*Flu*nomics Report

From vaccination to protection – Understanding the influenza protection gap in older adults



United States

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Second edition | 2026

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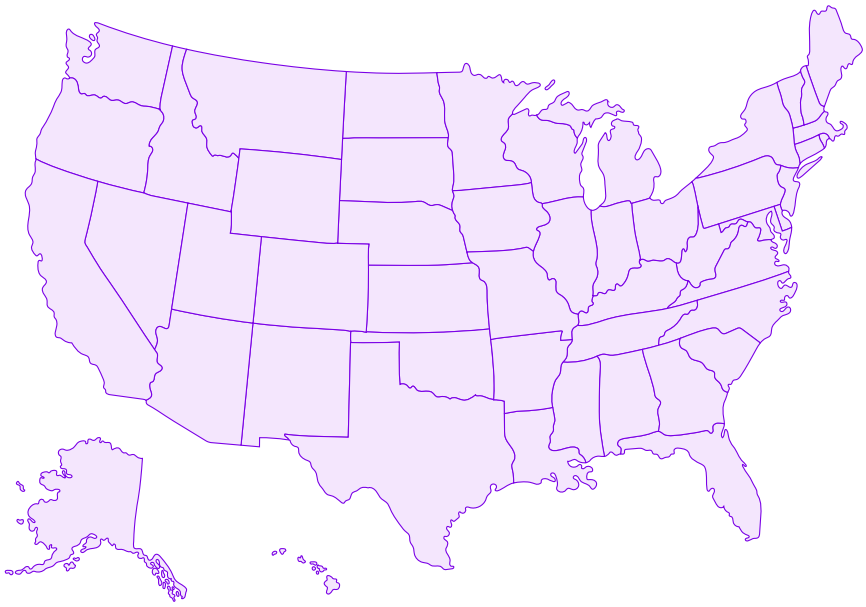
United States

The United States has one of the world's largest and most decentralized healthcare systems, with influenza vaccination recommendations implemented across diverse state and local systems. Recommendations recognize the increased risk faced by adults aged 65+ years through preferential use of age-specific influenza vaccines. Yet vaccination coverage has declined considerably in recent years, leaving a growing gap between policy intent and real-world protection while substantial influenza burden persists.

United States at a glance

Total population (2026): 342.7 million[1]

Adults aged 50+: 125.5 million[2]



Regional landscape

The United States has a **decentralized healthcare system**, in which **national influenza vaccination recommendations are implemented across its 50 states and the District of Columbia**.[3,4] While this creates multiple routes to vaccination, it also means national recommendations must be translated into practice across diverse healthcare settings.

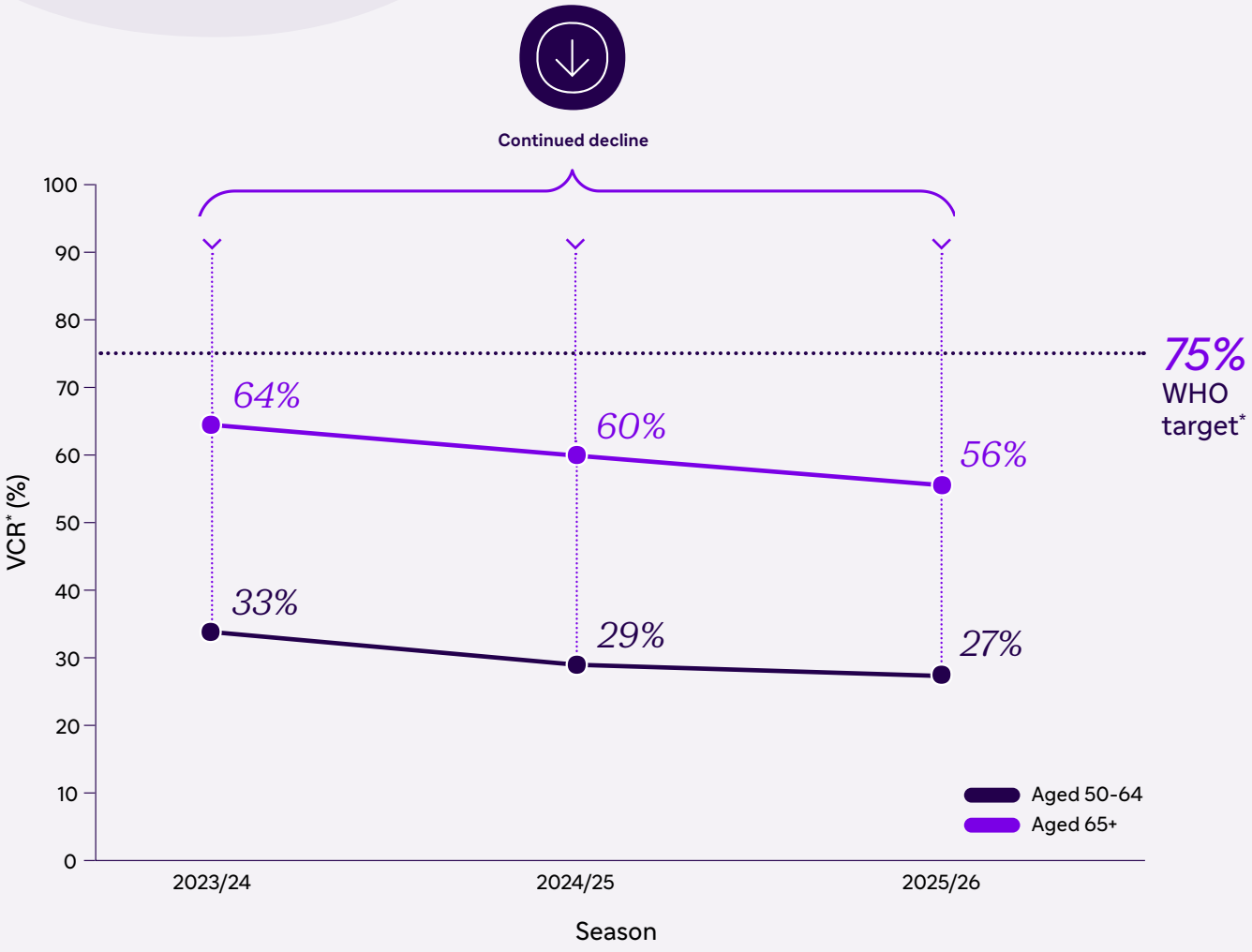
National influenza vaccination recommendations

