Flu season 2025-2026

Incidence estimation



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Why incidence?

- During flu season, the focus is on how many new cases of influenza occur week by week.
- The goal is to monitor the trend and active spread of the infection in the population.
- Epidemiological reports refer to the "weekly incidence of flu cases", often expressed as cases per 1,000 or 100,000 inhabitants.

Why not prevalence?

- Prevalence would include people who had the flu in previous weeks and have already recovered.
- But influenza is a short-term, acute illness, so prevalence is not very useful to describe the current situation or monitor a seasonal epidemic.

During flu season, we talk about incidence, because we want to know how many new cases are occurring and how the outbreak is evolving over time.

Where everything begins:

AUSTRALIA

Incidence

+63% Vs 2024

+13% of cases per week

Peak in July-August 2025

28.9% vaccination coverage

National situation:

- There were 70.334 laboratory-confirmed flu cases reported in Australia from 1 January 2025 to 30 April 2025 – a 63% increase compared with same period of 2024 (44,312 cases). In April, the number of cases closely approached the levels observed in 2019. [1]
- There were 247.690 flu cases in Australia from January to July 2025 [2]
- Between May and June, influenza cases in Australia increased by 44%, marking the official start of the 2025 flu season. [2]
- The number of hospital beds occupied by flu patients in Queensland rose from 112 to 129 per day during the week of June 23–29, indicating a growing trend in hospitalizations. [3]
- The peak of influenza cases in Australia in 2025 was observed between the second half of July and early August, with regional variations. We can assume that the peak was passed because we saw a decrease of 65% from July to August (from 91.929 to 59.838).
- National vaccination coverage remains low: 28.9% of the population is vaccinated, with only 13.7% of children aged 5 to 14 immunized. Free vaccination campaigns have been launched in Queensland and Western Australia, but the vaccination coverage remains lower than 2024 (32%) and 2023 (35%). [4]
- Indicators confirming the July-August peak include:
  - Weekly confirmed case increases exceeding 30% in recent weeks before July.
  - Influenza test positivity rising to 9–11% in Victoria and Queensland
  - A doubling of influenza-related hospitalizations in many areas between late June and early July.
  - An increase in test positivity rates in sentinel surveillance systems (GP and Flutracking)
  - A decrease of flu cases from July to August confirm the peak should be passed, but the number of cases are decreasing differently between regions (e.g. South Australia, Queensland & New South Wales) [5]

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1. https://www.immunisationcoalition.org.au/wp-content/uploads/2025/08/MAIN-Aust-Flu-Stats-worksheet-2025.xlsx-29.pdf
2. MAIN-Aust Flu Stats-worksheet-2025.xlsx
3. Couriermail.com.au | Subscribe to The Courier Mail for exclusive stories
4. https://www.abc.net.au/news/2025-07-18/covid-flu-rsv-health-data/105543560?utm_source=chatgpt.com
5. https://www.news.com.au/lifestyle/health/queensland-deputy-premier-satisfied-with-low-flu-vaccination-rates-as-cases-soar/news-story/c2deea1600da094979cac73088b53047?utm_source=chatgpt.com

Where everything begins:

AUSTRALIA

Epidemiology

Influenza A, B, Covid-19 & RSV

New H5N1 and H7N8

M. Pneumoniae & B. Pertussis

hMPV & rhinovirus

National situation:

