

# Public Audit Committee

## 7th Meeting, 2021 (Session 6), Thursday, 28 October

### Covid-19: Vaccination programme

#### Introduction

1. The Public Audit Committee will take evidence today from the Auditor General for Scotland (AGS) on his [Covid-19: Vaccination programme](#) report, published on 30 September 2021.
2. The AGS has prepared a briefing on the key messages from the report which, along with a copy of the report, can be found in **Annexe A**.
3. SPICe has prepared a Covid-19 statistical update briefing for the Covid-19 Recovery Committee meeting, also on 28 October 2021, to inform its consideration of the vaccination programme and pandemic preparedness. A copy of this briefing is also included in **Annexe B**.

**Clerks to the Committee**  
**25 October 2021**

**SCOTTISH PARLIAMENT PUBLIC AUDIT COMMITTEE**

**THURSDAY 28 OCTOBER 2021**

**BRIEFING PAPER BY THE AUDITOR GENERAL FOR SCOTLAND**

**COVID-19 VACCINATION PROGRAMME**

1. The Auditor General's briefing paper on the [Covid-19 vaccination programme](#) was published on 30 September 2021. The briefing paper focuses on the rollout of the vaccination programme so far. It covers how the programme was managed, what progress has been made and the next steps.
2. Key messages from the briefing paper are:
  - The Covid-19 vaccination programme has made excellent progress in vaccinating a large proportion of the adult population. More than 90 per cent of people aged 18 years and over have received at least one Covid-19 vaccine (paragraph 28). Uptake has varied, however. A smaller proportion of young people, those from the most deprived areas and people from some ethnic groups have been vaccinated (exhibit 4, page 13). The Scottish Government has taken action to encourage people to take up the offer of a Covid-19 vaccination. Vaccines have been delivered in a variety of ways to make it easier for more people to access them, and the level of vaccine wastage has been low.
  - The programme has been effective in reducing the number of people getting severely ill and dying from Covid-19. The rate of cases and hospitalisations is significantly lower among vaccinated people, than for those who are unvaccinated (paragraph 30, and exhibit 2 on page 11).
  - The Covid-19 vaccination programme is being implemented under uncertain and challenging circumstances. Clinical advice from the Joint Committee on Vaccination and Immunisation (JCVI) continues to evolve and has needed to be implemented quickly (paragraph 40). The Scottish Government and NHS boards are responding quickly to new clinical advice and are planning for future stages of the programme.
  - NHS boards and Health and Social Care Partnerships (HSCPs) have predicted that the programme will cost £223.2 million in 2021/22 (paragraph 26). The expenditure needed will depend on advice issued by the JCVI, so it could differ substantially from current predicted costs. The Scottish Government has confirmed that vaccination costs will be fully funded for the 2021/22 financial year.

- The vaccination programme has relied on temporary staffing to date. Vaccinators have consisted of nurses, doctors, dentists, allied health professionals, optometrists, pharmacists, healthcare students and healthcare support workers. The Scottish Government has recognised that a longer-term solution is needed (paragraph 18). The Scottish Government has planned for a permanent vaccine workforce to consist of mostly healthcare support workers, working alongside registered nurses.
- The delivery of the vaccination programme has been a success so far, with good collaboration, joint working and new digital tools developed at pace (paragraph 20). There are opportunities for the Scottish Government to use the learning from this programme to inform the implementation of further stages of the vaccine programme and the wider delivery of NHS services.

Covid-19

# Vaccination programme



Briefing prepared by Audit Scotland  
September 2021

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## Audit team

The core audit team consisted of: Leigh Johnston, Eva Thomas-Tudo and Claire Tennyson with support from other colleagues and under the direction of Angela Canning.

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## Links

-  PDF download
  -  Web link
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# Key messages

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- 1** The Covid-19 vaccination programme has made excellent progress in vaccinating a large proportion of the adult population. More than 90 per cent of people aged 18 and over have received at least one Covid-19 vaccine. The programme has been effective in reducing the number of people getting severely ill and dying from Covid-19. Vaccines have been delivered in a variety of ways to make it easier for more people to access them, and the level of vaccine wastage has been low.
  - 2** Engagement with the vaccination programme is lower in some groups of the population. A smaller proportion of younger people, those living in the most deprived areas and people from some ethnic groups have been vaccinated. The Scottish Government is taking action to encourage people to take up the offer of a Covid-19 vaccination.
  - 3** The Covid-19 vaccination programme is being implemented under uncertain and challenging circumstances. Clinical advice from the Joint Committee on Vaccination and Immunisation (JCVI) continues to evolve and has needed to be implemented quickly. The Scottish Government and NHS boards are responding quickly to new clinical advice and are planning for future stages of the programme.
  - 4** The Scottish Government has agreed that the UK Government should lead on the purchase and supply of the vaccines on a four nations basis. The Scottish Government and NHS Scotland are responsible for delivering the Covid-19 vaccination programme in Scotland. NHS boards and Health and Social Care Partnerships (HSCPs) have predicted that the programme will cost £223.2 million in 2021/22. The expenditure needed will depend on advice issued by the JCVI, so it could differ substantially from current predicted costs. The Scottish Government has confirmed that vaccination costs will be fully funded for the 2021/22 financial year.
  - 5** The vaccination programme has relied on temporary staffing to date. The Scottish Government has recognised that a longer-term solution is needed for future phases of the rollout to be sustainable.
  - 6** The delivery of the vaccination programme has been a success so far, with good collaboration, joint working and new digital tools developed at pace. There are opportunities for the Scottish Government to use the learning from this programme to inform the implementation of further stages of the vaccine programme and the wider delivery of NHS services.
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# Introduction

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**1.** The Covid-19 vaccination programme has been a crucial part of the UK and Scottish governments' responses to the pandemic and has helped to protect Scotland's population from Covid-19. It is the largest vaccination programme that NHS boards have ever carried out. The vaccines have helped to reduce the incidence of severe illness and death from Covid-19 and have eased pressure on stretched NHS services. The vaccines have also allowed restrictions across Scotland to be lifted more safely, supporting economic recovery.

**2.** The first doses of Covid-19 vaccines in Scotland were administered on 8 December 2020, following the approval of the first Covid-19 vaccine by the Medicines and Healthcare Products Regulatory Agency (MHRA).<sup>1</sup> By September 2021, four vaccines had been approved by the MHRA. These were Pfizer-BioNTech, Oxford-AstraZeneca, Moderna and Janssen. The JCVI has not yet provided guidance on the use of the Janssen vaccine, but the remaining three vaccines are in use [\(Exhibit 1, page 5\)](#).<sup>2</sup>

**3.** This briefing paper looks at progress of the Covid-19 vaccination programme to September 2021 and what plans are in place for the next phase of the rollout and for the longer term. We will also report on further progress of the programme in our NHS in Scotland 2021 report, which will be published in early 2022.

**4.** We would like to acknowledge the support and assistance provided by the Scottish Government and NHS boards that has enabled us to prepare this briefing paper.

**5.** This paper is in three sections:

- **[Part one \(Management of the programme\)](#)** sets out the aims and objectives of the Covid-19 vaccination programme. It covers how the vaccination programme has been managed, the staffing and infrastructure put in place and costs so far.
- **[Part two \(Progress so far\)](#)** covers the progress of the Covid-19 vaccination programme. It covers how many people have been vaccinated, variation in uptake, and what impact the vaccination programme has had.
- **[Part three \(Next steps\)](#)** sets out the next steps of the programme. It covers how the Scottish Government is preparing to deliver a booster programme from autumn 2021, and the longer-term role of the Covid-19 vaccination programme.

## Exhibit 1

### Timeline of major milestones in the Covid-19 vaccination programme

2020 	<b>2 December</b>	MHRA approval of Pfizer-BioNTech vaccine
	<b>8 December</b>	First Covid-19 vaccine administered in Scotland
	<b>30 December</b>	MHRA approval of Oxford-AstraZeneca vaccine
2021 	<b>8 January</b>	MHRA approval of Moderna vaccine
	<b>14 January</b>	Publication of the Scottish Government's first Covid-19 vaccine deployment plan
	<b>24 March</b>	Publication of the Scottish Government's second Covid-19 vaccine deployment plan
	<b>7 May</b>	Everyone in JCVI priority groups 1-9 has been offered the first dose of a vaccine
	<b>28 May</b>	MHRA approval of Janssen vaccine
	<b>30 June</b>	JCVI publishes interim advice on a potential Covid-19 booster programme for vulnerable and older people from Autumn 2021
	<b>18 July</b>	Everyone aged 18 and over has been offered the first dose of a vaccine
	<b>19 July</b>	JCVI publishes advice that children aged 12 and over who are at increased risk from Covid-19 should be offered the Pfizer BioNTech vaccine
	<b>23 July</b>	Publication of the Scottish Government's third Covid-19 vaccine deployment plan
	<b>4 August</b>	JCVI announces the Pfizer-BioNTech vaccine should be offered to all 16 and 17 year olds
	<b>1 September</b>	JCVI announces that a third dose should be offered to people aged 12 and over who were severely immunosuppressed at the time of their first or second dose
	<b>12 September</b>	Everyone aged 18 years and over has been offered the second dose of a vaccine
	<b>13 September</b>	The four UK Chief Medical Officers advise that all 12-15 year olds should be offered one dose of the Pfizer-BioNTech vaccine
	<b>14 September</b>	JCVI announces that priority groups 1-9 should be offered a booster vaccine dose
	<b>20 September</b>	The Covid-19 booster programme starts.