United States medical societies recommend annual influenza vaccination across adulthood. For adults aged 65+ years, medical organizations including, but not limited to, the American Academy of Family Physicians support preferential use of age-specific influenza vaccines, where available, reflecting the increased risk of severe influenza outcomes with older age.[5,6]

Declining influenza vaccination coverage is leaving more adults unprotected against influenza

Clear vaccination recommendations do not always translate into protection in practice.[7] Influenza vaccination coverage has declined considerably among adults aged 50–64 years, while coverage among adults aged 65+ years remains below the World Health Organization (WHO) target of 75%.[8,9]

Three-year influenza vaccination coverage rate (VCR)[8]



The **decline in vaccination coverage points** to a **widening protection gap** among adults already at increased risk of severe influenza. For adults aged 65+ years, fewer older adults are being reached despite preferential recommendations that recognize their increased age-related risk. Among adults aged 50–64 years, low and declining uptake is particularly important because **substantial influenza risk is already present before age 65**.[10,11]

Data Sources:

Private Market: *IQVIA Retail & Medical Claims from dashboard (IQVIA Claims - Power BI) capturing actualized claims for season-to-date in 2025/26 season (07/01/2025–03/14/2026) IQVIA state claims at Current Procedural Terminology (CPT) code level. IQVIA doesn't capture claims from Kaiser Permanente, long-term care (LTC), Federally Qualified Health Centers (FQHCs), hospitals or physicians not affiliated with the American Medical Association (AMA). Claims capture approximately 100% of retail and 65% of medical claims; medical claims are adjusted by dividing by 0.65 to estimate full market capture.*

Public Market: *Centers for Disease Control and Prevention (CDC), United States Department of Veterans Affairs (VA), and Defense Logistics Agency (DLA) pre-book shipments; due to lack of visibility into public utilization, all public pre-book shipments are assumed to be fully (100%) used for patient administration.*

Base Population: *United States Census 2024 Data.*

Influenza Season Timeline: *July-June.*

** VCR: vaccination coverage rate; WHO: World Health Organization.*

Influenza burden begins before the age of 65

Adults aged 50–64 years: a growing at-risk population

47% have at least one chronic medical condition[11]

Those individuals account for 68% of influenza-related hospitalizations[11]

Influenza vaccination coverage in this age group has declined from 33% to 27% in three years[8*]

Adults aged 65+: a clinically complex population

In a Southern California study, many adults aged 65+ years were living with multiple chronic conditions:[12†]

- **31.8%** have diabetes
- **19.8%** have kidney disease
- **10.3%** have heart disease
- **8.0%** have chronic obstructive pulmonary disease (COPD)/chronic bronchitis/emphysema
- **9.7%** have asthma

Nearly 1 in 2 had a Charlson comorbidity score ≥2‡, indicating a high burden of multimorbidity

These underlying chronic conditions increase the risk of severe influenza outcomes

Adults aged 65+ remain at the greatest risk of severe influenza outcomes, but the chronic disease burden and influenza-related healthcare utilization already seen among adults aged 50–64 show that vulnerability does not begin at age 65.[10-14] **The question is therefore not only whether risk exists before age 65, but whether it is consistently recognized and acted on in practice.**

Together, the evidence shows that influenza risk is shaped both by age and underlying health. Protection therefore needs to account for risk before the age of 65 while continuing to reflect the increased vulnerability of older adults.

** 2025/26 VCR reflects season-to-date data through 14 March 2026.*

† Figures represent the inverse probability of treatment-weighted standard-dose comparator group of vaccinated adults aged 65+ years in the Kaiser Permanente Southern California study (n=69,006), 2022/23, and should not be interpreted as national prevalence estimates.[12]

‡ Charlson comorbidity score: A validated measure of overall disease burden that assigns points based on the presence and severity of chronic medical conditions. Higher scores indicate greater comorbidity and a higher risk of adverse health outcomes.[12]

HCP perspectives

Primary care practice reflects the clinical relevance of influenza risk before age 65

Surveyed healthcare professionals (HCPs) working in primary care report **routinely recommending influenza vaccination** to adults aged 50–64 years, while placing additional emphasis on those at higher risk of complications.



