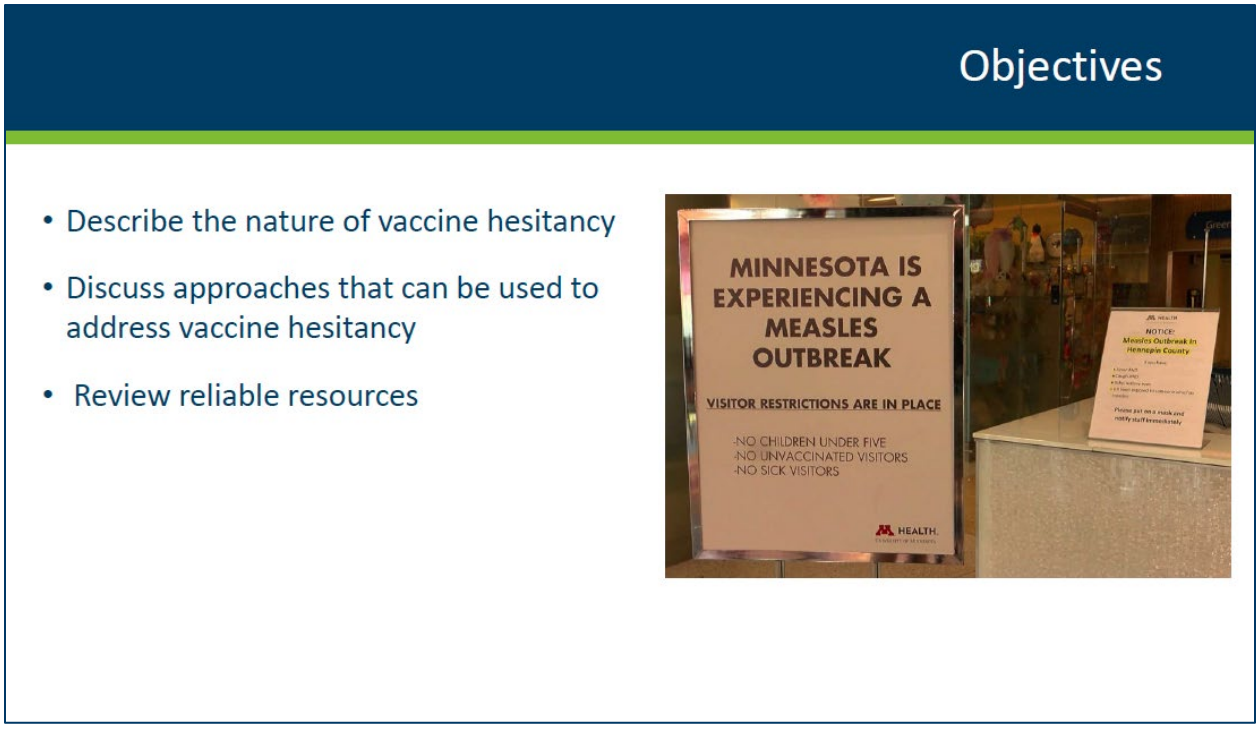
DEPARTMENT OF HEALTH

Approaches to vaccine hesitancy

WEBINAR SUMMARY | SEPTEMBER 11, 2017

Presented by: Lynn Bahta, RN, PHN, Immunization Clinical Consultant

Slide 1: Objectives



Slide image

Notice of measles outbreak visitor restrictions

Slide text

- Describe the nature of vaccine hesitancy
- Discuss approaches that can be used to address vaccine hesitancy
- Review reliable resources

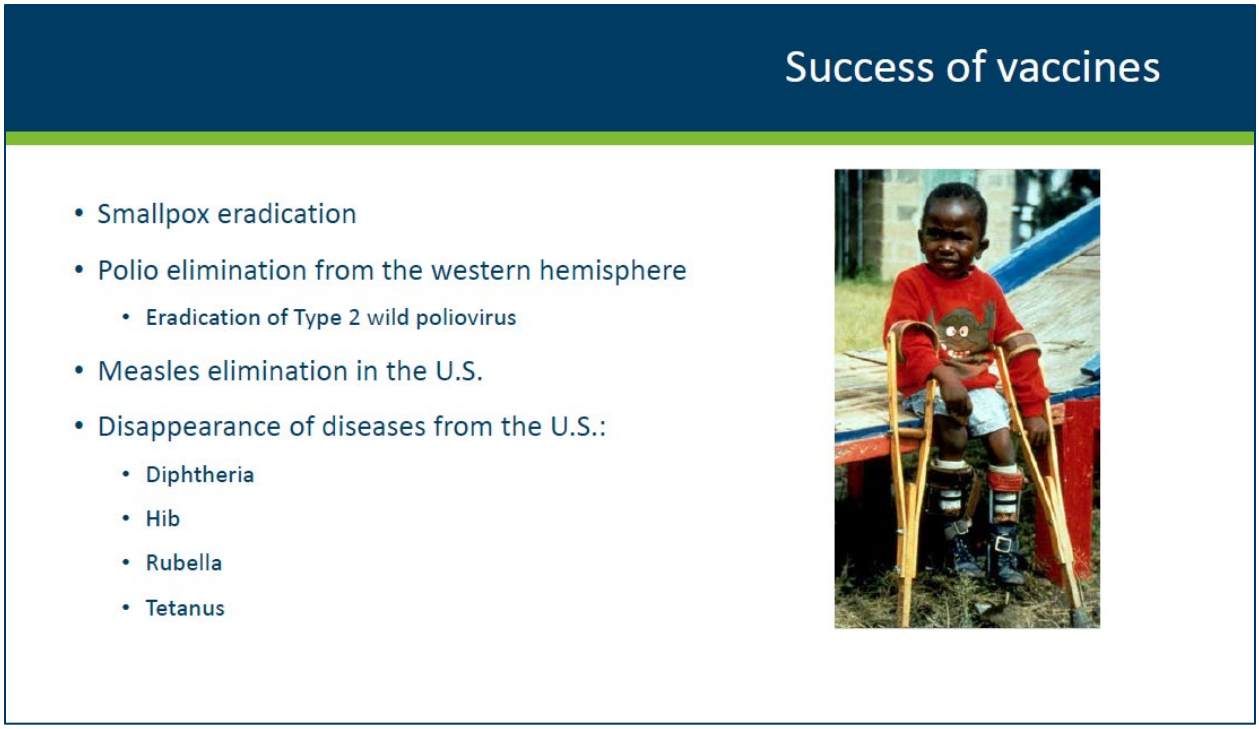
Presenter notes

As we move beyond the largest measles outbreak Minnesota has seen since 1990, it may be helpful to revisit issues related to vaccine hesitancy.

We have three objectives for this session today:

- I will be describing the nature of vaccine hesitancy and what recent studies have revealed
- I will describe some approaches, both evidence based and commonly use, that can be used to address vaccine hesitancy and
- I will review reliable resources that are available to parents and for which clinicians should be familiar

Slide 2: Success of vaccines



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Child with mobility supports

Slide text

- Smallpox eradication
- Polio elimination from the western hemisphere
  - Eradication of Type 2 wild poliovirus
- Measles elimination in the U.S.
- Disappearance of diseases from the U.S.:
  - Diphtheria
  - Hib
  - Rubella
  - Tetanus

Presenter notes

For some of us who have been around for a while, it may seem odd to have to address vaccine refusal. Immunizations have been hugely successful and are cited as one of the top 10 public health success of the 20th century.

We have seen the

- Smallpox eradication of from the world
- Elimination of polio from the western hemisphere
- Eradication of Type 2 wild poliovirus—which was declared in 2016
- Elimination of measles in the U.S.

- Disappearance in the U.S. of diseases like:
  - Diphtheria
  - Hib
  - Rubella
  - Tetanus

Despite the evidence of this success, vaccine preventable disease outbreaks in the U.S. do occur and usually among unvaccinated communities due to vaccine hesitancy. These make great headlines but and present challenges both to public health and health systems so let's review to what extent this is a problem.

Slide 3: Who are the vaccine hesitant?

