Vaccine Hesitancy

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Kelsey Hansen & Whitley Coatney
PharmD Candidates, Class of 2021

Objectives

1. Define vaccine hesitancy
2. Discuss the factors that surround vaccine hesitancy
3. Address some of the most common myths surrounding vaccines and develop a way to better educate caregivers and patients of the facts and established benefits of vaccines
4. Discuss how to address vaccine hesitancy using motivational interviewing
5. Discuss the do’s and don'ts for efficient conversation with hesitant caregiver/patient

What is vaccine hesitancy?

- The delay in acceptance or refusal of vaccines despite availability of vaccine services
- Is complex and content specific varying across time, place, and vaccines
- Is influenced by factors such as complacency, convenience, and confidence
- In 2019, vaccine hesitancy was ranked as one of the 10 biggest threats to global health

What factors contribute to vaccine hesitancy?

- Distrust in modern medicine and in government
- Fear of side effects
- Poor immunization infrastructure in lower- and middle-income countries
- A common misconception that vaccines are worse than the disease themselves

Distrust in Modern Medicine and Government

- Trust between United States citizens and its medical institutions is notably decreasing
  - Data from the General Society Survey shows that trust in U.S. medical institutions dropped from 61% in 1974 to 36% in 2016 while the Gallup-Knight Foundation reported a 43% decrease in trust between 1975 and 2015
  - United States citizens also flaunt the world's highest overall self-perception of scientific knowledge, with roughly 80% stating they know "a lot" or "some" about science, while the actual knowledge level of Americans is only slightly above the global average
- Historic failures in government responses to disasters and emergencies, medical abuse, neglect, and exploitation has jaded generations of African Americans into a distrust of public institutions
  - The Tuskegee Study

Fear of Side Effects

- All vaccines have potential side effects, but they are usually mild such as headache, fatigue, and injection site pain and affect a small number of people
- More serious side effects are extremely rare, equivalent to fewer than one in a million cases, according to a report from the Royal Society for Public Health (RSPH)
- Social media has had a big hand in spreading misinformation about vaccine safety, despite very good evidence to the contrary
    - People in all age groups said they were more likely to see negative messages about vaccines on social media than positive ones

Poor Immunization Infrastructure

- Those who live below the poverty line and are uninsured in the U.S. are less likely to receive immunizations
  - 11.5% of African Americans in the U.S. were uninsured in 2018 ~ 5,058,171 people
    - African American adults are 60% more likely than non-Hispanic white adults to be diagnosed with diabetes and 40% more likely to have high blood pressure and are less likely to have those conditions under control
  - In 2017, 75% of uninsured children aged 19-35 months only received one dose of MMR
- Vaccines for Children- federally funded program started in the 1990s that provides free vaccines to children who are uninsured or on Medicaid
  - In 2010, 82 million VFC vaccine doses were administered to approximately 40 million children

Poor Immunization Infrastructure

- Downside - the VFC program is contributing to the current deterioration of the U.S. vaccination market
  - The Federal government of the United States currently purchases 52 and 55 percent of childhood vaccines administered in the country
  - Thirty years ago, dozens of manufacturers produced vaccines for the U.S. market, but today only five companies produce all the vaccines for children and adults in the U.S.
  - The opportunity for large government contracts has led pharmaceutical companies to engage in aggressive price competition, causing the market for vaccinations to slowly collapse
  - This poses significant problems in the area of vaccine research and development, since there is little incentive for innovation within the market

Common Misconceptions

“Diseases had already begun to disappear before va were introduced because of better hygiene and sanitation”

- Improved socioeconomic conditions have undoubtedly had an indirect impact on disease
  - Better nutrition
  - The development of antibiotics and other treatments
  - Less crowded living conditions
  - Lower birth rates
- **BUT**...the only real decrease in diseases has occurred after a vaccine has been developed to prevent it

“Diseases had already begun to disappear before va were introduced because of better hygiene and sanitation”

- Several developed countries (Great Britain, Sweden, and Japan) cut back the use of the pertussis vaccine because of fear about the vaccine. The effect was dramat and immediate.
  - Great Britain: 19741978 there was an epidemic of over 100,000 cases of whooping cough and 36 deaths
  - Japan: Jump in pertussis from 393 cases and no deaths in 1974 to 13,000 cases and 41 deaths in 1
  - Sweden: The annual incidence rate of pertussis per 100,000 children 6 years of age increased from 700 cases in 1981 to 3,200 in 1985

“Vaccines contain toxic substances like mercury and aluminum”

