OECD Health Statistics 2025

Definitions, Sources and Methods

Immunisation against influenza among the elderly population (age 65+)

Number of people aged 65 and over who have been immunised against influenza (or "flu") during the last 12 months divided by the average annual population aged 65 and over.

Note: The last 12 months cover the last influenza season or calendar year.

Sources and Methods

Australia

Source of data:
- 2019 onwards: **Australian Immunisation Register** (AIR), Department of Health.
- **Australian Institute of Health and Welfare 2011.** 2009 Adult Vaccination Survey: summary results. AIHW Cat. No. PHE 135. Canberra: AIHW (also at http://www.aihw.gov.au/).
- **Australian Institute of Health and Welfare 2008**. Australia's Health 2008. 2006 Adult vaccination survey.
- **Australian Institute of Health and Welfare 2005**. 2004 Influenza vaccine survey: summary results. AIHW Cat. No. PHE 56. Canberra: AIHW (also at http://www.aihw.gov.au/).

Reference period: Data are for the calendar year.
Coverage:
- A national program for immunisation of persons aged 65 and over began in 1999 (69% in 1999). Various earlier state data exist, e.g. New South Wales 47% in 1993, 64% in 1998; and South Australia 28% in 1990, 56% in 1993, 71% in 1998. - The Australian Childhood Immunisation Register (ACIR) commenced in 1996 and was expanded to become the AIR in September 2016.
- Under the Australian Immunisation Register Act 2015 (https://www.legislation.gov.au/C2015A00138/latest/text), it is mandatory for vaccination providers to report to the AIR all influenza vaccinations administered on or after 1 March 2021.
- Since 2019, the numerator includes the number of individuals aged 65 and over, registered with medicare that have received an influenza vaccination in the relevant year and the denominator includes the population based upon individuals in AIR aged 65 years and over, who have an active Medicare status, and have not been end-dated within the respective year.

Break in time series: In March 2021 it became mandatory to report influenza vaccinations to the AIR so data for 2021 onwards are not comparable with earlier years.

Austria

Source of data:
- Up to 2019: **Austrian Health Interview Survey** 2006/07, 2014 and 2019.
- From 2024 onwards: **Austrian Federal Ministry of Social Affairs, Health, Care and Consumer Protection**.

Reference period (from 2024 onwards): Influenza season, defined as July 1 to June 30.
Coverage:
- Up to 2019:
  - National representative sample.
  - The survey will be repeated every 5 years.

– Numerator: Number of people aged 65 years and older who were vaccinated against flu within the past 12 months.
– Denominator: Number of people aged 65 years and older answering the Austrian Health Interview Survey.

- From 2024 onwards:
  – Numerator: Number people aged 65 and over who have been immunised against influenza for the influenza season.
  – Denominator: Population aged 65 and over in the beginning of the reference period.

Estimation method (from 2024 onwards): Estimates by MOH based on available data including national immunization registry.
Break in time series:

- 2014: The wording of the question concerning immunisation has changed from 2006/07 to 2014:

ATHIS 2014: Were you vaccinated against flu within the last 12 months?

1. within the last 12 months
2. for more than 12 months
3. Never

If 1: In which month and year were you vaccinated against flu?
ATHIS 2006/07: Do you have an upright protection by vaccination against flu (Influenza; revitalization yearly)?

1. Yes
2. No

Belgium

Source of data: **Health Interview Survey**, 2001 and 2004. Further information at https://www.sciensano.be/en/projects/health-interview-survey/hisia.

From 2006 onwards:
Intermutualistic Agency (IMA) via the Belgian Health Care Knowledge Centre (KCE)
https://www.healthybelgium.be/metadata/hspa/p4.pdf.
KCE reports are published under a "by/nc/nd" Creative Commons Licence
http://kce.fgov.be/content/about-copyrights-for-kce-publications.
Reference period: Calendar year.
Coverage: country
Only vaccines which have been reimbursed are taken into account. In Flanders, since 2010, vaccines are free of charges for elderly residing in elderly and nursing homes so there are not taken into account. Hence all calculations for this indicator exclude (from numerator and denominator) elderly residing in elderly or nursing homes.
- **Numerator**: Number of persons aged 65 and over not residing in an elderly or nursing homes who have been immunised against influenza with a reimbursed vaccine during the reference year.
- **Denominator**: Number of residents aged 65 and over not residing in an elderly or nursing homes.
Deviation from the definition:
The indicator deviate from the definition due to the limitations mentioned above. The indicator include only the population not residing in an elderly or nursing homes and consequently the proportion is underestimated.
Estimation method: Estimations based on reimbursed vaccines.
Break in time series: change of source from 2006 data onwards. Source used from 2006 data deviates from the definition.

Canada

Source of data:
- **Statistics Canada**. Canadian Community Health Survey (CCHS), 2000/01, 2003, 2005, 2011 to 2020. Data for 2003 through 2014 can be found in Table:13-10-0451-01(formerly CANSIM 105-0501) at https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310045101, data is found at

https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310009625 (Statistics Canada. Table 13-10-0096-25 Influenza immunization in the past 12 months, by age group).
- For 2023 data can be found at Health indicator statistics, annual estimates (https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310090501) (Statistics Canada. Table 13-10-0905-01 Health indicator statistics, annual estimates, indicator, Influenza immunization in the past 12 months)
Coverage:
- The proportion of household population aged 65 and over who reported in the surveys that they had their last influenza immunisation less than one year ago.
- The 2009 data on flu shots may include H1N1 vaccines received in the fall of 2009. In 2010, the word "seasonal" was added to the questions in order to collect the two types of vaccines separately.
Break in time series: 2015.
- As a result of the 2015 redesign, Canadian Community Health Survey (CCHS) has a new collection strategy, a new sample design, and has undergone major content revisions. With all these factors taken together, caution should be taken when comparing data from previous cycles to data released for the 2015 cycle onwards.