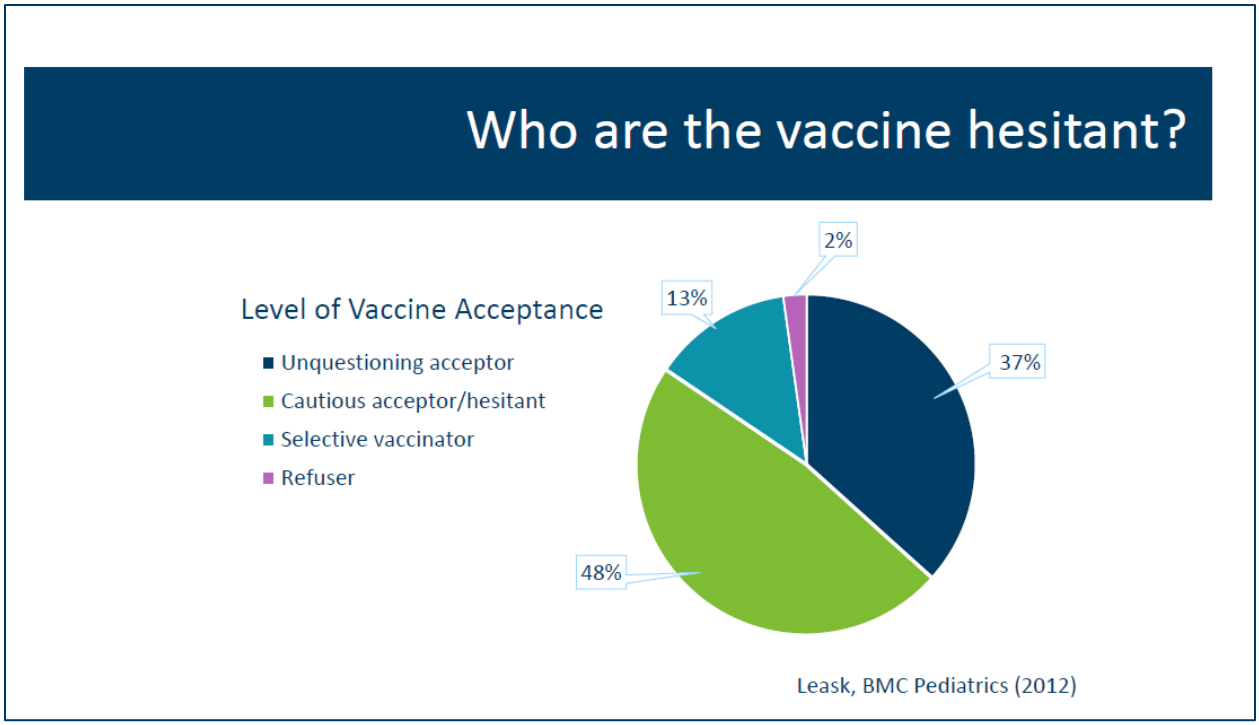

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Figure of levels of vaccine acceptance

Slide text

Level of vaccine acceptance

- Unquestioning acceptor: 37%
- Cautious acceptor/hesitant: 48%
- Selective vaccinator: 13%
- Refuser: 2%

Leask, BMC Pediatrics (2012)

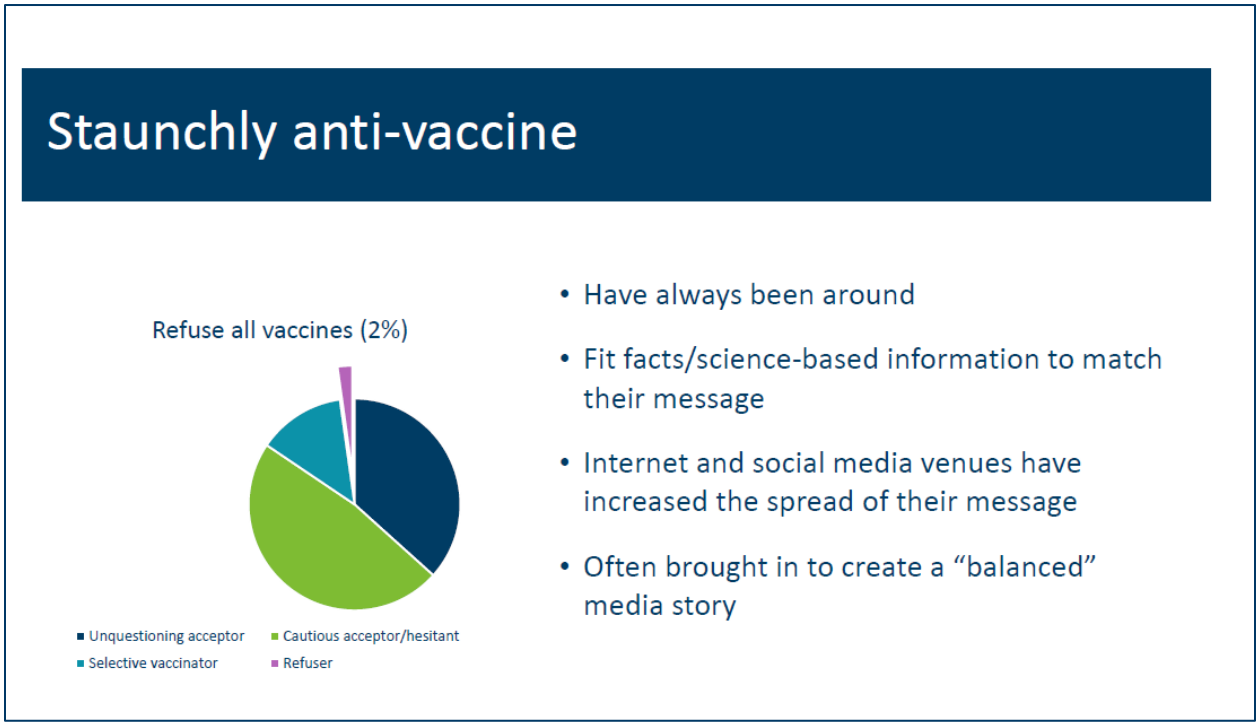
Presenter notes

Dr. Leask most recently in 2012 studied the type of hesitancy that occurs among parents. This is an update from a previous study by Gust et al in 2008.

What we see is that most parents vaccinate, though a significant majority vaccinate despite concerns. Those who vaccinate unquestioningly have been shrinking since the 2008 study. Parents that are selectively vaccinating—either refusing one vaccine or delaying vaccination have grown slightly in numbers and providers have increasingly noticed request for a delayed schedule.

The percent of parents that refuse vaccination have remained fairly stable at about 2%.

Slide 4: Staunchly anti-vaccine



Slide image

Figure of levels of vaccine acceptance

Slide text

- Have always been around
- Fit facts/science-based information to match their message
- Internet and social media venues have increased the spread of their message
- Often brought in to create a "balanced" media story

Presenter notes

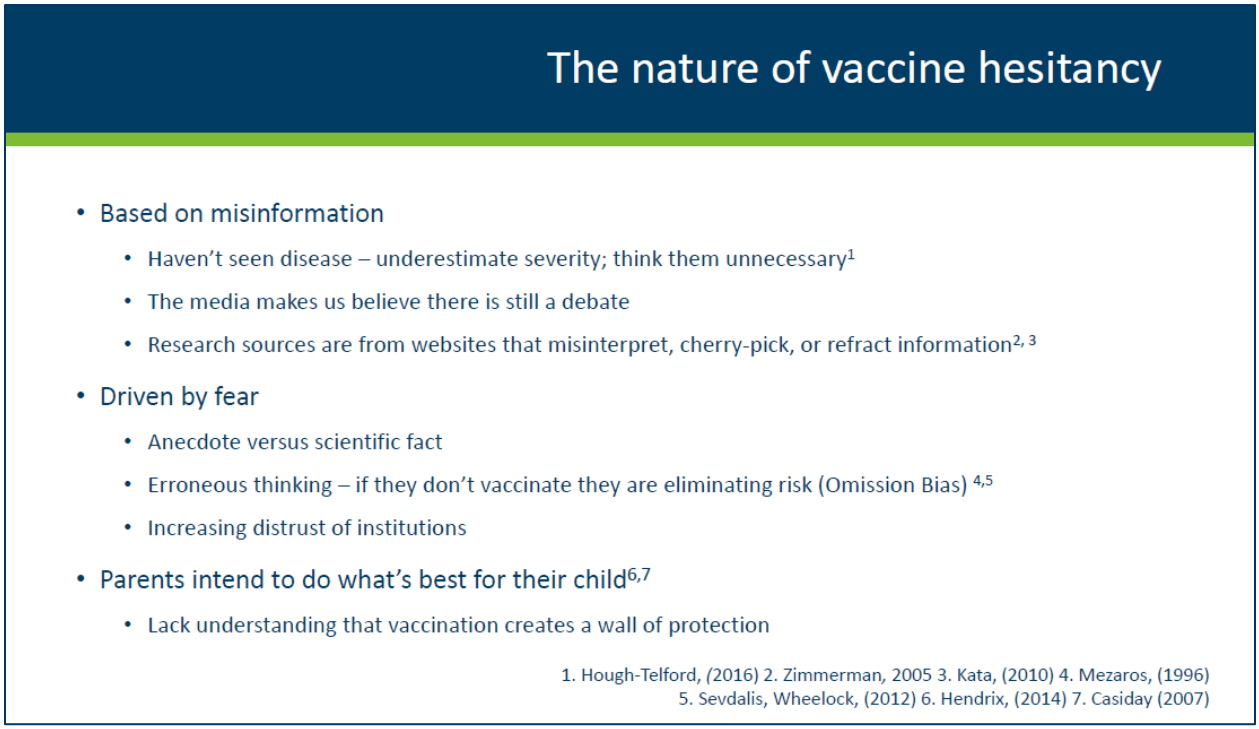
Let's briefly look at this 2%—these are often the parents interviewed by media in order to provide contrasting beliefs. These parents have always been around, since smallpox vaccination has been around. Typically, these are persons that generate claims against vaccines and they have become skilled at cherry picking and refracting science-based information to match their claim.