- Mercury:
  - The form of mercury found in thimerosal is ehtylmercury (EM), **NOT** methylmercury (MM).
    - MM is the form that is found in certain kinds of fish and has been shown to damage the nervous system
  - Thimerosal is used as a preservative in vaccines to help prevent potentially life-threatening contamination with harmful microbes, but has since been removed from many vaccines as a precaution
  - Vaccines for pediatrics, adolescents, and adults are available in formulations that do not contain thimerosal

“Vaccines contain toxic substances like mercury and aluminum”

- Aluminum:
  - Used in some vaccines as an adjuvant—an ingredient that improves the immune response
    - Adjuvants can allow for use of less antigen
    - They have been used for this purpose for more than 70 years
  - The aluminum that is contained in vaccines is similar to that found in a liter (about 1 quart or 32 fluid ounces) of infant formulas
    - Within the first six months of life, infants receive:
      - 4.4 milligrams of aluminum from vaccines
      - 7 milligrams from breastfeeding
      - 38 milligrams from formula
      - 117 milligrams from soy formula
  - Most of the aluminum taken into the body is quickly eliminated

“Giving an infant multiple vaccines can overwhelm th immune system”

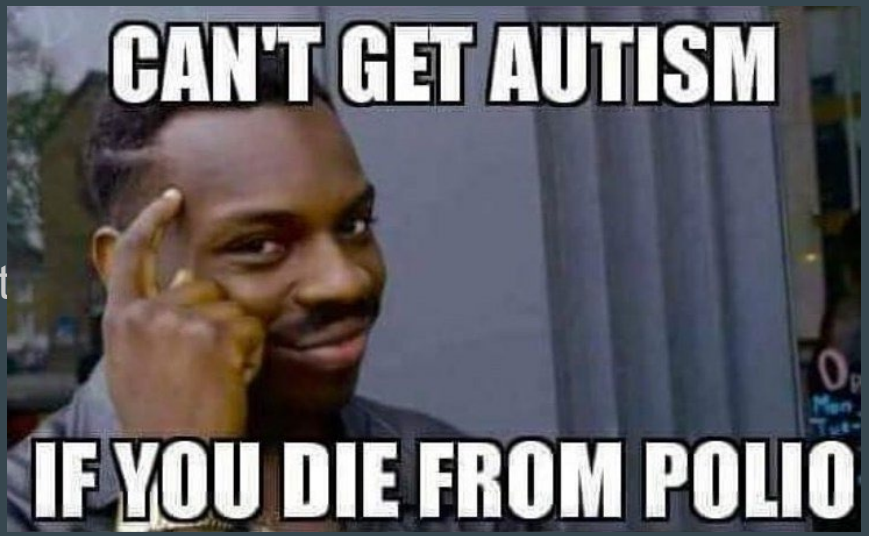
- Babies begin being exposed to immunological challenges immediately at the time of birth
  - As they pass through the birth canal and take their first breath, they are immediately colonized with trillions of bacteria, meaning they carry the bacteria in their bodies but aren’t infected by them
  - Healthy babies constantly make antibodies against these bacteria and viruses
- Children are given vaccines at a young age because this is when they are at the highest risk of getting sick or dying if they get these diseases
  - Newborn babies are immune to some diseases because they have antibodies present from their mothers, usually before they are born
  - However, this immunity only lasts a few months
  - Most babies do not get protective antibodies against diphtheria, whooping cough, polio, tetanus, hepatitis B, or haemophilus influenzae type b

“Giving an infant multiple vaccines can overwhelm th immune system”

- Scientific data show that getting several vaccines at the same time does not cause any chronic health problems
- The recommended vaccines have been shown to be as effective in combination as they are individually
  - Sometimes, certain combinations of vaccines given together can cause fever and occasionally febrile seizures; these are temporary and do not cause any lasting damage
  - Based on this information, both the Advisory Committee on Immunization Practices and the American Academy of Pediatrics recommend getting all routine childhood vaccines on time

“Vaccines cause autism”

- In 1998, Andrew Wakefield and colleagues published a paper in the journal *The Lancet*
- Wakefield’s hypothesis was that the MMR vaccine caused a series of event that include intestinal inflammation, entrance into the bloodstream of proteins harmful to the brain, and consequent development of autism



- To support his hypothesis, Dr. Wakefield described 12 children with developmental delay- eight had autism
- All of these children had intestinal complaints and developed autism within one month of receiving the MMR vaccine

“Vaccines cause autism”