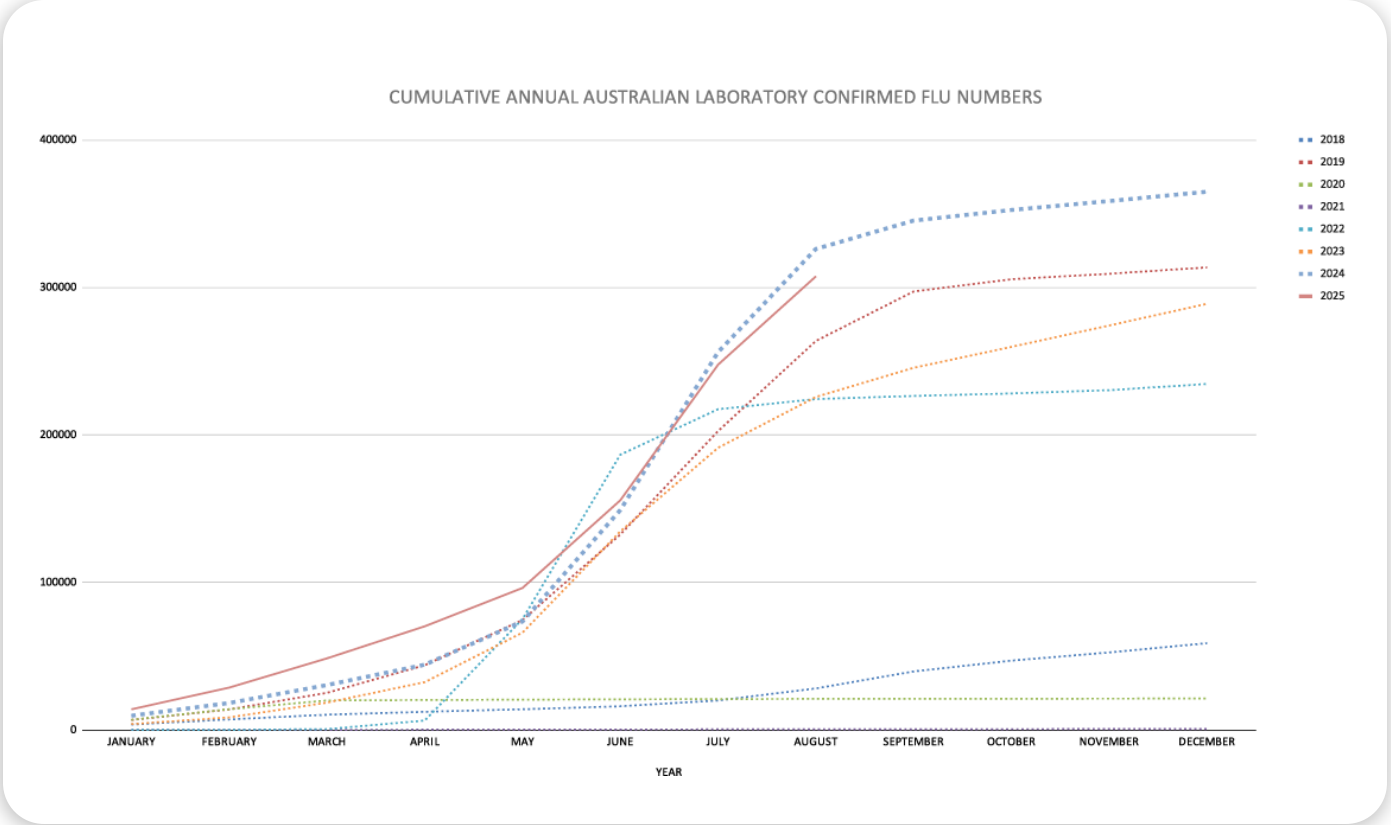
- Influenza A is predominant (~74%), followed by ~21% influenza B; circulation of subtypes (H1N1, H3N2) has already been detected.
- COVID-19 (subvariant NB.1.8.1), RSV, and influenza are circulating simultaneously.
  In Queensland, about half of flu-related hospitalizations involve people over 65 years old, and more than 90% of them were unvaccinated. The new SARS-CoV-2 subvariant NB.1.8.1 is gaining ground in temperate regions (NSW, WA, QLD), but it does not appear to cause more severe disease. [1, 2, 3]
- RSV levels remain stable, with around 880 weekly cases reported in QLD. [4]
- Avian H5N1 has been identified in a small number of human cases (travel-related), but there is currently no evidence of human-to-human transmission. [5]
- An H7N8 outbreak was reported in poultry in Victoria, with no clinical impact on humans so far. [6]
- Mycoplasma pneumoniae and Bordetella pertussis are showing signs of resurgence, with paediatric hospitalizations noted in QLD and reports of antibiotic shortages for pneumonia treatment.
- Seasonal circulation of hMPV (human metapneumovirus) and rhinovirus is also being reported, both common in respiratory infections, though without exceptional peaks. [7]