89%

Agree they routinely recommend influenza vaccination to all adults aged 50–64 years they see, regardless of their potential risk of influenza complications*



81%

Agree that they prioritize adults aged 50–64 years at high risk of influenza complications when recommending vaccination*



Key takeaway: HCP perspectives suggest that the importance of influenza prevention before age 65 is already recognized in primary care practice. However, this sits alongside substantially lower VCRs among adults aged 50–64, pointing to a gap between clinical recommendation and vaccination uptake.

What HCPs said

HCP perspectives also point to a **potential disconnect** between clinical assessment of risk and how some adults aged 50–64 perceive their own vulnerability to influenza.†



Pharmacist, United States

"Patients say they have never gotten flu in past so don't see need to protect against it for future. They say they are busy right now and say they will come back when they have more time but then never do. 50-to-64-year-olds do not view themselves as vulnerable, don't feel older yet."

Source: *Ipsos online survey conducted on behalf of Sanofi among HCPs in the United States; fieldwork conducted 28 May–13 July 2026. Results reflect the views and practices of the surveyed sample.*

Base: *Primary care HCPs (n=209: 105 general practitioners (GPs)/family practitioners (FPs), 50 GPs/FPs/internal medicine physicians (IMs) working in health systems or large clinics, and 54 pharmacists).*

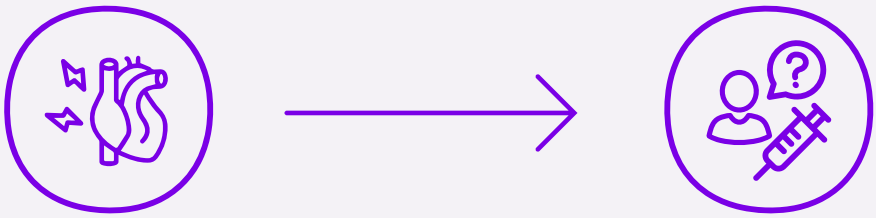
**** Question PA7:*** *Primary care HCPs were asked to what extent they agreed or disagreed with statements concerning influenza prevention and vaccination among adults aged 50+ and how this is managed in their practice/pharmacy. Figures shown represent respondents selecting "strongly agree" or "tend to agree." (other answer options were: "strongly disagree", "tend to disagree", "neither agree nor disagree" and "I don't know").*

† Question PA5: *Primary care HCPs were asked in their own words to summarize the main challenges to optimizing influenza protection among adults aged 50+ seen in their practice/pharmacy. Unprompted open-ended responses were collected with GenAI-supported probing and analyzed using GenAI-assisted thematic analysis of verbatim free-text responses to identify key themes. Themes shown represent mentions from open-ended responses and should not be interpreted as majority consensus. Quote reproduced from an individual primary care professional (PCP) response.*

Underlying conditions increase influenza risk – with cardiovascular disease an important consideration

Among adults aged 50–64, the substantial burden of chronic disease means influenza prevention should also consider the complications associated with specific underlying conditions.[11,13] **Cardiovascular disease** is particularly relevant, as influenza has been associated with an increased risk of serious cardiovascular events.[15] This association is important when considering influenza prevention among at-risk adults aged 50–64.

Influenza prevention may help reduce cardiovascular events



Cardiovascular consequences of influenza infection

Influenza is associated with an **increased risk of serious cardiovascular complications**, particularly among people with pre-existing cardiovascular disease.[15]

Influenza vaccination is associated with reduced cardiovascular risk

A 2026 meta-analysis of 15 observational studies involving more than 23 million individuals found that influenza vaccination was associated with **18% lower odds of myocardial infarction** compared with no vaccination (odds ratio [OR] 0.82; 95% confidence interval [CI] 0.78–0.86).[16]

Similarly, a 2023 systematic review and meta-analysis of five randomized controlled trials involving 9,059 patients with cardiovascular disease found that influenza vaccination was associated with:[17]

30%



Reduction in major cardiovascular events

26%



Reduction in myocardial infarction

33%



Reduction in cardiovascular-related death

The cardiovascular consequences of influenza reinforce its broader clinical impact beyond the respiratory system. This is particularly relevant for adults at increased risk of severe outcomes and may contribute to greater healthcare utilization and wider societal costs.

HCP perspectives

Cardiologists describe how influenza-related cardiovascular complications can disrupt ongoing care and increase pressure on hospital services

Cardiologists described how **influenza-related cardiovascular complications can disrupt** ongoing care, increase demand for urgent consultations and place additional pressure on hospital services.

What HCPs said*



Cardiologist, United States

> *"In my practice this [influenza] translates to more frequent consultations for heart failure exacerbations, arrhythmias and other cardiac complications precipitated by flu infection. Bed availability becomes limited, discharges are delayed, and we spend more time coordinating care with infectious disease and respiratory colleagues. Routine follow-up visits are interrupted by urgent admissions, making it harder to provide continuity of care."*

HCPs also recognize the cardiovascular relevance of influenza prevention, but integration into care pathways should be strengthened

Surveyed primary care HCPs and cardiologists report **strong recognition of the role of influenza vaccination in cardiovascular protection**, while cardiologists also identify an opportunity for greater integration into cardiovascular care pathways.