- The Wakefield paper published in 1998 was flawed for two reasons:
  - ~90% of children in England received the vaccine at the time this paper was written
    - The vaccine is administered around the same time that most children are diagnosed with autism
    - It’s expected that some children with a diagnosis of autism recently received the MMR vaccine
    - However, the determination of whether the vaccine causes autism is best made by studying the incidence of autism in both vaccinated and unvaccinated children—this was not done
  - Although the authors claim that autism is a consequence of intestinal inflammation, intestinal symptoms were observed **after**, not before, symptoms of autism in all eight cases
- In 2004, 10 of the 13 authors of this study retracted the study’s interpretation

“Vaccines cause autism”

- On February 2, 2010, the editors of *The Lancet* retracted the paper following the ruling of the U.K.’s General Medicine Council that stated the primary author’s conduct regarding his research was “dishonest” and “irresponsible” and that he had shown a “callous disregard” for the suffering of children involved in his studies
- Wakefield was subsequently removed from the U.K.’s medical register and is no longer licensed to practice medicine
- In January 2011, the BMJ published a series of articles showing Wakefield’s work was not just bad science, but deliberate fraud

“Vaccines cause autism”

- Since then, doctors and researchers have been trying to undo the irreparable damage of Wakefield’s studies
- Many large, well-designed studies have found no link between MMR and autism
- Autism usually becomes apparent around the same time the MMR vaccine is given but there is no evidence of causality
- Autism is assumed to have multiple components, including genetics
    - In one study, among twins in which one has been diagnosed with autism, approximately 60% of the time an identical twin is also diagnosed and 0% of the time is a fraternal twin diagnosed with autism

“Vaccines cause autism”

- Evidence also supports that autism is likely to occur in the womb
  - Children exposed to thalidomide during the first or early second trimester were found to have an increased incidence of autism
  - Structural abnormalities of the nervous system are also present in children with autism
- Children with congenital rubella syndrome are at increased risk for development of autism - risk is associated with exposure to rubella before birth but not after birth

How to Combate Vaccine Hesitancy

Who might be vaccine hesitant?

- Caregivers of children
- Pregnant women
- Adults
- Adolescents
- Elderly

How can a healthcare worker identify hesitant indivi

- Open the conversation with a presumptive statement or announcement, presenting vaccination as a default:
  - “Now it’s time for you to get your flu vaccine.”
  - “Today we’ll give you your flu vaccine.”
- Observe the caregiver/patient response and adjust how you move forward using the skills to be discussed in this section.

Types of Caregiver/Patient Vaccine Hesitancy:
and how to proceed…

- Refuses all vaccines:
  - Do not debate, focus on their concerns.
  - Explain their responsibilities for not accepting vaccinations

- Vaccine hesitant:
  - 3 Types:
    - Refuses vaccines but unsure
    - Accepts some vaccines but delay and refuse some
    - Accept vaccines but unsure
  - Guide conversation through using motivational interviewing method

- Accepts all vaccines
  - Offer positive encouragement and administer the vaccines

How to Address Vaccine Hesitant Caregivers/Pa

Motivational Interviewing:

- Process of engaging in an open-ended discussion with an individual to assess an individual's readiness to change with the goal of drawing upon the person's own desire and motivation to change, rather than the provider's motivation
- Should be aimed at exploring reasons for hesitancy, changing attitudes and behavior.
- Goal is to move the caregiver/patient who is hesitant to accept vaccination, and increase vaccine uptake

Motivational Interviewing Process

Use the 5 following steps for a more effective conversation:

1. Ask open-ended questions
    a. The questions to caregiver/patient should go beyond a simple yes or no answer
        i. Example: “Why do you feel this way?”
    b. Close-ended questions are those that can be answered by only a yes or no
        i. Example: “Do you want the vaccine?”

Motivational Interviewing Process cont.

2. Reflect and respond
    - Simple reflection: directly repeat what the person says
    - Complex reflection: repeating what you think the person means
    - Examples:
        - Patient “I know vaccines will help me but I am afraid of potential side effects.”
            - *Simple reflection: “I understand that you are afraid.”*
            - *Complex reflection: “I understand that you want to make the best choice for yourself. What side effects are you concerned about?”*

Motivational Interviewing Process cont.