Chile

Source of data:
- Up to 2009: **Ministry of Health (MINSAL)**, Department of Health Statistics and Information (DEIS). Administrative registry from public and private health sector through the Monthly Statistical Summary (REM, Resumenes Estadísticos Mensuales). REM are consolidated at a central level in DEIS in the MINSAL. REM consolidates the information from the National Inmunisation Program (PNI).
Anuario de estadísticas de atenciones y recursos para la Salud 1999/2004 (DEIS, MINSAL).
REM 2001-2009:
- Since 2010: **Ministry of Health**, National Immunisation Registry.
http://www.deis.cl/?p=21
Coverage:
- Data coverage is nationwide.
- Data cover the population aged 65-79 up to 2014, and the population aged 65 and over as of 2015.
- Data are collected monthly.
- Immunisation against Influenza in elderly persons over 65 is not mandatory, which explains the variations in the coverage.
Deviation from the definition:
In relation to the information for the year 2024, it should be noted that the target population corresponds to 60 years of age and over, so there is a deviation in the indicator.
Break in time series:
- Since 2010, the Ministry of Health has been implementing the National Immunisation Registry which is an online system for immunisation records covering both the public and the private sectors. The implementation of this online system has improved data quality, helping to avoid over-registration and to prevent errors by age group records. The information is more accurate and will improve the actual coverage in the coming years.
- From 2015, the target population is all persons over 65 years and not only those between 65 to 79 years as calculated previously. This change in the denominator explains why the coverage estimates decreased in 2015.

Colombia

Data not available.

Costa Rica

Source of data: Ministry of Health, Directorate of Health Surveillance, Unit of Epidemiology.
Coverage: It includes data coming from public and private facilities that applies this vaccine.

Czechia

Source of data: **Institute of Health Information and Statistics of the Czech Republic**.
Since 2022: National Registry of Reimbursed Health Services (NRRHS) January 2022- August 2022, supplemented with data from the Infectious Diseases Information System IDIS from September- December 2022), the ISIN data source will continue- 2010: **National Registry of Reimbursed Health Services** (NRRHS).
- 2008: **European Health Interview Survey in the Czech Republic** (EHIS CR 2008).
- 2002: **Health Interview Survey in the Czech Republic** (HIS CR).
Reference period: 31st December.
Coverage:
- Since: 2022 self-payers 65+ included- 2010: Population aged 65+ covered by health insurance scheme
- 2002, 2008: National representative sample survey of population.
- 2008: Total number of respondents = 1955; number of respondents aged 65 and over = 430.
- 2002: Total number of respondents = 2476; number of respondents aged 65 and over = 424.
Break in time series: 2010, since 2022 data source change

Denmark

Source of data:
- Up to 2008: **National Board of Health**, The National Health Insurance Service Registry.
- From 2009: **Statens Serum Institut** (https://statistik.ssi.dk//sygdomsdata#!/?vaccination=14&sex=3&agegroup=4&landsdel=100&xaxis=Season&show=Graph&datatype=Vaccination).
Reference period: Data refer to seasonal years (e.g. the 2018 data is for 2017/2018).
Coverage:
- Up to 2008: The number of immunisations of people aged 65 years old and over covers the number of people who have received the immunisation for free. All population aged 65 years old and over has been offered the immunisation. Some choose to pay themselves and are not included in the number.
Break in time series: 2009 (change in data source). Until 2008, data only include people who get vaccinated free of charge. From reference year 2021 and onwards data have been updated to include all service numbers for immunisation. Some of the service numbers change every year and the new update take this into account.

Estonia

Source of data: **Health Board**, Annual immunisation report of health care providers; https://www.terviseamet.ee/en/.
Reference period: calendar year.
Coverage: Data are collected with quarterly reports of all health care providers who deliver immunisation. Vaccination against influenza has been increasing year to year due to increasing awareness of the severity of influenza and increasing attention at national level. From 2017, vaccination is also possible in pharmacies. Since September 2019, the state has financed the immunisation of the persons who receive a 24-hour general or special care service provided outside home. From 2022, a free flu vaccine is available to everyone over 60.

Finland

Source of data: **THL Finnish Institute for Health and Welfare**, Department of Health Security
Reference period: The data are collected and reported for influenza season.
E.g. 2019 corresponds to 2018/2019 season,
Coverage:
- Percentage of people aged 65 years old and over who have been immunised against seasonal influenza.
Deviation from the definition:
Estimation method:

Break in time series: 2010. Change in methodology: THL established a national vaccine registry. The data collected prior to 2009-2010 is based on self-reports of the service providers. The data available after that is based on automatically collected register data.
- Influenza vaccinations given in private health care available since 2021-2022.
- In 2009, the data on the coverage of seasonal influenza vaccination among the elderly does not cover pandemic H1N1 vaccinations, for which the coverage was 56% in the age group of 65 years old or over (season 2009-2010).

France

Source of data:
- Up to 2003: **Groupe d'études et d'informations sur la grippe** (GEIG).
- From 2004 onwards: **SNIIR_AM database** (Système national inter-régimes) managed by **CNAM**. https://www.santepubliquefrance.fr/determinants-de-sante/vaccination/articles/donnees-regionales-de-couverture-vaccinale-grippe-par-saison-et-dans-chaque-groupe-d-age.
Reference period: Data for 2021 refer to the 2020-2021 season, 2020 refer to the 2019-2020 season, etc.
Coverage:
- Up to 2004: The Sofres Santé institute publishes a study every year on influenza immunisation in general population on behalf of the GEIG.
The methodology applied consists of a questionnaire sent by post to a national sample representing individuals 15 years old and over. In May 2002, the survey was sent to 6000 people. The rate of return reached 70%. A similar methodology has been used since 1989/90, which allows the comparison of results from one year to the other.
- Since 2005: Data come from the SNIIR_AM database (Système national inter-régimes) managed by CNAMTS as Ratio of people aged 65 or more for which there has been a prescription of vaccine against influenza during the campaign period reported to the number of assured or elderly dependents aged 65 years or more.
The source of data has been changed in a view of consistency with the data presented in the national reports.
Break in time series: 2005.