99% of primary care HCPs and 98% of cardiologists
consider annual seasonal influenza vaccination very or fairly important as a preventive intervention for cardiovascular patients in their healthcare system†



90% of cardiologists
agree that contracting influenza significantly increases the risk of cardiovascular events among adults aged 65+‡



82% of cardiologists
agree that influenza vaccination should be more formally integrated into cardiovascular disease prevention pathways‡



Key takeaway: Recognition of influenza vaccination within cardiovascular prevention is already high, while cardiologists' support for more formal integration points to an opportunity to embed influenza prevention more consistently within cardiovascular care pathways.

Source: *Ipsos online survey conducted on behalf of Sanofi among HCPs in the United States; fieldwork conducted 28 May–13 July 2026. Results reflect the views and experiences of the surveyed sample.*

Base: *Primary care HCPs (n=209: 105 GPs/FPs, 50 GPs/FPs/IMs working in health systems or large clinics, and 54 pharmacists); cardiologists (n=50).*

***Question SB4:** Cardiologists were asked in their own words to summarize the main impact influenza and its complications among adults aged 50+ have on the secondary-care health system, considering firstly overall system-level impact and secondly the impact on their day-to-day practice. Unprompted open-ended responses were analyzed using GenAI-assisted thematic analysis of verbatim free-text responses to identify key themes. Themes shown represent mentions from open-ended responses and should not be interpreted as majority consensus. Quote reproduced from an individual cardiologist response.*

***†Questions PD2/SA7:** Primary care HCPs and cardiologists were asked how important they consider a range of preventive interventions for cardiovascular patients in their healthcare system; figures shown represent respondents selecting "very important" or "fairly important" (other answer options were: "not at all important", "not very important" and "I don't know").*

***‡Question SA5:** Cardiologists were asked to what extent they agreed or disagreed with statements concerning influenza prevention and vaccination among adults aged 50+ and how this is managed in their area; figures shown represent respondents selecting "strongly agree" or "tend to agree" (other answer options were: "strongly disagree", "tend to disagree", "neither agree nor disagree" and "I don't know").*

Adults aged 50–64 years in the United States contribute substantially to the economic burden of influenza

Adults aged 50–64 years **contribute substantially to the economic burden of influenza** in the United States. A systematic review of studies in adults aged 18–64 years found that **indirect costs accounted for up to 88% of reported influenza-related economic burden**.[14] Adults aged 50–64 remain economically active while already experiencing high rates of chronic disease and influenza-related hospitalizations.[13,14,18] In a large retrospective cohort study of adults hospitalized with influenza in the United States, adults aged 50–64 years had higher mean influenza-related hospitalization costs and greater use of mechanical ventilation than adults aged 65+ years, highlighting the substantial healthcare burden associated with severe influenza in this age group.[13]

Many adults aged 50–64 years already experience substantial clinical and economic consequences of influenza before reaching older age.[13,18] **Earlier identification of adults at increased risk may therefore help reduce avoidable healthcare utilization and wider societal costs**.

Healthcare and economic burden due to influenza in adults aged 50-64 years in the United States[18]

Annual burden



3.2 million

Outpatient visits



78 thousand

Hospitalizations



4.4 thousand

Deaths



3.5 billion (US$)

Direct medical costs



6.4 billion (US$)

Total economic burden



2.9 billion (US$)

Work absenteeism costs

Estimates represent modeled annual influenza burden among adults aged 50–64, based on 10 influenza seasons from 2012/13 to 2022/23 (excluding 2020/21), using 2024 US demographics and 2024 US dollars.[18]

The clinical and economic evidence shows that substantial influenza burden is already present among adults at increased risk. Yet recommendations and access alone do not guarantee vaccination in practice. Understanding why these gaps persist requires looking at how existing healthcare encounters are being used.

HCP perspectives

HCPs report that influenza burden translates into pressure across healthcare services*

HCPs describe influenza as a significant source of **seasonal healthcare pressure**, affecting both day-to-day patient demand and hospital capacity.

89%



of primary care HCPs rate influenza as placing a very high or moderately high burden on the healthcare systems each year*

61%



primary care HCPs experience increased patient demand in their clinical setting during influenza season, while 53% report increased hospitalizations or hospital-bed shortages†

68%



of cardiologists report a high or very high impact of influenza complications on hospital resources (beds, equipment, etc.)‡

62%



of cardiologists report a high or very high impact on hospital admissions‡



Key takeaway: The economic burden of influenza is reflected in healthcare delivery as well as monetary costs, with surveyed primary care HCPs reporting increased patient demand and pressure on hospital capacity during influenza season.

What HCPs said

Cardiologists described how **influenza-related pressure** can translate into greater use of emergency, inpatient, and critical care resources.§



Cardiologist, United States

"Flu and its complications place a substantial burden on secondary care through increased emergency visits, hospital admissions, longer lengths of stay, and higher demand for respiratory and critical care services, particularly during peak flu seasons."