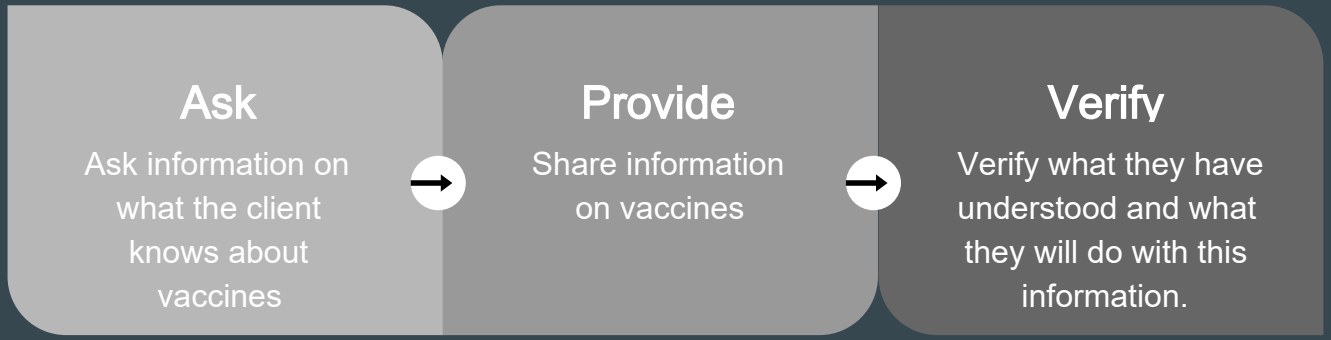
3. Affirm the strengths and **validate** concerns.

- Praise the caregiver/patient using the strengths of the conversation
- Validate the concerns of caregiver/patient by repeating their concerns back to them.
- Examples:
  - “It is great that you are starting to think about vaccines.”
  - “Protecting yourself from illness is important for you and the health of your community.”

Motivational Interviewing Process cont.

4. Ask-Provide-Verify

- As the conversation evolves, explore the concerns further



Cation: Be careful to not add potential concerns by mentioning issues not raised by the patient/caregiver

Motivational Interviewing Process cont.

5. Summarize the interactions and determine the action

- Summarize the conversation back to the caregiver/patient addressing concerns and important points.
  - Summary example:
    - “The reason that’s important is…”
    - “What that means to you is…”
    - “The main point to remember is.”

Motivational Interviewing Process cont.

5. Determine the action cont.

- **If Yes:**
  - Vaccinate and offer praise to affirm the positive decision.
- **If for Follow-Up (if possible):**
  - Refer caregiver/patient to a specialist/community advocate or schedule a new discussion:.
    - Example of conversation “Let’s revisit this once you have had a chance to think more about vaccination. When could you come back?”
- **If Refusal:**
  - Do NOT debate. Leave the door open.
    - Example of conversation “ I understand. Please know that if you change your mind and want to talk about vaccinating, we are always available.”

If the caregiver/patient's wishes are NOT to vaccinate, **ensure they understand their decision**, and explain their responsibilities for protecting the health of their child/themselves.

Example conversations:

"I understand that you have decided not to vaccinate today. Please know you are taking an important responsibility. What this means is…

1) *If your* ***child/you are ill****, you* ***must seek medical assistance***
2) *When talking to medical/clinic staff, you* ***must tell them*** *that you/your child has not received all the vaccines recommended.*
3) *You* ***must learn about the signs and symptoms*** *of vaccine preventable diseases."*

When applying these approaches...

Always ADAPT the communication to YOUR setting

Be sensitive to culture, social norms, religion, level of education, etc.

As you apply these skills, examples of questions to a

- What do you think about vaccines?
- What is your major concern?
- What would it take to move you to a “yes” to vaccine?
- What could make it easier for you to get vaccines (on time) for yourself and/or your children?

Opportunities for building trust in vaccines

Healthcare workers can build the trust of caregivers/patients by being transparent and competent.

- Share data on disease that can be prevented by vaccination
- Share information on safety and risk associated with vaccines
- Explain why vaccines are recommended and when per vaccine schedule

Emotions matter when building trust

Take into account the feelings and concerns of caregiver/patient:

- Offer the time, space, and the environment for caregiver/patient to digest information and ask questions.
- Acknowledge and validate the perceptions of caregiver/patient before advising them.
- Demonstrate listening, be authentic and show you care about how the caregiver/patient feels.
- Always tell the truth, even if admitting you don't know the answer.

Reminders

DO	DON'T
Do take a guiding style.	Do not take a traditional directive and argumentative style.
Do work with the caregiver/ patient to establish trust.	Do not identify and solve the problem for the caregiver/ patient.
Do explore doubts and interest in vaccination. Think from their perspective.	Do not argue or debate with the client. Make it know that you are there to listen to their concerns.
Do take time to reflect on what the caregiver/ patient is saying.	Rush through the conversation without listening.

How to Combat Vaccine Hesitancy Summary

- Goal of conversation is to move caregiver/patient towards a “yes” for acceptance.
- Open with a presumptive statement, if hesitant, follow up with guided conversation.
- Ask open ended questions, reflect and respond, affirm strengths and validate concerns, ask-provide-verify, summarize and describe action.
- Adequate training and practice can lead to positive outcomes.

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What questions do you have for us?