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1. Covid variant NB. 1.8.1 gaining ground in NSW, VIC and WA | news.com.au — Australia's leading news site for latest headlines
2. Queensland respiratory infection update | Queensland Health
3. NSW respiratory surveillance
4. Couriermail.com.au | Subscribe to The Courier Mail for exclusive stories
5. Health expert warns Australians to prepare for a triple virus surge this winter | news.com.au — Australia's leading news site for latest headlines
6. Australia: Victoria Reports A New Outbreak of HPAI (H7N8) : r/ContagionCuriosity
7. Trends of acute respiratory infection, including human metapneumovirus, in the Northern Hemisphere

Key points:

Aspect	Situation
Onset	Rapid: a significant increase wasobserved already between May and early June
Historical comparison	Levels are higher than previous years
Most affected groups	Infections among children (0–9 years) are particularly intense; Hospitalizations mainly among the elderly
Vaccinations	Low coverage in many areas; many infections and hospitalizations could be prevented – less than 28.9% overall
Healthcare system	Hospitalizations are increasing, putting pressure on wards across several states



LINKS TO MONITOR:

1. 2025 Australian flu season: Who should get a flu shot, which vaccines are available and what to expect in the days following your vaccination | AusVaxSafety
2. MAIN-Aust Flu Stats-worksheet-2025.xlsx
3. Australian Respiratory Surveillance Report – 14 July to 27 July 2025 | Australian Government Department of Health, Disability and Ageing

What's next?

EMEA

Incidence

Start: October - November

Expected peak: late December - January

End: March - April

150 – 215 million cases of ILI

EMEA overall situation:

- **Based on the progression of the 2025 flu season in Australia** — which, as every year, can serve as an early indicator for the Northern Hemisphere — we can reliably estimate what to expect in Europe during the 2025–2026 autumn-winter season.
- Here's a realistic forecast, based on current data and post-pandemic trends:
  - **Expected period of highest incidence in Europe:**
    - Start of flu activity: between late **October** and **mid-November** 2025
    - Expected peak: late **December** 2025 – **January** 2026
    - End of the season: through **March–April** 2026, with possible residual circulation into May (as seen in 2023 and 2024)

This projection is based on the fact that the peak in Australia is occurring earlier than usual (June–July), which often corresponds to an early and intense season in Europe as well.

- **Estimated Number of Cases in EMEA: 150 - 215 million**
  The estimated number is based on the historical correlation between Australian and European flu seasons, and taking into account:
  - the current **record-high intensity** in Australia (+58.6% compared to 2024),
  - the incidence of the **previous years** (20-30% of the population)
  - **lower post-COVID vaccination coverage** in many European population groups;
  - the return to pre-pandemic levels of **mobility and international travel**

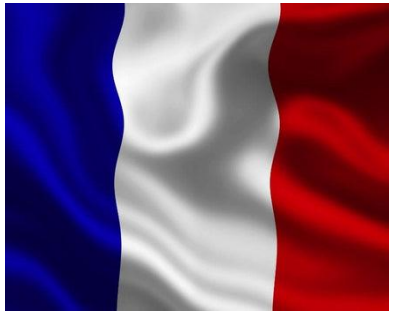
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EMEA – main countries deep dive:

Total numbers in EMEA: 125 - 215 million (including Middle Est & North Africa)



- **Estimated flu cases:** 12 – 18 million (20-30% of the population)
- **Expected peak:** Late December – Late January
- **Vaccination coverage (65+):** 57–60%
- **Testing patterns:** Increasing in emergency settings and nursing homes post-COVID. Monitoring from RespiVirNet [1]



- **Estimated flu cases:** 14– 20 million (20-30% of the population)
- **Expected peak:** January (occasionally February)
- **Vaccination coverage (65+):** 53–55%, lower in younger adults
- **Sentinelles + SOS Médecins:** robust symptom surveillance [2]



- **Estimated flu cases:** 17 – 20 million (20-30% of the population)
- **Expected peak:** January – mid-February
- **Vaccination coverage (65+):** 39–42%
- **Strong Robert-Koch Institute surveillance**, extensive PCR testing infrastructure [3]



- **Estimated flu cases:** 10 – 15 million (20-30% of the population)
- **Expected peak:** Late December – Late January
- **Vaccination coverage (65+):** 60–65%
- **Testing more frequent in Emergency Rooms, less in primary care**

EST EUROPE

- **Total estimated cases (region-wide):** 22 – 35 million (15-25% of the population)
- **Expected peak:** January – March
- **Vaccination coverage (65+):** 10–25%, depending on country)
- **Surveillance less robust**, but improving post-COVID