Source: *Ipsos online survey conducted on behalf of Sanofi among HCPs in the United States; fieldwork conducted 28 May–13 July 2026. Results reflect the views and practices of the surveyed sample.*

Bases: *Primary care HCPs (n=209: 105 GPs/FPs, 50 GPs/FPs/IMs working in health systems or large clinics, and 54 pharmacists); cardiologists (n=50).*

***Question PC1a:** Primary care HCPs were asked to think about winter pressures caused by viral respiratory infections and to characterize the extent of burden influenza places on healthcare systems each year; the figure shown represents respondents selecting "very high" or "moderately high" burden (other answer options were: "not very high", "no burden" and "I don't know").*

***†Question PC2:** Primary care HCPs were asked which signs of system strain they typically experience in their practice during influenza season; respondents could select multiple responses from a list of potential response options. The figures shown were not necessarily the most frequently selected answer options by surveyed HCPs.*

***‡Question SB5:** Cardiologists were asked to what extent different aspects of secondary care are impacted by influenza season and the potential for influenza complications in older adults; figures shown represent respondents selecting "very high" or "high" impact" (other answer options were: "no impact", "very low impact", "low impact", "moderate impact", and "I don't know). The figures shown were not necessarily the most frequently selected answer options by surveyed HCPs.*

***§Question SB4:** Cardiologists were asked in their own words to summarize the main impact influenza and its complications among adults aged 50+ have on the secondary-care health system, considering firstly overall system-level impact and secondly the impact on their day-to-day practice. Unprompted open-ended responses were analyzed using GenAI-assisted thematic analysis of verbatim free-text responses to identify key themes. Themes shown represent mentions from open-ended responses and should not be interpreted as majority consensus. Quote reproduced from an individual cardiologist response.*

Turning healthcare encounters into vaccination opportunities: how state policy can support implementation

Many adults who remain unvaccinated are already interacting with the healthcare system, **creating opportunities to strengthen influenza prevention**. During the 2018/19 influenza season, among **Medicare beneficiaries** who had at least one healthcare encounter during influenza season, missed opportunities for influenza vaccination were reported.[19] Among adults aged 50+, missed vaccination opportunities were most common in those aged 50–64 years.[19]

Missed vaccination opportunities remain across age groups[19]

Among Medicare beneficiaries who had at least one healthcare encounter during the 2018/19 influenza season, many remained unvaccinated despite being in contact with the healthcare system.*



50–64 years

60.2%

experience a missed vaccination opportunity





65–74 years

44.9%

experience a missed vaccination opportunity





75+ years

36.6%

experience a missed vaccination opportunity



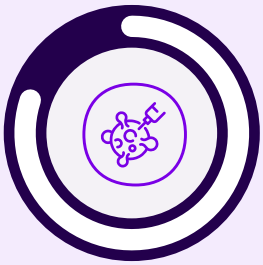
** Missed vaccination opportunity: individuals who had at least one healthcare encounter during the influenza season but did not receive an influenza vaccine.*

HCP perspectives

Cardiologists see healthcare encounters as opportunities to embed influenza vaccination into routine care

Surveyed cardiologists identify practical ways to make vaccination a **more consistent part of secondary-care encounters**, including opportunistic vaccination, coordination with primary care and vaccination before discharge.

80%



of cardiologists say opportunistic vaccination of high-risk patients, including in acute settings or prior to discharge, could have a high or very high impact on reinforcing influenza prevention*

74%



of cardiologists report general collaboration with primary care colleagues to encourage vaccination uptake†

52%



of cardiologists recommend influenza vaccination through patient discharge letters*†

60%



of cardiologists identify implementing protocols to ensure that all older adults are vaccinated prior to discharge as a strategy they believe could improve outcomes for high-risk adults aged 50+‡



Key takeaway: The missed opportunities identified in the wider evidence are reflected in HCP perspectives: surveyed cardiologists identify opportunistic vaccination, discharge processes and coordination with primary care as practical ways to make healthcare encounters more consistently actionable.

Source: *Ipsos online survey conducted on behalf of Sanofi among HCPs in the United States; fieldwork conducted 28 May–13 July 2026. Results reflect the views and practices of the surveyed sample.*

Base: *Cardiologists (n=50).*

****Question SD2:*** *Cardiologists were asked how impactful possible secondary-care or hospital specialists actions are or could be in reinforcing influenza prevention among adults aged 50+; the figure shown represents respondents selecting "very high" or "high" impact (other answer options were: "no impact", "low impact", "moderate impact" and "I don't know").*

†Question SA4b: *Cardiologists were asked how they or their team influence influenza vaccination for adults aged 50+ once patients are in a primary care setting; respondents could select multiple responses from a list of potential response options. The figures shown were not necessarily the most frequently selected answer options by surveyed HCPs.*

‡Question SB6: *Cardiologists were asked which strategies to reduce severe flu-related complications and hospitalizations in the future would be most likely to improve outcomes for high-risk adults aged 50+; respondents could select multiple initiatives. The figures shown were not necessarily the most frequently selected answer options by surveyed HCPs.*

