

INFLUENZA; Nurses, midwives: you are at the heart of the vaccine promotion! Digital tools help you



Section 1

**Nurses and midwives:
pillars awareness of flu
vaccination**

Section 2

**Digital tools to fight
against the flu: innovate!**

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**Basic knowledge for all
about flu**

Section 4

**Let's train ourselves to stay
up-to-date**

Section 5

**Improve e-health and
digital way**

**Millennia2025 Women
and Innovation
Foundation**

www.Millennia2025-foundation.org

October 2019

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Keys Word: influenza, vaccine, promotion, Education, e-Heath, social networks, connected tools



Nurses, midwives: you are at the heart of the flu vaccine promotion!!

Introduction

For Nurses and Midwives, it is important to know how to talk about vaccination: what to say, how to answer questions about Flu, where to find web places to share with people and patients with pedagogic material or training sellers, how and when to use Facebook, twitter or other video. About vaccination, Nurses and Midwives must know how and why to arguing for vaccination defence while being able to defend these values against their colleagues opposed to vaccination. Indeed, many health workers have a negative position against vaccination, opposed to mandatory vaccination: pro and anti-vaccines struggle on YouTube, anti-clearly winning the match when it comes to audience.

On immunization, nurses and midwives need to know how to use the various digital tools to advocate for immunization. Pros and anti-vaccines invade social networks and the media.

What to do?

This guide is for you to support you in the actions of information and prevention of the seasonal flu in the world. Inform yourself and train yourself! This is what we offer in **5 sections of 20 minutes**.

Be active and innovative nurses and midwives to spread messages and organize campaigns!



Section 1

Nurses and Midwives: pillars awareness of flu vaccination

1. Who can promote vaccination?

The responsibility and example of Nurses and Midwives in the world: **be at the forefront of innovation!**

Nurses-Midwives and vaccination¹

Nurses are at the forefront of influenza vaccination in 127 countries around the world². **Midwives** can prescribe and practice vaccinations for women and newborns as well as for those around them, if necessary. For midwives, vaccinations are part of their specifications because it is a medical profession, endowed with a power of diagnosis and a right of prescription.

Nurses and midwives correspond nearly half of the world's health workers (WHO, 2019 Congress of the International Council of Nurses in Singapore).

A step forward: since October 2018, vaccination against seasonal influenza of all adults eligible for vaccination (including pregnant women and primo vaccinated) can be carried out without a medical prescription by a nurse and / or midwife.

International legislation: Influenza vaccination is not mandatory in any country in the world.

Nurses and Midwives give a lot of vaccines. But they also need vaccines! By the nature of their work, nurses come into contact with many infectious diseases, the most notable of which is influenza. Vaccination is an important way to stay protected from contracting a disease at work.

But vaccination can also protect the nurse's-midwife's patients and family. While at work, a nurse or a midwife may unknowingly pass a disease on to the patient, especially when critically ill or the most vulnerable, such as new-borns. In addition, if a nurse or midwife contracts an illness from work, he or she can pass it on to her family members.

Don't risk it - be vaccinated. Being vaccinated against all diseases, from measles to influenza to whooping cough, can prevent the transmission of disease and protect nurses, their patients, and their families!

Nurses and Midwives have a professional and ethical obligation to be immunized - it protects both the health of the nurse or midwife, and the health of her or his patients and community.

Nurses as Midwives play a critical role during influenza prevention season by serving as vaccinators, educators, advocates, and role models for their patients as well as their colleagues. Vaccination of nurses and midwives, is strongly encouraged to protect both nurses-midwives and the patients whom they serve.

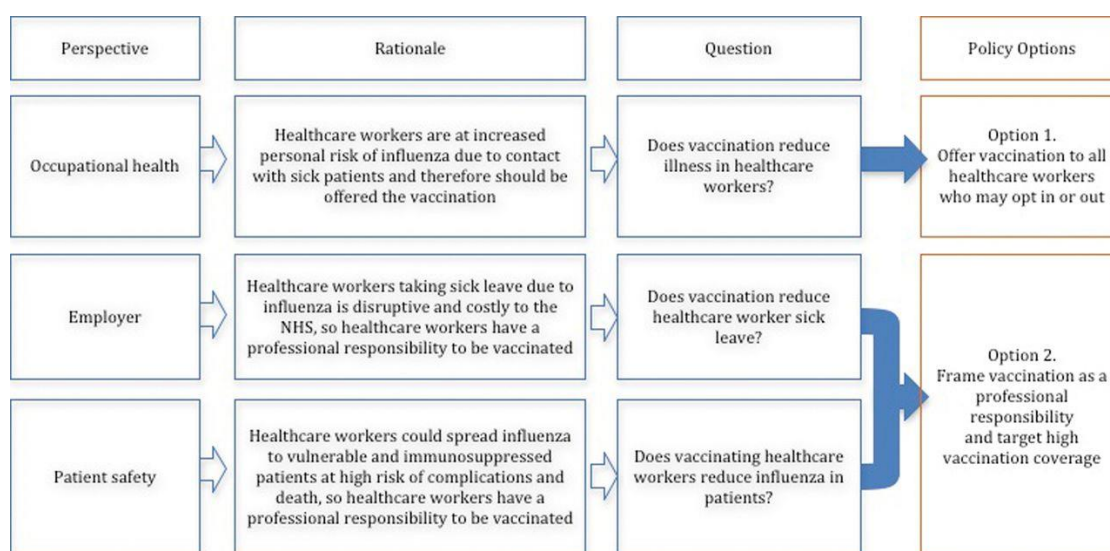
¹ <https://www.nursingworld.org/practice-policy/work-environment/health-safety/immunize/vaccines/>

² Annex 1

2. Vaccination for Health Professional

Why: Influenza vaccination of nurses-midwives not only reduces the disease burden in those vaccinated, but also has been shown to reduce the rate of influenza disease and overall mortality in the patients under their care.

Problem: the question of flu vaccination for healthcare professionals is an urgent and highly relevant one. After all, the devastating impact of flu is widely recognized, and flu vaccines are estimated to prevent thousands of admissions and millions of illnesses with current usage. At risk groups are well defined. Health care professionals work with the patients at risk on a daily basis. Annual vaccination is widely recommended to reduce the risk of healthcare acquired influenza. Why then is it so difficult to achieve influenza vaccine uptake levels in healthcare workers that would reduce or eliminate the risk of transmitting the disease?³



(in Bmjopen.bmj.com)

Rate of vaccination for UK healthcare workers

The 2017/18 season saw the highest number of frontline healthcare workers ever **vaccinated** against **flu** in **England**. Almost 69% received the **vaccine** – up from 63.2% in 2016/17 and 50.6% in 2015/16 (PHE, 2018b) (20/08/2018⁴).

3. Influenza vaccination: Global Action Plan for Vaccines (2011-2020)

The Global Vaccine Action Plan (GVAP) – endorsed by the 194 Member States of the World Health Assembly in May 2012 – is a framework to prevent millions of deaths by 2020 through more equitable access to existing vaccines for people in all communities.

https://www.who.int/immunization/global_vaccine_action_plan/GVAP

³<https://eswi.org/flusummit/> Marseille Nov. 2019

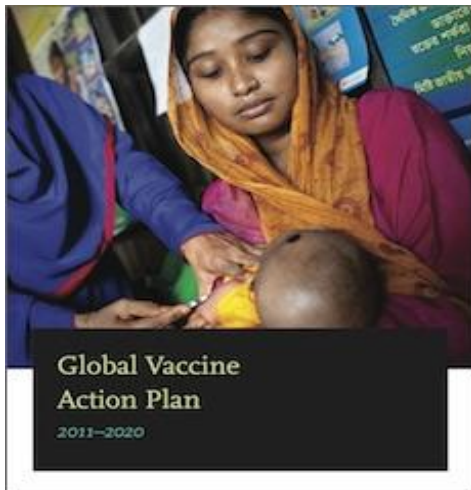
⁴<https://www.nursingtimes.net › infection-control › 7025659.article>

UN unveils global influenza strategy to prevent ‘real’ threat of pandemic (11 March 2019). Announcing the revised Global Influenza Strategy for 2019-2030, World Health Organization (WHO) ... another pandemic, but when”. “The threat of pandemic influenza is ever-present,” he said, noting that the risk of a new influenza virus transmitting from animals to humans and potentially leading to a pandemic is “real”. Influenza remains one of the world’s greatest public health challenges

<https://news.un.org/en/search/influenza%20vaccination>

Global Vaccine Action Plan 2011-2020

A new SAGE Working Group on Influenza Vaccines has been established and is expected to report in 2019/2020. SAGE issues its 2018 assessment report of the Global Vaccine Action Plan 2011-2020.



The Global Vaccine Action Plan (GVAP) – endorsed by the 194 Member States of the World Health Assembly in May 2012 – is a framework to prevent millions of deaths by 2020 through more equitable access to existing vaccines for people in all communities.

https://www.who.int/immunization/global_vaccine_action_plan/en/

4. Protecting European citizens against vaccine – preventable diseases

<https://www.vaccineurope.eu/manifesto/>

Did you know

- Vaccines are one of the greatest medical achievements in history, saving 2-3 million lives globally every year by preventing infectious diseases
- Vaccination contributes substantially to health, healthcare systems sustainability and society at large by preventing morbidity and mortality
- Vaccines can protect everyone: new born babies, infants, children, adults and older adults
- Vaccines offer community-wide protection
- Close to 30 diseases today are vaccine-preventable
- It costs less than 4,000 Euro (including administration costs) to protect a person for their entire life against the 17 most relevant vaccine-preventable diseases
- Vaccines play an important role in the fight against antimicrobial resistance
- More than 80% of vaccine doses are produced in Europe by R&D-led pharmaceutical companies

Challenges

Vaccines are a victim of their own success:

The absence of severe diseases, due to effective vaccines and vaccination programmes, is leading to the mis-perception that vaccination is not needed anymore.

European communities are at risk:

We see an increase of vaccine-preventable diseases in Europe leading to the recurrence of diseases. Despite the goal of eliminating measles by 2020, in the first half of 2018, more than 10,000 cases of measles and 31 deaths were reported in the EU/EEA.