Germany

2009-2023
Source of data: **Robert Koch-Institute (RKI)**, Influenza: Impfquote (ab 60 Jahre), Gesundheitsberichterstattung des Bundes, 2024; See information at https://gbe.rki.de.
Reference period:
- The 2023 data refer to the 2022-2023 winter season.
- A season is defined as the period from the third quarter of a year up to and including the first quarter in the following year.
Coverage:
- The Robert Koch Institute (RKI), together with the associations of statutory health insurance (KV), conducts a nationwide monitoring of vaccination quotas (project "KV-Vaccination Surveillance"). In the KV-Vaccination Surveillance coordinated by the RKI, anonymous, out-patient accounting data of the statutory health insured persons (approx. 85% of the population in Germany) are evaluated promptly in a joint project with all associations of statutory health insurance.
- As the seasonal influenza vaccination is administered annually, the calculation of the influenza vaccination rate includes the total number of persons vaccinated against influenza aged 60 years and over in one season (defined as the period from the third quarter of a year up to and including the first quarter in the following year) and calculates their share of the age-appropriate statutory health insurance population.
Deviation from the definition:
- Only the data of the statutory health insured persons are taken into account, vaccinations carried out with private insured persons are not recorded.
- Utilisation of influenza vaccination in the previous winter season of people aged 60 years and more.
Estimation method:
Break in time series: 2009. The sources for data up to 2007 and from 2009 use different methodologies.

2006-2007
Source of data: **TNS Healthcare** (European Vaccine Manufacturers), Telephone survey for Germany (population aged 60+); Arbeitsgemeinschaft Influenza 2008, *Abschlussbericht der Influenzasaison 2007/2008*, Berlin, p.6.
Deviation from the definition:
- Utilisation of influenza vaccination in the previous winter season of people aged 60 years and more.

2001-2005
Source of data: Cross-section survey – Immunisation (population aged 60+). Data were collected every two years.
Deviation from the definition:
- Utilisation of influenza vaccination in the previous winter season of people aged 60 years and more.

Greece

Source of data:
- **Hellenic Statistical Authority**, **Health Survey 2009 and 2014**. See further information at http://www.statistics.gr/en/statistics/-/publication/SHE22/-.
- From 2018**, EOPYY** (**National Organization for the Provision of Health Services**) is the main provider of the data.
Reference period: The data refer to the total of vaccinated people up to the 31 December.
Coverage:
- Percentages for 2009 and 2014 refer to the population aged 65 and over, who have been immunized against influenza during 2009 and 2014, respectively. The Health Survey has been conducted, by ELSTAT, during the last quarter of the respective years.
- From 2018, the data refer to reimbursed vaccines from EOPYY. From 2020 became mandatory the prescribing of influenza vaccines through EOPYY while in 2019 the beneficiaries of care could procure it privately.
Break in time series: Yes, please see above.

Hungary

Source of data:
- From 2002: **National Center for Epidemiology** (OEK in Hungarian). www.oek.hu.
- From 2017: **National Public Health Center** (NNK in Hungarian). www.nnk.gov.hu.
- From 2023: **National Center for Public Health and Pharmacy (NCPHP)** (NNGYK in Hungarian). www.nngyk.gov.hu
Reference period:
- The data refer to the reference period ending in the reference year. For example, 2024 data refers to winter season 2023/2024.
Coverage:
- Up to 2010, the population covers elderly people aged 60 years and over who have received the influenza vaccination free of charge.
- From 2011, the population covers elderly people aged 65 years and over.
Deviation from the definition:
- Up to 2010: Age group 60 and over.
Break in time series:
- From 2011: Age group 65 and over.
Note:
- In 2021: In the 2020/2021 flu season, there was a greater willingness to get vaccinated due to COVID-19. Everyone was afraid of getting infected with the flu and the coronavirus at the same time, and at that time there were not enough vaccines against COVID-19.
- In 2022: In the 2021/2022 flu season, willingness to vaccinate will fall below previous values.

Iceland

Source of data: **Directorate of Health**.
Reference period:
Coverage:
- As of 2018: Complies with definition of age group, i.e. numbers refer to population 65+.
- Before 2018: Numbers refer to the age-group 60+. Based on the number of persons vaccinated during the 4th quartile of one year and the 1st quartile of the next (presented as a percentage of the population 60+ on January 1st of the second year).
In Iceland, it is recommended to annually vaccinate all individuals older than 60 years of age in addition to risk groups.
Deviation from the definition:

a) Before 2018: Population aged 60+.
a) Based on the number of persons vaccinated during the 4th quartile of one year and the 1st quartile of the next (presented as a percentage of the population 65+ on January 1st of the second year). E.g. immunisations carried out in 2018/2019 would be presented as figures for 2018.