# Management of the programme



## The Scottish Government is responsible for the vaccination programme, and has prioritised Covid-19 vaccinations in accordance with JCVI guidance

**6.** The Scottish Government has agreed that the UK Government should lead on the purchase and supply of the vaccines on a four nations basis. The Scottish Government and NHS Scotland are responsible for the management and delivery of the Covid-19 vaccination programme in Scotland.

**7.** Scotland's allocation of the total supply of vaccines arriving in the UK is based on the Barnett formula.<sup>3</sup> The main factor determining the speed of the first phase of the rollout was the availability of vaccines. As the programme progressed, the Scottish Government made changes to more effectively allocate the available supply of vaccines across Scotland. NHS boards now plan the deployment of vaccines on a weekly basis, based on the expected supply of vaccines. The Scottish Government reviews these plans weekly alongside national modelling of predicted demand to manage the allocation of vaccines.

**8.** The Scottish Government has based its decisions on which groups should be prioritised for receiving Covid-19 vaccinations on advice from the JCVI. This approach has been taken by all four UK nations.

**9.** The JCVI developed nine priority groups for receiving Covid-19 vaccinations based on those who are most at risk from contracting Covid-19 ([Appendix](#)). The JCVI recommended that those living in care homes, older people, clinically vulnerable people and patient-facing health and social care staff should be the first groups to receive Covid-19 vaccinations.

**10.** The JCVI has since published advice about how the remaining adult population should be prioritised, based on age. It has also published advice about vaccinating children and young people and on a booster programme in autumn and winter 2021/22.

## The Scottish Government set out its priorities in three vaccine deployment plans

**11.** The Scottish Government has published three vaccine deployment plans since the start of the Covid-19 vaccination programme. These plans set out the high-level priorities of the programme, how it will be managed and summarise progress.

- First plan – published January 2021. This set out the Scottish Government's aim to vaccinate everyone in Scotland over the age of 18 and those aged 16 and 17 years who are frontline health and social care workers, young carers or have underlying health conditions. These groups amount to 4.5 million people.<sup>4</sup>

- Second plan – published in March 2021. This provided a summary of progress to date, highlighting that the programme was progressing faster than planned and with high uptake. It set out plans for the next phase of the programme and outlined some of the measures being taken to ensure that the vaccine programme is inclusive.<sup>5</sup>
- Third plan – published in July 2021. This provided a summary of progress and achievements since the start of the vaccination programme. It also outlined priorities for the next phase of the programme, including vaccinating eligible children and young people, and planning for a potential vaccine booster programme in autumn 2021.<sup>6</sup>

## **The Scottish Government and NHS boards have worked closely to deliver the Covid-19 vaccination programme**

**12.** The Covid-19 vaccination programme is categorised into three tranches. More information on the priorities of Tranches Two and Three can be found on [pages 15 and 16](#).

- Tranche One consisted of vaccinating all adults in Scotland with two doses of a Covid-19 vaccine.
- Tranche Two consists of the autumn and winter 2021/22 flu vaccinations and Covid-19 booster programme.
- Tranche Three focuses on the longer-term, business-as-usual approach to providing vaccinations in future across Scotland.

**13.** The Scottish Government set up a Flu Vaccination and Covid-19 Vaccination (FVCV) programme board to provide strategic direction and oversight of the planning and delivery of Tranche One of the Covid-19 vaccination programme. The board met fortnightly, and membership included senior officials from Scottish Government, NHS boards and other partners.

**14.** Several other groups reported to the FVCV programme board, including groups focused on clinical governance; programme delivery; planning; and communication and engagement. An Executive Group was also established for decisions that had to be taken between board meetings. All such decisions were recorded and reported at the next FVCV board meeting.

**15.** NHS National Services Scotland (NSS) has played a key role in the rollout of the Covid-19 vaccination programme in Scotland. It administers the allocation process for vaccines across Scotland and manages a contract for the storage and distribution of vaccines and sundries. It also developed and manages the National Vaccination Scheduling System (NVSS) and vaccination call centre.

## **Vaccines have been administered in a range of locations**

**16.** NHS boards have been delivering vaccines in a range of locations to reach as many people as possible. Vaccines have been administered in mass vaccination centres set up in conference centres and stadiums, and in local venues such as GP practices, town halls and community treatment centres. The Scottish Ambulance Service (SAS) has also set up mobile vaccination units to support the delivery of the vaccine programme. By the end of July 2021, 10,000 vaccines had been administered from SAS mobile vaccination units.<sup>7</sup>

**17.** As the economy reopened, the availability of some venues, such as stadiums and conference centres, decreased. The Scottish Government and NHS boards will need to consider how and where they deliver vaccines in the future.

### **The vaccine programme has relied on temporary staffing, and a longer-term, sustainable workforce is needed**

**18.** The vaccine programme has so far been reliant on temporary staff and volunteers. By July 2021, more than 14,000 vaccinators had administered vaccines.<sup>8</sup> Vaccinators consist of nurses, GPs, dentists, optometrists, pharmacists, allied health professionals, healthcare students and healthcare support workers (HCSWs). This diverse workforce has enabled the rollout of the vaccine programme to progress at pace, but it is an expensive model. Like other parts of the UK, NHS boards have also received support from the armed forces to increase vaccine workforce capacity when required.

**19.** As restrictions ease and NHS services recover, the availability of the temporary workforce will be reduced as staff return to their substantive posts. The Scottish Government has determined that a permanent, sustainable vaccine workforce will be needed in future. Work is currently taking place to establish the size of the workforce needed. This will depend on clinical advice about how vaccines should be delivered in future. The Scottish Government plans to recruit HCSW vaccinators as far as possible, working alongside registered nurses.

### **New digital tools were developed at pace to support the vaccination programme**

**20.** To support the rollout of the Covid-19 vaccination programme, new digital tools were developed quickly. These digital developments have enhanced NHS Scotland's ability to coordinate and manage the rapid rollout of the vaccines and required close collaboration and partnership working. NHS boards, such as NHS Education for Scotland, NHS NSS, Public Health Scotland (PHS) and NHS Greater Glasgow and Clyde, worked with the Scottish Government to develop new systems to support the deployment of the vaccines, including:

- the National Vaccine Management Tool – a web-based application that enables frontline health and social care staff to view and record patient vaccination data at the point of care
- the National Clinical Data Store – holds the Covid-19 vaccination records for everyone in Scotland, which can be securely shared with healthcare staff when required
- the NVSS – used to allocate and reschedule appointments and will continue to be used for the next phase of the programme, including giving people the option to book appointments online
- a self-registration portal – initially allowed unpaid carers to self-register for the vaccine before being rolled out to everyone aged under 30 years, and subsequently to all adults.

**21.** NHS boards developed vaccine programme delivery plans in January and March 2021. In these plans, NHS boards identified risks related to the NVSS. There were concerns about the functionality of the tool before its launch, and challenges around the flexibility to schedule second doses.

**22.** Risks and issues relating to the NVSS were monitored regularly, and the NVSS was adapted to improve its functionality. Most NHS boards have used the NVSS and there are plans to continue using it in future stages of the vaccine programme. Some NHS boards have opted for local scheduling arrangements to better meet the needs of the local population.

### **Vaccination costs for the 2021/22 financial year will depend on advice issued by the JCVI**

**23.** Covid-19 vaccines are procured by the UK Government, so the costs in Scotland are associated with the management, distribution, and delivery of the Covid-19 vaccination programme.

**24.** In 2020/21, NHS Scotland spent £58.9 million on the Covid-19 vaccination programme. Territorial NHS boards account for the majority of this (£42.7 million), and NHS NSS spent £16.1 million.

**25.** In August 2021, NHS boards and HSCPs predicted that the Covid-19 vaccination programme for the 2021/22 financial year will cost £223.2 million. NHS boards account for the majority of this (£209.9 million). Of this, NHS NSS has predicted that its costs will amount to £61 million.

**26.** NHS boards have based their predicted costs on planning assumptions provided by the Scottish Government. The expenditure needed will depend on advice issued by the JCVI, so could differ substantially from current predicted costs. The Scottish Government has confirmed that vaccination costs will be fully funded for the 2021/22 financial year.

**27.** As part of the initial Covid-19 funding allocations for 2021/22, the Scottish Government allocated £76.8 million for the extended flu and Covid-19 vaccination programme.<sup>9</sup> Costs are being reviewed quarterly and further allocations will be made later in the year.

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# Progress so far



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## Excellent progress has been made in rolling out the Covid-19 vaccination programme

**28.** The Covid-19 vaccination programme is making excellent progress, with most of the adult population having received their first and second doses. By 21 September 2021, 7,979,142 doses of the Covid-19 vaccine had been administered in Scotland. Of all those aged 18 years and over, 91.7 per cent had received their first dose of a vaccine, and 85.7 per cent had received their second dose.<sup>10</sup> This is considerably higher than the target of 80 per cent.