1. RespiVirNet - Sistema di Sorveglianza Integrata (epidemiologica e virologica)
2. French GPs Sentinelles network > France > Home
3. RKI - Unit 17: Influenza viruses and other respiratory tract viruses

Key points:



1. **Intense and Early season expected:**
    - The season is anticipated to start between late October and mid-November 2025, with the peak expected between December and January in Western Europe, and in February in Eastern Europe.
    - Australia's flu season showed a 63% increase in cases compared to the same period in 2024, suggesting a similar trend may unfold in EMEA.
2. **Estimated Cases: 125 – 215 Million ILI:**
    - Italy: 12–18 million cases
    - France: 14–20 million
    - Germany: 17–25 million
    - Spain: 10–14 million
    - Eastern Europe: 22–38 million
    - Other EMEA countries (Middle East, North Africa): 50–100 million
3. **Vaccination coverage still low among those aged 65+:**
    - Italy: 57-60%
    - France: 53-55%
    - Germany: 39-42%
    - Eastern Europe: 10-25%
4. **Coinfections & emerging pathogens to monitor:**
    - Covid-19, RSV, SARS-Covid, Mycoplasma Pneumoniae, hMPV & Bordetella Pertussis
    - In Australia, 50% of hospitalized flu patients are over 65, with 90% unvaccinated.
    - Ongoing surveillance of H5N1 and H7N8, though no current evidence of human-to-human transmission.

GUIDELINES


World Health
Organization


ecdc
EUROPEAN CENTRE FOR
DISEASE PREVENTION
AND CONTROL


CDC

GUIDELINES for respiratory infections:

World Health Organization

- Global Influenza Programme:

1. COLLECTION OF CLINICAL SPECIMENS

- For collection, storage and transport, appropriate biosafety recommendations must always be followed.
- Collection of specimens must be done using flocked nylon swabs and placed immediately in viral transport medium.
  - (cotton-tipped, calcium alginate or wooden stick swabs should not be used as they may contain substances that inactivate viruses and inhibit PCR testing)
- In severe hospitalized cases, lower respiratory specimens may also be collected where indicated. These include tracheal aspirate and bronchoalveolar lavage.
- Completed RSV specimen and data forms must be placed in a separate pouch (envelope) and sent to the laboratory along with the specimen.
- Specimens should ideally be collected within three days of the onset of clinical symptoms.

- Collection of specimens must be done using **flocked nylon swabs** and placed immediately in **viral transport medium.**
  - (cotton-tipped, calcium alginate or wooden stick swabs should not be used as they may contain substances that inactivate viruses and inhibit PCR testing)

GUIDELINES for respiratory infections:

- Operational considerations for respiratory virus surveillance in Europe

Laboratory considerations (pag. 15/37)

- Nasopharyngeal swabs or combined nasopharyngeal and throat (oropharyngeal) swabs are considered appropriate specimens both for influenza virus and SARS-CoV-2 molecular detection; other suitable respiratory specimens are listed in the WHO guidance document [9].
- Specimens collected should be stored in non-inactivating viral transport medium (VTM) or dry swabs if VTM is unavailable to facilitate the sharing of specimens for subsequent virus isolation.



GUIDELINES for respiratory infections:

- *Testing and diagnosis of avian influenza guidelines*

Respiratory	Adenovirus, coronavirus, hantavirus, CMV, HSV, influenza virus, parainfluenza virus, metapneumovirus, measles virus, rhinovirus, RSV, VZV	Nasopharyngeal aspirates (NPA) are specimens of choice from children, NPA or nasopharyngeal swabs collected from adults; bronchoalveolar lavage for the diagnosis of lower respiratory tract infections. Swabs are transported in VTM.