Estimation method:
Break in time series:

Ireland

Source of data: **Health Protection Surveillance Centre** (https://www.hpsc.ie/).
Reference period:
- Data for 2019 refers to the 2018/2019 season (September-August), 2018 refers to the 2017/2018 season, etc.
Coverage:
From 2021:
The denominator calculating coverage was changed and median denominator of those having medical and GP card is not used anymore. For coverage in 2021, population data from Central Statistical Office (CSO) was used, which is estimate for year 2021
From 2020:
Influenza vaccine is free of charge and is available for all of those aged 65 and over as per NIAC recommendation https://www.hse.ie/eng/health/immunisation/hcpinfo/guidelines/chapter11.pdf.
Pre-2020:
- It should be noted that all influenza vaccine data relate to paid claims for influenza vaccine reimbursement for medical card holders and GP Visit Card holders aged 65 years old and over attending GP clinics and pharmacies for influenza vaccination. Data from pharmacies were only available from the 2012/2013 (reference year 2013) influenza season when administration of influenza vaccine by pharmacists commenced. 82.2% of those aged 65 and over were medical and GP visit card holders in 2018.
- There are a number of limitations associated with the influenza vaccine uptake data. These are reviewed in editions of Epi-insight, see http://www.hpsc.ie/hpsc/EPI-Insight/.
Break in time series:
- Further to note above on coverage, the denominator calculating coverage was changed and median denominator of those having medical and GP card is not used anymore. For coverage in 2021, population data from Central Statistical Office (CSO) was used, which is estimate for year 2021.

Israel

Source of data:
- 2008-2024: Data based on official reports from the 4 sick funds, and reported by the **Israel Center for Disease Control (ICDC), Ministry of Health**.
- 2002-2007: Data based on *The Quality Indicators in Community Health Care in Israel Report*s, prepared by the **Israeli National Quality Indicators Program Team**. This program is funded by the Israel National Institute for Health Policy and Health Services Research (NIHP).
- 2000: **Central Bureau of Statistics**, Health Survey (supplement to Labour Force Survey).
- National representative sample of non-institutionalised civilian population; excludes nomad population in the southern region (about 0.7% of the population).

Reference period: The data refer to last 12 months covering influenza season, e.g. the 2021 data refer to the last 12 months, which cover the last influenza season from October 2021 till March 2022.
Coverage:
- Coverage is complete.
- Data collected annually since 2002.
Note: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Italy

Source of data: **Ministry of Health - General Directorate for Health Prevention**, https://www.salute.gov.it/portale/influenza/dettaglioContenutiInfluenza.jsp?lingua=italiano&id=679&area=influenza&menu=vuoto
https://www.salute.gov.it/portale/documentazione/p6_2_8_3_1.jsp?lingua=italiano&id=19.
Reference period: the data refer to the seasonal period (e.g. the data reported in 2024 correspond to the seasonal period 2023-2024) and to the vaccinations actually carried out.
Coverage:
- The proportion of people aged 65 years old and over who have been immunised against influenza (or "flu") during the seasonal period.
- Data provided by the Ministero della Salute (MoH)/Istituto Superiore di Sanità (NIH), on the basis of information gathered by regions.
Deviation from the definition: None (the data supplied match the definition).
Estimation method: None (data are provided by the regions and correspond to the vaccinations actually carried out).
Break in time series: None (there was no interruption in the time series).

Japan

Source of data: **Ministry of Health, Labour and Welfare**;
Coverage:
- Persons immunised: "Report on Regional Public Health Services and Health Promotion Services".
- Population aged 65 and over: "Vital Statistics of Japan".
- The number of persons immunised against influenza per year, as tabulated in Report on Regional Public Health Services and Health Promotion Services, is divided by the estimated population aged 65 and over as of October 1 of each year, as estimated by Vital Statistics of Japan.

Korea

Source of data:
- From 2007: **Ministry of Health and Welfare**, **Korea Disease Control and Prevention Agency,** National Health and Nutrition Examination Survey microdata.
(In 2020, the Korean Center for Disease Control and Prevention changed to the Korea Disease Control and Prevention Agency.)
- 2005: **Ministry of Health and Welfare**, **Korea Institute for Health and Social Affairs**, Report on the National Health and Nutrition Survey in 2005, 2006.
- 2004: **Korea Institute for Health and Social Affairs**, Survey on the living conditions and welfare needs of the elderly 2004.
Note: The immunisation rate decreased in 2020 because of a reduction in the frequency of visits to medical institutions due to COVID-19 and the occurrence of low influenza.

Latvia

Source of data: **Centre for Disease Prevention and Control**, Statistical Report.
Reference period: 1st January to 31st December.

Lithuania

Source of data: **Centre of Communicable diseases and AIDS**, data of annual reports of health care establishments.
Data on immunisation are collected using annual reports of health care institutions. Reports are collected by Public Health Centres in Counties and summarised in Centre of Communicable diseases and AIDS. Since 2022: Data of National Public Health Centre. Available on Official Statistics Portal of Statistics Lithuania http://osp.stat.gov.lt/en.
Reference period: June 30 year T-1 to July 1 year T.
Coverage: Data include immunisation covered by State budget and paid by the person. In 2008-2009 due to swine and some others flu the vaccination rate have increased but after that dropped again. In 2021 during the first year of COVID-19 pandemic the immunization rate has increased but in 2022 dropped again to the level of 2020.

Luxembourg

Source of data: Fichiers de la sécurité sociale. Data prepared by Inspection générale de la sécurité sociale.
Reference period: calendar year.
Coverage:
- The immunisation programme was launched in 2001.
- The immunisation rate was calculated based on the yearly average number of residents covered by the statutory social health insurance scheme aged 65+ who collected the vaccine from a pharmacy which got reimbursed by the health insurance. It can thus not be concluded that the persons have actually been vaccinated.
- The rate for 2023 is preliminary.
Break in time series: The method for calculating resident population covered by the statutory health insurance scheme in Luxembourg (annual average) has changed in 2005 and then in 2009.