The internet and social media have become the greatest venue for spread of misinformation and development of social networks to reinforce confirmation bias. They are often held on equal grounds to scientists and experts in the media when there is an attempt to bring "balance" to a story.

But a reminder—these staunchly anti-vaccine persons are only 2% of parents—most of our energy and understanding needs to be directed toward:

- Supporting the acceptor
- Reassuring the cautious acceptor and
- Addressing concerns of the selective vaccinator in hopes of improving their comfort level to vaccinate

Slide 5: The nature of vaccine hesitancy



Slide text

- Based on misinformation
  - Haven't seen disease—underestimate severity; think them unnecessary [1]
  - The media makes us believe there is still a debate
  - Research sources are from websites that misinterpret, cherry-pick, or refract information [2,3]
- Driven by fear
  - Anecdote versus scientific fact
  - Erroneous thinking—if they don't vaccinate they are eliminating risk (Omission Bias) [4,5]
  - Increasing distrust of institutions
- Parents intend to do what's best for their child [6,7]
  - Lack understanding that vaccination creates a wall of protection

1. Hough-Telford, (2016) 2. Zimmerman, (2005) 3. Kata, (2010) 4. Mezaros, (1996) 5. Sevdalis, Wheelock, (2012) 6. Hendrix, (2014) 7. Casiday (2007)

Presenter notes

Multiple studies help us understand this spectrum of parent and by understanding the nature of their hesitancy, we might be able to improve our effectiveness in addressing a parent's concern.

The misinformation that parents hold to are derived from several sources:

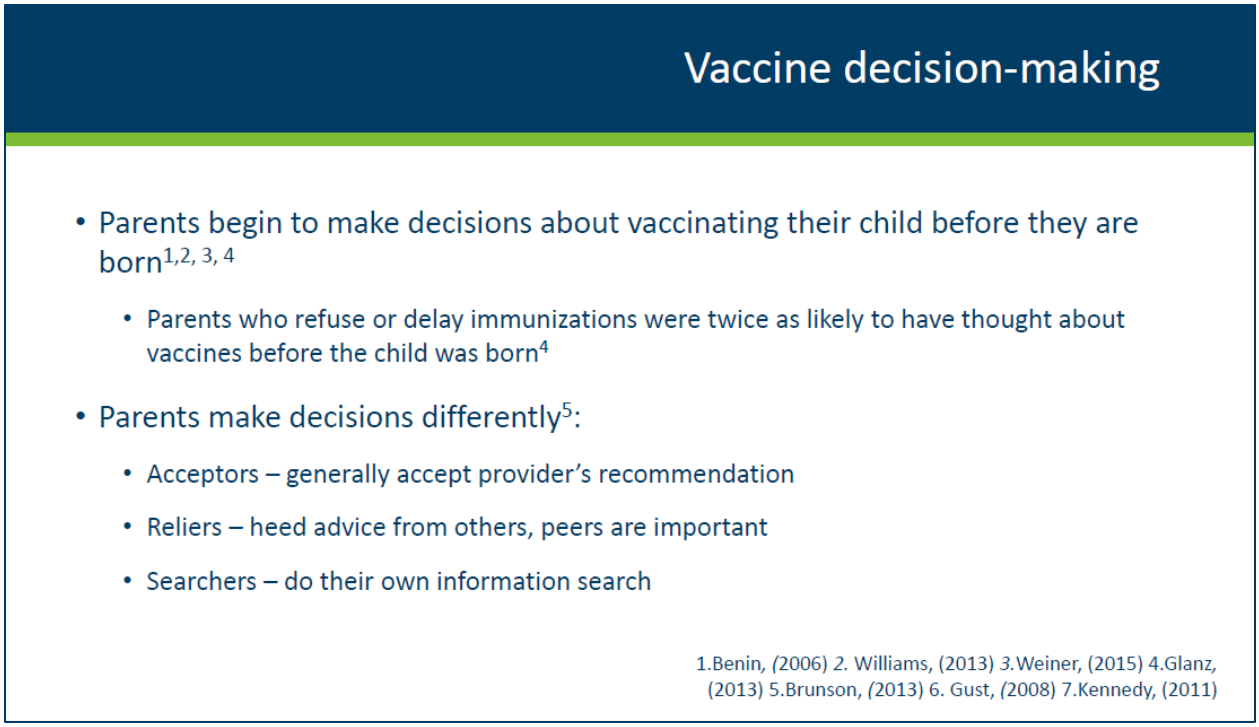
- Haven't seen disease—underestimate severity; think them unnecessary
- The media perpetuates the narrative that there is still a debate
- Research sources are from websites that misinterpret, cherry-pick, or refract information

More parents express fear of vaccinating, in fact the success of vaccination has misdirected parents toward vaccines

- Anecdote versus scientific fact
- Erroneous thinking—if they don't vaccinate they are eliminating risk (Omission Bias) parents don't think that not vaccinating is also risky.
- Increasing distrust of institutions

Finally, in an individualistic society, parents are focused on their child, herd immunity is a foreign concept to them.

Slide 6: Vaccine decision-making



Slide text

- Parents begin to make decisions about vaccinating their child before they are born [1,2,3,4]
  - Parents who refuse or delay immunizations were twice as likely to have thought about vaccines before the child was born [4]
- Parents make decisions differently [5]:
  - Acceptors –generally accept provider's recommendation
  - Reliers –heed advice from others, peers are important
  - Searchers –do their own information search

1. Benin, (2006) 2. Williams, (2013) 3. Weiner, (2015) 4. Glanz, (2013) 5. Brunson, (2013) 6. Gust, (2008) 7. Kennedy, (2011)

Presenter notes

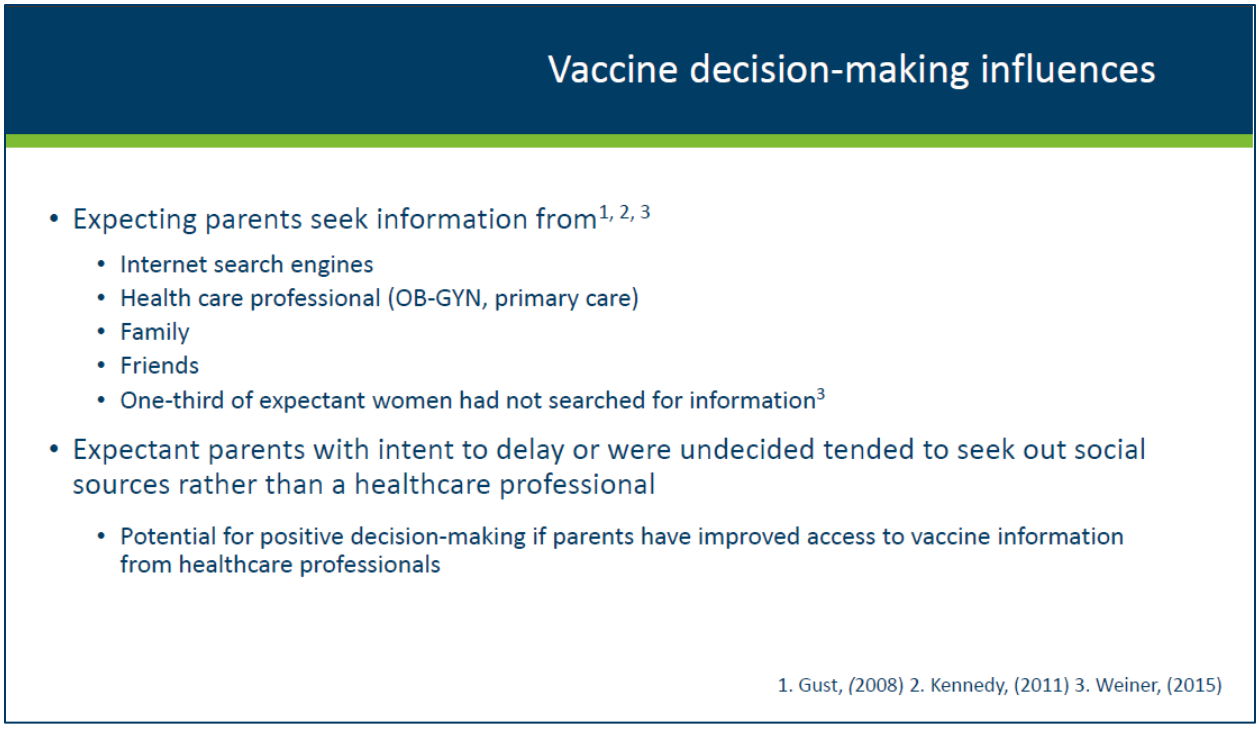
Among those of you who provide pediatric care, it doesn't come as a surprise that parents often have already made a decision about vaccinating their child by the time they bring the child for the 2 month well child visit.

Several studies suggest that parents have started this decision-making process during the pre-natal time frame.

Additionally, how parents make decisions can differ. Brunson in her work on vaccine-decision making found that there is a continuum of how someone goes about making a decision and can range from acceptance of what is recommended—following the norm to persons without respect to convention who do their own research and make a decision based on what they've learned.