- *Influenza Specimens Collection guidelines*

	Nasopharyngeal Swab	Nasopharyngeal/Nasal Aspirate	Nasopharyngeal/Nasal Wash	Deep Nasal Swab	Combined Nasal & Throat Swab
Materials	• Sterile Dacron/nylon swab • Viral transport media tube *(should contain 1-3 ML of sterile viral transport medium)*	• Sterile suction catheter/suction apparatus • Viral transport media tube *(should contain 1-3 ML of sterile viral transport medium)*	• Sterile suction catheter/suction apparatus • Sterile normal saline	• Sterile polyester swab *(aluminum or plastic shaft preferred)* • Viral transport media tube *(should contain 1-3 ML of sterile viral transport medium)*	• 2 dry sterile polyester swabs *(aluminum or plastic shafts preferred)* • Viral transport media tube *(should contain 1-3 ML of sterile viral transport medium)*

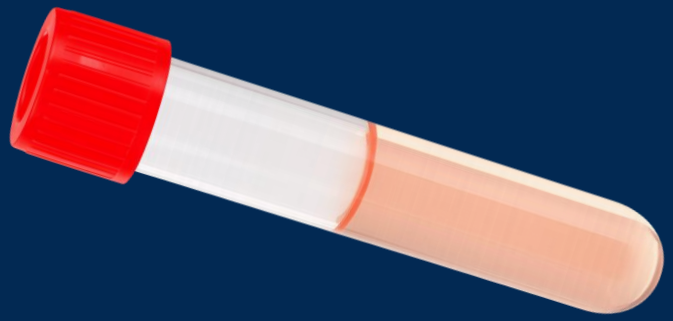
GUIDELINES for respiratory infections:

- *Testing and diagnosis of avian influenza guidelines*

- *Testing and detection of zoonotic influenza virus infections in humans in the EU/EEA, and occupational safety and health measures for those exposed at work*

This ECDC guidelines do not mention officialy the VTMs, but ECDC suggests to refer to WHO guidelines for the collection of clinical specimens

WHAT IS VIRAL TRANSPORT MEDIUM?



VTMs are designed to preserve viable viruses, chlamydiae, mycoplasmas and ureaplasmas for downstream applications.

They typically contain:

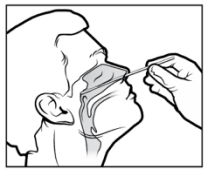
- Buffers to maintain pH.
- Proteins (e.g., albumin or gelatin) to stabilize viral particles.
- Antibiotics and antimycotics to inhibit bacterial or fungal contamination.
- pH indicator

Advantages:

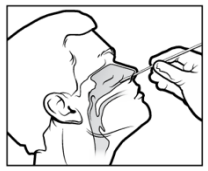
- Essential for applications requiring viable viruses (e.g., culture)
- Compatible with a wide range of diagnostic platform.

VTMs' features in compliance with WHO & other guidelines:

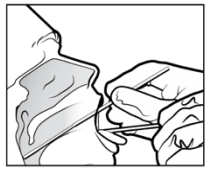
COLLECTION



Nasopharyngeal swabs (Dacron/nylon)



Deep nasal (Sterile polyester swab with aluminum or plastic shaft preferred)



Combined Nasal & Throat Swab
(2 dry sterile polyester swabs with aluminum or plastic shafts preferred)



TRANSPORT

Compatibility with different transport conditions:

- RT for 48 hours
- Frozen temperature after 48 hours

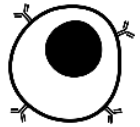


ANALYSIS

Culture, shell vial or tube



Direct immunofluorescence



Direct rapid Antigen detection by EIA (Lateral Flow)



Nucleic Acid Amplification



Different medium volumes:

- 1 mL
- 3 mL



UTM's features in compliance with WHO & other guidelines:

COLLECTION



Nasopharyngeal swabs (Dacron/nylon)

Deep nasal (Sterile polyester swab with aluminum or plastic shaft preferred)

Combined Nasal & Throat Swab (2 dry sterile polyester swabs with aluminum or plastic shafts preferred)



TRANSPORT

Compatibility with different transport conditions:

- RT for 48 hours
- Frozen temperature after 48 hours



ANALYSIS

Culture, shell vial or tube



Direct immunofluorescence



Direct rapid Antigen detection by EIA (Lateral Flow)



Nucleic acid amplification



Different medium volumes:

- 1 mL
- 3 mL



UTM advantages – DX Compatibility:

Cepheid
BD
Roche
SD BIOSENSOR
Seegene
UTM®
Abbott
meridian BIOSCIENCE®
HOLOGIC®
QIAGEN
ELITechGroup A BRUKER COMPANY
BIOMÉRIEUX

