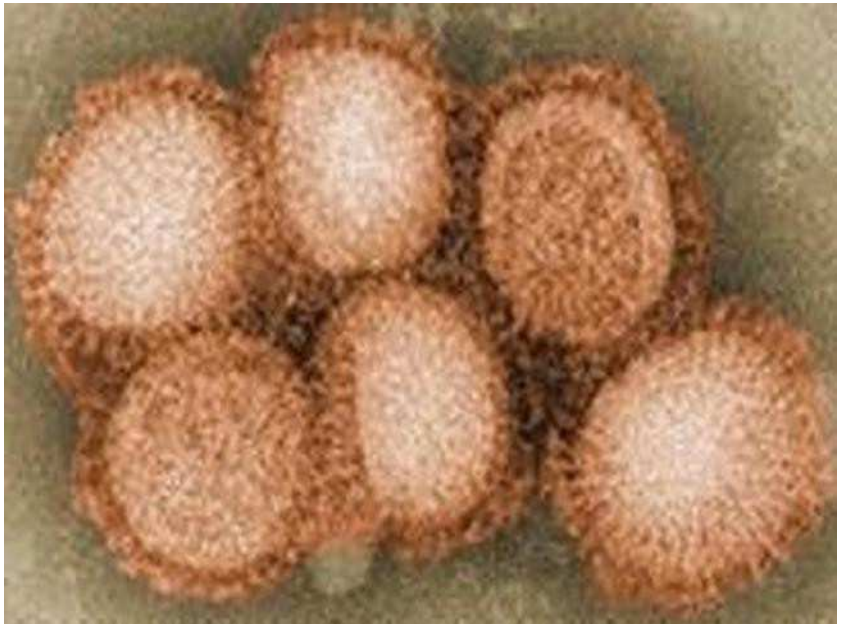
Influenza Vaccination



- Myths about vaccinations
- What a vaccination is
- Why influenza vaccination works
- Why influenza vaccination is essential among our patients, staff, and doctors
- Potential risks
- Summary

Myths about Vaccinations

- **I could get the flu from a flu vaccination:**

  -NO, the virus(es) which are used to make the flu shot vaccine are killed, and are not infectious! Viral parts used to make some vaccines are not infectious, either. All are treated and purified so as not to be infectious.

- **My child could develop autism from MMR vaccination:**

  - NO, this research has been withdrawn as untrue!

- **If I have an organ transplant, flu vaccination could be harmful.**

  -NO, flu vaccination with killed virus is recommended for transplant patients.

What a Vaccination Is

- A tool to stimulate the immune system to "recognize" a virus so it knows to make antibody to it.
- May be made from a
  - living virus
  - attenuated virus
  - inactivated (killed) virus (flu shot vaccine)
  - part of a virus which cannot cause infection

What a Vaccination Is

To make a vaccine one must:

1. Grow the specific virus(es) (for influenza, in a chicken egg, in cell culture), or construct using recombinant technology.
2. Harvest the specific virus which has grown in the egg or in cell culture.
3. Kill the virus (for the flu shot).
4. Take a piece or all of the killed virus, and make a vaccine out of it by purifying it.
5. Vaccinate.

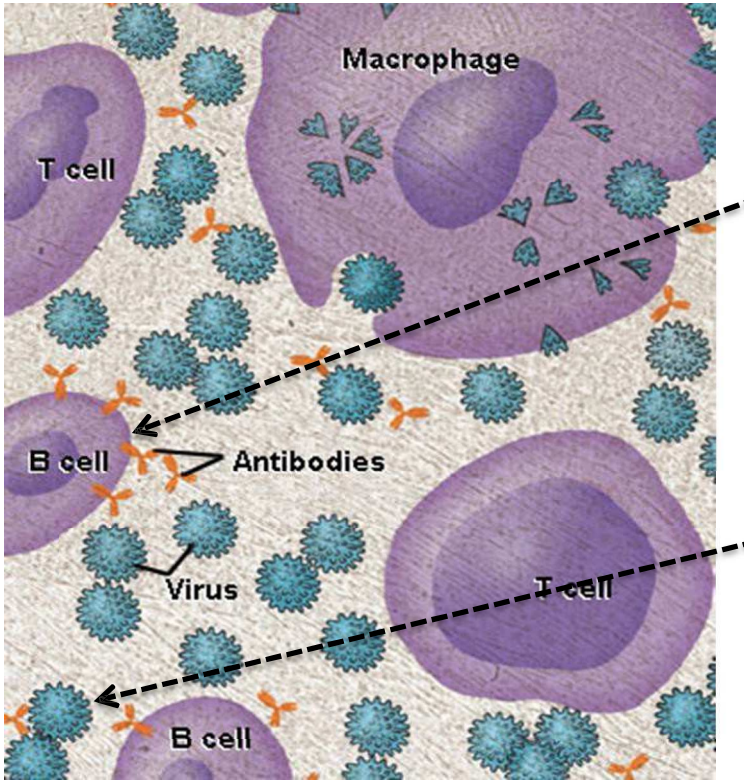
***If you are allergic to eggs or any other component of the vaccine, contact Employee Health.**