Fake news making the situation worse:

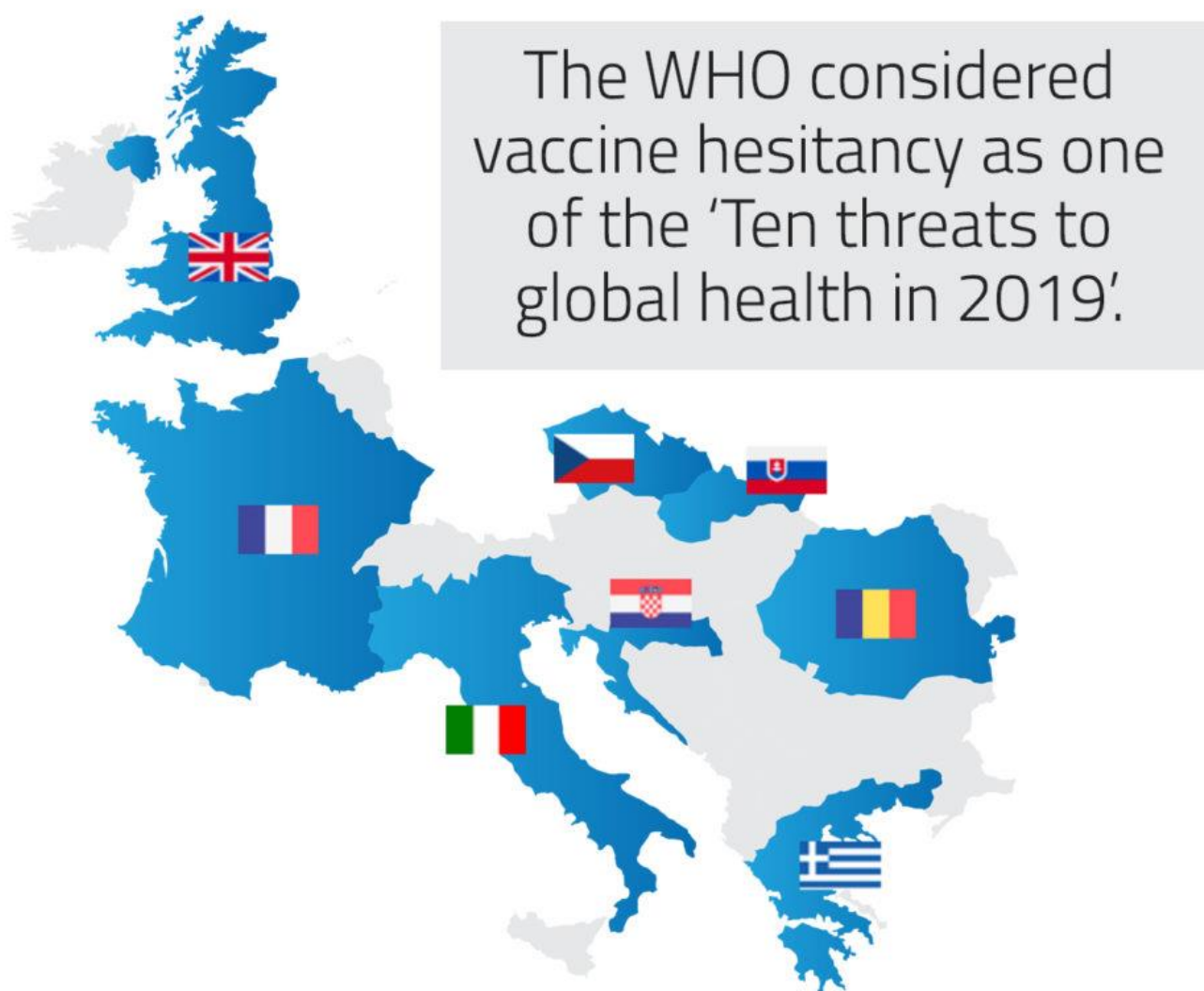
Despite the high-quality standards that apply to vaccine production (> 100 quality checks per product), robust clinical trials and strict pharmacovigilance, vaccine safety and effectiveness are repeatedly challenged.

Many vaccines are undervalued and underutilised:

Less than 0.5% of health budgets in many European countries are spent on vaccination

The sustainability of vaccine supply is being challenged:

Only a few manufacturers can meet the high-quality standards and handle the high-risk vaccine production processes and development costs. This makes short-term or unexpected changes in vaccine demand difficult to respond to. Finding solutions to this problem requires a concerted effort by all key stakeholders



Section 2

Digital tools to fight against the flu: innovate!

a. Social Networks

Three key words must be used: nurse-midwife, flu and vaccination. 5 Networks can be used:

- **Facebook:** Post during the flu period, research of collected content

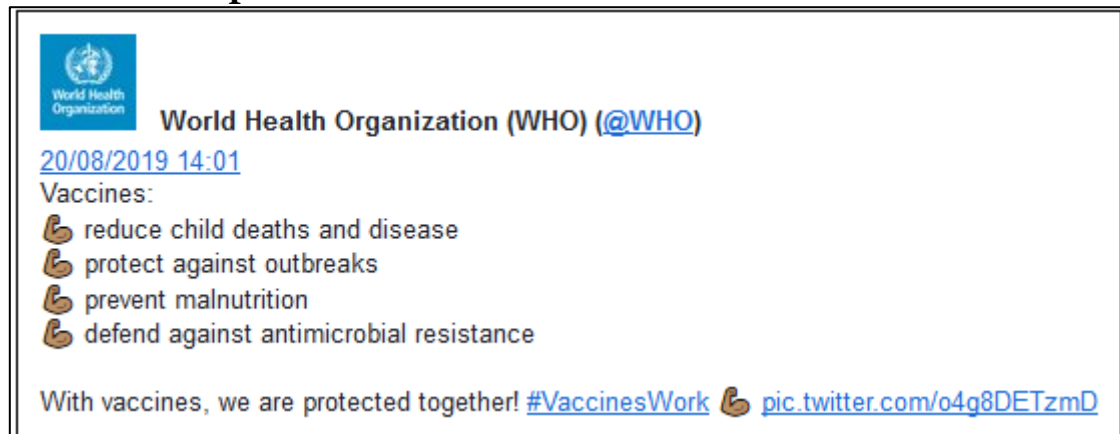
Example: Facebook to direct vaccine searches to public health pages. Facebook moves to stem spread of misinformation online about side-effects of immunisations: People who access Facebook and Instagram pages and groups that discuss vaccines, as well as those searching or using relevant hashtags, will see an educational module about vaccine safety. Links will take them to a page provided by the Centers for Disease Control and Prevention (CDC) in the United States and to the World Health Organization elsewhere in the world.

(<https://www.theguardian.com/society/2019/sep/04/facebook-to-redirect-anti-vaccine-searches-to-public-health-pages>)

- **Blogs:** For relation with patients or parents about vaccination
- **Forum:** For relation with mother and children
- **Twitter:** For sharing information from WHO, UN, SanofiPasteur or other...Personal opinion by tweets

- <https://twitter.com/connectingnurse>

- **WHO example**



<https://twitter.com/WHO/status/1163783189070012417/photo/1>

- **Reunion Island example**

An example: // TWITTER: A COMPLEMENTARY TOOL FOR MONITORING THE SEASONAL INFLUENZA EPIDEMIC IN METROPOLITAN FRANCE AND THE REGIONS?
Pascal Vilain (pascal.vilain@santepubliquefrance.fr), Laurent Filleul. In BEH 34, October 2018
Santé publique France, Cellule d'intervention en région Océan Indien, Saint-Denis, La Réunion, France

Introduction – Social media as Twitter are used today by people to disseminate health information, but also to share or exchange on their health condition. In this context, an exploratory study was implemented to investigate whether Twitter data can be used as a proxy for monitoring the seasonal influenza epidemic in France and at the regional level.

Methods – A real-time automated system allowing the collection, the pre-processing (geolocation and classification) of tweets related to influenza illness was developed. The data collected from 8 August 2016 to 26 March 2017 were compared to those of the French syndromic surveillance system SurSaUD® (OSCOUR® and SOS Medecins networks).

- **Twitock example:** <https://twitock.com/JCPHS>



- **Platform;** to be created to collect content about vaccination and fight against Fake news.
- **LinkedIn:** important for nurses' professional association: can be a good nurses and midwives networking to share prevention message and go against false news about vaccine.
- **YouTube:** YouTube stopped serving ads to a number of popular channels that promote anti-vaccine conspiracy theories. YouTube takes ads off 'anti-vax' video channels. (<https://www.bbc.com/news/technology-47357252>).
- **Instagram:** Instagram blocks vaccine hoax hashtags: 'Don't be taken in by anti-vaccine myths on social media' (<https://www.bbc.com/news/health-45990874>).

b. National Influenza Vaccination Week (NIVW) Digital Media Toolkit

NIVW⁵: in 2018, the CDC (Center of Disease Control and Prevention) gave some good examples of possible actions.

- **Newsletters messages:** “It’s Not Too Late! It’s that time of year again — flu season. As family and friends are gathering for the holidays, flu activity is increasing. Get a flu vaccine now if you have not gotten vaccinated yet this season.”
- **Twitter and Facebook:**

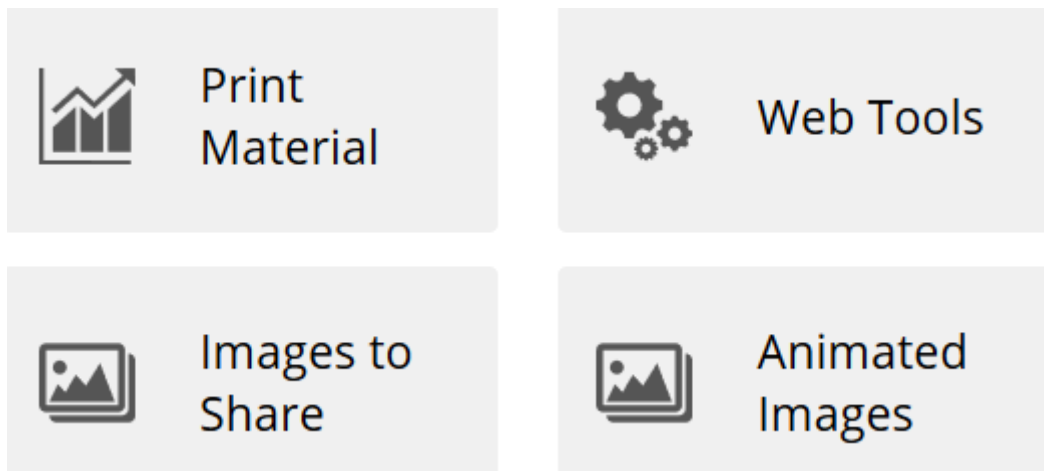
⁵ <https://www.cdc.gov/flu/resource-center/nivw/nivw-social-media-content.htm>

Use these Tweets and Facebook messages on your social media platforms to share the importance of getting a flu vaccine and to remind everyone that it is not too late to get a flu vaccine if you haven't already.