What HCPs said

Cardiologists have also highlighted the role that **systematic identification and prompts** can play in translating vaccination recommendations into routine practice.*



Cardiologist, United States

> *"Ensuring all eligible patients are identified in the EMR [electronic medical record] and providers prompted when seeing for an encounter."*

Source: *Ipsos online survey conducted on behalf of Sanofi among HCPs in the United States; fieldwork conducted 28 May–13 July 2026. Results reflect the views and practices of the surveyed sample.*

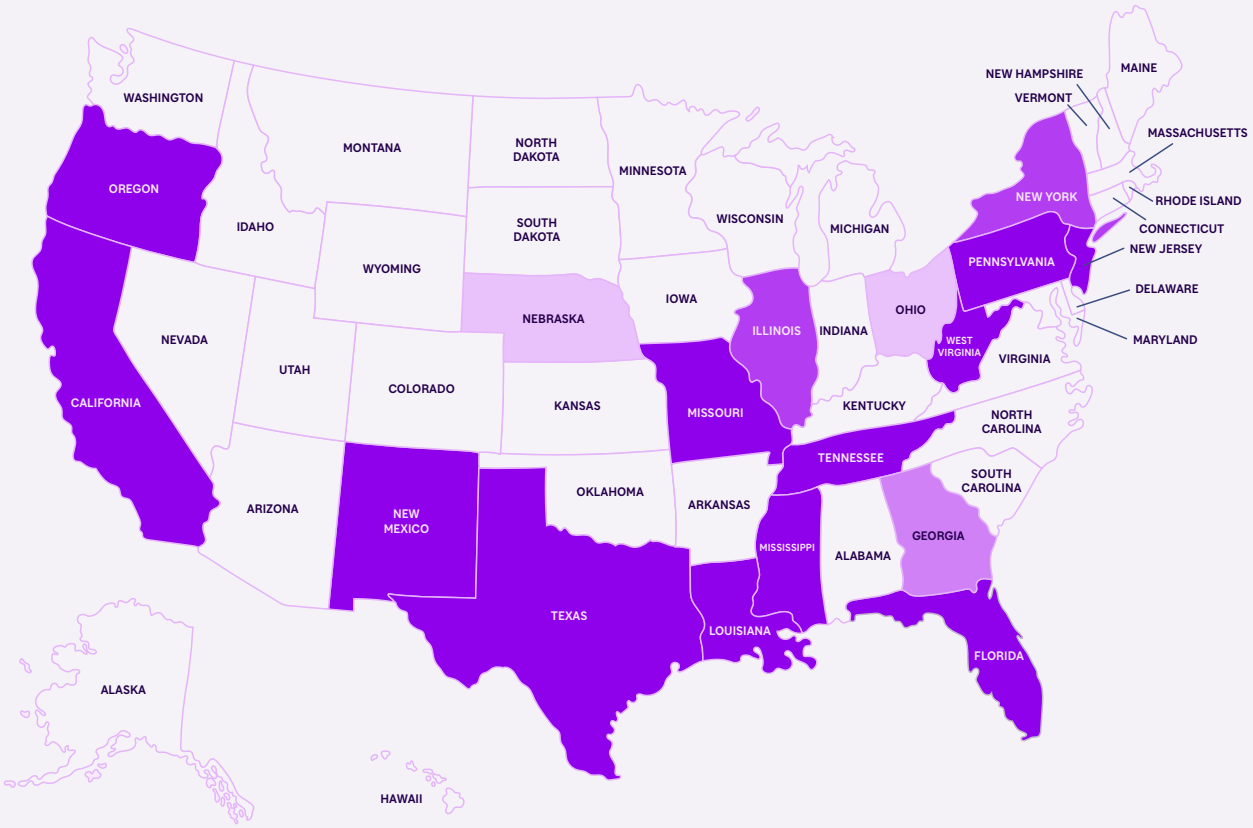
Base: *Cardiologists (n=50).*

**** Question SC3:*** *Cardiologists were asked in their own words how well the practical implementation of influenza prevention guidelines for older adults has translated into practice in recent years. Unprompted open-ended responses were collected with GenAI-supported probing and analyzed using GenAI-assisted thematic analysis of verbatim free-text responses to identify key themes. Themes shown represent mentions from open-ended responses and should not be interpreted as majority consensus. Quote reproduced from an individual cardiologist response.*

State requirements for influenza vaccination offering prior to hospital discharge vary across the United States

States use different policy approaches to make hospital encounters opportunities for influenza vaccination. Requirements to offer influenza vaccination prior to hospital discharge during influenza season vary across states, including in the age groups covered, while many states have no mandatory requirement.[20]

Mandatory requirement to offer influenza vaccination to patients aged 65+[20*]



** Based on review of current legislation as of January 2026.*

State policy can formalize the hospital encounter as a vaccination opportunity



New York provides one example of how this approach is translated into a specific hospital requirement.[21] **During influenza season**, general hospitals must offer influenza vaccination to admitted adults aged 50+, unless they have already been vaccinated or vaccination is inappropriate.[21] The **law also requires hospitals** to establish processes to identify eligible patients, offer influenza vaccination on admission or discharge, assess contraindications, and document vaccination or refusal.[21]

Turning policy into practice requires vaccination to be embedded into hospital workflows

Legislation can establish the opportunity to vaccinate, but **healthcare systems and HCPs still need to operationalize it consistently**.