This spectrum may result in either vaccine refusal of one or more vaccine to vaccine acceptance. Knowing how a parent is making a decision about vaccination allows the clinician to tailor their approach with each parent.

Slide 7: Vaccine decision-making influences



Slide text

- Expecting parents seek information from [1,2,3]
  - Internet search engines
  - Health care professional (OB-GYN, primary care)
  - Family
  - Friends
  - One-third of expectant women had not searched for information [3]
- Expectant parents with intent to delay or were undecided tended to seek out social sources rather than a health care professional
- Potential for positive decision-making if parents have improved access to vaccine information from health care professionals

1. Gust, (2008) 2. Kennedy, (2011) 3. Weiner, (2015)

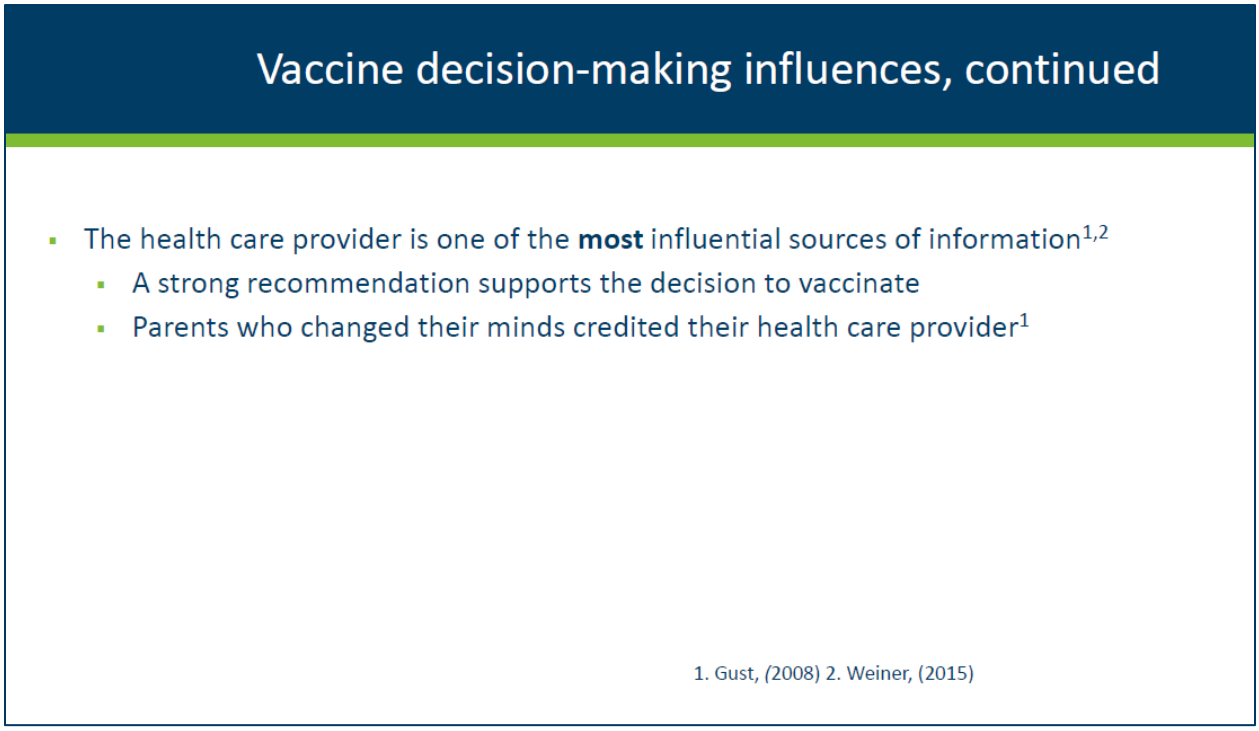
Presenter notes

There are several external influences that may impact a parent's decision about vaccinating their child: information sources and social networks play a large role.

Internet searches have become a dominant source of information for today's parent so steering a parent to reliable resources becomes more critical.

Health care professionals remain an important source for health information but a growing influence has become the parent's social network.

Slide 8: Vaccine decision-making influences, continued



Slide text

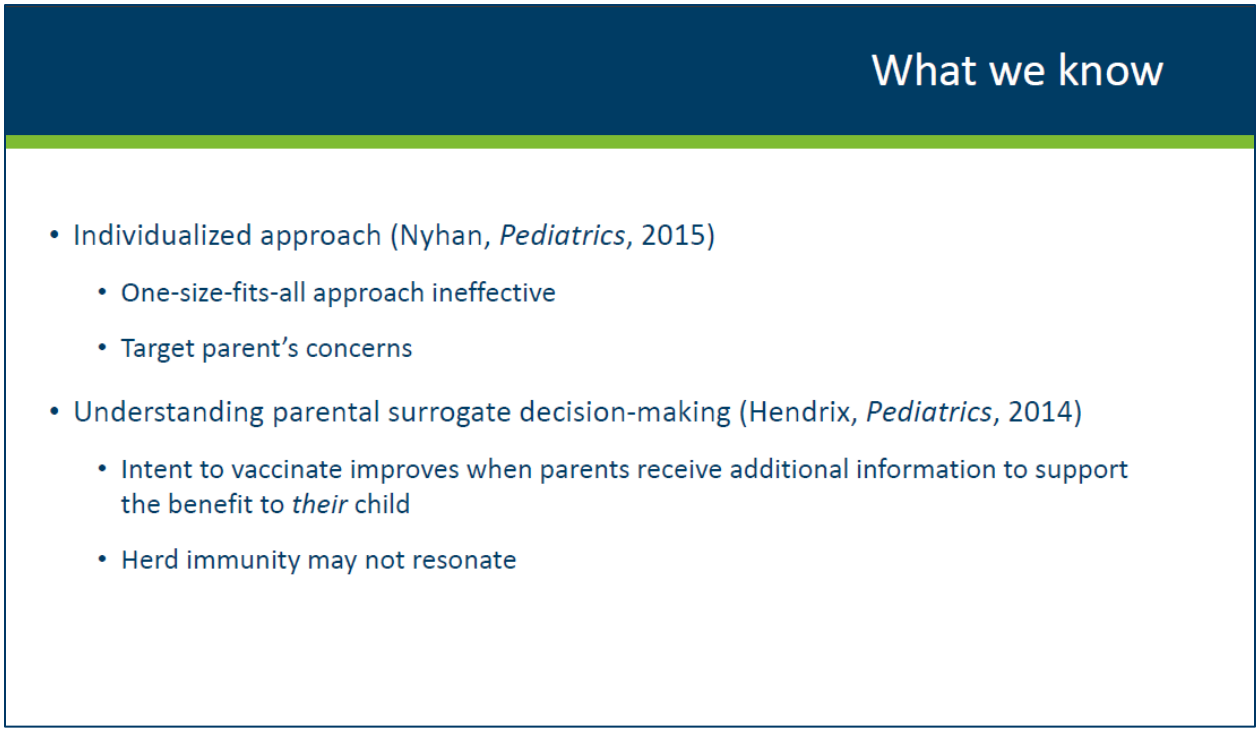
- The health care provider is one of the **most** influential sources of information [1,2]
  - A strong recommendation supports the decision to vaccinate
  - Parents who changed their minds credited their health care provider [1]

1. Gust, (2008) 2. Weiner, (2015)

Presenter notes

To reiterate, the health care provider can play a critical role in providing reliable and trusted information.

