
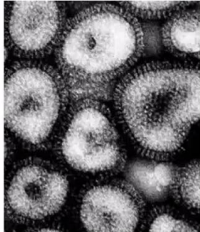


Flu Vaccination Event Notes

What is influenza (flu)

- There are three kinds of flu virus
 - Flu A
 - Flu A is further subdivided into "H" & "N" types
 - H = Haemagglutinin
 - N = Neuraminidase
 - i.e. H1N1 or H3N2
 - Flu B
 - Flu C
- Influenza C is a rare cause of flu in humans c. 1%



NHS
University College
London Hospitals
NHS Foundation Trust

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End

Is flu a winter only virus?

- Flu A & B infections are strongly seasonal
- In the UK flu season typically begins in December & carries on until March
- In general, flu A arrives first
- Flu affects all regardless of ages, gender or any other demographic characteristic

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Outbreaks of flu

- There are typically two main variations of flu and in the UK flu A and B are strongly seasonal (December to March typically).
- Children do not get as sick from flu as older people.
- Public Health England publishes weekly and annual flu reports (annual - <https://www.gov.uk/government/statistics/annual-flu-reports>)



How is the flu virus spread?

- Flu is mainly spread by droplets
 - Surface contamination
 - Contaminated hands
 - Can be spread by aerosol
- Incubation period is 2-3 days
- When is flu contagious
 - 1 day before symptoms to 5 days after onset of illness in adults
 - This period is extended by several days in children and in the immunocompromised
- Flu virus can survive on hard surfaces for 72 hours and on porous items (clothing, tissues) for 24 hours
- The virus is easily inactivated by alcohol hand gel and by routine environmental cleaning

How is flu spread?

- Flu is mainly transmitted via droplets It has an incubation period of 2-3 days.
- People are contagious with the flu 1 day before symptoms start showing to 5 days after symptoms start, usually.
- Children react differently to flu and although they are likely to have milder symptoms, they can be infectious for up to a few weeks after the first get ill.
- As with Covid-19, the flu virus can live on hard surfaces (door handles) for up to 72 hours and on soft surfaces (clothes) for 24 hours



Pandemic influenza

Emergence of a new strain to which a large proportion of the population have no immunity

- The first pandemic that fits the description of influenza appeared in 1580
 - Begun in Asia and Russia and spread to Europe via Asia Minor and North-West Africa.
 - In Rome, it caused the death of over 8,000 people, while in Spain it decimated the populations of entire cities.

- Spanish flu 1918-1919 H1N1 (20 to 100 million dead)
- Asian flu 1957/58 H2N2 (~1.5 million)
- Hong Kong Flu, 1968-69 H3N2 (~ 1 million dead)
- Novel H1N1, 2009 (swine flu) (100 thousand to 400 thousand)
- **H5N1 (avian Flu) 1997-Present**
- **H7N9 (avian flu)**
- Avian Flu
 - Few cases of human infections, limited human-human transmission

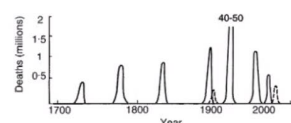



Fig. 2 History of influenza pandemics 1700-2000. Not to exact scale

- Epidemics happen every year - eg. Seasonal flu. During the winter season in the UK we have an epidemic for flu.
- Every 50 or so years, you'll have a flu pandemic. In 2009 we had swine flu, which was a new mutation of H1N1

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Who should have the flu vaccine?

Individuals that are more likely to be unwell if infected or could transmit to others at risk

- All children aged two to eleven on 31st Aug 2020 (
- Those aged 65 or over (including those becoming 65 by 31st March 2021)
- Pregnant women
- Those in long-term residential care homes
- Carers
- Health and social care workers
- Household contacts of those on the [NHS shielded patient list](#) or of immunocompromised individuals
- If enough vaccine 50-64 year age group can also be vaccinated

- Those aged 6 months to 65 years in at-risk groups including people with the following health conditions:
 - Respiratory (lung) diseases, including asthma
 - Heart disease, kidney disease or liver disease
 - Neurological (brain or nerve) conditions including learning disability
 - Diabetes
 - A severely weakened immune system (immunosuppression), a missing spleen, sickle cell anaemia or coeliac disease
 - Being seriously overweight (BMI of 40 and above)