**29.** The Scottish Government aimed to offer first doses to everyone in JCVI priority groups 1-9 by early May 2021, and to all adults by the end of July 2021. This deadline was originally September 2021, but it was revised because of the good progress being made. First doses of the vaccine had been offered to all adults by 18 July 2021.<sup>11</sup>

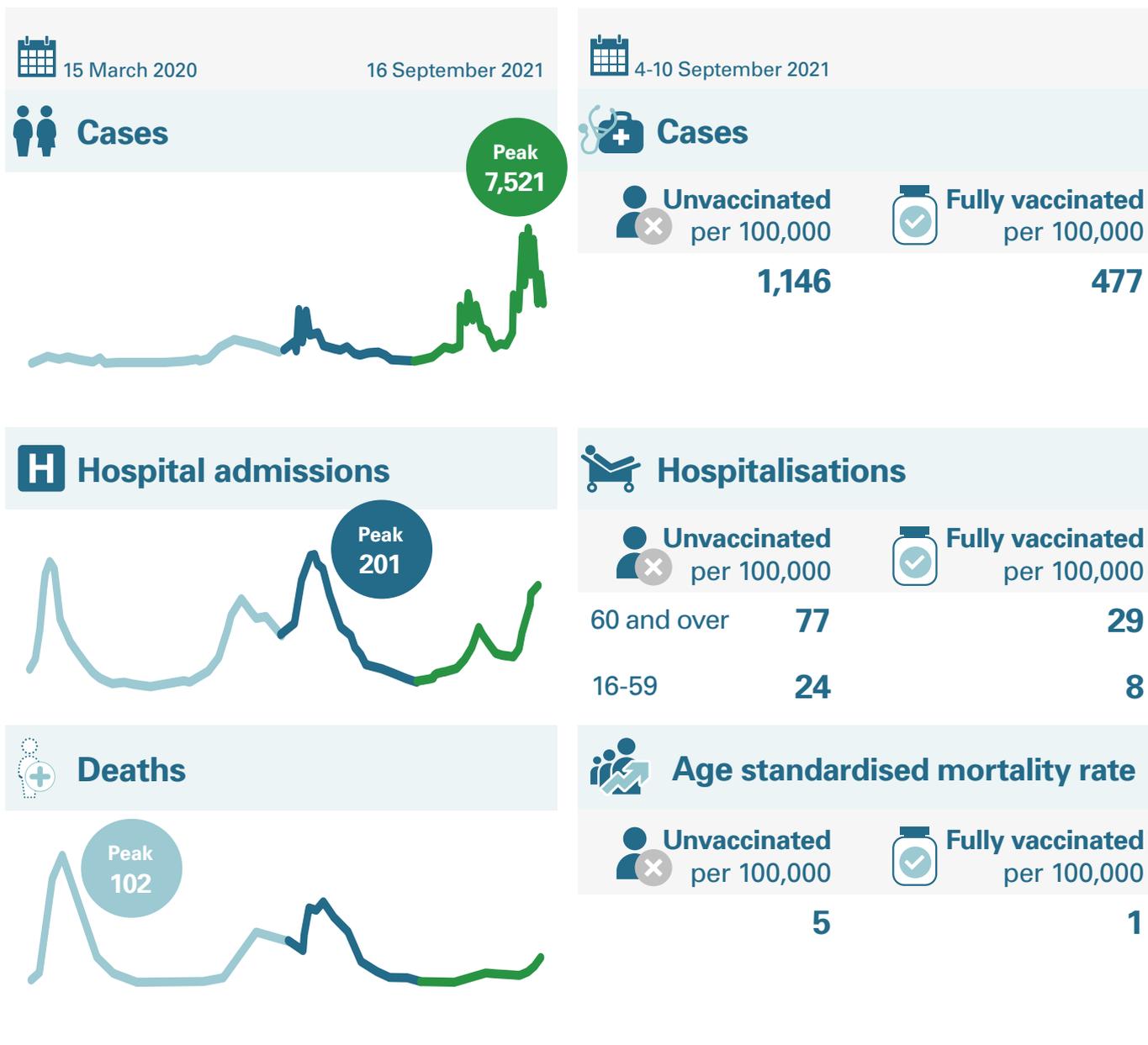
## The vaccines have helped to reduce the number of people getting severely ill and dying from Covid-19

**30.** The vaccines have helped to reduce the incidence of severe illness and death from Covid-19. The rate of cases and hospitalisations is significantly lower among vaccinated people, than for those who are unvaccinated. The most recent increase in Covid-19 cases during summer 2021 did not result in as significant an increase in hospitalisations and deaths as the previous waves of Covid-19 ([Exhibit 2, page 11](#)). As new variants of the virus continue to emerge however, there is a risk that the current Covid-19 vaccines will become less effective.

## Exhibit 2

### Covid-19 cases, hospitalisations and deaths, March 2020 to September 2021

The vaccination programme has helped to reduce the number of people needing hospital treatment or dying from Covid-19.



- Before the vaccination programme
- Vaccination programme began from 8 December 2020
- 98% of priority groups 1-9 had received their first dose of the Covid-19 vaccine by 7 May 2021

Note. Cases, hospitalisations and the age standardised mortality rate per 100,000 by vaccine status between 4 and 10 September 2021. Hospital admissions and deaths trend lines are based on the seven day averages.

Source: Public Health Scotland and National Records of Scotland

## The rate of people not attending their vaccination appointments has increased, but the proportion of vaccine wasted remains low

**31.** The rate of people not attending their vaccination appointments (DNAs) has been higher in recent months. In February 2021, DNAs accounted for eight per cent of scheduled appointments. This increased to a high of 36 per cent in July 2021, before decreasing to 23 per cent in August ([Exhibit 3](#)).

**32.** It is important not to look at DNA rates in isolation. The uptake of Covid-19 vaccinations is very high, and there are factors that could account for the increasing rate of DNAs. For instance, all mainland NHS boards introduced drop-in clinics from early July 2021. This meant that people could be vaccinated when it is most convenient for them, instead of at their scheduled appointment time.

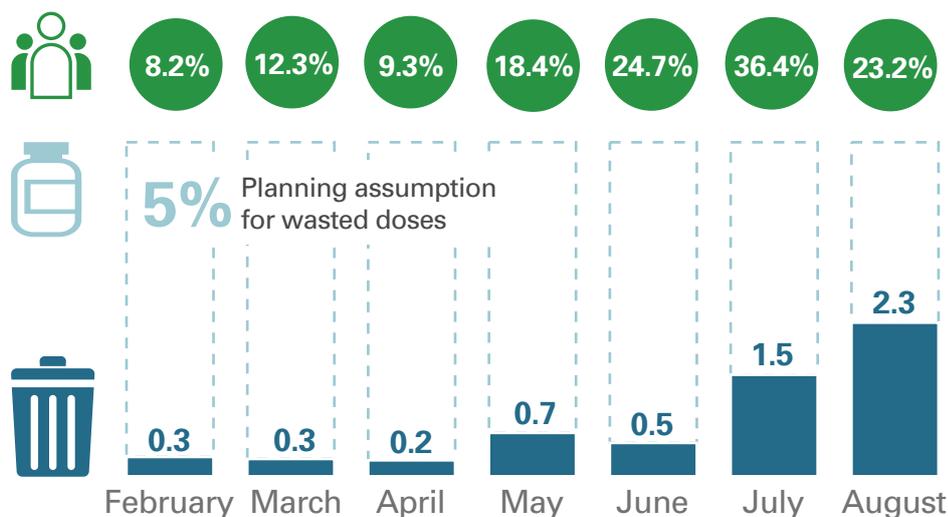
**33.** The proportion of Covid-19 vaccine doses being wasted has remained consistently low throughout the vaccination programme, although it has increased slightly in recent months, with 2.3 per cent of vaccines wasted in August 2021.

**34.** The Scottish Government published guidance in March 2021 to help NHS boards to minimise the number of vaccine doses wasted. Some wastage is unavoidable and to be expected: for instance, depending on the equipment being used, or if there is a malfunction in the cold storage of the vaccines. In its planning assumptions, the Scottish Government anticipated that around five per cent of vaccines would be wasted. Between February and August 2021, the proportion of vaccines wasted was just 0.65 per cent ([Exhibit 3](#)).

### Exhibit 3

Rates of non-attendance at appointments and vaccine wastage between February and August 2021

#### Did not attend appointment



■ % Doses wasted

## Engagement with the vaccination programme is lower in some groups of the population

35. Despite high uptake of Covid-19 vaccines overall, there is variation in uptake between different groups of the population. A smaller proportion of younger people, those living in the most deprived areas and people from some ethnic groups have been vaccinated ([Exhibit 4](#)). These trends are also evident in other parts of the UK.