Slide 9: What we know



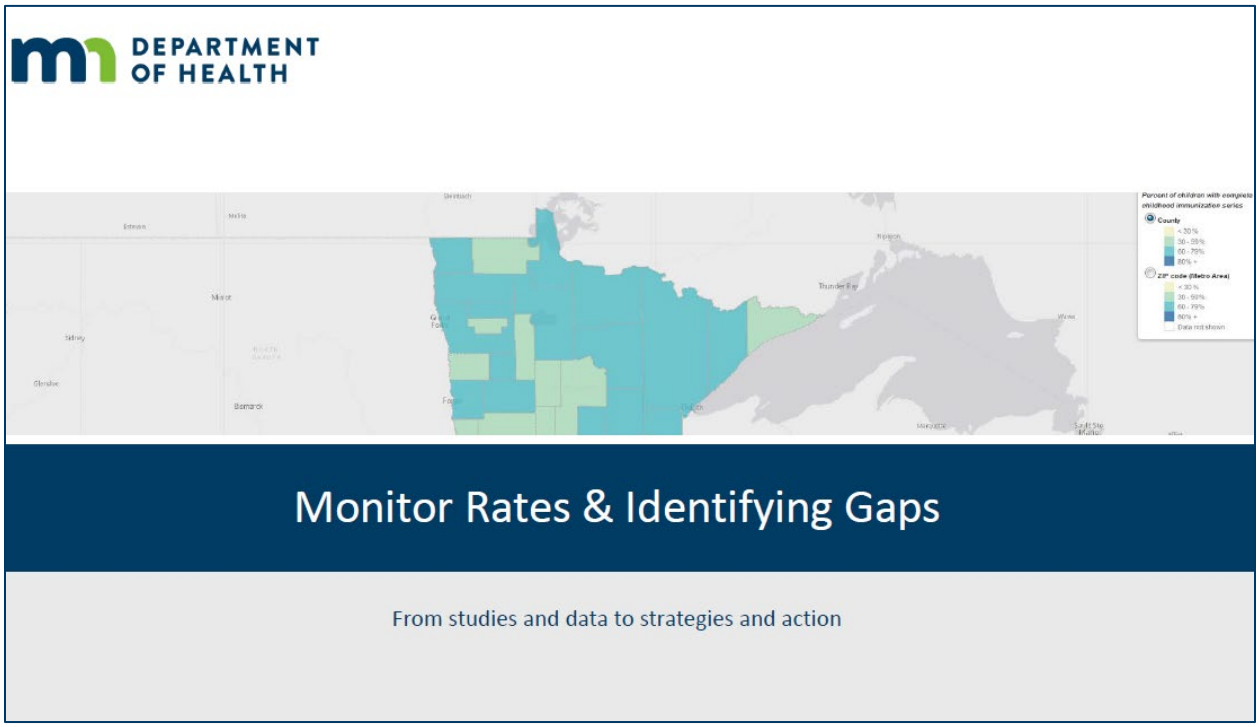
Slide text

- Individualized approach (Nyhan, *Pediatrics*, 2015)
  - One-size-fits-all approach ineffective
  - Target parent's concerns
- Understanding parental surrogate decision-making (Hendrix, *Pediatrics*, 2014)
  - Intent to vaccinate improves when parents receive additional information to support the benefit to *their* child
  - Herd immunity may not resonate

Presenter notes

The public health sector relies on broad stroke messages to influence the public to make health decisions, however, according to the study conducted by Brent Nyhan that approach is not effective in addressing vaccine hesitant parents.

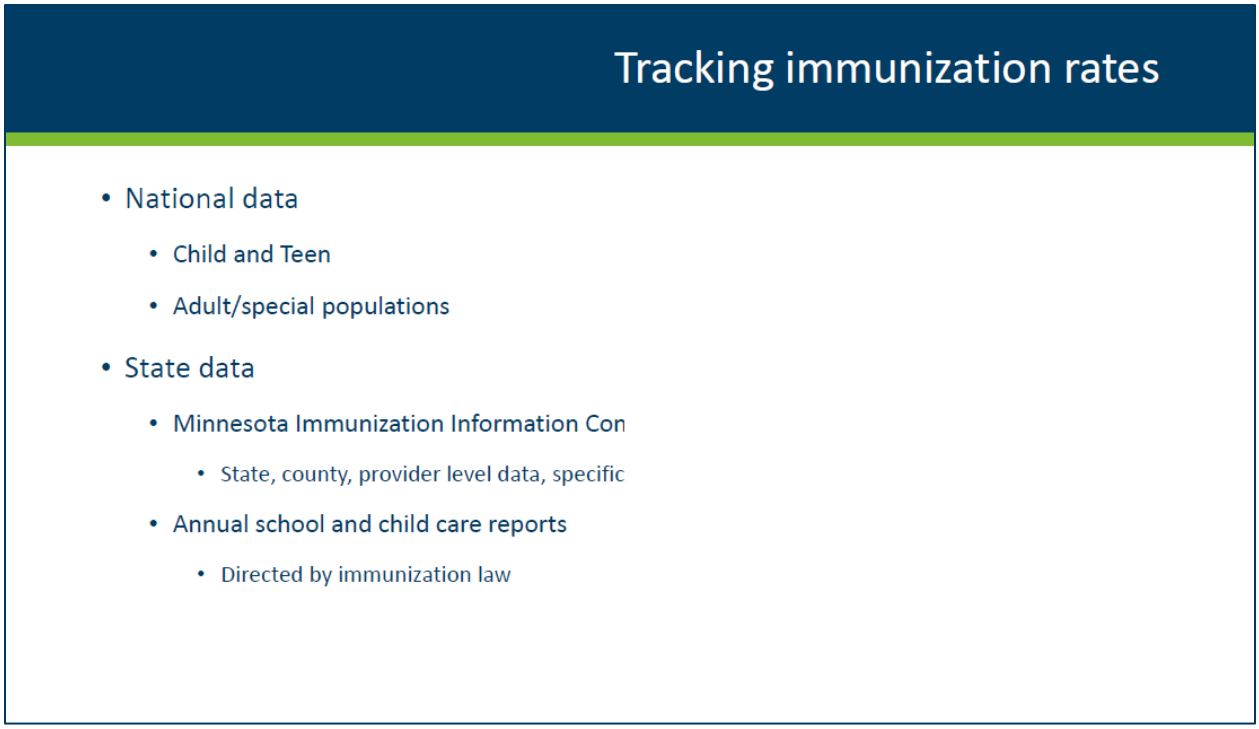
Slide 10: Monitor rates and identifying gaps: From studies and data to strategies and action



Presenter notes

Assessing immunization rates is a core public health function—it allows us to examine level of parental acceptance as well as identify where under vaccination is occurring.

Slide 11: Tracking immunization rates



Slide text

- National data
  - Child and Teen
  - Adult/special populations
- State data
  - Minnesota Immunization Information Connection (MIIC)
    - State, county, provider level data, specific groups
  - Annual school and child care reports
    - Directed by immunization law

Presenter notes

There are several ways and at several levels in which we can track immunization rates

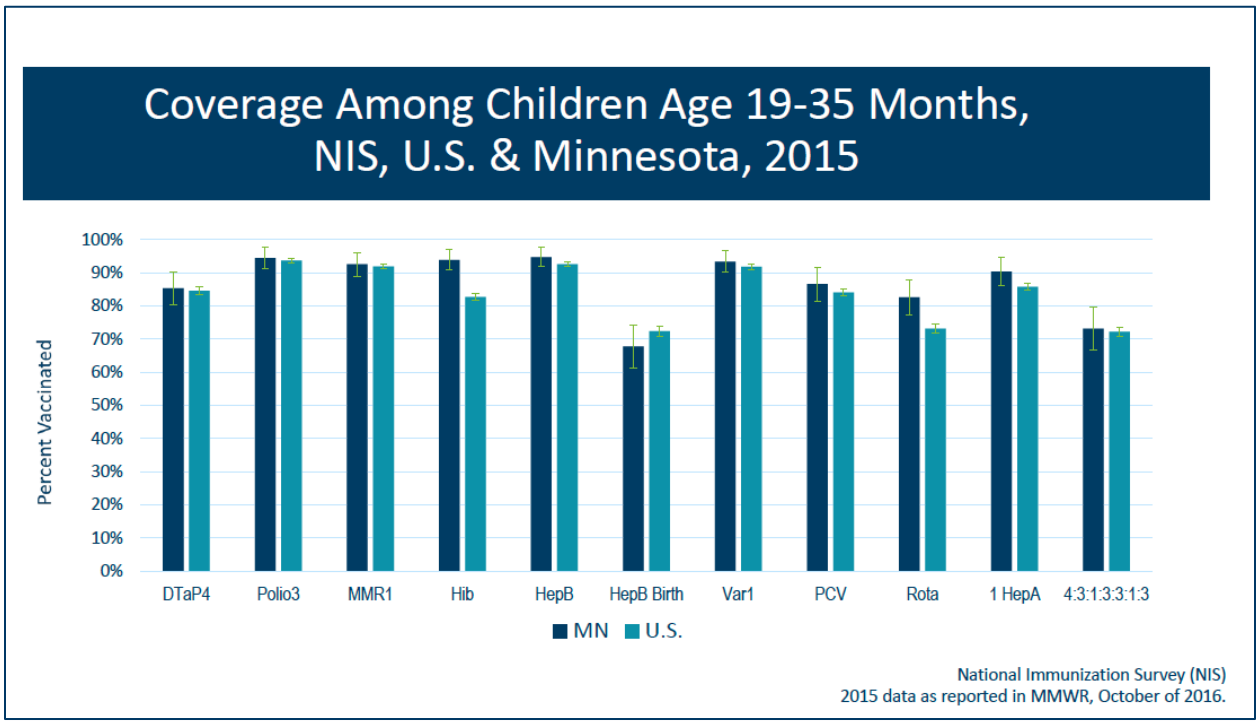
National data

- National Immunization Survey (NIS): Provides national and state-specific rates
- Childhood
- Teen
- Behavioral Risk Factor Surveillance System (BRFSS)
- Adult
- National Health Interview Survey (NHIS)

State—derived

- Minnesota Immunization Information Connection (MIIC)
- Childhood
- Adolescent
- Adult
- State, county, provider level data
- Annual school and child care immunization report (AISR)
- Kindergarten and 7th grade reporting

Slide 12: Coverage among children age 19 to 35 months, National Immunization Survey, U.S. and Minnesota, 2015



Slide image

Figure: Coverage among children age 19 to 35 months, National Immunization Survey, U.S. and Minnesota, 2015

Slide text

National Immunization Survey (NIS)