In a United States quality-improvement project across **24 emergency departments**, introduction of a nurse-driven electronic order set alongside staff education was associated with an increase in influenza vaccinations administered from nine during the 2019/20 season to 2,002 during the 2020/21 season.[23]



A **separate United States emergency department program** highlights the importance of systematically identifying eligible patients.[23] Of 20,878 emergency department visits, only 17.1% included screening to determine whether patients could receive an influenza vaccine.[23] However, among patients who were screened and identified as eligible, 43.7% received influenza vaccination.[23]

This suggests that **making influenza vaccination available is only one part of implementation**; eligible patients also need to be consistently identified and offered vaccination during the encounter.

HCP perspectives

Even where vaccination opportunities are recognized, practical constraints can make it harder to act on them consistently

HCPs also identified **practical barriers that can limit** how consistently influenza-prevention guidelines are implemented in routine care, including patient hesitancy, misinformation, staffing and access constraints.

What HCPs said*



IDN/Health System PCP, United States

"Vaccine hesitancy, misinformation, delayed presentation for vaccination, and occasional staffing or access constraints can limit guideline implementation and vaccination coverage."

The potential consequences of missed encounters are also reflected in a 2023 retrospective study conducted in the United States.[24]

Among 1,963 patients with influenza-positive encounters:



21.3%

(n=418) had a prior missed vaccination opportunity during an emergency department visit.[24]

Among these 418 patients...



14.4%

(n=60) had subsequent influenza-related healthcare encounters.[24]

These results highlight the **potential opportunity cost when vaccination is missed during an earlier healthcare encounter**.

The evidence suggests that hospital encounters can provide **structured opportunities for influenza vaccination**, but their impact depends on systematic identification and implementation within routine workflows. Comparable evidence on how consistently states' pre-discharge requirements are implemented, and whether they increase vaccination uptake, remains limited, creating an **important gap in assessing the impact of state policy in practice**.

Source: *Ipsos online survey conducted on behalf of Sanofi among HCPs in the United States; fieldwork conducted 28 May–13 July 2026. Results reflect the views and experiences of the surveyed sample.*

Base: *Primary care HCPs working in health systems or large clinics (n=50).*

****Question PB3:*** *Respondents were asked in their own words to describe what works well and what does not in the practical implementation of influenza-prevention guidelines for older adults. Unprompted open-ended responses were analyzed using GenAI-assisted thematic analysis of verbatim free-text responses to identify key themes. Themes shown represent mentions from open-ended responses and should not be interpreted as majority consensus. Quote reproduced from an individual health-system HCP response.*

Closing the gap between risk and protection

Closing the gap between influenza risk and protection will **require action across three areas**: improving vaccination coverage among adults at increased risk, strengthening prevention before age 65, and supporting effective implementation of vaccination recommendations at state level.

1 Improve influenza vaccination coverage among adults at increased risk



Challenge

Influenza vaccination coverage among adults aged 50+ years continues to decline despite established influenza vaccination recommendations. This leaves **substantial scope to improve uptake among adults** at increased risk of severe influenza outcomes.

Opportunity

Strengthen vaccination uptake among adults at increased risk by ensuring they are **consistently identified, engaged, and offered** the recommended influenza vaccination across routine healthcare settings.

How this could be achieved

- **Reinforce vaccination discussions** during routine primary care, pharmacy, and chronic disease management encounters.
- **Use reminder and identification systems** to consistently identify eligible adults and support timely vaccination.

2 Strengthen influenza prevention before age 65



Challenge

Adults aged 50–64 years already experience a substantial burden of chronic disease, influenza-related hospitalization, cardiovascular complications and healthcare utilization, yet vaccination coverage remains considerably lower than among adults aged 65+ years. **Influenza prevention** therefore needs to **account for both increasing age** and **underlying health conditions**.

Opportunity

Earlier identification of adults at increased risk of severe influenza could support more informed vaccination discussions before severe complications occur.

How this could be achieved

- **Incorporate underlying medical conditions and wider influenza-related complications**, including cardiovascular risk, into routine vaccination discussions.
- Integrate influenza prevention **more consistently into chronic disease and cardiovascular care pathways** for both patients and HCPs.

3 Reduce missed vaccination opportunities across healthcare settings



Challenge

Many adults who remain unvaccinated are already interacting with the healthcare system. **Missed vaccination opportunities remain common** among adults aged 50+ years, with particularly high levels reported among those aged 50–64 years.

Opportunity

Make better use of existing healthcare encounters by embedding influenza vaccination more systematically into routine care and transitions between care settings.

How this could be achieved

- **Incorporate vaccination screening and offering** into hospital admission, discharge, and emergency department workflows, where appropriate.
- **Support HCPs** with standing orders, electronic prompts, and other workflow tools that facilitate identification and vaccination of eligible patients.

Methodology

Flunomics brings together **publicly available epidemiological**, **vaccination**, **economic and policy evidence** to examine **how influenza affects older adults** across **nine countries**:



Together, these data provide a broader understanding of how influenza burden, protection, and health system performance interact in aging populations.