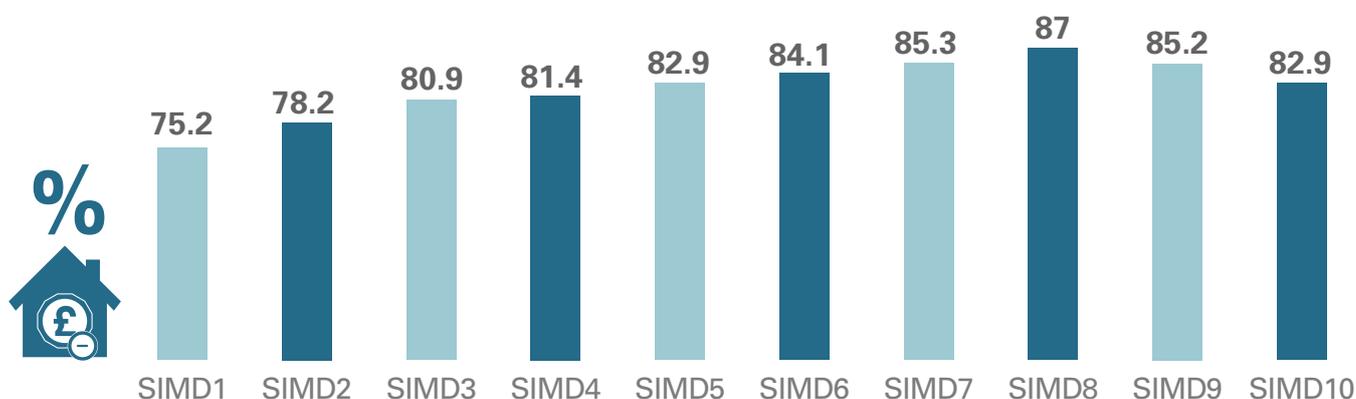
### Exhibit 4

The rate of Covid-19 vaccination uptake varies

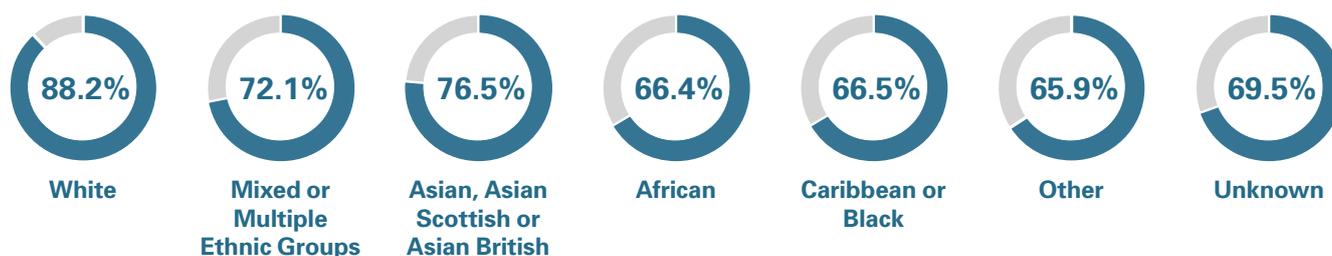
**Age** – At 20 September 2021, the uptake of first doses for adults aged 18 years and over was 91.7 per cent. **Uptake was lowest in younger age groups.**



**Deprivation** – At 24 August 2021, uptake was lowest among people living in the most deprived areas.



**Ethnic group** – At 24 August 2021, uptake was highest in the white ethnic group at 88.2 per cent.



Notes:

1. The Scottish Index of Multiple Deprivation (SIMD) is a relative measure of deprivation across small areas known as data zones, from the most deprived – SIMD1 to the least deprived – SIMD10. If an area is identified as deprived, this can relate to people having low incomes, but it can also relate to people with fewer resources or opportunities.
2. Denominator populations for age groups and area breakdowns are sourced from National Records of Scotland mid-2020 estimates.

Source: Public Health Scotland

## The Scottish Government and NHS boards are taking action to improve uptake of Covid-19 vaccinations

**36.** The Scottish Government and NHS Scotland recognised that there would be challenges in vaccinating the entire adult population with a new vaccine, and that some groups would be more reluctant or less able to engage with the programme.

**37.** In November 2020, PHS led a health inequalities impact assessment (HIIA) for an extended flu and Covid-19 vaccination programme.<sup>12</sup> This identified potential barriers to the uptake of flu and Covid-19 vaccines across different population groups, such as those from minority ethnic backgrounds and people living in deprived areas. The HIIA identified recommendations for the Scottish Government and NHS boards to consider when planning the vaccination programme. It was shared with the Scottish Government, NHS NSS and local NHS boards to inform planning and help them to develop their own equality impact assessments. PHS should publish the HIIA to share the findings more widely.

**38.** Throughout the vaccine programme, the Scottish Government and NHS boards have worked with partners to increase uptake and reduce vaccine hesitancy through a variety of methods, such as:

- improving data collection – to better understand trends by collecting data on uptake by characteristics such as ethnicity and deprivation
- working with organisations, such as Young Scot and the Minority Ethnic Health Inclusion Service, to tailor messaging for young people and those from ethnic minority backgrounds
- improving accessibility of information – for example, NHS Inform has published vaccine information in more than 30 different languages<sup>13</sup>
- a national inclusive steering group has been established to encourage vaccine uptake and reduce barriers to engagement with the programme. It has engaged with groups including African and Polish communities, where uptake has been low<sup>14</sup>
- outreach work – has targeted groups that may be less likely to come forward for vaccinations, such as Gypsy/Travellers, asylum seekers, those experiencing homelessness and seasonal migrant workers.

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# Next steps

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## The Scottish Government and NHS Scotland are preparing for future stages of the vaccination programme

**39.** Tranche One of the vaccine programme has been effective in reducing the number of people getting severely ill and dying from Covid-19. It met its target to have offered both doses to the remaining adult population by mid-September 2021.

**40.** The next stages of the vaccine programme bring further challenges. The Scottish Government has committed to continuing to follow advice from the JCVI in prioritising vaccine deployment beyond September 2021. In recent months, the JCVI has published a range of guidance on the next steps that the Scottish Government and NHS Scotland have needed to operationalise quickly, including:

- 30 June 2021 – interim advice on a potential Covid-19 booster programme starting in the autumn for vulnerable and older adults; final advice was issued in September 2021
- 19 July 2021 – advice that children aged 12-15 years at increased risk from Covid-19, and those aged 12-17 years living with someone who is immunosuppressed, should be offered the Pfizer-BioNTech vaccine
- 4 August 2021 – advice that all 16 and 17 year-olds should be offered a first dose of the Pfizer-BioNTech vaccine
- 1 September 2021 – advice that a third dose should be offered to people aged 12 and over who were severely immunosuppressed at the time of their first or second doses
- 14 September 2021 – advice that people in priority groups 1-9 should be offered a booster vaccine dose, no earlier than six months after having received their second dose of the vaccine.

**41.** The Scottish Government has responded quickly to JCVI advice, with vaccines for eligible groups being offered within days of the advice being published. In many instances, the Scottish Government and NHS boards have had to plan for future stages of the vaccine programme with formal clinical advice from the JCVI yet to be confirmed.

**42.** Final advice from the JCVI on the booster programme was issued in September following the results of clinical trials. This made planning particularly challenging, as it is the same month that the JCVI suggested in its interim guidance that a booster programme should begin.

**43.** In advance of final JCVI advice, the Scottish Government started planning to provide booster vaccines from September 2021. It established a programme board for Tranche Two: the flu vaccine and Covid-19 booster programme. This board is intended to increase focus and the pace of planning and delivery of Covid-19 booster and flu vaccinations that is taking place over autumn and winter 2021/22. It has been meeting fortnightly since the end of June 2021.

**44.** The Scottish Government developed a central planning scenario, informed by the JCVI's interim advice and by discussions at the Tranche Two programme board. The Scottish Government has asked NHS boards to develop delivery plans for the flu vaccine and Covid-19 booster programme based on this planning scenario. There was a risk that changes would need to be made at short notice, once the JCVI issued its final advice. Some elements of the central planning scenario that were subject to that final advice included:

- eligibility for booster vaccines and how boosters would be prioritised
- whether flu vaccinations and Covid-19 booster jabs could be administered at the same time – this has a particular impact on the staff and infrastructure needed to deliver the vaccines
- the dosage and type of vaccines that would be used for Covid-19 boosters, including whether the vaccine should be the same as that given for the first two doses, a different vaccine, or if either case could apply.

**45.** The Scottish Government has also started planning for the longer-term, business-as-usual approach to providing vaccinations in future across Scotland: Tranche Three of the Covid-19 vaccination programme. It plans to establish a new National Vaccinations Partnership portfolio board to provide oversight and direction across all three tranches of the vaccination programme, but its primary focus will be on Tranche Three. This board will link with existing groups, such as the Scottish Immunisation Programme and the Vaccine Transformation Programme, to ensure that the strategies and directions of the groups are aligned.

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# Endnotes



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- 1 The Medicines and Healthcare Products Regulatory Agency is an executive agency sponsored by the UK Department of Health and Social Care. It regulates medicines, medical devices, and blood components for transfusion in the UK.
  - 2 The Joint Committee on Vaccination and Immunisation advises UK health departments on immunisation programmes.
  - 3 The Barnett formula is used to allocate resources to Scotland, Wales and Northern Ireland when the UK Government spends money in areas that are devolved to the relevant administrations, such as health or local government. The funds received by devolved administrations are known as Barnett consequentials.
  - 4 [Coronavirus \(COVID-19\): vaccine deployment plan](#),  Scottish Government, January 2021.
  - 5 [Coronavirus \(COVID-19\): vaccine deployment plan](#),  Scottish Government, March 2021.
  - 6 [Coronavirus \(COVID-19\): vaccine deployment plan](#),  Scottish Government, July 2021.
  - 7 [10k vaccines delivered from SAS mobile vaccine clinics](#),  Scottish Ambulance Service, July 2021.
  - 8 Coronavirus (COVID-19): vaccine deployment plan, Scottish Government, July 2021.
  - 9 [NHS Covid-19 funding increased](#),  Scottish Government, July 2021.
  - 10 [Daily trend of total vaccinations in Scotland](#),  Public Health Scotland, September 2021.
  - 11 Coronavirus (COVID-19): vaccine deployment plan, Scottish Government, July 2021.
  - 12 Extended flu and COVID-19 vaccination health inequalities impact assessment (HIIA) Engagement and consultation report, Public Health Scotland, November 2020.
  - 13 NHS Inform is Scotland's national health information service. It provides information to the public on health services, national health campaigns and other topics to help them make informed decisions about their health.
  - 14 Vaccination Strategy: inclusive programme board papers, June 2021.