Twitter Messages	Facebook Messages
<ul style="list-style-type: none"> • It's National Influenza Vaccination Week! Have you gotten your #flu vaccine? Visit https://go.usa.gov/xPd6XExternal for more info. • #NIVW is a national observance that highlights the importance of #flu vaccination for everyone 6 months and older. Visit: https://go.usa.gov/xPd6XExternal • It's that time of year again; #flu season. It's not too late to get a flu vaccine to help protect yourself and your loved ones against. Visit: https://go.usa.gov/xPd6XExternal • As family and friends gather for the holidays, #flu activity is increasing. Now is the time to get a flu vaccine if you haven't yet! Visit: https://go.usa.gov/xPd6XExternal • It is not too late to get a #flu vaccine. @CDCFlu recommends vaccination for everyone 6 months and older as long as #flu viruses are circulating. Learn more: https://go.usa.gov/xPd6XExternal • Even if you have already gotten sick with flu, you can still benefit from a #flu vaccine. More facts: https://go.usa.gov/xPv2RExternal • There are many reasons to get a flu vaccine. It can reduce your risk of #flu and its potentially serious complications. It also can reduce the severity of your illness, if you get sick. Learn more: https://go.usa.gov/xPv2RExternal • Flu vaccination can help protect women and their babies during and after pregnancy, save children's lives, prevent complications related to certain chronic conditions, and prevent hospitalizations among adults. https://go.usa.gov/xPv2RExternal • Getting a #flu vaccine isn't just about keeping you healthy; it's also about helping to protect everyone around you who may be vulnerable to becoming very sick from #flu. https://go.usa.gov/xPd6XExternal • #Flu vaccination cannot cause flu illness. Learn more facts about common flu misconceptions: https://go.usa.gov/xnZ4xExternal 	<ul style="list-style-type: none"> • It's that time of year again; flu season. As family and friends gather for the holidays, flu activity is increasing. Get a flu vaccine now if you haven't gotten vaccinated yet. https://go.usa.gov/xPd6X • It's National Influenza Vaccination Week (NIVW)! NIVW highlights the importance of continuing flu vaccination through the holiday season and beyond. Make sure you get a flu vaccine to protect yourself and your loved ones this flu season. For more information on NIVW, visit: https://go.usa.gov/xPd6XExternal • There are many reasons to get a flu vaccine. It can reduce your risk of flu and its potentially serious complications. It also can reduce the severity of your illness, even if you still get sick. However, flu vaccination isn't just about keeping you healthy; it's also about helping to protect everyone around you who may be vulnerable to becoming very sick from flu. Learn more: https://go.usa.gov/xPv • Flu vaccination has been proven to protect women and their babies during and after pregnancy, save children's lives, prevent complications related to chronic lung disease, diabetes and heart disease, and prevent hospitalizations among adults. Visit https://go.usa.gov/xPv2RExternal to learn more about the benefits of flu vaccination. • Flu Fact: Flu vaccination cannot cause flu illness because the vaccines are made with inactivated (dead) and weakened viruses, or they only contain a single gene from a flu virus, which cannot cause illness. Learn more facts about common flu misconceptions: https://go.usa.gov/xnZ4x

- **Communication Resources**

For more details, visit : <https://www.cdc.gov/flu/resource-center/nivw/communication-resources.htm>



- **Videos**

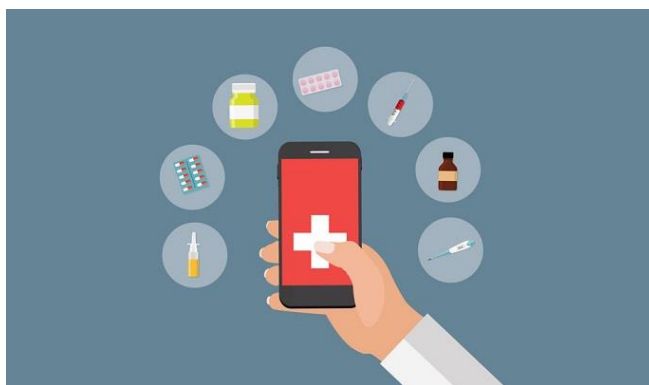
- You will find some examples: visit: <https://www.cdc.gov/flu/resource-center/nivw/videos.html>
- Why is the flu deadly in some but not in others? This year's flu season has been one of the worst on record. It's even claimed the lives of otherwise healthy children and adults. Scientists are working on a test to determine why the immune systems of some patients can actually make the flu turn deadly. See this video from a nurse who get flu!

<https://www.abc.net.au/news/2019-08-08/why-is-the-flu-deadly-in-some-but-not-in-others/11397800?pfmredir=sm>

- **mHealth App**

- ✓ **Wearable Thermometer⁶**, mHealth App Predict Flu Outbreaks: when equipped with both a wearable thermometer and an app, healthcare experts can use mHealth monitoring to quickly predict flu outbreaks : to be continued.....
- ✓ **Healthcare Mobile Apps Among Hospital**, Health Systems: the top hospital and health system mobile apps offer interoperability and secure care coordination to enhance clinical communication and workflows.

⁶ <https://mhealthintelligence.com/news/wearable-thermometer-mhealth-app-predict-flu-outbreaks>



- **Nurses website**

- ✓ **eHealth& ICNP⁷** : the ICN eHealth programme seeks to advance nurses' knowledge of and involvement in eHealth worldwide.

ICNP is helping to ensure that nurses have the information tools they need to meet the changing health and care needs of citizens. ICNP can be a good help for vaccine prevention against Flu.

- **Connecting Nurses⁸**: Connecting Nurses is an international project that was created for the nursing community to provide professional resources for its members around the world. Nursing organizations with support from Sanofi have created Connecting Nurses. The following organizations are working together on the Project:
 - International Council of Nurses (ICN)
 - The Nurse Practitioner Healthcare Foundation (NPHF)
 - Association Française pour le Développement de l'Éducation Thérapeutique (AFDET)
 - Millennia2025 FoundationWeObservatory

The video-library is full of good tools for Nurses.

- **Communication**

Vaccine safety communication⁹

To develop vaccine safety communication plans at country level to promote awareness of vaccine risks and benefits, understand perceptions of risk, and prepare for managing any adverse events and concerns about vaccine safety promptly.

Communicating about vaccine safety is always important. It is essential in at least three situations, namely:

- Explaining properly the benefits and risks of a recommended vaccine;
- Addressing public concerns and upcoming or persistent rumours about vaccine safety;
- Preparing to address vaccine safety crises if and when they occur. And benefits, understand perceptions of risk, and prepare for managing any adverse events and concerns about vaccine safety promptly

⁷<https://www.icn.ch/what-we-do/projects/ehealth-icnp>

⁸<https://www.connecting-nurses.com/en/video-library>

⁹https://www.who.int/vaccine_safety/initiative/communication/en/



Section 3

Basic knowledge for all about flu

1) Influenza in the world

Influenza is a contagious respiratory illness caused by influenza viruses infecting the nose, throat and lungs. Each year, influenza claims thousands of lives and is responsible for hundreds of thousands of hospital admissions from influenza and its complications.



Avian and swine influenza viruses can occasionally infect and cause disease in humans, usually associated with close exposure to infected animal populations. These viruses are not detailed here.

On the website: a very complete site to be well aware of Sanofi-Pasteur:

You will find :

- ♣ Videos: Why should we fear Influenza? What are the consequences of Influenza for people at risk?
- ♣ Informative documents: Things you need to know about influenza? The process of manufacturing vaccines. Influenza infographics.

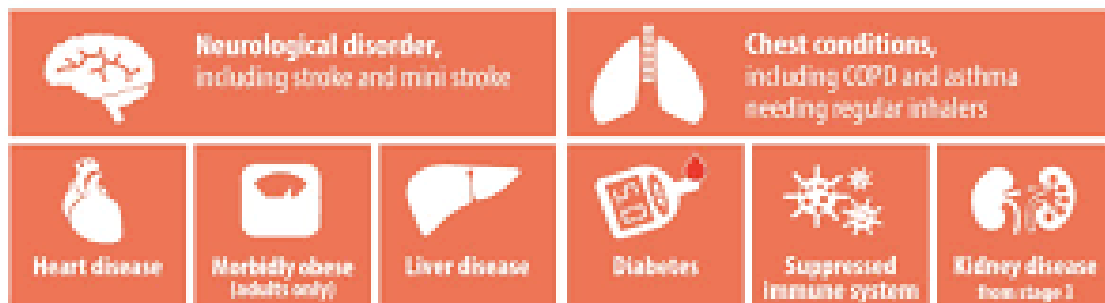
<https://www.sanofipasteur.com/en/immunization-essentials/influenza-seasonal>

2) INFECTIOUS AGENT

Influenza is caused by infection of the respiratory tract with influenza viruses, RNA viruses of the *Orthomyxovirus* genus. Influenza viruses are classified into 4 types: A, B, C, and D. Only virus types A and B commonly cause illness in humans. Influenza A viruses are further classified into subtypes based on 2 surface proteins, hemagglutinin (HA) and neuraminidase (NA). Although 4 types and subtypes of influenza virus cocirculate in humans worldwide (influenza A(H1N1), A(H3N2), and influenza B-Yamagata, B-Victoria viruses), the distribution of these viruses varies from year to year and between geographic areas and time of year. Information about circulating viruses in various regions can be found on the CDC website (www.cdc.gov/flu/weekly) or the World Health Organization website¹⁰).

Flu can be serious!

You should have a flu vaccine if you are aged 6 months and over and have...



¹⁰(www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/)

3) Influenza prevention policy

- WHO World Program

<https://www.who.int/influenza/en/>

- Questions and Answers

Recommended composition of influenza virus vaccines for use in the southern hemisphere 2020 influenza season and development of candidate vaccine viruses for pandemic preparedness (27 September 2019)

https://www.who.int/influenza/vaccines/virus/recommendations/201909_ganda_recommendation.pdf?ua=1

4) TRANSMISSION

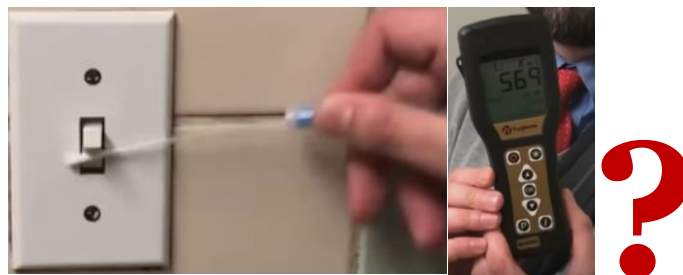
Influenza is an acute viral infection of the respiratory tract. There are three types of influenza virus: A, B and C. Influenza A and influenza B are responsible for most clinical illness. Influenza is highly infectious with a usual incubation period of one to three days.

