



**COVID
Vaccination
Programme**

The Vaccination Programme

On 8 December 2020, the first vaccination to combat COVID-19 was administered in Scotland. Initially targeting older people in care homes and their carers, the programme was quickly rolled out to the wider population. By September 2021, four approved vaccinations were being administered across the country.

Digital solutions for a global pandemic

To meet the demands of the programme, several new digital tools were developed at pace. These include:

- The National Vaccination Management Tool (VMT) allows health care staff to record patient vaccination data at the point of care.
- The National Vaccination Scheduling System (NVSS) allow vaccination appointments to be scheduled and monitored.
- The National Clinical Data Store (NCDS) holds vaccination data for the population.
- The self-registration portal allows citizens to register and book appointments from their own devices.

We were tasked with bringing the data from these platforms together in a way that would support decision making at both national and local (i.e., health board) levels.

In response, we developed the Vaccination Hub, a suite of analytical, easy-to-use dashboards. These dashboards are made available to registered users at a local or national level via role-based access privileges.

Source data from VMT, NVSS, NCDS and self-registrations is brought into our data and analytics platform, Seer. There, the data is integrated and linked into meaningful information which is shared with key stakeholders.

Information in the dashboards continues to be used to support decision making at national and local levels. Amongst other things, it allows us to understand individual patient vaccination journeys from beginning-to-end; helps us to ensure that every eligible citizen is given the opportunity to be vaccinated; and allows us to plan our resources so that we meet the needs of the Scottish people.





Healthier
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Vaccination Hub

This hub hosts a number of reporting outputs for the Scottish Vaccinations Programme.
Content has been developed by the NISS Data Services Team.



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NHS Digital and Security

The dashboards featured on this Hub have been commissioned to support decision making at both National and Local levels.

For more information about the data sources or the metrics, please refer to the Guidance Notes tab found in each dashboard.

You can customise the panels shown on this landing page by choosing the desired options in the dropdowns below or by searching using keywords

Search Dashboards

Hub Groups

All Dashboards

Filter Dashboards

(All)

Sort Options

Default

Hover over the icons to see more information about the dashboards

<div style="text-align: center;">  <p>Vaccination Performance Summary</p> <p style="font-size: 0.8em;">This dashboard provides high level metrics about the vaccination programme, focussing on activity over the last 7 days.</p> <p style="font-size: 0.8em; color: #666;">Go to dashboard ▶</p> </div>	<div style="text-align: center;">  <p>Vaccination Covid Uptake</p> <p style="font-size: 0.8em;">The total number of Covid-19 vaccinations administered, with ability to explore by product, age and geographies.</p> <p style="font-size: 0.8em; color: #666;">Go to dashboard ▶</p> </div>	<div style="text-align: center;">  <p>Vaccination Flu Uptake</p> <p style="font-size: 0.8em;">The total number of Flu vaccinations administered, with ability to explore by product, age and geographies.</p> <p style="font-size: 0.8em; color: #666;">Go to dashboard ▶</p> </div>	<div style="text-align: center;">  <p>Vaccination National Uptake</p> <p style="font-size: 0.8em;">Vaccination coverage for a range of target diseases, excluding Covid-19 and Flu, with ability to explore by product, age and geographies.</p> <p style="font-size: 0.8em; color: #666;">Go to dashboard ▶</p> </div>
<div style="text-align: center;">  <p>Vaccination Travel Uptake</p> <p style="font-size: 0.8em;">Travel vaccination coverage for a range of target diseases with ability to explore by product, age and geographies.</p> <p style="font-size: 0.8em; color: #666;">Go to dashboard ▶</p> </div>	<div style="text-align: center;">  <p>Vaccination Capacity</p> <p style="font-size: 0.8em;">Provides the vaccination clinic capacity numbers for the next 6 weeks</p> <p style="font-size: 0.8em; color: #666;">Go to dashboard ▶</p> </div>	<div style="text-align: center;">  <p>Vaccination Covid Dose Completeness</p> <p style="font-size: 0.8em;">Percentage of the population who've had a first dose, completed their vaccination course, and/or had their booster vaccination.</p> <p style="font-size: 0.8em; color: #666;">Go to dashboard ▶</p> </div>	<div style="text-align: center;">  <p>Vaccination Appointment Scheduling</p> <p style="font-size: 0.8em;">A detailed view of vaccination appointments created or updated through the National Vaccination Scheduling System.</p> <p style="font-size: 0.8em; color: #666;">Go to dashboard ▶</p> </div>
<div style="text-align: center;">  <p>Vaccination Flu Dose Completeness</p> <p style="font-size: 0.8em;">Percentage of the population who've had a flu vaccination. Shown by residence, age group and other demographics.</p> <p style="font-size: 0.8em; color: #666;">Go to dashboard ▶</p> </div>	<div style="text-align: center;">  <p>Vaccination Breaches</p> <p style="font-size: 0.8em;">Provides the number of people who have breached, or are about to breach, the recommended number of weeks between doses.</p> <p style="font-size: 0.8em; color: #666;">Go to dashboard ▶</p> </div>	<div style="text-align: center;">  <p>Vaccination Analysis</p> <p style="font-size: 0.8em;">Provides further analysis of specific vaccination data items, including the cohort categories selected at vaccination.</p> <p style="font-size: 0.8em; color: #666;">Go to dashboard ▶</p> </div>	<div style="text-align: center;">  <p>Vaccination Call Centre</p> <p style="font-size: 0.8em;">Key metrics on all calls received to the National Vaccination phone line, broken down by date, call reason and outcome.</p> <p style="font-size: 0.8em; color: #666;">Go to dashboard ▶</p> </div>
<div style="text-align: center;">  <p>Vaccination Self-Registration</p> <p style="font-size: 0.8em;">Vaccination appointment self-registration requests, submitted through the Citizen Portal web form or the National Vaccination Contact Centre.</p> <p style="font-size: 0.8em; color: #666;">Go to dashboard ▶</p> </div>	<div style="text-align: center;">  <p>Vaccine Stock and Supply</p> <p style="font-size: 0.8em;">A high level view of stock which has been allocated and delivered, broken down by product and geography.</p> <p style="font-size: 0.8em; color: #666;">Go to dashboard ▶</p> </div>	<div style="text-align: center;">  <p>Vaccine Wastage</p> <p style="font-size: 0.8em;">Number of vaccine doses wasted against the number of doses administered, with the ability to explore by wastage reason and geography.</p> <p style="font-size: 0.8em; color: #666;">Go to dashboard ▶</p> </div>	



Technology Stack

We employ several different technologies in the Vaccination Programme, including:

- **SAP Data Services** – to extract, transform and load the various data sources into our data warehouse
- **Oracle** – the DBMS used for our data warehouse
- **Denodo** – to build and make available vaccination related data products for analysts at a national and local level
- **Tableau** – to visualise the data for decision makers at a national and local level (e.g., vaccination uptake, appointment scheduling and clinic capacity)

We are currently engaged in migrating our resources and processes to the cloud (**Snowflake/Amazon Web Services**).

If you are interested in joining a team that makes a real difference to Scotland's health and social care sector, contact nss.birecruitment@nhs.scot for more information.