Mexico

Source of data: **Programa de Vacunación (PROVAC), Ministry of Health**.
Reference period:
- The data for each year reported refers to the vaccination period from year t-1 to t. For example, data for 2014 refer to period 2014/2015.
Coverage:
- Data for people aged 60 and over.
- The information refers to the percentage of the population 60 years or older that has been immunized against influenza during the seasonal period.
Note: In 2007, there were changes in the vaccination program (PROVAC) and the number of applied doses against influenza may be under reported. From 2010 onwards, data on immunisation against influenza cover the population over 60 year or more.
From 2010 onwards, the updating of populations by year, sex and age was carried out in Mexico (by the National Population Council CONAPO), which generates an adjustment in the denominator.
In 2022, a reinforcement is carried out in the vaccination strategy towards the target population.
In 2024, an adjustment is made to the calculation of the indicator, which is why the series is adjusted from 2010 onwards.

Netherlands

Source of data:
- 2004 onwards: Sample data from **NIVEL Primary Care Database**, based on data from GPs. Nivel Primary Care Database | Nivel (https://www.nivel.nl/en/nivel-primary-care-database), Monitor Nationaal Programma Griepppreventie (Monitor National Program Influenza Prevention (https://www.rivm.nl/griep-griepprik/feiten-en-cijfers/vaccinatiegraad)).
- 2000-2003: Integrated System of Social Surveys (POLS).
Reference period: 2004 onwards: 1 June to December 31

Coverage:
- 2004 onwards: Only practices with sufficiently registered data on procedures, morbidity and prescriptions have been selected. Furthermore, every practice had to have a good quality of registration, demonstrated by a meaningful ICPC code for at least 70% of the morbidity data (in accordance with the guideline on electronic patient records of the Dutch College of General Practitioners (NHG)).
For the practices included, all persons were selected that for the entire calendar year were registered at the practice, and of which the year of birth at Nivel Primary Care Database was known. Data on procedures (immunisation) and prescribed medication (vaccine against influenza) in the period September 1 to December 31 or January 31 of next year were used for the analysis.
- 2000-2003: Every year, some 90% of all influenza vaccinations take place during the months of October and November. Vaccination rates are calculated from persons interviewed during the year.
Deviation from the definition: persons living in nursing homes are not included, neither in the numerator nor in the denominator.
Break in time series: 2004: change of source.

New Zealand

Source of data (from 2023): Aotearoa Immunisation Register (AIR).

From 2023 figures:
- Numerator: Number people aged 65 years and over on the Aotearoa Immunisation Register (AIR). The time frame for measuring influenza vaccinations is 1 April to 30 September. In New Zealand, the influenza vaccine is available from 1 April to 31 December each year, however, influenza vaccine coverage is reported to 30 September for national measures of performance. The small number of vaccines given after 30 September are not included in the numerator.
- Denominator: Number of people aged 65 years and over on the AAIR.
Break in time series: break in 2023 was due to a change in data source, this affected the counts used for the numerator and denominator.
Source of data (2006-2022): **Sector Services** (formerly HealthPAC) claims and primary health organisation enrolment data. (Note: Sector Services is part of the **Ministry of Health** and provides support services, including health payments, to the health sector).
Coverage:
- The number of individuals aged 65 years or older who have been immunised for influenza in a given year. This is measured as the number of payment claims made for administration of influenza vaccine to a person aged 65 years or older between 1 March and 30 September, divided by the number of people aged 65 years or older who are enrolled with a Primary Health Organization (PHO) in New Zealand.
- Data do not include vaccines given but not claimed.

2013-2022 figures:
- **Numerator**: Number people aged 65 years and over who have had a claim for payment for an influenza vaccine filed on their behalf with Sector Services. The time frame for measuring the influenza vaccinations is 1 March to 30 September. In New Zealand, the influenza vaccine is available from 1 April to 31 December each year. However, influenza vaccine coverage is reported to 30 September for national measures of performance, approximately 99 percent of doses are administered prior to this date.
The very small number of vaccines given after 30 September are not included in the numerator.
As payment claims data is used as the source of information for vaccinations, vaccinations are not included if a claim for payment has not been submitted.
- **Denominator**: Number of PHO enrolled people aged 65 years and over in the Capitation Based Funding (CBF) enrolment register for the quarter ending October 2018.
- Age is evaluated at the beginning of the year.
Note: New Zealand's influenza coverage target for those aged 65 years and over is 75% and in 2020 coverage reached a high of 73% as a key part of New Zealand's response to COVID-19. In 2021 influenza vaccination was complicated by COVID-19 disruptions (including the rollout of the COVID-19 vaccination programme in the same over-65 age group) and coverage dropped back to 69%, which is more in line with coverage seen in recent years. The Ministry is currently assessing a number of initiatives to drive improved coverage for 2022, especially among high-risk and under-protected populations.

2008-2012 figures: The flu season for the PHO performance covers the following period: 1 January to 31 August.
- **Numerator**: Number of PHO enrolled people aged 65 years and over who have had a claim filed on their behalf with Sector Services for a flu vaccine administered between 1 January and 31 August.
- **Denominator**: Number of PHO enrolled people aged 65 years and over in the July to September quarter of the Capitation Based Funding (CBF) enrolment register. This is used to match NHIs with the flu vaccine claims data. Note for 2012 that the coverage calculation was based on April to June 2012 enrolment register.

2007 figures:
- The flu season for the PHO performance covers the following period: 1 January to 30 June 2007.
- **Numerator**: Number of PHO enrolled people aged 65 years old and over who have had a claim filed on their behalf with HealthPAC for a flu vaccine administered between 1 January to 30 June 2007.
- **Denominator**: Number of PHO enrolled people aged 65 years old and over in the April to June quarter of the Capitation Based Funding (CBF) enrolment register. This is used to match NHIs with the flu vaccine claims data.