- Everyone should have the flu vaccination this year. The goal is to offer the vaccination to as many people as possible:
 - Over 65
 - Pregnant women
 - Care home residents
 - Carers (in hospital / care homes)
 - Health and care workers
 - NHS shielding group
 - Possibly 50-64 year group if enough

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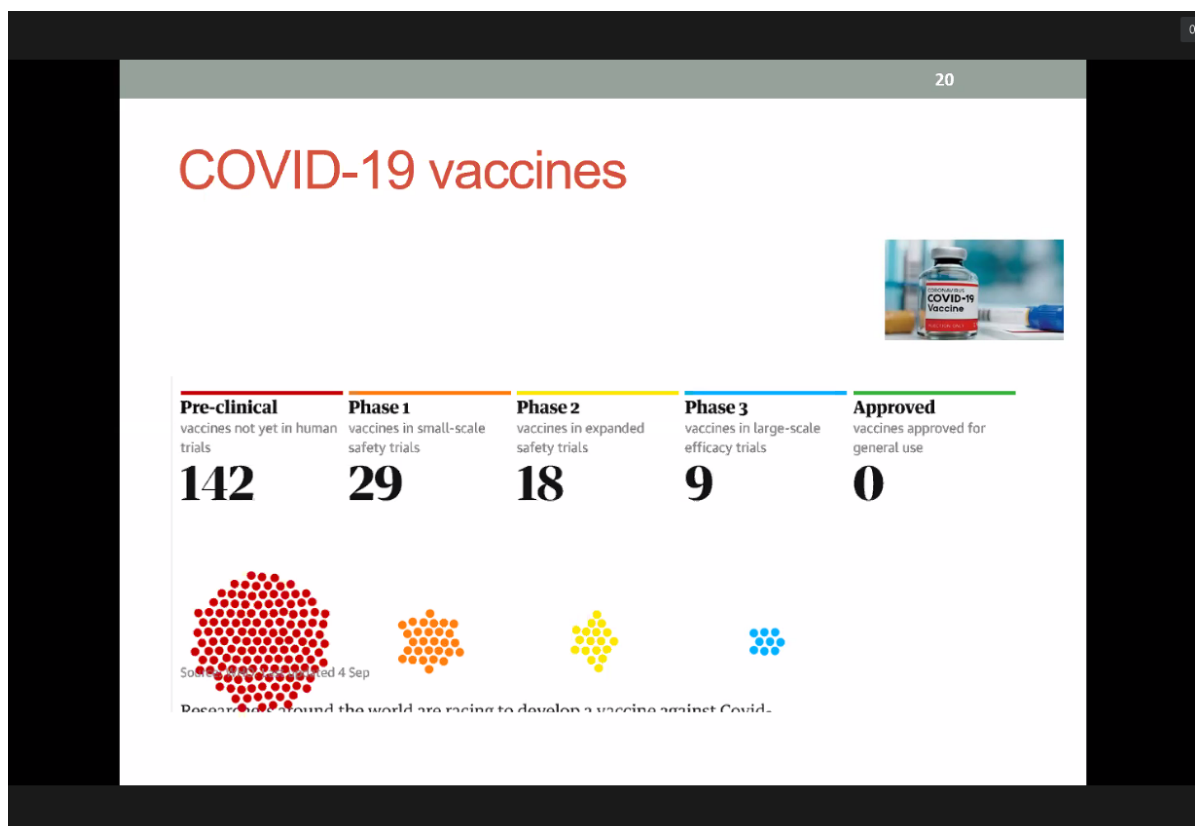
Are there different types of flu vaccine?

Age Group	Recommended Vaccine	Live vaccine?	Types of flu strains protected	Reason for recommendation
Children aged 6 months to 2 years	Egg-grown quadrivalent vaccine (QIVe)	No	Four	LAIV is not suitable for children under two
Children aged 2 – 17 years	Live attenuated influenza vaccine (LAIV)	Yes	Four	Nasal vaccine helps to reduce spread of flu virus in children
Adults aged 18 – 64 years	Quadrivalent influenza vaccine: Egg-grown (QIVe) Cell-based (QIVc)	No	Four	Quadrivalent vaccines protect against four types of flu strain
Adults aged 65 or over	Adjuvanted trivalent influenza vaccine (aTIV)	No	Three	"Adjuvant" is added to the vaccine to make it more effective in older people

- The vaccination for over 65's contains 'Adjuvant' which helps older people make an immune response to the strand.