Influenza viruses spread from person to person, primarily through respiratory droplet transmission (such as when an infected person coughs or sneezes near a susceptible person). Transmission via large-particle droplets requires close proximity between the source and the recipient, because droplets generally travel only short distances (approximately 6 feet or less) through the air, before settling onto surfaces. Indirect (fomite) transmission can also occur, such as when a person touches a virus-contaminated surface and then touches his or her face. Airborne transmission via small-particle aerosols in the vicinity of the infectious person also occurs.

Most adults who are ill with influenza shed the virus in the upper respiratory tract and are infectious from the day before symptom onset to approximately 5–7 days after symptom onset. Infectiousness is highest within 3 days of illness onset and is correlated with fever. Children and those who are immunocompromised or severely ill may shed influenza virus for 10 days or more after the onset of symptoms. Seasonal influenza viruses have rarely been detected from non-respiratory sources such as stool or blood.

What This Nurse Wants You to Know About the Flu: 'Watch This? For example, watch this video, you will learn about the risk of transmission!

<https://www.youtube.com/watch?v=C5xmcqGdfsY>



5) PANDEMICS: is it a risk?

Three influenza pandemics occurred in the last century: in 1918, 1957 and 1968. In 1918, we had the most devastating infectious disease event in recorded history: the 1918 influenza pandemic. Since 1918, three influenza pandemics have occurred - in 1957, 1968 and 2009 (H1N1).

6) Things to know about pandemic influenza¹¹

The threat of pandemic influenza is ever-present. A pandemic can arise when a new influenza virus that hasn't affected humans before emerges, spreads and causes illness in humans. Influenza viruses are unpredictable – we can never be certain of when or from where the next pandemic will arise. However, another influenza pandemic is inevitable. In this interconnected world, the question is not if we will have another pandemic, but when. To protect people across the globe from this threat, the WHO has released a Global Influenza Strategy for 2019-2030. The new strategy is the most comprehensive and far reaching influenza strategy that WHO has developed. The strategy outlines a framework for WHO, countries and partners to work together to prepare for, prevent, and control the influenza.

1. Another influenza pandemic will happen – it's a question of when

We know there will be another influenza pandemic at some point. In 1918, we had the most devastating infectious disease event in recorded history: the 1918 influenza pandemic. Since 1918 three influenza pandemics have occurred - in 1957, 1968 and 2009 (H1N1). The risk of a new influenza virus transmitting from animals to humans and potentially causing a pandemic is real and serves as a warning that we must continue to be prepared for the next pandemic.

2. Influenza is already a major health challenge

Seasonal influenza represents a year-round disease burden. Every year, there are an estimated 1 billion cases, of which 3 to 5 million are severe cases, with 290 000 to 650 000 influenza-related respiratory deaths worldwide. Reducing the impact of seasonal flu through better surveillance, prevention and control helps countries prepare for a pandemic. Do your part to help prevent influenza and get your annual influenza shot. It is the most effective way to prevent the flu.

3. We are better prepared than we have been – but still not prepared enough

While there has been much work over the years to prepare for a pandemic, there is still much work to be done. It is critical that all health systems across the world are ready to prevent and control influenza. We need our health systems to be strong and healthy.

4. We are all connected

Because we are all connected, collaboration is key to ensuring the world's preparedness for an influenza pandemic. WHO, countries and partners will work together to achieve the strategy's goals and will align global and national capacities for influenza prevention, rapid detection and response.

5. We need better tools to combat influenza

Through this strategy, WHO and partners will promote the development of better global tools to prevent, detect, control and treat influenza. These tools include more effective vaccines, antivirals and treatments. The goal is to make these accessible for all countries.

6. All countries are affected

Building stronger country capacities in disease surveillance, response, prevention and control, and preparedness is a primary goal of this strategy. To achieve this, it calls for every country to have an evidence-based and tailored influenza programme.

7. It costs less to prepare than to respond

The cost of major influenza outbreaks will far outweigh the price of preparedness. A severe pandemic can result in millions of deaths globally, with widespread social and economic effects. The cost of pandemic preparedness has been estimated at less than US\$ 1 per person per year, which is less than 1% of the cost estimates for responding to a pandemic.

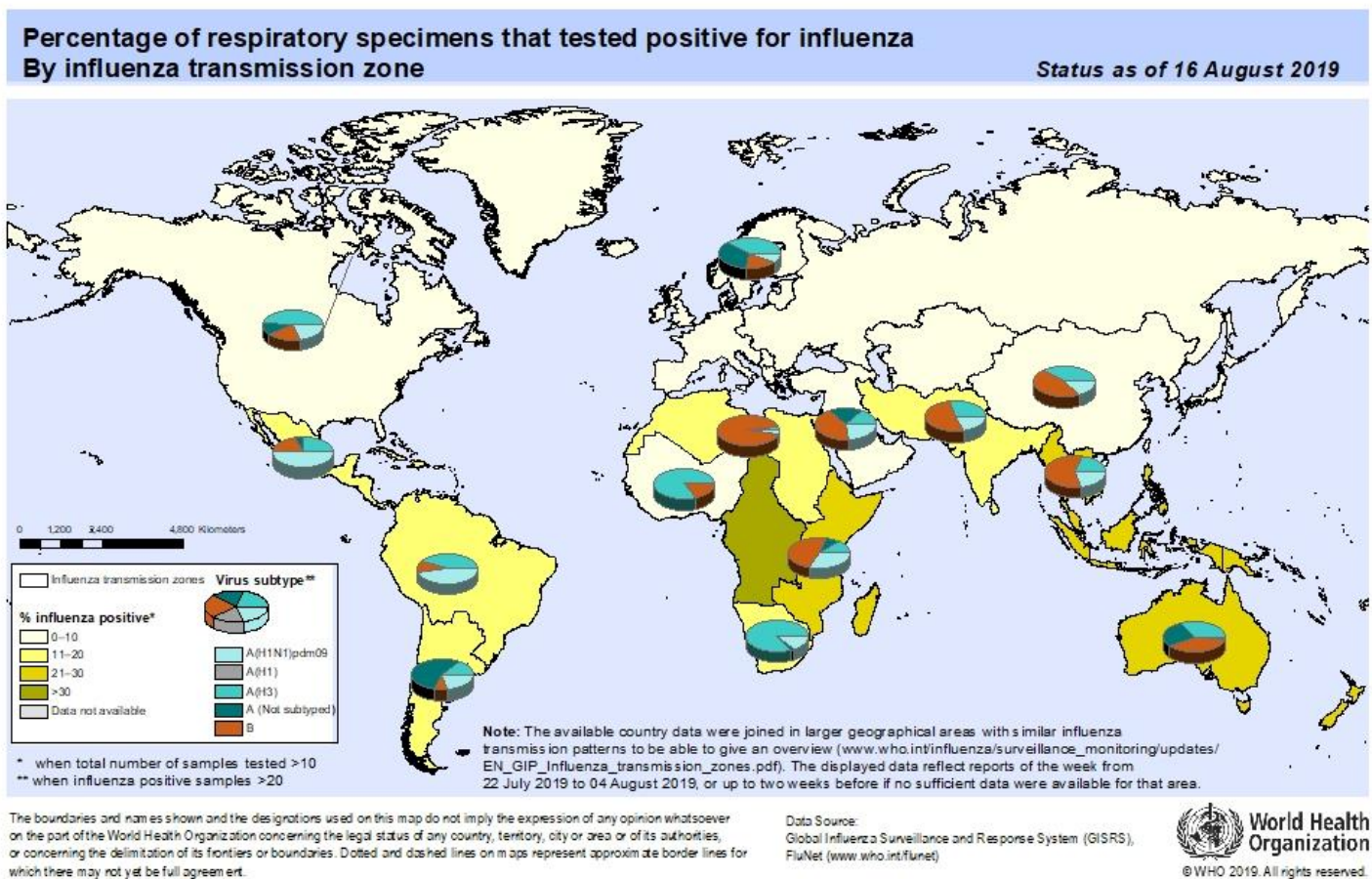
¹¹11 March 2019: WHO Global Influenza Strategy for 2019-2030

8. The Global Influenza Strategy benefits more than just influenza preparedness

By investing in influenza prevention, control and preparedness efforts, countries will all see benefits beyond influenza through overall strengthening of their health care systems. Countries can link their influenza efforts with other national and global efforts dedicated to health security and universal healthcare.

The threat of pandemic influenza is ever-present: a new UN-led plan¹² has been unveiled to tackle the estimated one billion cases of influenza which occur each year, and protect against the “real” threat of a global pandemic. Globalization, urbanization and mobility will result in the next pandemic moving faster and further, the agency maintains, while also underlining that those infected with the virus can face other health threats, such as heart attacks, strokes and severe pneumonia.

7) Influenza in the world



- In the temperate zones of the southern hemisphere, influenza activity appeared to have peaked in most countries.
- In the Caribbean, Central American, and tropical South American countries, influenza activity was low overall.
- In tropical Africa, influenza activity was low across reporting countries, with the exception of a few countries in Eastern Africa.
- In Southern Asia, influenza activity was low across reporting countries.
- In South East Asia, influenza activity was decreasing or low across reporting countries except in Myanmar.

¹²<https://news.un.org/en/story/2019/03/1034431>

- In the temperate zone of the northern hemisphere, influenza activity remained at inter-seasonal levels.
- Worldwide, seasonal influenza A viruses accounted for the majority of detections.