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# Appendix

## JCVI Priority Groups 1–9

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1. Residents in care homes for older adults and their carers
2. All those 80 years of age and over and frontline health and social care workers
3. All those 75 years of age and over
4. All those 70 years of age and over and clinically extremely vulnerable individuals
5. All those 65 years of age and over
6. All individuals aged 16 years to 64 years with underlying health conditions which put them at higher risk of serious disease and mortality, and unpaid carers
7. All those 60 years of age and over
8. All those 55 years of age and over
9. All those 50 years of age and over

**Covid-19**

# Vaccination Programme

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**SPICe**

**The Information Centre**  
An t-Ionad Fiosrachaidh

## **COVID-19 Recovery Committee**

**8th Meeting, 2021 (Session 6), Thursday 28  
October 2021**

### **COVID-19 statistical update**

#### **Background**

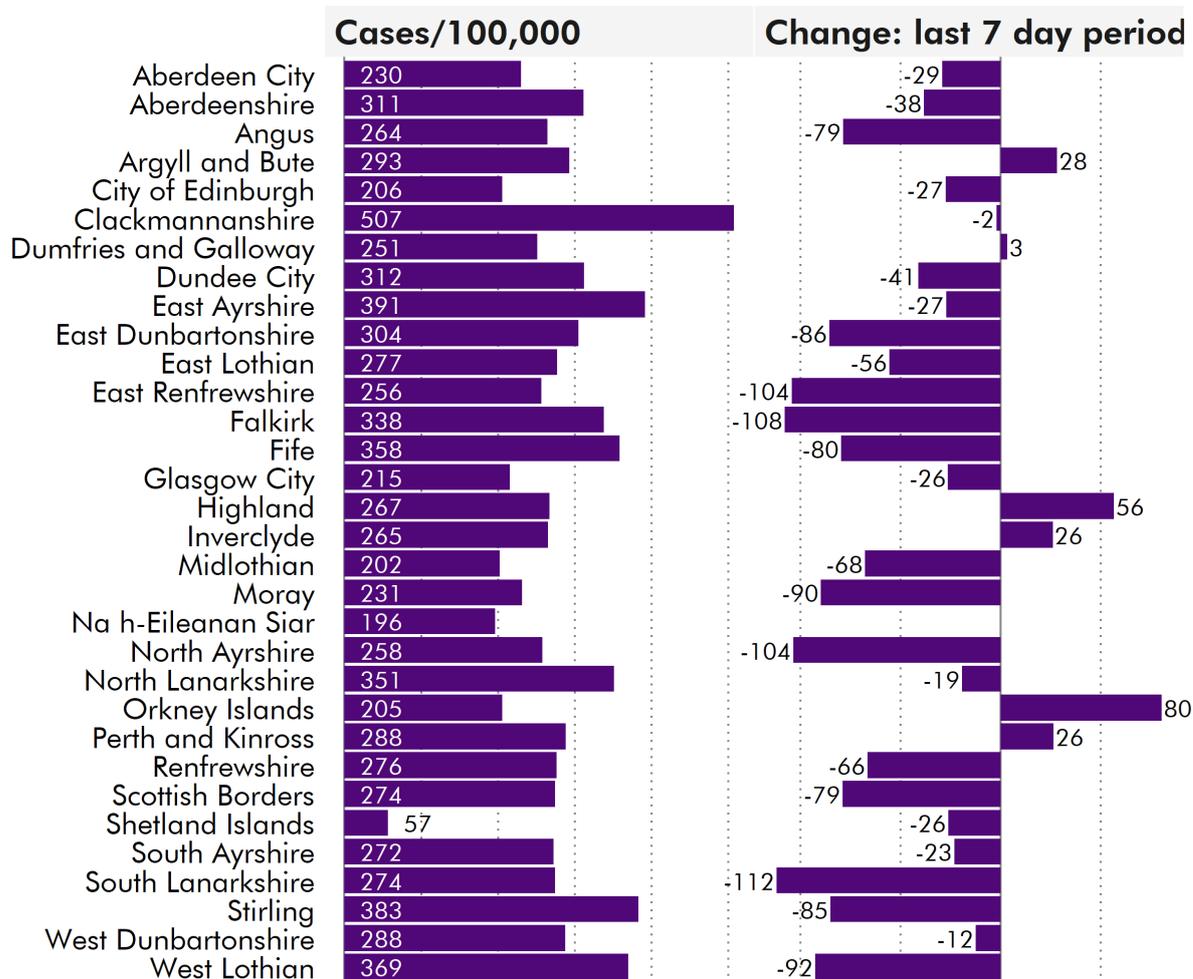
This note updates Members with some recent data on Covid-19, including:

- positive cases per 100,000 by local authority area (based on the methodology used by [Public Health Scotland in their daily dashboard.](#))
- longer term trends for Scotland as a whole
- a closer look at vaccine uptake, including new data on uptake by local areas in Scotland
- information on the four harms of Covid-19
- links to further resources and information

# Recent Trends

## Positive cases per 100,000 of the population by local authority

Data for the seven days up to 25 October 2021

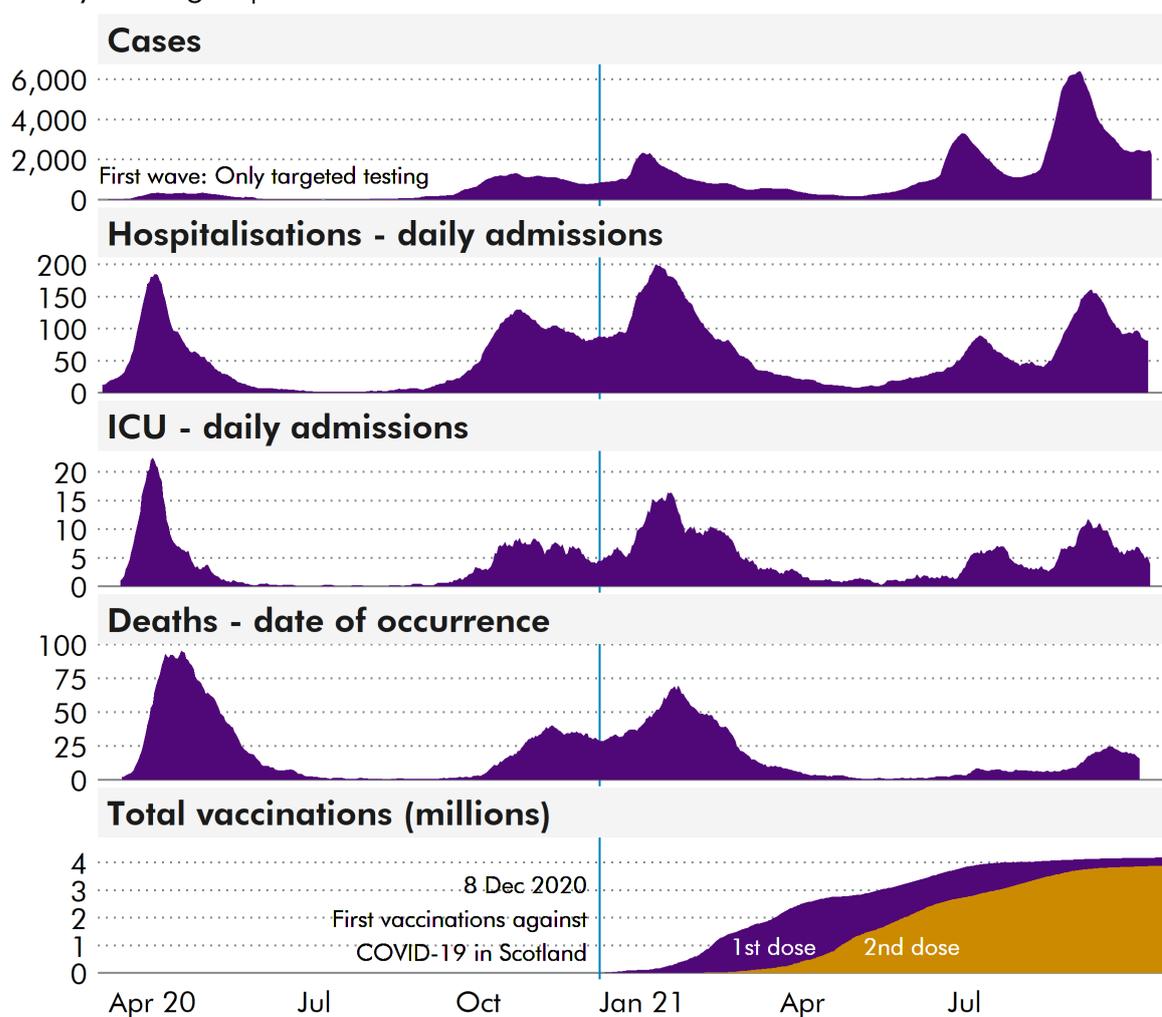


Source: Public Health Scotland

# Longer term trends

## Trends in COVID-19 cases, hospital admissions, ICU admissions, deaths and vaccinations in Scotland since the start of the pandemic