Flu Vaccination

- The first flu vaccination was made in the 1930's by the same man who went on to make the polio vaccine.
- Every year more than 1 billion flu vaccinations are rolled out worldwide.
- To create the vaccination all flu testing labs submit their data to the World Health Organisation and at the end of our winter season (February) the WHO works out which flu strains it is most sensible to vaccinate again in the following season.
- In March/ April the immunisations start getting made
- In May/ June the vaccines begin getting manufactured
- By September, the vaccine starts to be sent to the places that need it. Eg, GP's pharmacists etc.
- Therefore, if a change has happened in the flu strands during the year, there is a 6 month delay and vaccinations cannot be changed to reflect that.
- Anyone can pay to have the flu vaccination privately at a pharmacy at the cost of about £9-12.



- We're currently involved in 2 Covid-19 Vaccination developments, Oxford and Imperial.
- Oxford and Imperial are conducting pre-clinical trials with small numbers of volunteers before going to phase 2 with larger numbers. They have vaccinated some people with 10,000 volunteers in the UK as well as South Africa, Brazil and North America.

Busting Common Flu Myths

1. It doesn't work

- a. The match of the vaccine may depend on one's own immunity and the effectiveness of the match of virus and vaccine
In 2016/17 - it prevented around 67% of hospital admissions and was very effective
In 2017/18 - it was not such a good match but still reduced hospital admissions by 34%

2. I had the flu, so I don't need the vaccination.

- a. The virus mutates and there's more than one type. Currently people need a flu vaccination annually but there is research into a universal vaccination taking place. You can also get flu A and B in one season.

3. I'm allergic to eggs so I can't have the vaccine.

- a. Most flu vaccines are grown on eggs, however, the amount of egg contained in a vaccine is very small. Unless you've had a serious anaphylactic reaction to eating eggs or to a previous flu jab it should be safe. If you're worried you can speak to your GP about having the vaccine in a controlled environment.

4. The flu vaccination gives you flu/ makes you sick.

- a. Neither type of the vaccination can give you the flu, even in the live vaccine the virus cannot mutate back to become strong again. It takes 10-14 days for the protection from the vaccine to start, so you could catch the flu before you're protected.

5. The vaccination has toxic ingredients

- a. The vaccination does not contain mercury. It does contain ethylmercury but this is safe and it's a very small amount. There is more mercury in a tuna sandwich than the flu vaccine. The ingredients are actually used in shampoos and even ready meals.

6. The flu vaccination has terrible side effects/ is not safe to use.

- a. The vaccination was created in the 1930's and so is not a new vaccination. It has been trialled and tested and is safe to use. There are normal side effects after a vaccination such as pain at the site of injection, headaches and muscle aches. Who ever gives you the vaccine has a responsibility to report any unusual reactions back to the monitoring body.

7. Having the flu vaccination will make you more likely to catch Covid-19 (or other respiratory viruses)

- a. There is no current evidence to support this. You can be infected with Covid-19 and the flu at the same time which is why we are suggesting people have the flu vaccine this year, so people don't get twice as sick. While there are Covid-19 vaccines being tested at the moment we don't know when or whether these will be successful and ready for use. Advice is to have the flu vaccine to reduce the chances of hospital admission.

Questions and Answers

Q1. If I'm at home, not going out because I'm scared of coronavirus, getting my shopping delivered and not seeing anyone, do I really need a flu jab?

- If you're alone in your house, not seeing anyone or having any contact with anyone you won't be catching flu. However, the flu season can run from November to April and that's a long time to not see anyone. It's better to be safe and to have the vaccination as you can't guarantee you won't come into contact with someone.

Q2. Once you have had the flu, can you re-infect yourself and would this lead to a longer illness?

- You wouldn't catch the same strain of flu again, so you wouldn't re-infect yourself. Others in your household could though. I'd give the same advice as Covid-19 for those living in the house when someone has flu - e.g. clean communal areas such as door knobs etc.

Q3. I know people who say they got flu from the vaccine. Why might this be?