This year's vaccine does not contain thimerosol.
Each year, the vaccine usually protects against several different strains of flu.

Why Vaccination Works

- Immune cells respond to infections by making antibody to the virus.
- The antibody binds to the virus and neutralizes it.
- Immune cells "remember" the virus: the next time they see it they will make antibody to it, enabling the person to get rid of it more easily.
- Vaccination works because it teaches these cells to "remember" the virus, and make antibody when they "see" it again.

Immune cells "learn" from vaccination to fight viruses



- The patient gets vaccinated.
- Immune cells (T and B lymphocytes) "see" the vaccine and make antibody to the virus, or viral part. These cells "remember" what they've seen, and make antibody whenever they see the virus again.
- Antibody neutralizes the virus.
- The virus-antibody complex is removed from the body.

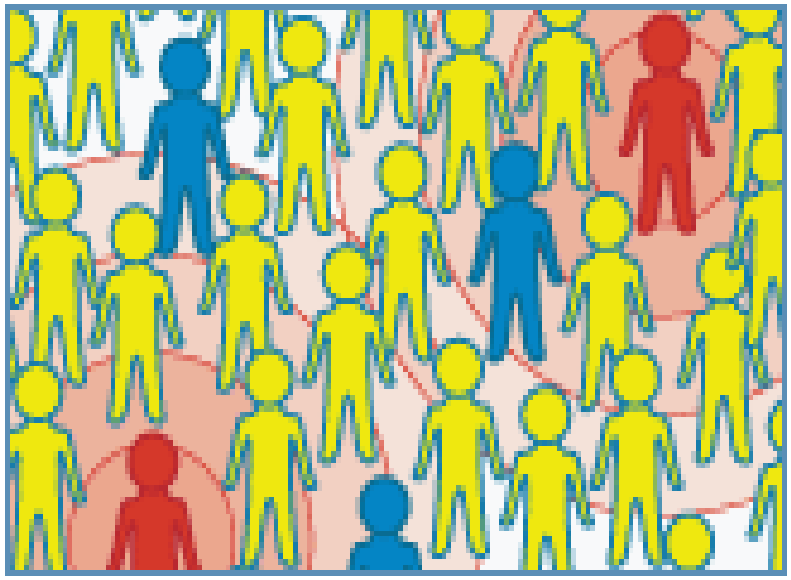
Image modified from: National Institute of Allergy and Infection Diseases/National Institute of Health/Department of Health and Human Services. "How Vaccines Work" August 2008

Why Influenza Vaccination is Essential among Dialysis Patients, Staff, and Doctors

A little sneeze or cough goes a LONG way.

Why Influenza Vaccination is Essential among Dialysis Patients, Staff, and Doctors

- The patients are ill to start with, and their immune systems are weaker than in patients without kidney disease.



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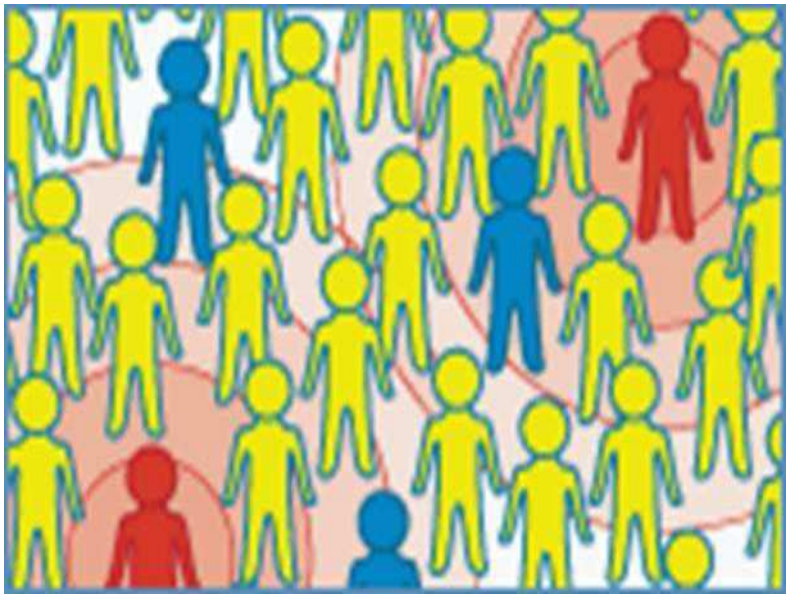