7 day averages | Data as at 25 October 2021



Source: Public Health Scotland and National Records of Scotland

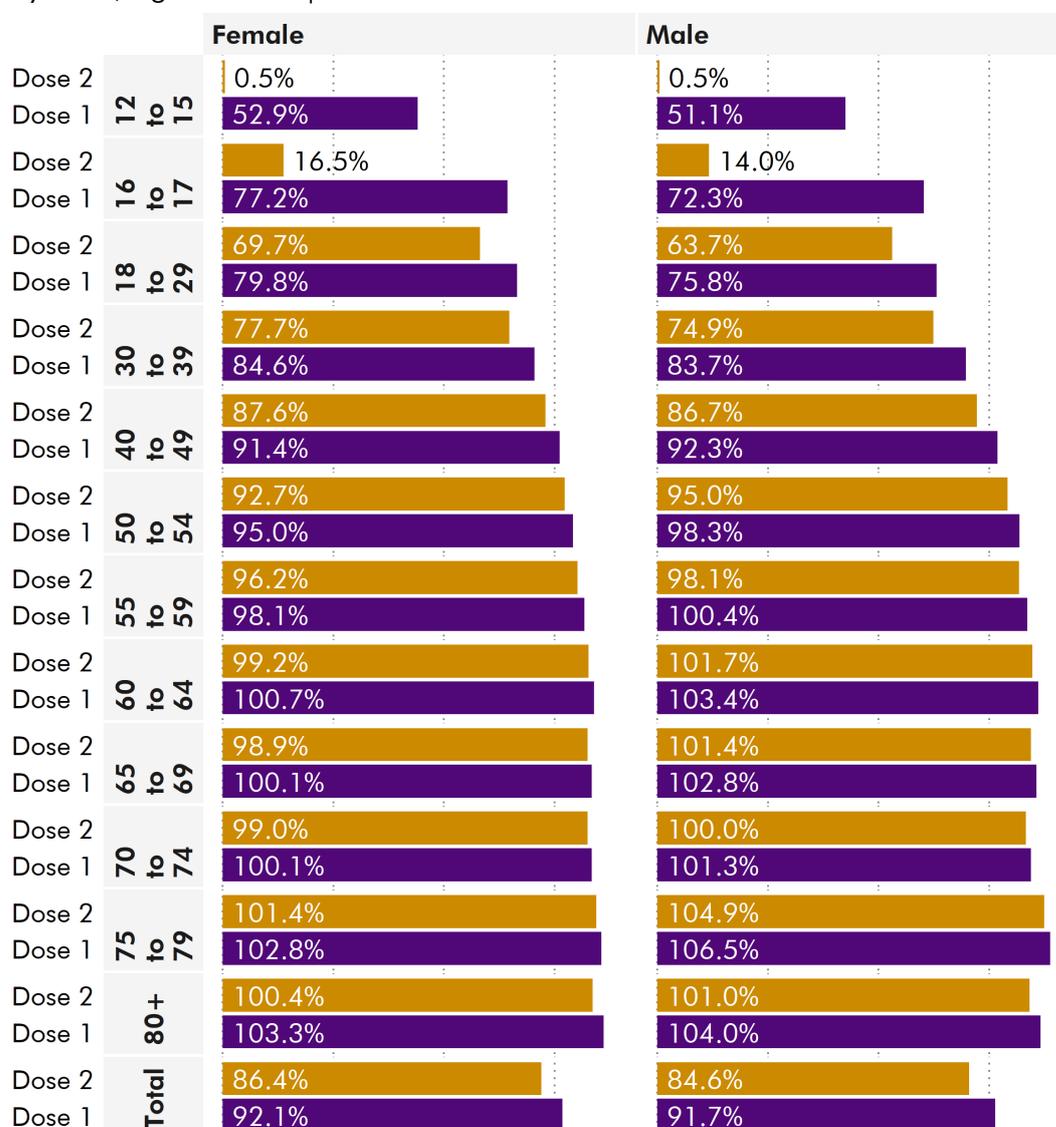
# A closer look at vaccine uptake

The following charts provide a breakdown of vaccine uptake (by first and second doses), by age, sex, local authority area, ethnicity, deprivation and new data for local areas. This [article by David Spiegelhalter and Anthony Masters](#) (Guardian June 2021) explains that some age groups report vaccination rates higher than 100% (in the English and Scottish figures) because of issues such as people moving into new age bands, and migration effects. It is also worth noting that there are more [registered patients in Scotland](#) (5,814,155) than the [overall population](#) (5,466,000).

## Age and sex

### Proportion of population who have received the vaccine

By dose, age and sex | As at 25 October 2021

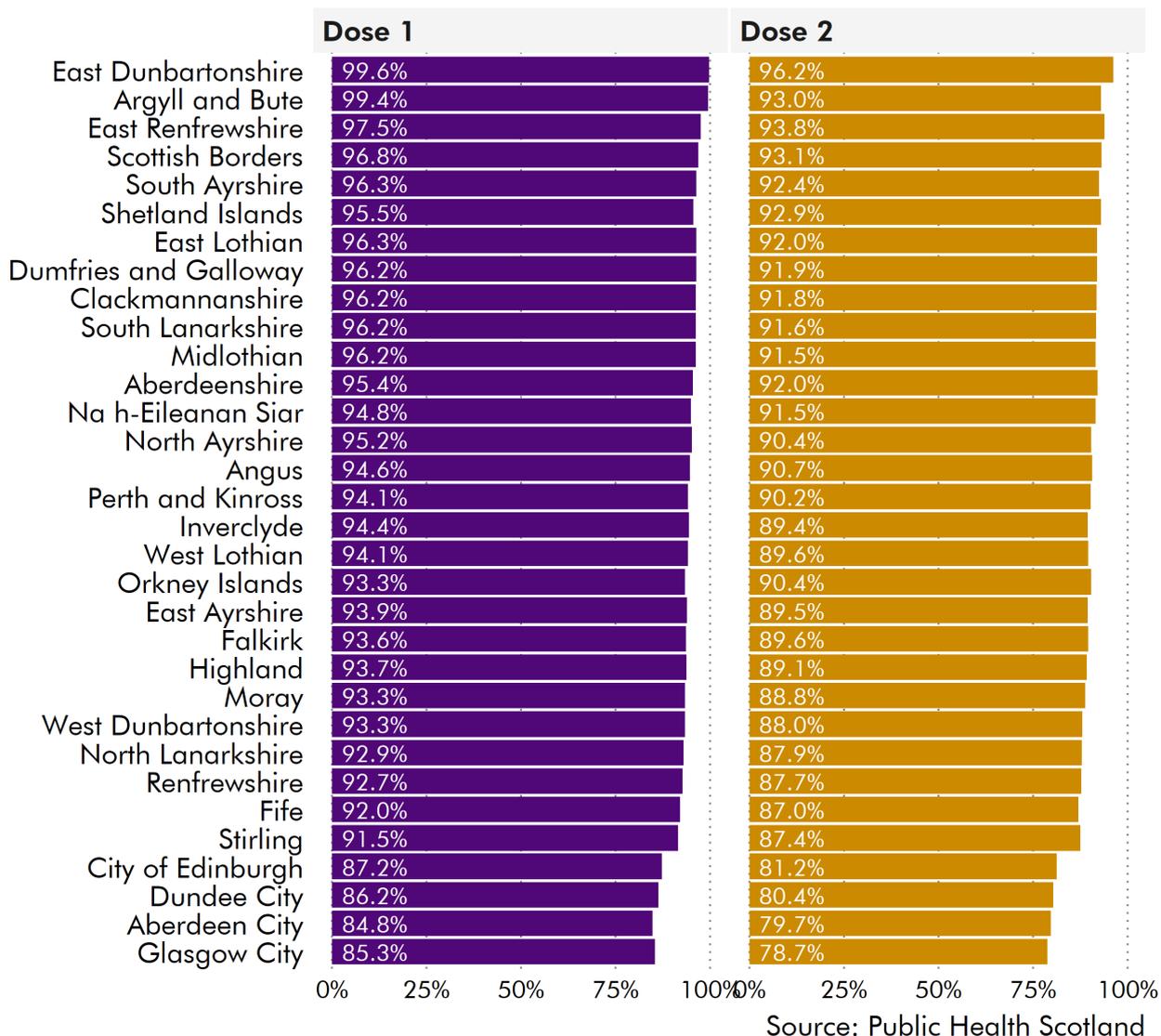


Source: Public Health Scotland

## Geography

### Proportion of population who have received the vaccine

By dose and local authority | As at 25 October 2021



The chart above shows the proportions who have received vaccines by local authority area.

### New data for local neighbourhoods

Public Health Scotland provided SPICe with figures by small areas called “Intermediate Zones”, **as at 3 October 2021**.

## **There are however some health warnings with this data.**

These are unpublished, management information data, (and not official National Statistics), and there are some caveats that need to be borne in mind when interpreting these figures.

To get percentage figures we need both estimates of the numerator (the top half of the percentage), and a denominator (the bottom half):

- In this case the numerators are estimated from the daily vaccination data which are added daily into the National Clinical Data Store from vaccination centres and/or GP Practices in Scotland. This data identifies the community the person lives in based on their postcode at the time of vaccination. (There are also some records for those vaccinated outside Scotland, and Public Health Scotland are looking at this non-Scottish vaccination data to see how it can be used in the future).
- For the denominators, the population data is taken from a different data set – the Community Health Index (CHI), and this counts the number people who are currently registered with different GP practices in Scotland.

## **So, what does this mean?**

Firstly, as said above this is not an official survey; it is an attempt by Public Health Scotland to build a picture based on administrative data sets. This data is useful, but it does come with some health warnings. For example, some people will have moved since they had their vaccination. And not everyone in a local community will be registered with their local GP. These figures, therefore, may well be at their most unreliable in communities where a large number of the population has moved in or out over the course of the year, and one of the most obvious examples of this are communities with large student populations.

The chart below shows those neighbourhoods (or Intermediate Zones) with what the data says, are the lowest rates of vaccine uptake.

