpatients at midnight by 10-year age group and sex.

# TECHNICAL NOTES: DASHBOARD UPDATES

**Announced 21st December 2020**
From 21st December 2020, an additional page on the number of care home outbreaks by geographic area was added.
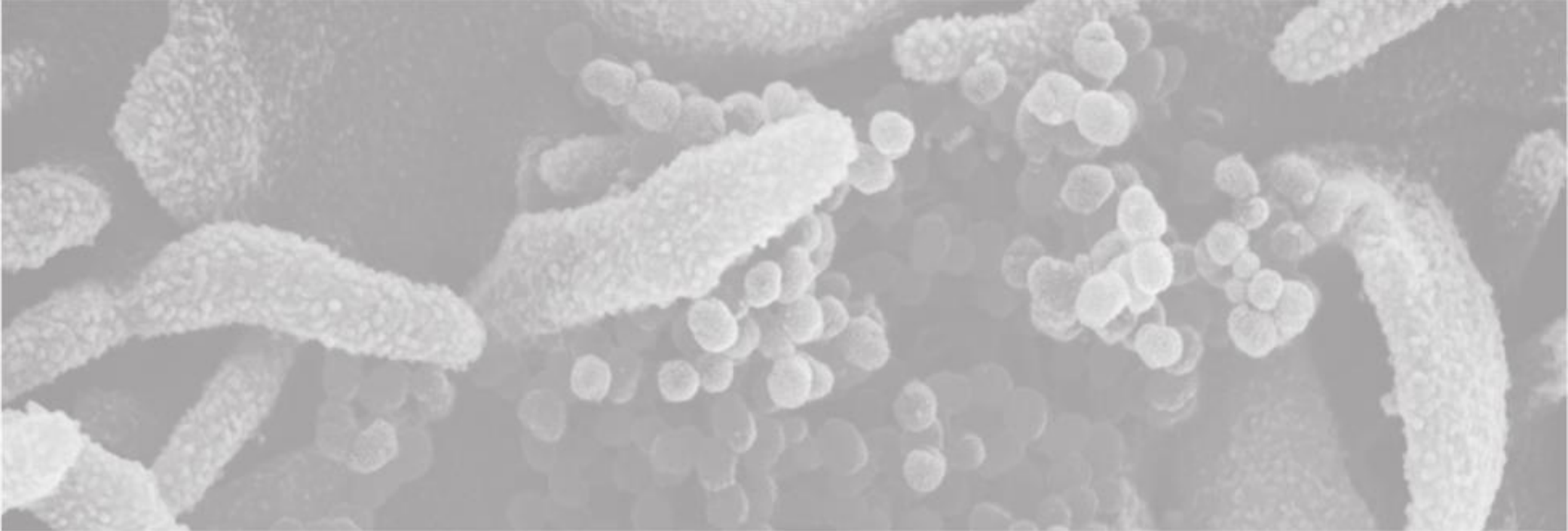
**Announced 28th January 2021**
From 28th January 2021, two new pages have been added detailing 7-day rolling average of cases and deaths by country.

**Announced 6th February 2021**
Pages on 'Doubling Rates' were removed on Thursday 4th February.

**Announced 19th February 2021**
On the 19th February 2021, two new pages were added presenting the change in the seven day rolling average of COVID-19 admissions by age group.

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