The more people that are vaccinated (that includes patients, staff, and doctors), the less likely influenza can be passed between anyone in the unit (patient to patient, patient to staff, staff to patient, MD to staff, MD to patient, etc.).

Why Influenza Vaccination is Essential among Dialysis Patients, Staff, and Doctors

- Influenza is a serious respiratory disease that results in hospitalization of more than 200,000 persons in the US yearly.

- People who contract influenza in the health care setting can shed virus for 24-48 hours before influenza symptoms appear. This can spread influenza to patients in the facility.

- Consequences of declining vaccination could have life-threatening impact on personal health and those with whom we have contact, including patients, coworkers, family, and community.

Think about this:

- When everyone at NKC is vaccinated against influenza (patients, staff, MD's), there is nowhere for the virus to go, and infections are either minimized or made much less severe.

Reaction to the Vaccine

With a vaccine, like any medicine, there is a chance of side effects. These are usually mild and go away on their own.

Minor problems following a flu shot include:

- soreness, redness, or swelling where the shot was given
- hoarseness
- sore, red or itchy eyes
- cough
- fever
- aches
- headache
- itching
- fatigue

If these problems occur, they usually begin soon after the shot and last 1 or 2 days.

More serious Problems

- There may be a small increased risk of Guillain-Barré Syndrome (GBS) after inactivated flu vaccine. This risk has been estimated at 1 or 2 additional cases per million people vaccinated. This is much lower than the risk of severe complications from flu, which can be prevented by flu vaccine.

Risks of a Reaction to the Vaccine

Serious Reaction:

- What to look for:
  - Signs of a severe allergic reaction: very high fever, or behavior changes(would start a few minutes to a few hours after the vaccination).
- What to do?
  - If a patient or staff has a severe allergic reaction or other emergency that can't wait, notify 911 and Employee Health. Otherwise, call physician.

  The safety of vaccines is always being monitored. For more information, visit: www.cdc.gov/vaccinesafety/

  - Reaction should be reported to the Vaccine Adverse Event Reporting System (www.vaers.hhs.gov, or call 1-800-822-7967).

Some people should not get this vaccine.

Tell the person who is to give you the vaccine:

1. If you have any severe, life-threatening allergies. If you ever had a life-threatening allergic reaction after a dose of flu vaccine, or have a severe allergy to any part of this vaccine, including (for example) an allergy to eggs or any other component of the vaccine you may be advised not to get vaccinated. Most, but not all, types of flu vaccine contain a small amount of egg protein.

2. If you ever had Guillain-Ba rre' Syndrome : (a severe paralyzing illness, also called GBS). Some people with a history of GBS should not get this vaccine. This should be discussed with your doctor

3. If you are not feeling well: It is usually okay to get flu vaccine when you have a mild illness, but you might be advised to wait until you feel better You should come back when you are better

adapted from Vaccine Information Statement; Flu Vaccine, Inactivated or Recombinant, 2014-2015; 42 U.S.C., § 300-aa-26; 8/07/2015
*package insert, Novartis, p 7

Summary

- Influenza can be a very severe disease in dialysis patients.
- Immunization provides the body with antibody "memory" to fight off infection.
- Patients, staff, doctors, and families can get the flu and pass it between each other if not vaccinated.
- Immunization is an "insurance" policy for patients, staff, and doctors, potentially eliminating passage of influenza.
- There are very few medical reasons not to receive vaccination; the risks of influenza immunization are minimal, and are vastly outweighed by its benefit for all.
- Patient and Staff vaccination is reported to the federal government for dialysis facilities, and is a very important expectation of Medicare for facility performance.

NKC Influenza Staff Vaccination Performance

year	% staff vaccinated
2014-15	94%
2015-16	96%
2016-17	96%
2017-18	96%