Given the caveats with the data, it is useful to know how many students are in each of these neighbourhoods. Unfortunately, we don't have these figures for Intermediate Zones, but the Labour Force Survey can tell us the numbers of people who are "economically inactive", and the proportion of those who are students in the parliamentary constituency that the Intermediate Zone sits. This is by no means perfect but it does allow us to see that almost all the low vaccine neighbourhoods are in areas with higher than average student populations.

**Overall, the caveats associated with this data make conclusions difficult, and reflect the challenges in identifying those local areas with genuinely low vaccine uptake rates**

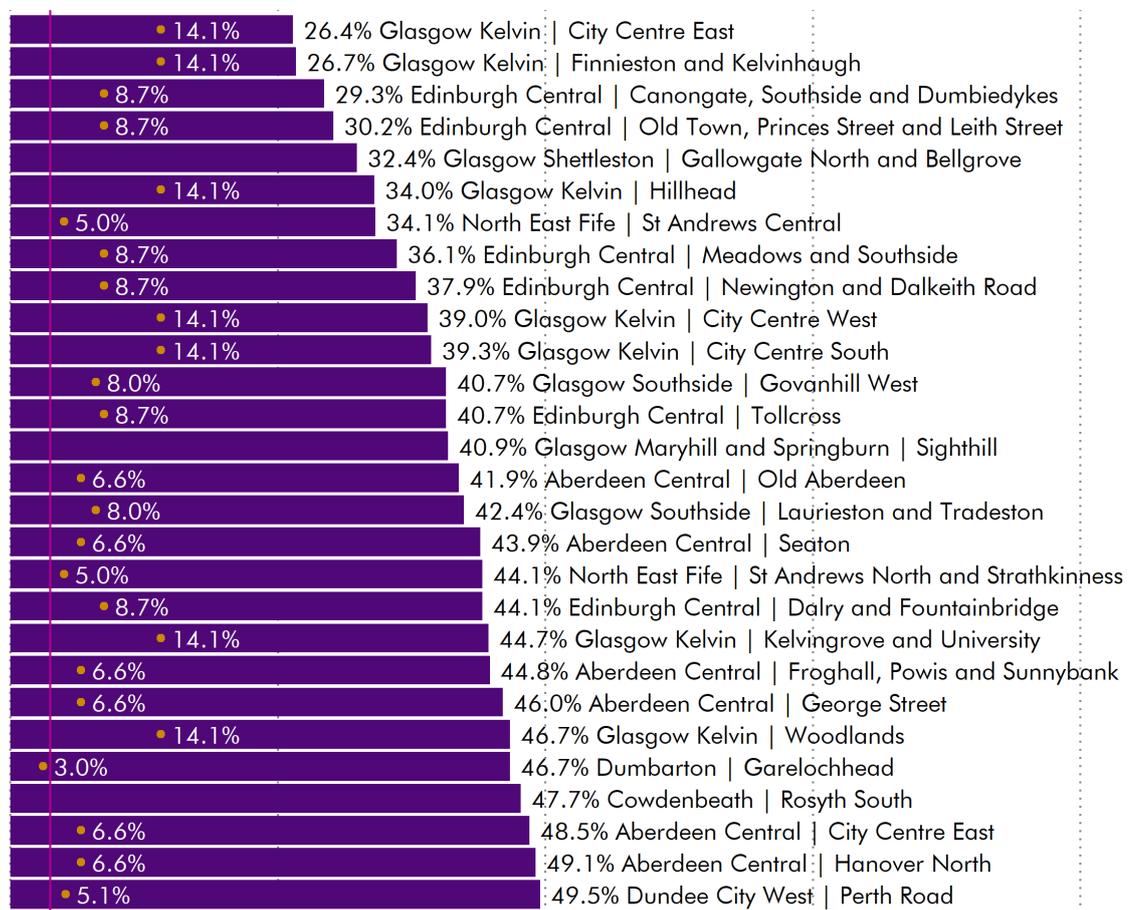
The chart below therefore shows all the Intermediate Zones where, **as at 3 October 2021**, the uptake of vaccines was reported by Public Health Scotland as being below 50%. So 'City Centre East', which is in the Glasgow Kelvin parliamentary constituency reported vaccine uptake of 26.4%.

However, the Glasgow Kelvin parliamentary constituency, also contains a high proportion of students. 14.1% of the economically inactive in the constituency are students, compared to a national average of 3.7%.

## Neighbourhoods with Vaccine uptake below 50%

Second dose uptake percentage | Proportion of Scottish Parliament constituency who are students\*

Average proportion of students per Scottish Parliamentary constituency = 3.7%



Source: Public Health Scotland

\*The student figure is based on the number of economically inactive people in the relevant Scottish Parliament constituency who give student as a reason for inactivity.

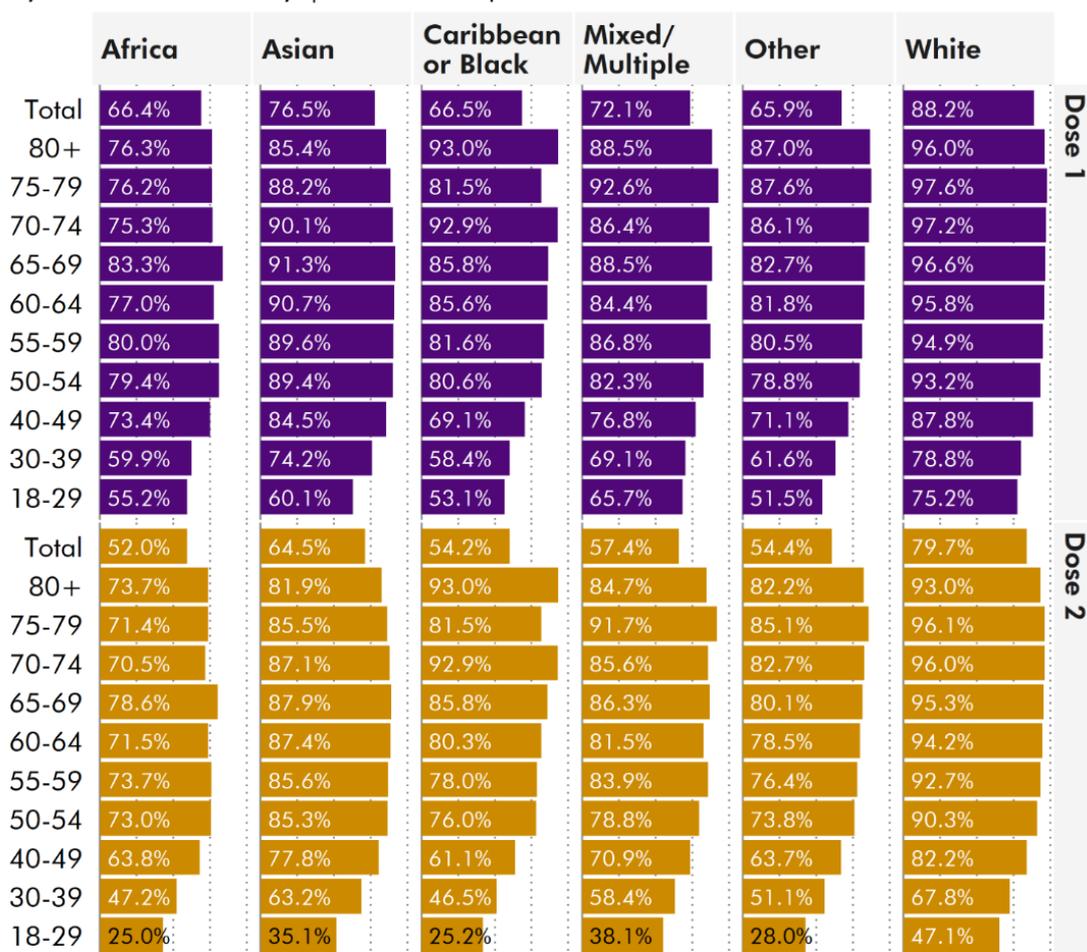
## Ethnicity and deprivation

The following charts on vaccine uptake by ethnicity, and by Scottish Index of multiple Deprivation (SIMD) are taken from the Public Health Scotland [Covid-19 Statistical Report](#) (published 6 October 2021).

The chart below shows the picture **as at 28 September 2021**. The next update with equalities data is due mid-November.

### Proportion of population who have received the vaccine

By dose and Ethnicity | As at 28 September 2021



Source: Public Health Scotland

The following chart shows the proportion of people who have received both doses broken down by areas experiencing differing levels of deprivation (according to the Scottish index of Multiple Deprivation). The areas in decile 1 are considered to be experiencing the highest levels of deprivation (the lowest 10%), whilst those in decile 10 are considered to be the least deprived (the highest 10%).

The data indicates that for example, that **as at 28 September 2021**, (for all people 18 and over) 69% of those living in the 10% most deprived areas, had received their second dose, compared to 80% of those in the 10% least deprived areas.

Again, the next update for these figures is due in mid-November.