2006 figures: The percentage of people aged 65 years old and over who have been immunised against influenza (or "flu") during the last 12 months.
- **Numerator**: Number of PHO enrolled people aged 65 years old and over who have had a flu vaccine in the past 12 months, based on HealthPAC claims from October 2005 through to September 2006.
- **Denominator**: Number of people aged 65 years old and over in the October to December quarter of the Capitation Based Funding (CBF) enrolment register. This is used to match NHIs with the flu vaccine claims data.

Source of Data (2002-2005): **DHBNZ**.
Coverage:
- Includes 70 of the 81 PHOs or 426267 people aged 65 years old and over, out of a Census estimate of 495612.
- 2004 and 2005: Immunisation Handbook 2006 (p.10), http://www.moh.govt.nz/moh.nsf/indexmh/immunisation-handbook-2006. 2003: **New Zealand Health Survey 2002/03**.
- 2002 and 2003: National Influenza Strategy group report: 2002 coverage 51% and 2003 coverage 63.15%.
Break in time series: Change in source of data in 2004 with the advent of PHOs and MoH changes to claims processes (to be managed by HealthPac) during 2003. Vaccine coverage was calculated from benefit claims data for those over 65 years old enrolled in a PHO.

Norway

Source of data:
- 2009-2013: **Norwegian Immunisation Registry (SYSVAK), Norwegian Institute of Public Health**. http://www.fhi.no/artikler/?id=90930.
- From 2014: **Survey data from Statistics Norway** (Reise- og ferieundersøkelsen, 3rd quarter 2014; https://www.ssb.no/transport-og-reiseliv/artikler-og-publikasjoner/reise-og-ferieunders%C3%B8kelsen-2014 (Information in Norwegian only).
- 2019-2020: **Norwegian national vaccine registry**.
Coverage:
- 2009-2013: Seasonal influenza vaccinations are registered. Substantial under coverage.
- From 2014: Data from the survey is representative for the population in the age group 65-79 years living in private households. A sample of 2 000 persons aged 16-79 years is drawn every quarter. Interviews are conducted via telephone (CATI). Response rate for the 3rd quarter 2014, which included a module with questions on influenza vaccination and health status/chronic conditions, reached 54 %. The reported percentage is a minimum estimate as people 65-79 years living in institutions and people over 80 years are not covered. Despite this, survey data are considered to be more accurate as an estimate.

Deviation from the definition: Estimate based on survey that cover the age group 65-79 years. Survey data for population 80 years and older is not available.
Break in time series: 2014, 2019.
- Registry data (SYSVAK) on influenza vaccine coverage among persons aged 65 years and over are reported for 2009-2013. From 2014: Survey data.
- Change in data source in 2019

Poland

Source of data: **Statistics Poland**.
Reference period: 2009, 2014, 2019 – European Health Interview Survey.
2020 - 2023 number of vaccinations NIH http://wwwold.pzh.gov.pl/oldpage/epimeld/index_p.html, population: GUS https://demografia.stat.gov.pl/bazademografia/Tables.aspx.
Coverage:
- Persons 65 years old or older who have been immunised against influenza during the last 12 months (between the date of the interview and the vaccination).
- Two questions in the survey: "Have you ever been vaccinated against the flu?" and "If yes, when was the last time?"
Break in time series: Data source changed in 2020.

Portugal

Source of data:
- 2022: National Health Institute Doutor Ricardo Jorge, *Vacinação antigripal da população portuguesa, em 2021-2022: cobertura e algumas características do ato vacinal*
- 2021: National Health Institute Doutor Ricardo Jorge, *Vacinação antigripal da população portuguesa, em 2020-2021: cobertura e algumas características do ato vacinal*
- 2020: National Health Institute Doutor Ricardo Jorge, *Vacinação antigripal da população portuguesa, em 2019-2020: cobertura e algumas características do ato vacinal*
- 2019: National Health Institute Doutor Ricardo Jorge, *Vacinação antigripal da população portuguesa, em 2018-2019: cobertura e características do ato vacinal*
- 2017 and 2018: National Health Institute Doutor Ricardo Jorge, *Vacinação antigripal da população portuguesa nas épocas 2016/2017 e 2017/2018.*
- 2016: National Health Institute Doutor Ricardo Jorge, *Vacinação antigripal da população portuguesa na época 2015/2016: estudo na amostra ECOS.*
- 2015: National Health Institute Doutor Ricardo Jorge, *Relatório Vacinação Antigripal da População Portuguesa – Época 2014/2015.*
- 2014: National Health Institute Doutor Ricardo Jorge, *Vacinação antigripal da população portuguesa na época 2013-2014: estudo na amostra ECOS.*
- 2013: National Health Institute Doutor Ricardo Jorge, *Vacinação antigripal da população portuguesa na época 2012-2013: estudo da amostra ECOS.*
- 2012: National Health Institute Doutor Ricardo Jorge, *Vacinação antigripal da população portuguesa na época 2011-2012: cobertura e características do ato vacinal.*
- 2011: National Health Institute Doutor Ricardo Jorge, *Vacinação antigripal da população portuguesa, em 2010-2011: cobertura e algumas características do acto vacinal.*
- 2010: National Health Institute Doutor Ricardo Jorge, *Vacinação antigripal da população portuguesa, em 2009-2010: cobertura e algumas características do acto vacinal.*
- 2009: National Health Institute Doutor Ricardo Jorge, *Vacinação antigripal da população portuguesa, em 2008-2009: cobertura e algumas características do acto vacinal.*
- 2000-2008: National Health Institute Doutor Ricardo Jorge, *Vacina antigripal: cobertura da população portuguesa entre 1998/1999 a 2007/2008.*
Reference period: Data on immunisation against influenza is collected during the winter months and is assigned to the end of the immunisation period (e.g., data collected between October 2019 and May 2020 is reported as 2020 data).
Coverage: National coverage.