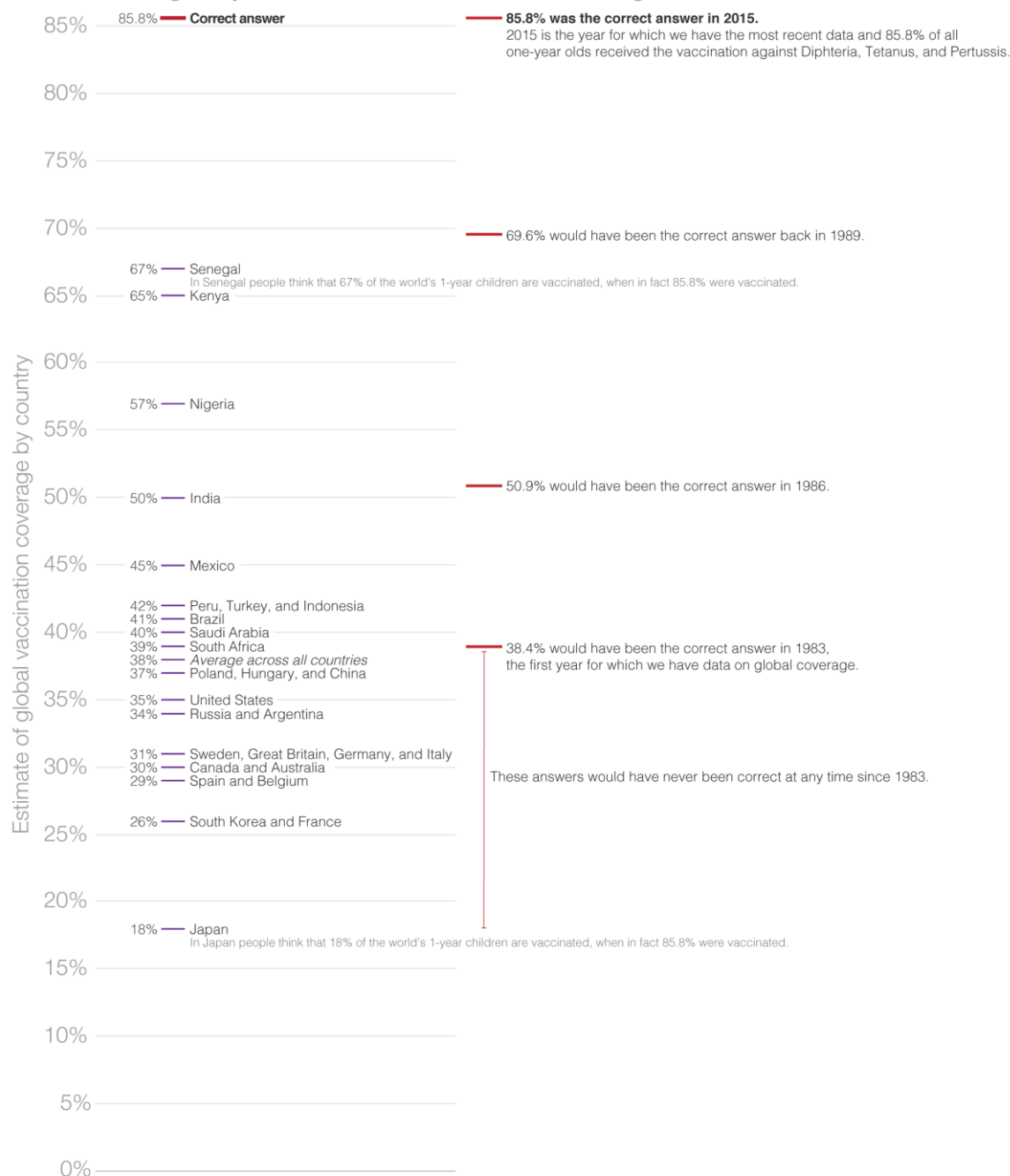
8) Vaccination coverage

We hugely underestimate global vaccination coverage

Our World
in Data

Shown on the left is what people in different countries answered when in 2017 they were asked: "How many of the world's 1-year old children today have been vaccinated against some disease?"

Shown on the right is how outdated these answers are – in most countries people estimate that the global vaccination coverage today is as low as it was more than three decades ago.



Data: Survey results: Ipsos – Perils of Perception. September 2017. Based on 26,489 interviews conducted between July 21st and August 25th, 2017. Vaccination data on DTP3 coverage from the WHO.

The data visualization is available at OurWorldinData.org. There you find research and more visualizations on this topic.

Licensed under CC-BY-SA by the author Max Roser.

9) Survey of influenza

“[Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices – United States, 2019–20 Influenza Season](#)” has been published. CDC recommends annual influenza vaccination for everyone 6 months and older with any licensed, influenza vaccine that is appropriate for the recipient’s age and health status, (IIV, RIV4, or LAIV4) with no preference expressed for any one vaccine over another. Content on this website is being updated to reflect this most recent guidance. More information about the [upcoming 2019-2020 flu season](#) is available.

➤ <https://www.cdc.gov/flu/weekly/fluactivitysurv.htm>

10) Mortality

*Worldwide*¹³, these annual epidemics are estimated to result in about 3 to 5 million cases of severe illness, and about 290 000 to 650 000 respiratory *deaths*. In industrialized countries most *deaths* associated with *influenza* occur among people age 65 or older. Illnesses range from mild to severe and even death. Hospitalization and death occur mainly among high risk groups. Epidemics can result in high levels of worker/school absenteeism and productivity losses. Clinics and hospitals can be overwhelmed during peak illness periods. (in 2018)

The effects of seasonal influenza epidemics in developing countries are not fully known, but research estimates that 99% of deaths in children under 5 years of age with influenza related lower respiratory tract infections are found in developing countries.

As Nurses and Midwives, you must know these data to convince for the value of vaccination! Estimates of influenza-associated mortality are important for national and international decision making on public health priorities. Previous estimates of 250 000–500 000 annual influenza deaths are without a doubt outdated.

11) Research

For old people¹⁴: “Under the skin Listening to the voices of older people on influenza immunisation”. Rates of influenza immunisation remain good among older adults, however, in recent years, they have begun to stagnate.

In this report, they explore the attitudes of older adults to influenza immunisation, a significant gap in previous research. Through this research, they found:

- Attitudes are a significant factor in influencing rates of influenza vaccination among older adults.
- Vaccine hesitancy among older adults in the case of seasonal flu vaccines – ultimately impacting coverage rates – is a different phenomenon to wider vaccine hesitancy in the general population; it is more specific and less related to broad concerns around trust in institutions.
- Efforts to increase influenza vaccination coverage rates among the older population need to move beyond associating age with vulnerability and towards presenting immunisation as a positive and healthy lifestyle choice.

Vaccine Confidence Project: <https://www.vaccineconfidence.org>

¹³ <https://www.who.int/news-room/fact-sheets/detail/influenza-%28seasonal%29>

¹⁴ <https://ilcuk.org.uk/wp-content/uploads/2019/05/ILC-Under-the-skin.pdf>

12) Prevention of the flu: vaccination!

Vaccine the primary intervention to reduce influenza mortality and morbidity!

Vaccination: assessment and prospects

a) Vaccination in the world

➤ *In the United States*

Annual vaccination for seasonal influenza is recommended for those aged ≥ 6 months and is the most effective way to prevent influenza and its complications. Several influenza vaccines are approved for use in the United States (www.cdc.gov/flu/protect/vaccine/vaccines.htm) and can be grouped into categories: inactivated influenza vaccine (IIV), live attenuated influenza vaccine (LAIV), and recombinant influenza vaccine (RIV).

Fighting Flu: How can we improve? (from [Elaine O'Hara](#), Chief Commercial Officer at Sanofi Pasteur, North America).

Last year, almost 170 million doses of flu vaccine helped US health care providers immunize the nation, well in advance of the peak influenza season, which typically occurs in February or March. That is an astonishing number of doses all having to undergo myriad manufacturing and quality processes. Each year, the influenza vaccine is licensed as a new vaccine, as we know one influenza season is never like another. It's a process that includes – just to name a few steps:

- A coordinated and complex strain selection by the WHO in February that must be confirmed by the US FDA, typically in March.
- Optimization of the seed viruses, which are tested by both the manufacturer and FDA.
- Availability of potency test reagents.
- Carefully orchestrated production, followed by FDA review of lot release protocols for every lot and sample testing. The manufacturer additionally has extensive quality control steps before releasing each batch.

➤ *For children in developing countries*

People in poorer countries have a more accurate view of the world: in Kenya and Senegal people thought that vaccines reach around two thirds of all children in the world, but even these highest estimates are 20 percentage points too low. (<https://ourworldindata.org/new-entry-on-vaccination>).

We hugely underestimate global vaccination coverage¹⁵

b) What is a vaccine, and how do vaccines work?

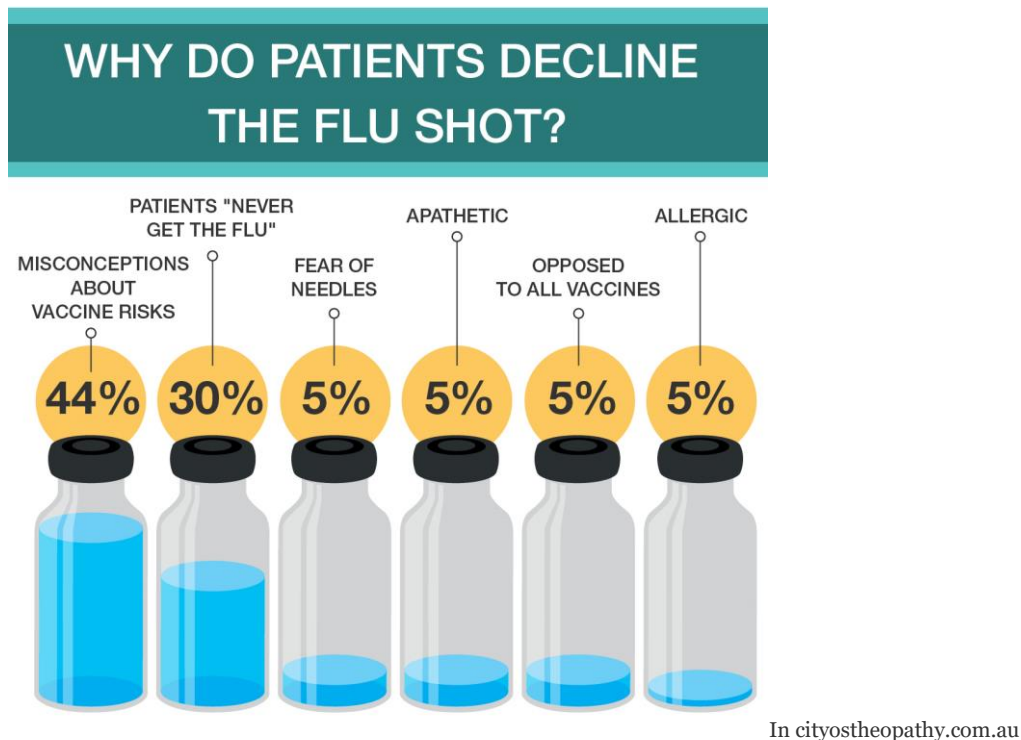
A vaccine is a type of medicine that trains the body's immune system so that it can fight a disease it has not come into contact with before. Vaccines are designed to prevent disease, rather than treat a disease once you have caught it. For more information: <http://vk.ovg.ox.ac.uk/vk/how-do-vaccines-work>

¹⁵The survey results are from Chris Jackson (2017) – Global Perceptions of Development Progress: 'Perils of Perceptions' Research', published by Ipsos MORI, 18 September 2017. Online [here](#).

c) How to Talk to Patients and Parents About Flu Vaccine?¹⁶

These fact sheets provide information on the timing and types of influenza vaccinations as well as methods to provide a strong influenza vaccine recommendation to parents, adults ages 50-64, adults ages 65+, and the general public:

- Preparing questions Parents may ask about Vaccines
- Be ready to respond to people who are against vaccination
- Make a strong Flu Vaccine recommendation



The State of Vaccine Confidence: 2016¹⁷

This year's study (2016) surveyed 65,819 individuals across 67 countries, investigating confidence in vaccine safety and effectiveness, as well as perceptions of vaccine importance and compatibility with religious beliefs. The analysis, published in EBioMedicine, was conducted in collaboration with Imperial College London and the National University of Singapore, and the data was collected by WIN/Gallup International Association.