## Proportion of population who have received the vaccine

By dose and Deprivation | As at 28 September 2021

	1	2	3	4	5	6	7	8	9	10	
All 18+	76.1%	79.0%	81.7%	82.1%	83.6%	84.7%	85.9%	87.6%	85.8%	83.5%	Dose 1
80+	93.5%	94.2%	94.8%	95.2%	95.6%	95.5%	95.8%	96.1%	96.1%	96.4%	
75-79	95.2%	96.1%	96.1%	96.6%	96.8%	96.9%	97.2%	97.4%	97.6%	97.6%	
70-74	94.0%	94.9%	95.6%	95.8%	95.9%	96.4%	96.6%	96.9%	97.0%	97.1%	
65-69	92.3%	93.6%	94.3%	94.7%	95.3%	95.6%	95.6%	96.2%	96.4%	96.5%	
60-64	90.9%	91.8%	93.2%	93.6%	93.9%	94.7%	94.7%	95.2%	95.6%	95.5%	
55-59	88.7%	90.4%	91.3%	92.1%	92.7%	93.2%	93.7%	94.1%	94.4%	94.2%	
50-54	84.4%	86.4%	88.0%	89.1%	89.7%	90.5%	91.2%	92.4%	91.8%	90.9%	
40-49	73.4%	76.0%	78.9%	80.3%	80.8%	83.1%	83.7%	85.9%	85.0%	83.7%	
30-39	63.9%	66.7%	69.6%	70.0%	70.1%	73.1%	73.8%	77.8%	73.9%	70.9%	
18-29	61.1%	64.6%	68.1%	66.5%	69.5%	68.6%	73.6%	75.8%	71.2%	65.6%	
All 18+	69.1%	72.9%	76.2%	77.3%	79.2%	80.8%	82.1%	84.0%	82.5%	80.0%	Dose 2
80+	90.0%	90.8%	92.0%	92.3%	93.0%	92.8%	93.2%	93.6%	93.6%	94.1%	
75-79	93.1%	94.3%	94.5%	95.3%	95.4%	95.8%	96.1%	96.5%	96.6%	96.8%	
70-74	92.1%	93.4%	94.2%	94.7%	94.9%	95.5%	95.8%	96.2%	96.4%	96.5%	
65-69	90.4%	92.1%	92.9%	93.6%	94.2%	94.8%	94.7%	95.4%	95.7%	95.7%	
60-64	88.5%	89.9%	91.4%	92.2%	92.6%	93.6%	93.7%	94.4%	94.7%	94.7%	
55-59	85.2%	87.8%	89.1%	90.2%	91.1%	91.8%	92.3%	93.0%	93.4%	93.2%	
50-54	79.8%	82.8%	84.9%	86.5%	87.5%	88.7%	89.5%	91.0%	90.4%	89.7%	
40-49	66.5%	70.2%	73.9%	76.0%	76.9%	79.7%	80.7%	83.2%	82.6%	81.2%	
30-39	54.6%	58.4%	61.9%	63.1%	63.9%	67.2%	68.1%	72.4%	69.3%	66.2%	
18-29	47.9%	52.3%	56.2%	55.7%	58.9%	58.7%	63.6%	65.8%	62.3%	56.3%	

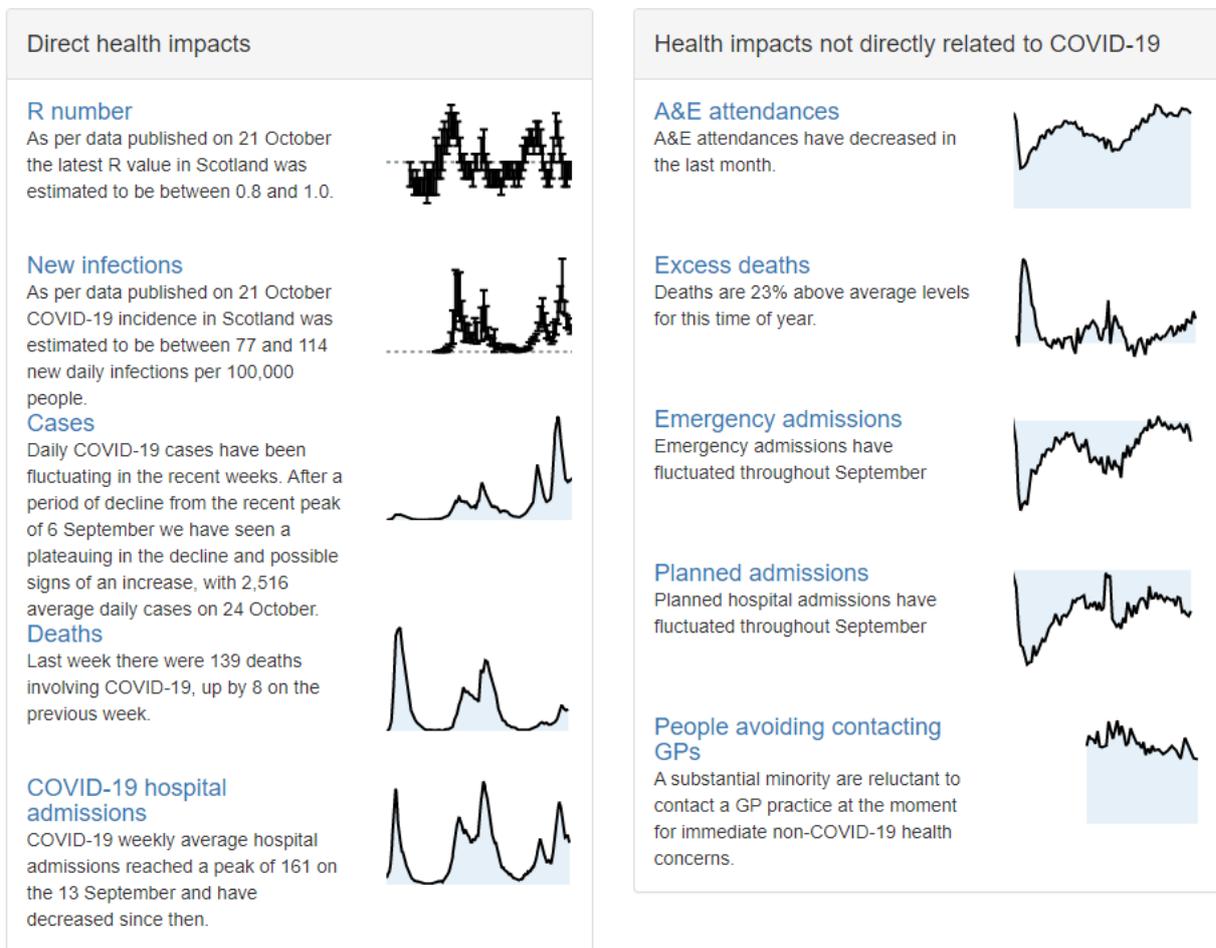
Source: Public Health Scotland

# The four harms

Below is a snapshot of data taken from the Scottish Government’s visual summary of the four harms, as at Monday 25<sup>th</sup> October. The text next to the charts is provided by the Scottish Government.

NB – in the majority of cases the charts run from around the start of the pandemic, though the economic indicators for example show trends over a five-year period)

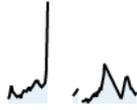
[Further detail about each indicator](#) is provided on the government website



## Societal impacts

### Education

The percentage of school openings with pupils not in school because of COVID-19 related reasons has decreased since 10 September and has levelled off over the week to 8 October.



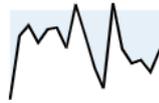
### Crisis grants

Scottish Welfare Fund crisis grant applications were 5% higher in July 2021 than in July 2020



### Crime

Recorded crime in August 2021 was lower than both August 2019 and August 2020.



### Loneliness

Around half of people report feeling lonely.



### Trust in Scottish Government

There are consistently high levels of trust in the Scottish Government.



### Perceived threat to jobs

1 in 5 employees are worried about the threat COVID-19 poses to their job.



### Transport

The number of people saying they are concerned about people contracting or spreading COVID-19 on public transport remains high.



## Economic impacts

### Monthly Business Turnover Index (MBTI)

Business turnover in March is at a similar level to the same month last year.



### Gross Domestic Product (GDP)

Scotland's GDP grew 0.9% in June.



### Unemployment

Scotland's unemployment rate was 4.3% in April - June.



### Claimant Count

Scotland's Claimant Count was 176,000 in July.



# Key Resources

## Health: COVID-19

- **Scottish Government** - [latest protection levels](#); [daily data for Scotland](#) and [latest reviews and evidence](#)
- **Vaccinations data** – published on the [Public health Scotland COVID-19 statistical report](#)
- **SPICe** – blogs on local [protection levels](#), [cases at a local level](#) and [latest available data](#) on testing, deaths, hospital admissions, and NHS absences, and blog on protection (NB please open using google chrome).
- **Public Health Scotland** - [Daily dashboard](#) (includes daily update, cases by neighbourhood, trends and demographics, and data table)
- **SPICe blog** - [Coronavirus \(COVID-19\): Vaccinations in Scotland – latest data](#) provide breakdowns of who has been vaccinated by age, sex, health board and eligibility criteria
- **Public Health Scotland** – [Open Data](#) includes analysis by age, sex, are and deprivation. And [Weekly report](#) (NB: published Wednesdays).

## Wider issues

- **Scottish Government** [four harms interactive dashboard](#) – provides data and visuals on a range of indicators relating to the four harms: direct impact of COVID-19, other health effects, economic effects and social impacts
- **Public Health Scotland** - [Wider health impacts dashboard](#) - includes analysis of summary trends (e.g. hospital admissions, ambulance figures, excess deaths), cardiovascular statistics, child health, mental health and pregnancy.
- **Improvement Service** - [Dashboard on economic impacts](#) in Scotland, and **Transport Scotland** - [Information on transport trends and public attitudes](#) towards transport for the pandemic period.
- **Scottish Government** [equality evidence finder](#), and **SPICe blogs** – [links to key sources](#) and [timeline](#).

Simon Wakefield and Andrew Aiton: SPICe Research  
25 October 2021

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