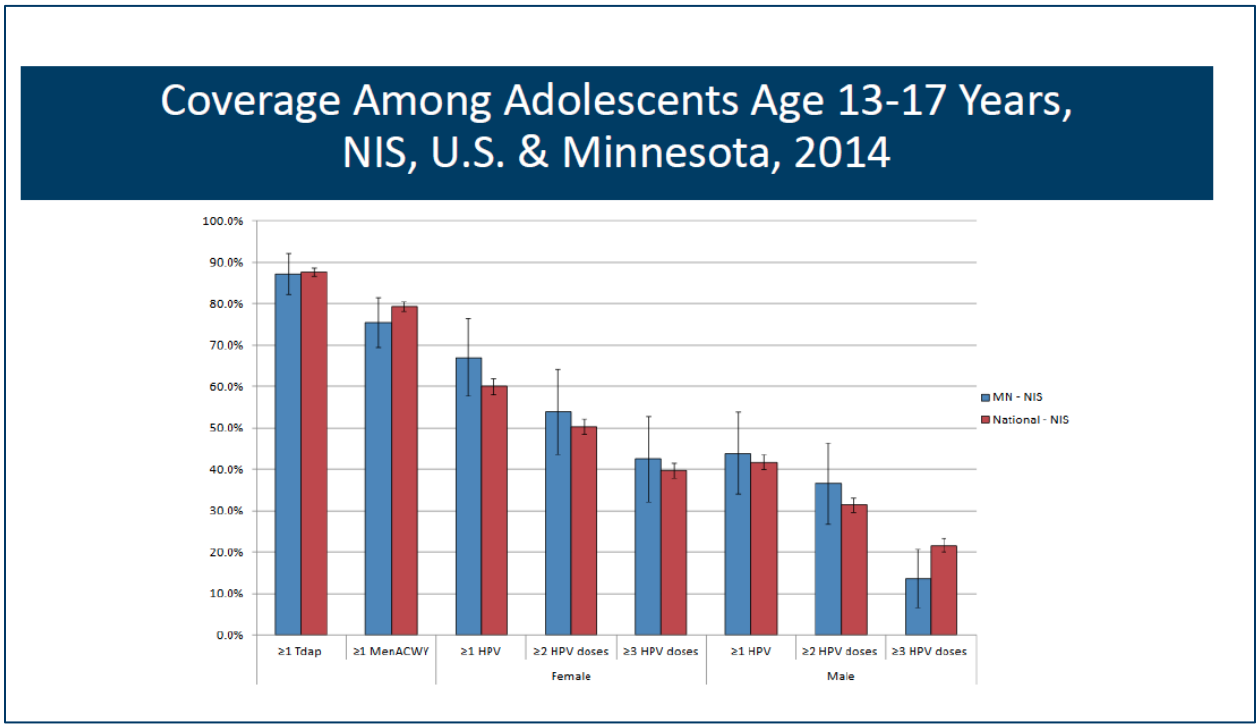
2015 data as reported in MMWR, October of 2016.

Presenter notes

The National Immunization survey provides us with a consistent snapshot of how well we are achieving vaccination among our infants as shown here as well as our adolescents.

In Minnesota we are generally consistent with national rates—both for individual antigens as well as for the combination of vaccines a child should have received by the time they are 1-1/2 to 3 years of age. This data also gives us a clue that we need to improve the hepatitis B birth dose rate.

Slide 13: Coverage among adolescents age 13 to 17 years, National Immunization Survey, U.S. and Minnesota, 2014



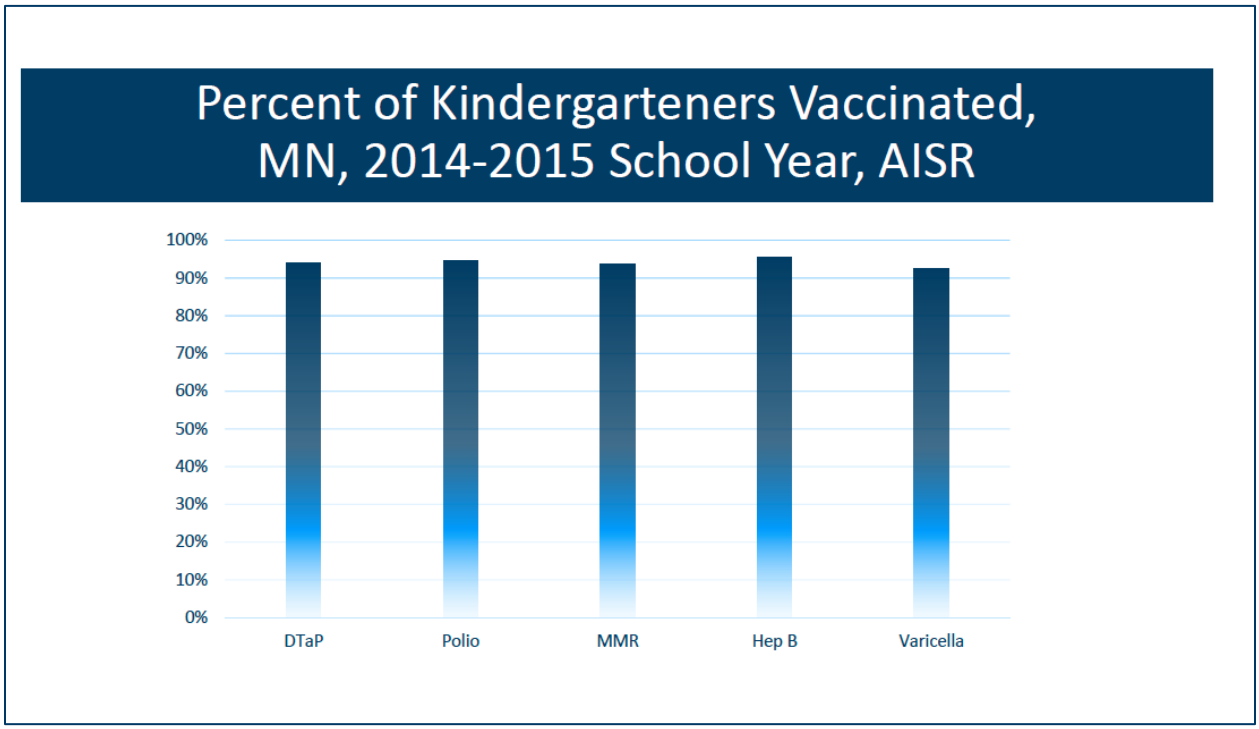
Slide image

Figure: Coverage among adolescents age 13 to 17 years, National Immunization Survey, U.S. and Minnesota, 2014

Presenter notes

We have work to do related to adolescent HPV vaccination rates and there are several programs are in place.

Slide 14: Percent of kindergartners vaccinated, Minnesota, 2014-2015 school year, Annual Immunization Status Report



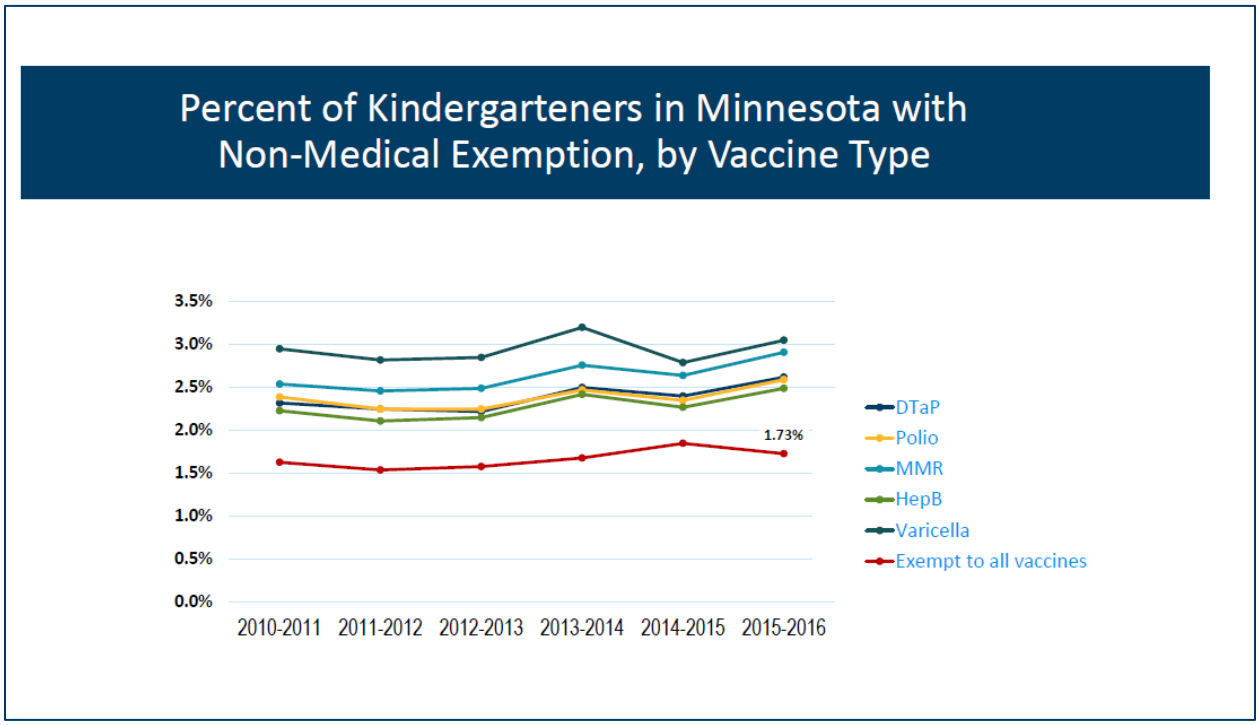
Slide image

Figure: Percent of kindergartners vaccinated, Minnesota, 2014-2015 school year, Annual Immunization Status Report

Presenter notes

The aggregate data that schools submit each year reveal that children entering kindergarten are getting their vaccines and this reinforces the studies regarding the great majority of parents support immunization.