Overall sentiment towards vaccine importance is positive across all 67 countries, however there is wide variability between countries and across world regions. Confidence in vaccine safety is less positive, particularly in the European region, which has seven of the ten least confident countries, with 41% of respondents in France and 36% of respondents in Bosnia & Herzegovina reporting that they disagree that vaccines are safe, followed by Russia (28%) and Mongolia (27%), with Greece, Japan and Ukraine not far behind (25%). This is compared to a global average of 12%.

Europeans' attitudes towards vaccination

In response to the threat to public health posed by outbreaks of vaccine-preventable diseases, the EU is taking action to strengthen cooperation. <https://echalliance.com/attitudes-towards-vaccination/> 2019

¹⁶<https://www.cdc.gov/flu/professionals/vaccination/prepare-practice-tools.htm>

¹⁷<https://www.vaccineconfidence.org/research/the-state-of-vaccine-confidence-2016/>

d) Recommendation and question-answer

Make a Strong Flu Vaccine Recommendation

FIGHT FLU



Information for Health Care Professionals

CDC recommends everyone 6 months and older get an Influenza (flu) vaccine every year. Flu vaccine has been shown to prevent millions of illnesses, tens of thousands of hospitalizations and thousands of deaths each year.

Your Vaccine Recommendation is Critical

As a health care professional (HCP), your strong recommendation is a critical factor in whether your patients get an influenza vaccine. Research indicates that adults are more likely to get their flu vaccine if their doctor or health care professional recommends it to them. Most adults believe vaccines are important, but they need a reminder from you to get vaccinated.



When to Vaccinate

- CDC recommends that vaccination should be offered by the end of October. However, vaccination should continue throughout flu season as long as influenza viruses are circulating, even into January or later.
- If you do not offer vaccine at your facility, make a flu vaccine referral, and then follow up with each patient during subsequent appointments to ensure they got vaccinated. If the patient remains unvaccinated, repeat the recommendation/referral and try to identify and address any questions or concerns.

How to Make a Strong Flu Vaccine Recommendation

Based on years of research into vaccine motivators, CDC has developed a mnemonic device to help HCPs make a strong vaccine recommendation. This method known as "SHARE" can help you to make a strong vaccine recommendation and provide important information to help patients make informed decisions about vaccinations.

S- SHARE the reasons why an influenza vaccine is right for the patient given his or her age, health status, lifestyle, occupation, or other risk factors CDC recommends annual vaccination for everyone 6 months and older with any licensed, age-appropriate flu vaccine with no preference expressed for one vaccine over another.

"This vaccine can protect you and your family from getting sick from flu. By getting the vaccine today, you'll be protecting yourself and the people around you who may be more vulnerable to serious flu illness, like your children and parents."

H- HIGHLIGHT positive experiences with influenza vaccines (personal or in your practice), as appropriate, to reinforce the benefits and strengthen confidence in flu vaccination.

Tell your patients that CDC and you recommend they get an influenza vaccine each year.



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Preparing for Questions Parents May Ask about Vaccines

Many parents won't have questions about vaccines when you give your strong recommendation and use language that assumes parents will accept vaccines for their child.

If a parent questions your recommendation, this does not necessarily mean they will not accept vaccines. They consider you their most trusted source of information when it comes to vaccines and sometimes parents simply want your answers to their questions. This sheet outlines some of the topics most parents ask about and tips for how to answer their questions.

Questions about the vaccine schedule and number of vaccines

Some parents may be concerned that there are too many vaccines or that their child will receive too many at one time. But, they may not understand that following the recommended vaccine schedule provides the best protection at the earliest possible time against serious diseases that may affect infants early in life.

PARENTS MAY ASK: *Can it harm my child to get several vaccines at one time? Does my child need all of the vaccines recommended?*

To respond, you can:

- Share that no evidence suggests that receiving several vaccines at one time will damage or overwhelm a healthy child's immune system.
- Explain what antigens are (parts of germs) and emphasize the small amount of antigens in vaccines compared to the antigens babies encounter every day in their environment.
- Remind parents that they must start each vaccine series on time to protect their child as soon as possible and their child must complete each multi-dose series for the best protection. There are no data to support that spacing out vaccines offers safe or effective protection from these diseases.

"There's no proven danger in getting all recommended vaccines today. Any time you delay a vaccine, you leave your baby vulnerable to disease. It's really best to stay on schedule."

Questions about whether vaccines are more dangerous for infants than the diseases they prevent

Because vaccines are very effective, many parents have not seen a case of a vaccine-preventable disease firsthand. Therefore, they may wonder if vaccines are necessary and if the risks of vaccinating infants outweigh the benefits of protection from vaccine preventable diseases.

PARENTS MAY ASK: *Are these diseases that dangerous? Is it likely that my baby will catch this disease? Will ingredients in vaccines hurt my baby more than possibly getting the disease could?* To respond, you can:

- Share your experience of how these serious diseases still exist and explain that outbreaks still occur in the U.S. For example:
 - From year to year, measles cases in the U.S. can range from roughly less than 100 to a couple hundred. However, in 2014, health departments reported cases in 667 people from 27 states.
 - Between 1970-2000, health officials reported fewer than 8,000 cases of whooping cough each year in the U.S. But since 2010, health officials have reported between 15,000 and 50,000 cases of whooping cough each year to CDC.
- Teach parents that diseases eliminated in the U.S. can infect unvaccinated babies if travelers bring the diseases from other countries. If you need up-to-date information on specific diseases, share *Disease Fact Sheets* with parents.
- Remind parents that many vaccine preventable diseases can be especially dangerous for young children and there's no way to tell in advance if their child will get a severe or mild case. Without vaccines, their child is at risk for getting seriously ill and suffering pain, disability, and even death from diseases like measles and whooping cough.

"I know you didn't get all these vaccines when you were a baby. Neither did I. However, we were both at risk of serious diseases like Hib and pneumococcal meningitis that can lead to deafness or brain damage. Today, we're able to protect your baby from 14 serious diseases before his second birthday with vaccines."

Questions about known side effects

It is reasonable for parents to be concerned about possible reactions or side effects listed on *Vaccine Information Statements*. Vaccines, like any medication, can cause some side effects. Many of these effects are minor, treatable, and last only a few days.

PARENTS MAY ASK: *Will my child be okay if she has a side effect? I know someone whose baby had a serious reaction—will my baby too?* To respond, you can:

- Remind parents that most side effects are mild and go away within a few days.
- Reassure parents that you and your staff are prepared to deal with serious vaccine reactions.
- Encourage parents to watch for possible side effects (fussiness, low-grade fever, soreness where the shot was given) and provide information on how they should treat them and how to contact you if they observe something they are concerned about.
- Share your own experience, or lack thereof, of seeing a serious side effect from a vaccine. Explain that serious side effects are very rare.

Reassure parents that the disease-prevention benefits of getting vaccines are much greater than the risks of possible side effects.



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e) Vaccination: who make it?

WHO¹⁸ recommendations for influenza virus vaccine composition for the 2019–2020 northern hemisphere season: On 18–20 February 2019, the World Health Organization (WHO) agreed on the recommended composition of the quadrivalent influenza vaccine for the northern hemisphere 2019–2020 influenza season: an A/Brisbane/02/2018 (H1N1)pdm09-like virus, an A(H3N2) virus component to be announced on 21 March 2019, a B/Colorado/06/2017-like virus (B/Victoria/2/87 lineage) and a B/Phuket/3073/2013-like virus (B/Yamagata/16/88 lineage). The WHO recommendations are based on the viruses currently circulating globally. The WHO recommendation represents a change in the (H1N1) pdm09 component. Compared to the current trivalent and quadrivalent vaccines for the 2018–2019 season in the northern hemisphere influenza season, the B virus components are unchanged from 2018–2019. Due to the genetic and antigenic diversity of recently circulating A(H3N2) viruses, the recommendation of the A(H3N2) virus component has been postponed to allow more time for the selection of the appropriate virus.

f) Vaccination: for whom?

➤ Pregnant women

Flu is more likely to cause severe illness in pregnant women than in women of reproductive age who are not pregnant. Changes in the immune system, heart, and lungs during pregnancy make pregnant women (and women up to two weeks postpartum) more prone to severe illness from flu, including illness resulting in hospitalization. Flu also may be harmful for a pregnant woman's developing baby. A common flu symptom is fever, which may be associated with neural tube defects and other adverse outcomes for a developing baby. Getting vaccinated can also help protect a baby after birth from flu. (Mom passes antibodies onto the developing baby during her pregnancy.)¹⁹

Pregnant women should get a flu shot and not the live attenuated influenza vaccine (LAIV), also known as nasal spray flu vaccine. Flu vaccines given during pregnancy help protect both the mother and her baby from flu. Vaccination has been shown to reduce the risk of flu-associated acute respiratory infection in pregnant women by up to one-half.

➤ High blood pressure

Influenza vaccination in patients with high blood pressure is associated with an 18% reduced risk of death during flu season, according to research presented today at ESC Congress 2019 together with the World Congress of Cardiology

<https://www.sciencedaily.com/releases/2019/09/190901100615.htm>

➤ Mistrust for vaccination

Public mistrust of vaccines means the world is taking a step backwards in the fight against deadly yet preventable infectious diseases, warn experts. The [biggest global study](#) into attitudes on immunization suggests confidence is low in some regions.