The report incorporates **the most recent evidence available for each country at the time of analysis**, including data from the **2025/26 influenza season where published**. Where newer surveillance data were not yet available, the latest validated national datasets and longer-term trends were used to provide context. As reporting schedules differ between countries, the reference period varies by market.

The evidence framework

Flunomics examines five interconnected dimensions of protection:

Dimension	Focus
Epidemiological impact	Influenza burden, including cases, hospitalizations, ICU admissions and mortality, with a focus on older adults.
Vaccination coverage	Influenza vaccination coverage trends among older adults, including the most recent publicly available national estimates.
Economic impact	Published evidence describing the direct and indirect costs of influenza to individuals, health systems and society.
Policy & system impact	How vaccination recommendations are implemented in practice, including delivery, access, surveillance and system performance.
Opportunity	Evidence-informed opportunities to strengthen protection for older adults based on observed burden and implementation gaps.

Country approach

Each country chapter follows a consistent analytical framework comprising five sections:

1. **Epidemiological impact**
2. **Vaccination coverage**
3. **Economic impact**
4. **Policy & system impact**
5. **What needs to change**

Recognizing that **health systems are organized differently across countries**, policy and system analyzes are undertaken either at national level or through selected regional case studies, depending on how influenza vaccination programs are delivered. This approach allows the report to assess how policy translates into real-world protection while respecting **differences in governance**, **implementation and data availability**.

Interpreting the findings

Flunomics is intended to **support informed discussion rather than direct comparison between countries**. Surveillance systems, case definitions, reporting practices, age thresholds and data availability differ substantially across markets. As a result, vaccination coverage is the only indicator presented comparatively across all countries; all other findings are interpreted within their national context.

Where evidence gaps exist – particularly in age-specific hospitalization, mortality or economic data – they are explicitly identified throughout the report. These **gaps are treated as important findings**, highlighting **opportunities to strengthen surveillance**, **improve visibility of influenza burden and better inform future policy and implementation**.

Dr Marco Del Riccio contributed the foreword and provided scientific advice on the identification, interpretation, and presentation of evidence included in this report.

Survey research element

To support the findings of this report and further explore the burden of influenza in each of the countries covered by this report, **Sanofi sponsored an independent survey of frontline HCPs** to understand real-world perspectives on optimizing influenza protection among older adults, the extent and challenges of annual flu burden, and how well existing guidelines translate into successful implementation.

Ipsos, a market research agency based in the UK, conducted the research on behalf of Sanofi. The following table summarizes the key aspects of survey design.

Survey parameters	
Data collection:	Computer-Assisted Web Interviewing (CAWI). A semi-structured questionnaire designed to collect both quantitative metrics (closed list, option select, rating scale, numeric responses) and qualitative feedback (open-ended free-text response), rendered for online self-completion by respondent. All respondents were self-selecting, all data shown is therefore based on those healthcare professionals who chose to take part in the survey
Sample type:	Non-probability, unstratified, therefore not designed to be statistically representative of the respective HCP universes in each country. Instead, specific minimum numerical targets for subgroups (region, years in practice, practice type) were applied to ensure a good level of sample diversity and geographical coverage
Sample source:	Online panels of relevant HCPs who have opted-in to receive invitations to participate in market research surveys
Sample size:	n=1353 across 8 countries and 5 HCP classifications (countries/HCP types per table below)
Sample quotas:	Applied to country and HCP type within country (see quota table below)
Data analysis:	• Responses aggregated into simple descriptive statistics (e.g. percentage of sample selecting response option/range of response or mean score for numeric responses) • Open-ended/free-text questions were analyzed by generative AI and organized into response themes (percentage of sample where all or part of response attributed to derived theme) • No weighting or calibration applied to dataset
Eligibility and screening criteria:	• Must have spent between 3-40 years working within current role • Must spend 70% of professional time in clinical setting (seeing patients/customers) • GPs/FPs/Nurses working in clinic/office-based practices; Pharmacists working in retail pharmacies (single location or with multiple branches under same ownership); Specialists working in clinic/medical centers or in hospital settings; Cardiologists must not be working in specialized fields only • Minimum 150 (primary care HCPs) and 100 patients (secondary care HCPs) seen in a typical month and at least 20% within defined older age category • No pharmaceutical company work as consultant or researcher
Fieldwork dates:	28th May to 13th July 2026 inclusive

Survey sample size by country and HCP type									
HCP type*	England	France	Germany	Italy	Spain	Portugal	Canada	USA	Total
Primary care									
GP/FP*	100	101	100	101	54	50	51	155†	**712**
Retail Pharmacist	-	50	51	-	-	-	31	54	**186**
Nurse	-	-	-	-	51	-	-	-	**51**
Secondary care									
Pulmonologist	50	50	-	-	-	-	-	-	**100**
Cardiologist	-	50	50	-	53	50	51	50	**304**
Total	**150**	**251**	**201**	**101**	**158**	**100**	**133**	**259**	**1353**

** HCP = healthcare professional; GP = general practitioner; FP = family practitioner.*

† 50 working in health systems/large clinics and included internal medicine working in primary care.

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MAT-US-2610158-v1.0-09/2026