Slide 15: Percent of kindergartners in Minnesota with non-medical exception, by vaccine type



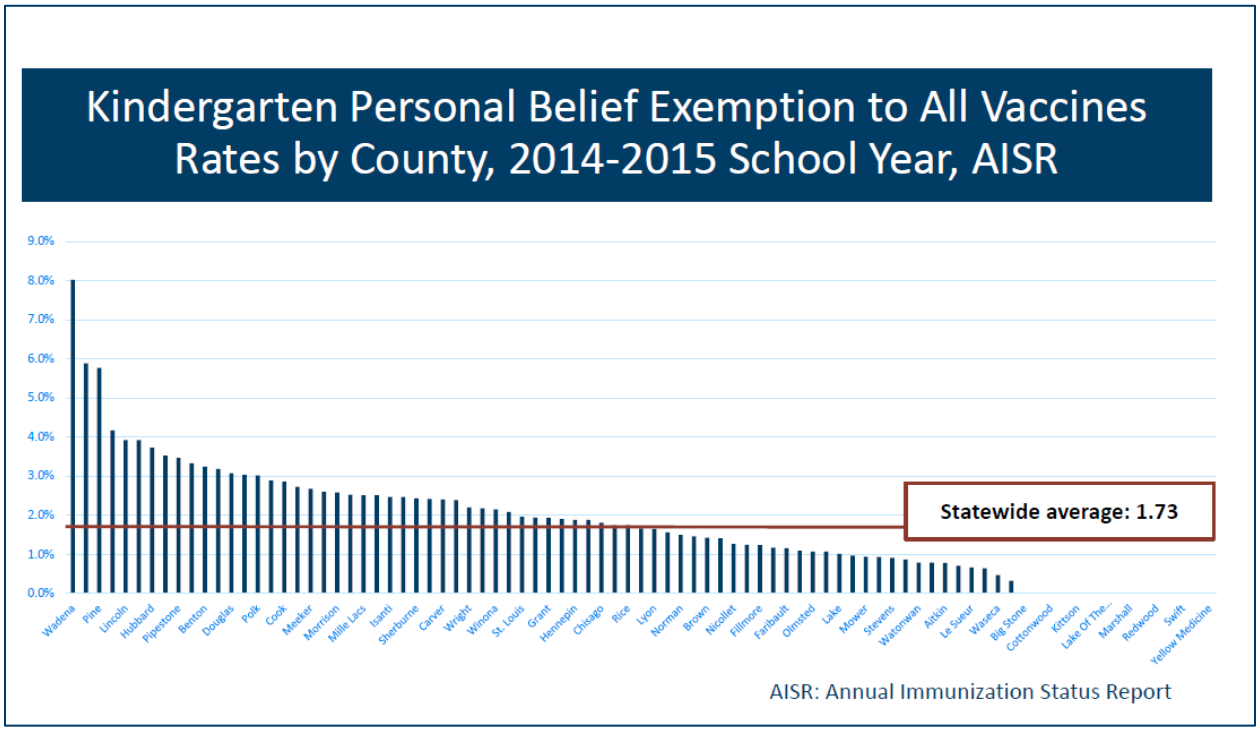
Slide image

Figure: Percent of kindergartners in Minnesota with non-medical exception, by vaccine type

Presenter notes

In fact, exemptions to all vaccines in Minnesota have hovered at just below 2%.

Slide 16: Kindergarten personal believe exemption to all vaccines, rates by county, 2014-2015 school year, Annual Immunization Status Report



Slide image

Figure: Kindergarten personal believe exemption to all vaccines, rates by county, 2014-2015 school year, Annual Immunization Status Report

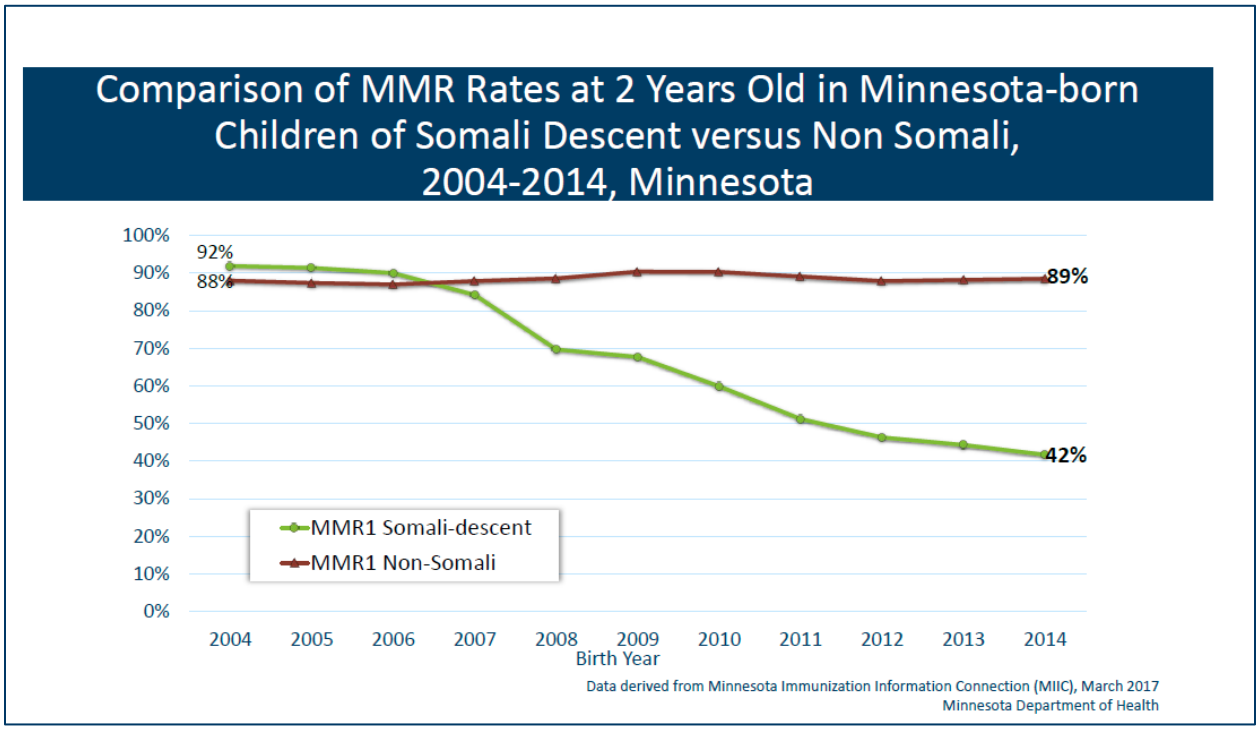
Slide text

AISR: Annual Immunization Status Report

Presenter notes

It is important that we are not complacent about this exemption data because there are still pockets of susceptible children. This graph shows the diverse level of exemptions that are found by county—do you know what your county's exemption rates are for kindergarteners?

Slide 17: Comparison of MMR rates at two years old in Minnesota-born children of Somali descent versus non-Somali, 2004-2014, Minnesota



Slide image

Figure: Comparison of MMR rates at two years old in Minnesota-born children of Somali descent versus non-Somali, 2004-2014, Minnesota

Slide text

Data derived from Minnesota Immunization Information Connection (MIIC), March 2017