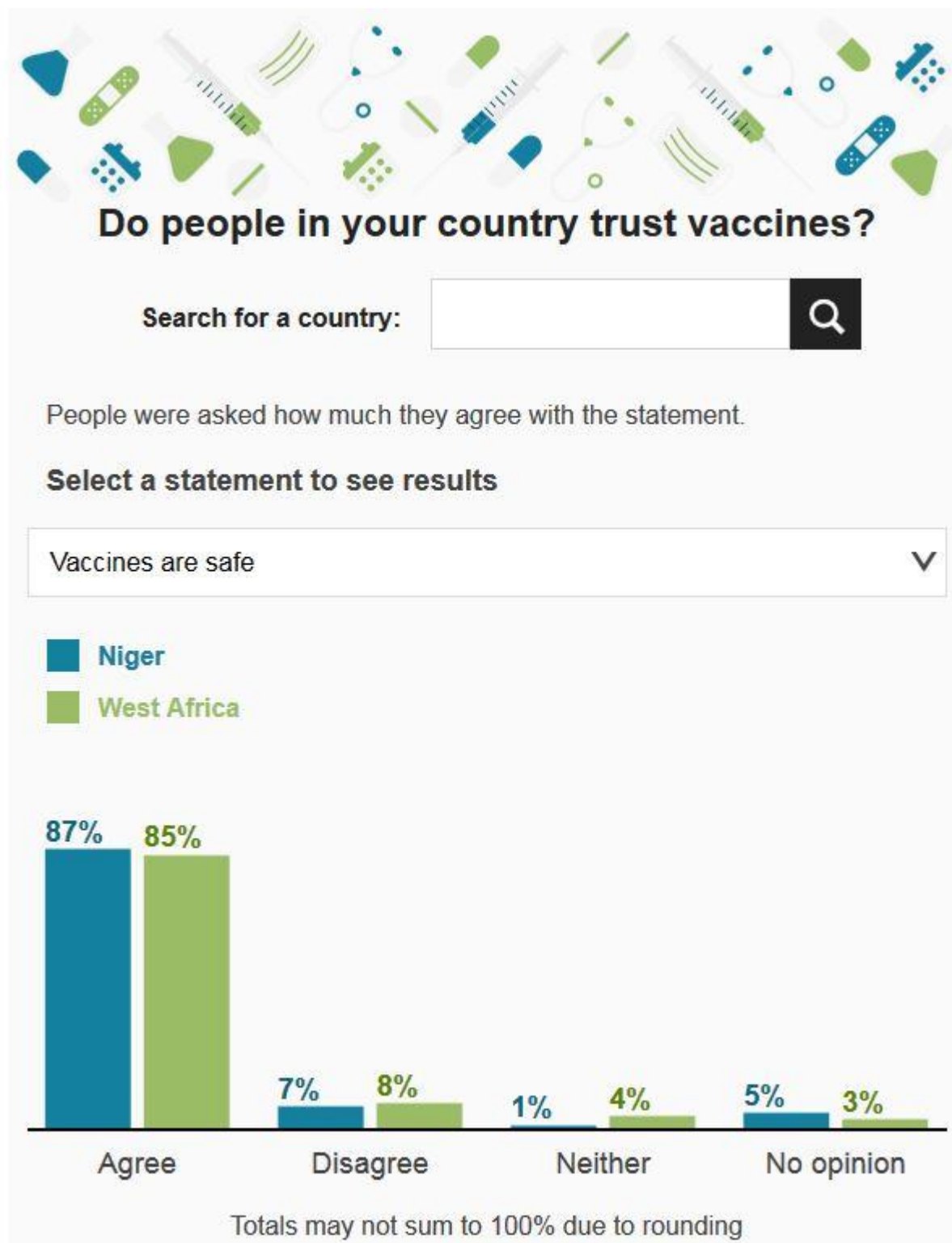
¹⁸<https://ecdc.europa.eu/en/news-events/who-recommendations-influenza-virus-vaccine-composition-2019-2020-northern-hemisphere>

¹⁹https://www.cdc.gov/flu/highrisk/qa_vacpregnant.htm

The Wellcome Trust analysis includes responses from more than 140,000 people in over 140 countries. The World Health Organization lists vaccine hesitancy as one of the top 10 threats to global health²⁰.

If you want to know the opinion in your country, click on the following site!

- <https://www.bbc.com/news/health-48512923>



²⁰In <https://www.bbc.com/news/health-48512923> June 2019

➤ **Homeopathy and vaccination**

Does Oscillococcinum work for Flu?²¹

g) Side effect of vaccination, precaution and Guillain-Barre syndrome²²

- The most frequent side effects of vaccination with intramuscular and intradermal IIV in adults are soreness and redness at the vaccination site. These local injection-site reactions are slightly more common with vaccine administered intradermally, with needle-free jet injection and with high-dose IIV. They generally are mild and rarely interfere with the ability to conduct usual activities. Fever, malaise, myalgia, headache, and other systemic symptoms sometimes occur after vaccination; these may be more frequent in people with no previous exposure to the influenza virus antigens in the vaccine (such as young children) and are generally short-lived.
- Guillain-Barre syndrome (GBS) was associated with the 1976 swine influenza vaccine, with an increased risk of 1 additional case of GBS per 100,000 people vaccinated. None of the studies of influenza vaccines other than the 1976 influenza vaccine has demonstrated a risk of GBS of similar magnitude. If there is an increased risk of GBS after seasonal influenza vaccines, it is small, approximately 1–2 additional cases per 1 million people vaccinated.
- The most frequent side effects of Live Attenuated Influenza Vaccine LAIV reported in healthy adults include minor upper respiratory symptoms, runny nose, and sore throat, which are generally well tolerated. Some children and adolescents have reported fever, vomiting, myalgia, and wheezing. These symptoms, particularly fever, are more often associated with the first administered LAIV dose and are self-limited.
- Influenza vaccine is contraindicated in people who have had a previous severe allergic reaction to influenza vaccine, regardless of which vaccine component was responsible for the reaction. Immediate hypersensitivity reactions (such as hives, angioedema, allergic asthma, and systemic anaphylaxis) rarely occur after influenza vaccination. These reactions likely result from hypersensitivity to vaccine components, one of which is residual egg protein.

The seasonal flu shot is a yearly vaccine administered to protect against the flu, or influenza.

In the United States, flu shots are recommended for everyone ages 6 months and older, [according to the Centers for Disease Control and Prevention](#).²³

According to the CDC, mild side effects from the flu shot include soreness, redness or swelling at the injection site, low-grade fever and aches. Only about 1 percent to 2 percent of people who get a flu shot will have fever as a side effect, Schaffner said.

Rare but serious side effects can occur, including allergic reactions. Symptoms of serious side effects include difficulty breathing, swelling around the eyes or lips, hives, racing heart, dizziness and high fever. If you experience serious side effects, you should seek medical care immediately, the CDC says.

²¹<https://www.healthline.com/nutrition/oscillococcinum>

²²<https://wwwnc.cdc.gov/travel/yellowbook/2020/travel-related-infectious-diseases/influenza>

²³<https://www.livescience.com/40279-flu-shot-information.html>

For children, side effects from the flu nasal spray can include runny nose, wheezing, headache, vomiting, muscle aches and fever. For adults, side effects include runny nose, headache, sore throat and cough. These side effects last a short time compared to the actual flu illness, the CDC says.



Is the nasal spray recommended²⁴?

After not recommending the flu nasal spray for the past two years, the CDC is once again recommending the spray during the 2018-2019 flu season.

For both the 2016-2017 season and the 2017-2018 season, the CDC omitted the nasal spray, called FluMist, from its list of recommended flu vaccine types. That's because data showed that the nasal spray was not very effective at preventing flu from 2013 to 2016, the CDC said.

h) Diabetics and vaccination

Did you know that patients with chronic conditions, such as those with diabetes, are especially vulnerable to influenza because of higher risk of complications?

A campaign was supported, in 2018, by an alliance of organizations and groups, called the Influenza Diabetes Task Force²⁵. This Task Force are committed to educating and engaging healthcare professionals about the impacts of influenza. The goals are to:

- Provide knowledge on influenza & diabetes to healthcare professionals so that they can better support their patients in vaccine decision-making;
- Increase influenza vaccination coverage rates among people living with diabetes, thus lowering their risk of suffering from influenza and its related complications.

How to Talk to People with Diabetes who are Reluctant to Getting Vaccinated²⁶?

People with diabetes (PWDs) are more susceptible to vaccine-preventable illness and diseases than the general public; unfortunately, many PWDs are not aware of this risk to their health. Educational visits are an opportune time for diabetes educators to promote vaccines as part of an effective strategy for preventative care.

²⁴Flu Shot Facts & Side Effects (Updated for 2018-2019), By [Rachael Rettner](#) August 17, 2018 [Health](#)

²⁵ <https://eswi.org/influenza-diabetes-community/>

²⁶ <https://www.diabeteseducator.org/news/aade-blog/aade-blog-details/aade/2019/02/20/how-to-talk-to-people-with-diabetes-who-are-reluctant-to-getting-vaccinated>

Here is the most important vaccine that midwives and nurses should promote among PWD's to reduce the risk of severe infection and complications: Influenza (flu). During flu season, it is critical that individuals with diabetes receive the influenza and pneumococcal vaccines. The CDC estimates almost 80,000 Americans died from influenza and related complications during the 2017-2018 flu season and only 37% of adult Americans received flu vaccine.^{1,2} Influenza vaccine uptake in American adults has been historically low, often due to misperceptions about the burden/severity of flu infection and a lack of confidence in vaccine efficacy.

i) Epidemiology

Seasonal Influenza

Influenza circulation varies geographically. In temperate regions, influenza typically circulates at higher levels during colder winter months: October to May in the Northern Hemisphere and April to September in the Southern Hemisphere. In many tropical or subtropical regions, influenza can occur throughout the year.

Influenza may be more common in children, especially in school-aged children. Rates of severe illness and death are typically highest among people aged ≥ 65 years, children < 2 years, and people of any age who have underlying medical conditions that place them at increased risk for complications of influenza.

(www.cdc.gov/flu/about/disease/burden.htm).