Slovak Republic

Source of data: **Public Health Office** (National Reference Center of Influenza).
Reference period: 31st December.
Coverage: Data covers people aged 59 years and over. (Note that people over 59 years old receive the influenza vaccination free of charge.)
Deviation from the definition: Age group.

Slovenia

Source of data: **National Institute of Public Health, Slovenia**, Communicable Disease Centre (https://nijz.si/nalezljive-bolezni/).
Reference period: Seasonal data monitoring (influenza season).
Coverage:
- National immunisation coverage.
- Data are collected annually.
- Percentage of people aged 65 years old or over who have been immunised against influenza during last influenza season (12 months).
- 2000-2012 data obtained from reports from health care providers on number of people immunised.

Spain

Source of data: **Ministerio de Sanidad** (Ministry of Health). Dirección General de Salud Pública (G.D. for **Public Health)**. Included in the inventory of statistics of the Ministry of Health: https://www.sanidad.gob.es/areas/promocionPrevencion/vacunaciones/coberturas/home.htm.
Reference period: Data reported in year 2024 correspond to winter season2023-2024.
Coverage: Proportion of people aged 65 and over who have been immunised against influenza (or "flu") during the last season, e.g., for 2023-2024:
- Numerator: Number of people vaccinated of the birth cohorts 1910-1958.
- Denominator: Number of people born in 1910-1958 residing in Spain.
Limitations: The regions provide information on vaccination coverage to the Ministry of Health, according to an agreement of the Interterritorial Council of the National Health System. Each region (19) uses its own sources and methods (INE, Padrón Municipal, Tarjeta Sanitaria, Historia clínica, regional registries…).
Note: The final data of Influenza season 2023-2024 were collected throughout 2024. In our vaccination information system, they are published in 2023 data coverage. 17 of 19 regions participated.

Sweden

Source of data: **The Public Health Agency of Sweden** (responsible for compiling and analysing the statistics, based on information from the county medical officers), prior to 2014, **Swedish Institute for Infectious Disease Control** Published yearly in the reports "Influenza in Sweden – Season …" available for download by using the search function at .
The sources of the vaccination coverage have been the same, i.e., the county medical officers, but it is possible that they have changed their assessment methods over the years.
Reference period: Data do not relate to the last 12 months, but to the winter seasons (calendar week 40-20) of the respective year.
Coverage:
- Estimates not available from the counties of Södermanland before 2016 and Uppsala before 2015.
- Both vaccinations given in the public and private sector are included for most regions.
- Vaccination coverage is given for the winter season that spans two calendar years. In accordance with the Regulation (EU) 2022/2294 definition of influenza seasons, we report data for the years 2004-2024 so that vaccinations given during a given season are counted in the year of the season's second half (e.g., vaccinations during 2021-2022 are listed under 2022) which differs from the national season for these statistics.
Estimation method:
- The county medical officers use different methods to estimate vaccination coverage in this age group.

Most of the counties use electronic health record systems to transfer the information. Other methods are surveys directed towards vaccination clinics or individuals recommended vaccination, medical chart statistics or doses distributed.
- During the season 2009-2010 (year 2010) the vaccination coverage was significantly lower compared to previous years due to the simultaneous vaccination campaign against the pandemic flu strain.

Switzerland

Source of data: **Federal Office of Public Health (FOPH)**, Bern, irregular surveys.
Coverage: Data submitted are derived from national estimates based on irregular surveys.
Break in time series: Punctual estimation in 2010, following an immunisation campaign survey from 2000 to 2007.

Türkiye

Source of data: **TURKSTAT**, Türkiye Health Interview Survey 2008, 2010, 2012, 2014, 2016,2019 and 2022.
Reference period:
Coverage: Percentage of people aged 65 and over who have been immunised against influenza (or "flu") during the last 12 months.

United Kingdom

Source of data: Calculated by the **NHS Digital** using data from:
2007 onwards:
- *England*: **Public Health England**.
- *Scotland*: **Health Protection Scotland**.
- *Wales*: **Public Health Wales**.
- *Northern Ireland*: **Public Health Agency**.

Up to 2006:
- *England*: **NHS Information Centre for Health and Social Care**.
- *Wales*: **National Public Health Service**.
- *Scotland*: **Information & Services Division NHS Scotland**.
- *Northern Ireland*: **Northern Ireland Statistics and Research Agency**.

Reference period: Data refer to flu season (e.g. the 2021 data refers to the 2020-21 flu season).
Coverage:
- 2017 onwards England only rate has been used. For England Immunisation data for 2018-19 onwards, the flu season is 1 Sept until 28 (or 29) February.
- 2005-2015: United Kingdom.
- 2004: England data only.
- 2003: United Kingdom.
- 2002: England, Northern Ireland and Scotland data.
- 2001: England, Wales and Northern Ireland data.
- 2000: England data only.
- In *England*, immunisation data for 2018-19 onwards, the flu season is 1 Sept until 28 (or 29) February. For 2000 and 2001, vaccination monitoring forms were returned for the months of October to December for all health authorities. 2001 figure of 68%, however, also includes data returned from 18 health authorities (out of 95) for January 2002, which has slightly raised the uptake percentage compared to the previous year. Without this extra data, the uptake percentage for all health authorities for October-December 2001 was 67.4%. For 2002 and 2003, vaccination monitoring forms were returned for the months of October to December for all Primary Care Trusts. From 2011 it has been noted that England data is provisional at the end of January 2013. Cumulative uptake data for England on flu vaccinations are given from 1 September to 31 January.
- In *Wales*, for 2001/02 and 2002/03, vaccination-monitoring forms were returned for the months of October, November and December for all Health Authorities areas, via GP practices and Immunisation Co-coordinators. Immunisation rates were calculated from the total population of 65+ and the total numbers of

65+ immunised within each Health Authority Area. A total figure for Wales was also calculated following the same method. 2002/2003 data are not reliable because of problems in accurate reporting by GP practices. Therefore, data were not used.
- In *Scotland*, 2003 data for the year ending 31 March 2004.
- 2005 data for financial year 2005/06.
- *Scotland* – 06/07 to 11/12 based on PSD claims for payment data, supplied after March of the vaccinating year.
- From 2007 onwards, the % has been calculated by the number of 65+ immunised against influenza divided by the number of 65+ patients registered.
Break in series: 2003, 2014 and 2019.