- You can't get flu from the ingredients of the vaccination. Someone might be unwell for the following reasons: The vaccine doesn't work 100% of the time, the individual caught flu before the vaccine started to work or it's not flu and they have another respiratory illness.

Q4. Does having the flu vaccination every year weaken your immune system?

- No, your immune system is designed to cope with new viruses all the time. It's like saying, 'if I run on this treadmill I will get weaker'.

Q5. Will the flu vaccination protect me from Coronavirus?

- No. It won't protect you from Covid-19 or any other respiratory viruses. There's also no evidence that you would be more likely to catch Covid-19 after having the flu vaccination.

Q6. Do you think we should all be getting the flu vaccination this year - especially BAME people?

- I am biased, but yes. I do think if you have the opportunity, I would recommend you have the flu vaccination this year. As BAME people have higher risk of having Covid-19 they would also benefit from the vaccine, so they don't get flu and Covid-19 at the same time.

Q7. The pharmacist last year told me that the vaccine given to carers/those under 60 is inferior to the over 60s one. I felt under the weather for a while from straight after having it. Would there be a connection?

- The vaccination for under 65's is not inferior, it actually protects against 4 strains of flu while the vaccination for over 65's protects against 3. The vaccination for over 65's contains something that helps to boost the immune response as older people's immune systems do not do this as well.

Q8. If the vaccination contains egg it's not suitable for vegans. Does it contain gelatine?

- Yes, gelatine is in the vaccination. It's important not to confuse ethical issues when thinking about immunisations. Most Imams and Rabbi's generally support vaccinations irrespective of the ingredients, because preservation of life is seen as

more important. However, with veganism each person has to decide for themselves where they draw that line. I'd suggest researching into the manufacture of drugs and medication and deciding for yourself.

Q9. If I have multiple respiratory problems should I be staying at home as much as possible at the moment even if I've had the flu vaccination?

- The presentation of Covid symptoms has been so varied. So even though having a respiratory condition means you're more likely to catch Covid-19 we cannot know what symptoms you'd have. I do think it's best to shield yourself as much as possible *but* not to your psychological detriment. There's a personal risk assessment you need to consider.

Q10. If someone has sickle cell trait does it make any difference to how well you'd recover from Covid-19 or flu? And would you recommend having the flu vaccination even if they don't fall within the NHS groups?

- If someone is in their early 30's and has sickle cell traits, should they get the vaccine? I'm biased - yes! Our experience so far is that there's no direct connection between sickle cell traits and recovery from either of these viruses. But it's good to be safe.

Q11. Although the government has said there will be sufficient vaccine to cover everybody who needs it this year, it has failed to live up to many of its other health-related commitments. Will there be enough vaccine this year?

- Covid-19 has raised a lot of issues and made many things much harder. We have been thinking about flu from the start of Covid-19 and a lot of investment has gone into the manufacturing of the vaccine. London has had a request to optimise the vaccinations but I know we have at least 100,000 in North Central London.

Q12. Should we all be taking vitamin D? and do you have a key message for older people?

- Many of us should be taking vitamin D and it can't hurt. However, stopping smoking and losing weight will have a greater effect on our ability to recover if we catch Covid-19. The key message for older people would be - wash your hands! And try not to fixate on things.

Healthwatch flu poll

When attendees registered for this event, we asked '*In what settings would you feel comfortable having the flu jab this year? (e.g. GP surgery, pharmacy, Community Centre, supermarket etc.)*'

The responses were as follows:

GP	20
Pharmacy	10
Any of the above	8
Community Centre	2
Not sure	2
Workplace	2
No answer	2
NHS Hospital	1
Somewhere Covid free	1

'Not sure about the supermarket in case it was an inferior type but I wouldn't rule it out'

'Not sure that I want the flu vaccination'

Due to social distancing services may need to change the way they arrange appointments for flu vaccinations with their patients. With this in mind we wanted to ask attendees where they might prefer to go for a flu vaccination (if they're planning on having one) if they were unable to have it at their GP practice...

Pharmacy	80%
Community Centre	40%
Supermarket	25%
Emirates Stadium	18%
Workplace (if appropriate)	18%
Other	8%

Comments:

'none of these'

'anywhere convenient locally'

'I usually have it at my GP. They are not receiving until Oct this year, my pharmacy offered it to me yesterday, I'll be having tomorrow at pharmacy instead of waiting til Oct.'