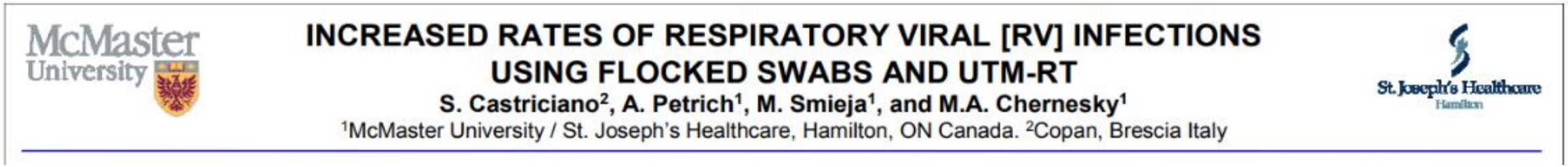


UTM advantages – Non-cytotoxic

UTM swabs and medium are internally tested by **Copan Laboratory** to assure the absence of cytotoxic effects on cell lines used for viral culture analysis.

UTM	Competitor VTM
	
Non-cytotoxic, confluent growth and no alterations of the cell monolayer and the cells morphology.	Cytotoxic, alterations of the cell monolayer and the cells morphology.

UTM advantages – Allows different lab applications:



McMaster University

INCREASED RATES OF RESPIRATORY VIRAL [RV] INFECTIONS USING FLOCKED SWABS AND UTM-RT

S. Castriciano[2], A. Petrich[1], M. Smieja[1], and M.A. Chernesky[1]

[1]McMaster University / St. Joseph's Healthcare, Hamilton, ON Canada. [2]Copan, Brescia Italy

St. Joseph's Healthcare Hamilton

Study Objective

To determine whether respiratory viruses positivity rates are different when nasopharyngeal swabs [NPS] are collected by FLOQSwabs® into UTM-RT to diagnose respiratory viruses (RVs) using 4 antigen tests, cell culture and PCR assays.

Results

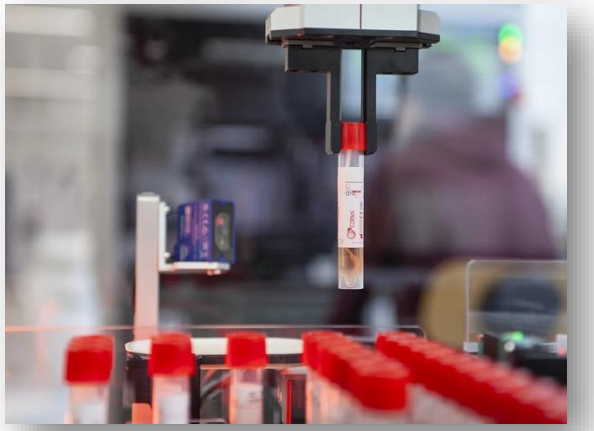
NPS collected with FLOQSwabs® in UTM-RT demonstrated higher positivity rates for each virus type with DFA/culture, rapid antigens and PCR compared to other collection devices.

UTM advantages – and more….

- CLSI M40-A2 compliant
- Beads to homogenize samples
- Capture cap
- Compatibility with Copan automation (Universe ®)







What to do to be prepared?

1. **Continue monitoring the flu season trends in Australia.**
   Australia serves as an early warning indicator. Closely tracking its data will help generate more accurate forecasts for the upcoming flu season in the EMEA region.

2. **Stay up to date on vaccination campaigns in your country.**
   The more visible and accessible vaccination efforts are, the higher the public uptake—and the fewer flu cases and hospitalizations are expected.

3. **Identify national influenza surveillance networks and reference laboratories.**
   Understanding whether your country has a surveillance system and designated reference labs for flu data collection is key to assessing the true disease burden.

4. **Understand the workflows of respiratory sample testing laboratories.**
   Knowing how labs operate allows us to tailor and propose the most suitable Copan products, aligned with local needs and improving operational efficiency.
   Trying to understand if the laboratory do diagnosis or screening and if they use RT-PCR or NGS.
   (e.g. offering the right Copan product which is validated on their platforms)

5. **Be sure to provide your customer the best choice for the collection & transport of respiratory infection specimens.**
   Keep in mind that not all the VTMs are the same and don't forget UTM advantages.