United States

Source of data: **Centers for Disease Control and Prevention/National Center for Health Statistics/National Health Interview Survey**, *2018* (and previous years).
- For 2000-2005: https://www.cdc.gov/nchs/nhis/erkeyindicators.htm.
- 2006 to 2018: https://public.tableau.com/profile/nhis#!/vizhome/FIGURE4_2/Dashboard4_2.
Coverage:
- HUS provides influenza estimate based on the National Health Interview Survey (NHIS). NHIS is an ongoing nationwide sample survey in which data are collected through personal household interviews of the non-institutionalised population. Information is obtained on personal and demographic characteristics including race and ethnicity, by self-reporting or as reported by an informant. Information is also obtained on illness, injuries, impairments, chronic conditions, utilization of health resources and other health topics.
- Estimates provided show non-adjusted (crude percent) distributions. Age-adjustment estimates at US 2000 standard population are available at the National Health Interview Survey (NHIS) website.
- The final household response rate for the ongoing portion of the survey (core) has been between 87 and 92 percent over the years, with response rates for other questions (sample adult core) somewhat lower due to a requirement of self-response.
Deviation from the definition: Data match the OECD definitio on adults 65+ who received influenza vaccination in the past 12 months.
Estimation method:
- Nationally representative sample of the U.S. civilian non-institutionalised population.
- The sample design plan of NHIS follows a multistage probability design that permits continuous coverage of the non-institutionalised population residing in the United States.
Break in time series: 2019. In 2019, the NHIS questionnaire was redesigned to better meet the needs of data users. Due to changes in weighting and design methodology, direct comparisons between estimates for 2019 and earlier years should be made with caution. For more information on the data source, methods, and definitions used for this table, refer to Technical Notes for Interactive Summary Health Statistics— 2019: National Health Interview Survey (available from: https://www.cdc.gov/nchs/data/nhis/SHS_Tech_Notes-508.pdf).

NON-OECD ECONOMIES

Bulgaria

Source of data: **National Statistical Institute**, European Health Interview Survey 2008, harmonised questionnaire was used.
Reference period:
November – December 2008.
October – December 2014 – EHIS wave 2.
Coverage: All persons aged 15 and over within the selected non-institutionalised households are surveyed. In accordance with the EHIS methodology people that live in institutionalised households (residencies for students or workers, medical or social institutions, prisons) are excluded from the target population.
Data refer to the persons aged 65 and over.

From 2019
Source of data: **National Centre for Public Health and Analyses at the Ministry of Health.**
Reference period: calendar year.
Coverage: All persons aged 65 and over who are target group in National program to improvement seasonal influenza vaccine prophylaxis 2019 – 2022 and National Program for Improving Vaccination Prevention of Seasonal Influenza and Pneumococcal Infections in Persons Aged 65 and Over 2023 - 2026.

Croatia

Source of data: Croatian Institute of Public Health, Epidemiology Service.
Reference period: Seasonal; influenza season (late fall until spring).
Coverage: Entire population of people 65 and older.
Data about immunisation against influenza is available for immunisation seasons each of which includes two years, therefore percentage for certain year is actually percentage for that season (for example percentage for 2008 is actually percentage for immunisation season 2007/08).
Estimation method:
Number of immunised people aged 65 and over was taken from report on use of flu vaccine according to categories for each season (Number of people aged 65 and over who have been immunised against influenza during the reference period divided by the population aged 65 and over.).

Cyprus

Source of data: European Health Interview Survey 2008, European Health Interview Survey 2014, European Health Interview Survey 2019. For years 2020, 2021 and 2022 the data has been obtained from the Health Insurance Organisation (HIO) and covers all the immunes received through the GHS.
Reference period:
2020 onwards: Data obtained from the GHS.
Coverage: Government Controlled Area of Cyprus.
Deviation from the definition: None as regards the survey data from EHIS. As regards the data obtained from the Health Insurance Organisation, the data refers to the number of immunes provided via the general health system to the beneficiaries of the GHS. However, the number of beneficiaries approaches the number of permanent residents of Cyprus, since in order to be eligible for health care through the GHS a person should be residing permanently to the Government controlled areas of Cyprus.
Estimation method:
EHIS: Total number of people who have been immunised against influenza during the last 12 months as a percentage of the population who answered the question on flu vaccination (people answered by themselves, aged 65+).
GHS: The number of vaccinations performed to beneficiaries aged 65 and over, during the reference year, through the GHS.
Break in time series: From 2020 the data has been obtained from the HIO.

Romania

Source of data: **Ministry of Health - National Center for Surveillance and Control of Communicable Diseases.**
Reference period: data refers to seasonal immunisations not to calendar years. Thus, for example for year T data refers to the (T-1) - T season.
Coverage:
Data cover seasonal immunisations of persons aged 65 years and older from the population group considered to be at risk, immunised against influenza free of charge by Ministry of Health, through the National Health Programme for Immunisation. Not included are data for persons aged 65 years and older immunised against influenza with vaccines purchased individually or from other sources except the Ministry of Health.
- The indicator is calculated relative to usual resident population on July 1st of each year.