Section 4

Let's train ourselves to stay up-to-date

a) Training

On WHO website²⁷

Overview: This course²⁸ provides web-accessible training on influenza sentinel surveillance for public health practitioners and laboratorians. Participants learn what kinds of data to collect from influenza patients and patient specimens, and the methods of collecting these data. Participants also learn how to analyse, summarise, report, present, and interpret data collected within a sentinel influenza surveillance system. Each of the four modules contains online lecture content, quizzes, a hands-on activity that can be conducted individually or with a group, an instructor's guide for completing the activity, and a cumulative assessment that covers the major teaching points in the module.

Learning objectives: This course aims to:

- provide a public health background on influenza;
- introduce the major steps and concepts involved in conducting public health surveillance; and
- discuss the rationale and objectives of conducting sentinel surveillance for influenza.

Course duration: Approximately 14 hours. (Lectures, quizzes and assessments should take 4-5 hours to complete. Allotted time for activities is around 9 hours in total.)

Certificates: A record of achievement is issued to those who earn more than 75% of the maximum number of points from all graded assignments. A confirmation of participation is issued to those who complete at least 80% of the course material.

- **Lesson 1 Part A: Overview of Influenza:**
By the end of this lesson, you will be able to describe the characteristics of influenza viruses and the disease they cause.
- **Lesson 1 Part B: Influenza Surveillance:**
By the end of this lesson, you will be able to list the objectives of influenza surveillance and review the common types of surveillance and the types used for influenza surveillance. You will also understand the need to establish sentinel influenza surveillance, be able to discuss how influenza surveillance data are used, and understand the importance of data quality for influenza surveillance.
- **Lesson 2: Implementing SARI and ILI Surveillance:**
By the end of this lesson, you will be able to understand the case definition for severe acute respiratory infection (SARI), influenza-like illness (ILI) and the principle etiologic agents. You will also be able to describe ways to identify and sample cases, understand the types of clinical samples to collect, list the minimum data that should be collected, explain why epidemiological data should be reported through FluID, and finally, describe key indicators for surveillance system monitoring and evaluation.
- **Lesson 3: Data Analysis: Using Tables and Graphs to Present Surveillance Data:**
This lesson focuses on data analysis and ways to use tables and graphs to present surveillance data. By the end of this lesson, you will be able to understand the use of absolute and relative measures, describe seven key influenza indicators and interpret the recommended outputs. You

²⁷ <https://openwho.org/courses/seasonal-influenza-introduction>

²⁸ <https://openwho.org/courses/influenza-sentinel-surveillance>

will also be able to construct tables and graphs to illustrate proportions and distributions as well as interpret tables and figures to analyse trends.

- **Lesson 4: Organizing a Sentinel Surveillance System:**

This lesson focuses on organizing a sentinel surveillance system. By the end of this lesson, you will be able to understand the roles and responsibilities for sentinel influenza surveillance at surveillance site, laboratory, and at national level in Ministry of Health. You will also be able to describe the information flow related to influenza sentinel surveillance.

b) E-learning course²⁹: Influenza vaccination campaigns targeting healthcare workers

This online course aims to support the EU/EEA Member States in their planning of annual seasonal influenza vaccination campaigns targeting healthcare workers.

c) MOOC on vaccinology³⁰

The objective of this course is to offer an integrated overview of vaccinology, from public health and scientific data justifying the development of a vaccine, to its delivery to the populations in the context of industrialized and developing countries.

Dedicated to candidates with a medical or scientific background who are interested in all aspects of vaccinology: medical and public health students, scientific Master II and PhD students (Immunology, Microbiology), physicians, pharmacists, veterinarians and other health professionals.

The MOOC is composed of 31 lectures presenting historical aspects of vaccines, immunology and design of vaccines, basic principles of preclinical and clinical development, an update of vaccine development for the major infectious diseases, and the future challenges of vaccinology.

This MOOC is organized in 6 modules over a time period of 6 weeks. Each module consists of 5/6 video sequences of 10 minutes' length on average, followed by two questions to help learners to update their understanding. For each sequence, discussions are open on the forum. The main questions addressed on the forums will be answered weekly in live by hangouts.

²⁹<https://ecdc.europa.eu/en/news-events/e-learning-course-influenza-vaccination-campaigns-targeting-healthcare-workers>

³⁰<https://www.fun-mooc.fr/courses/pasteur/96002So2/session02/about>

Section 5

Improve e-health and digital way

1. **Vaccination:** European Commission and World Health Organization join forces to promote the benefits of vaccines

12 September 2019: the European Commission and the World Health Organization (WHO) are co-hosting the world's first [Global Vaccination Summit](#) in Brussels. The aim is to accelerate global action to stop the spread of vaccine-preventable diseases, and advocate against the spread of vaccine misinformation worldwide.

2. **For 2019: Important Dates & Resources offer by CDC**

- **October:** 2019-20 [FluView](#) Starting in October. The 2019-20 FluView will be released on Friday mornings. [Sign up](#) to get the latest updates on flu from CDC.
- **December 1-7:** [National Influenza Vaccination Week \(NIVW\)](#)

3. **Expert consultation meeting: Developing a training course on vaccine acceptance³¹**

Vaccine acceptance and dealing with vaccine hesitancy is increasingly a topic of concern, and empowering frontline healthcare professionals to deal with this challenge is vitally needed at this time. At the beginning of 2019, vaccine hesitancy was included in the top 10 health threats of this year for WHO. In order to improve the skills of European health professionals working in healthcare and public health in addressing the doubts and concerns of patients regarding vaccination, ECDC convened an expert consultation meeting during 11-12 April 2019 to inform the development of a training course on vaccine acceptance.

4. **10th edition of Options for the Control of Influenza³²**

- In Singapore, September 2019. Objectives: Provide comprehensive, state-of-the art scientific information for all disciplines involved in influenza prevention, control, and treatment, including seasonal and pandemic planning.
 - Promote genuine international and multidisciplinary collaboration supporting the full spectrum of influenza research, from basic science to the development of new vaccines and antiviral agents, to epidemiology and control programs.
 - Provide a collegial atmosphere where scientists working in both public health and agricultural/veterinary agencies may exchange information to develop collaborative approaches to the control and prevention of pandemic influenza.
 - Maximize the opportunities for informal discussions and exchange of ideas between representatives of government agencies, academia, and industry.

5. **Pinterest to direct vaccine searches to health sites**

Pinterest users searching for vaccine-related information will be directed to results from "public health organisations". Pinterest is an online scrap booking platform.

6. **Connecting Nurses @connectingnurse**

³¹<https://ecdc.europa.eu/en/news-events/expert-consultation-meeting-developing-training-course-vaccine-acceptance>

³²<https://2019.isirv.org/>

@WHO & @Facebook worked together to ensure users will have access to accurate and reliable vaccine information all over the group networks. #VaccinesWork #Vaccination #Flu

Last tool: **Five simple steps to protect against flu**

(WHO: [Nov 6](#) · 2 min read!!!)

Midwives and Nurses

- ✚ **Get vaccinated**
- ✚ **Wash your hands regularly**
- ✚ **Avoid touching your eyes, nose and mouth**
- ✚ **Avoid being around sick people**
- ✚ **If you don't feel well, stay home**

<https://medium.com/@who/five-simple-steps-to-protect-against-flu-30465fa69da2>

Conclusion

The Millennia2025 Women and Innovation Foundation creates and manages new online tools under the joint M2025 label. For you midwives and nurses, this booklet concerns you and it is developed for you to give you the keys to prevention and information needed for the fight against influenza around the world.

Register: www.millennia2015.org/Community_Registration

And follow us on: www.m2025-weobservatory.org/ BLOG: www.weobservatory.com



Annex

Annex 1: list of 127 countries where nurses vaccinate

As of 21 November 2016

Vaccination zone	Countries, areas or territories from tropics and subtropics
NH – North America	Guatemala, Jamaica, Mexico
SH – South America	Anguilla, Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia (Plurinational State of), Brazil, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, French Guiana, Grenada, Guyana, Haiti, Honduras, Montserrat, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Islands, Uruguay, Venezuela (Bolivarian Republic of)
NH – Northern Africa & Middle East	Afghanistan, Algeria, Bahrain, Burkina Faso, Chad, Djibouti, Egypt, Eritrea, Ethiopia, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Mali, Mauritania, Morocco, Niger, Oman, Pakistan, Qatar, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates, Yemen
SH – Western Africa	Benin, Cabo Verde, Cameroon, Central African Republic, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo, Uganda
NH – Equatorial Africa	Burundi, Congo (the), Democratic Republic of the Congo, Equatorial Guinea, Gabon, Madagascar, Malawi, Mauritius, Rwanda, United Republic of Tanzania
SH – Southern Africa	Angola, Botswana, Mozambique, Namibia, South Africa, Zambia, Zimbabwe
SH – Tropical Asia	Bangladesh, Bhutan, Cambodia, India, Lao People's Democratic Republic, Maldives, Myanmar, Nepal, Philippines, Thailand, Timor-Leste, Viet Nam
NH – Equatorial Asia	American Samoa, Brunei Darussalam, Cook Islands, Fiji, French Polynesia, Guam, Indonesia, Kiribati, Marshall Islands, Nauru, New Caledonia, Niue, Palau, Papua New Guinea, Samoa, Singapore, Solomon Islands, Sri Lanka, Tonga, Vanuatu



Annex 2 – List of Influenzae vaccins

Generic Name	Brand Name
trivalent inactivated influenza vaccine (TIV)	Agriflu, Fluad, Fluviral, Fluzone, Influvac, Vaxigrip
quadrivalent inactivated influenza vaccine	Flulaval Tetra, Fluzone Quadrivalent
live attenuated influenza vaccine	FluMist (nasal)

Influenza (flu), a contagious viral disease, can usually be prevented by getting immunized with a flu vaccine. The inactivated influenza vaccine contains several different strains of killed influenza viruses that are most likely to be circulating within the population in a given year. This vaccine is injected into a muscle, usually in the upper arm. The body develops antibodies to fight off the similar strains of influenza within about 2 weeks.

A flu vaccine (FluMist) that is given as a spray in the nose is also available in Canada. Because this flu vaccine uses live flu virus, it is not recommended for children younger than 2 years, pregnant women, people with some health conditions, or people over age 59. For more information, talk with your doctor or public health nurse. The vaccine is reformulated every year because the influenza viruses change in ways that make a previous year's vaccine ineffective. In Canada, the United States, and other temperate areas of the northern hemisphere, flu epidemics usually occur in the winter. To be fully protected, you need to be **immunized** each year.

Annex 3 : Immunization schedule

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