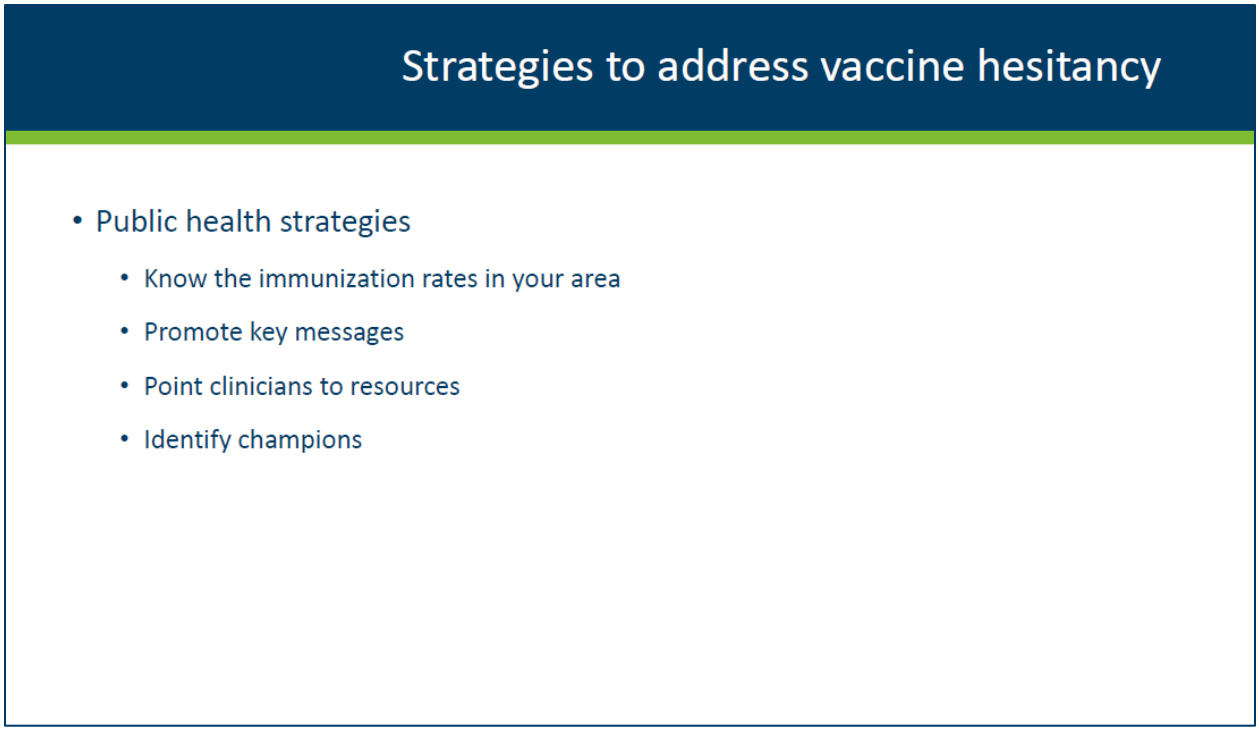
Minnesota Department of Health

Presenter notes

This graph demonstrates another pocket of susceptible children—one that has been in the news a lot lately. MIIC uses birth certificate data to populate the registry which includes race and ethnicity data. The Somali-specific data is from mothers indicating Somali ethnicity on the birth certificate.

It shows the MMR rate in each 24 month old cohort since 2004—we stopped at 2009 because the age of children born in 2010 would range from as young as 13 months. As you can see there is a clear disparity between children of Somali descent and non-Somali children and there was a precipitous drop between the 2006 and 2007 birth cohort.

Slide 18: Strategies to address vaccine hesitancy



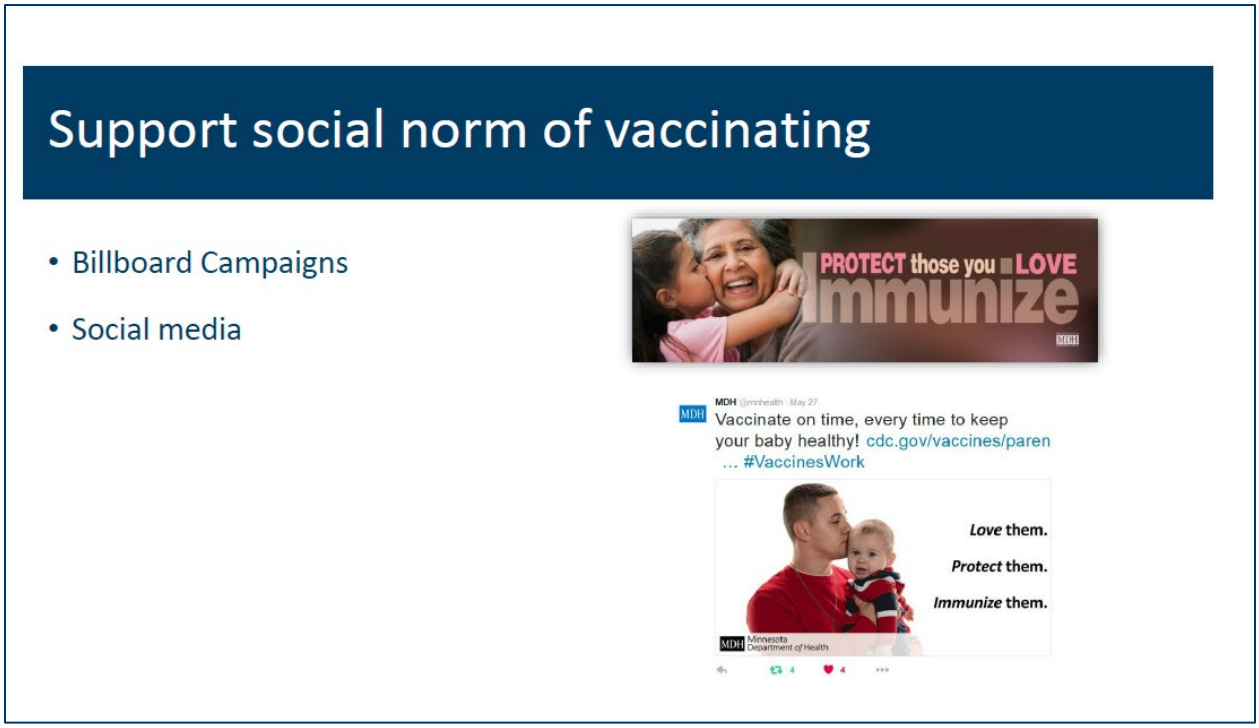
Slide text

- Public health strategies
  - Know the immunization rates in your area
  - Promote key messages
  - Point clinicians to resources
  - Identify champions

Presenter notes

Here are some general things that can be done at a local health jurisdiction level to help address vaccine hesitancy.

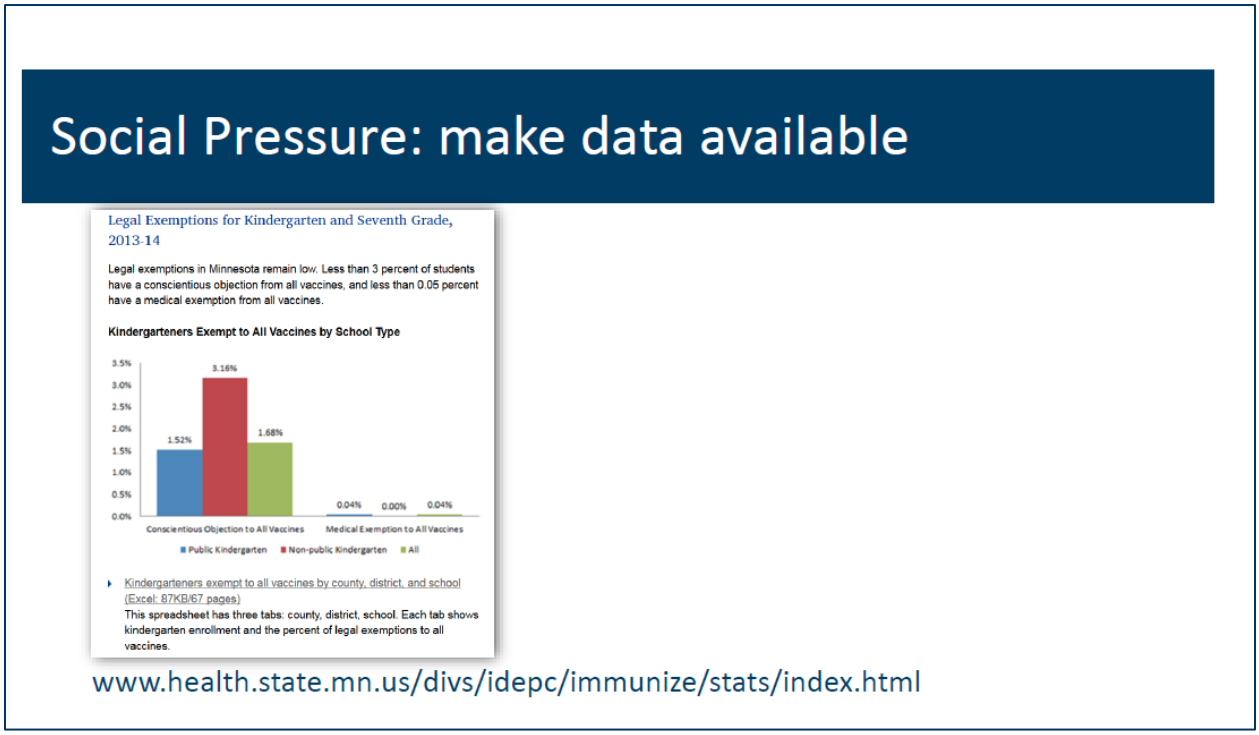
Slide 19: Support social norm of vaccinating



Slide image

- Billboard with grandmother and grandchild that says “Protect those you love: Immunize”
- Twitter post with image of father kissing baby, that says “Vaccinate on time, every time to keep your baby healthy!” and “*Love* them. *Protect* them. *Immunize* them.” with a URL and the hashtag #VaccinesWork

Slide 20: Social pressure: Make data available



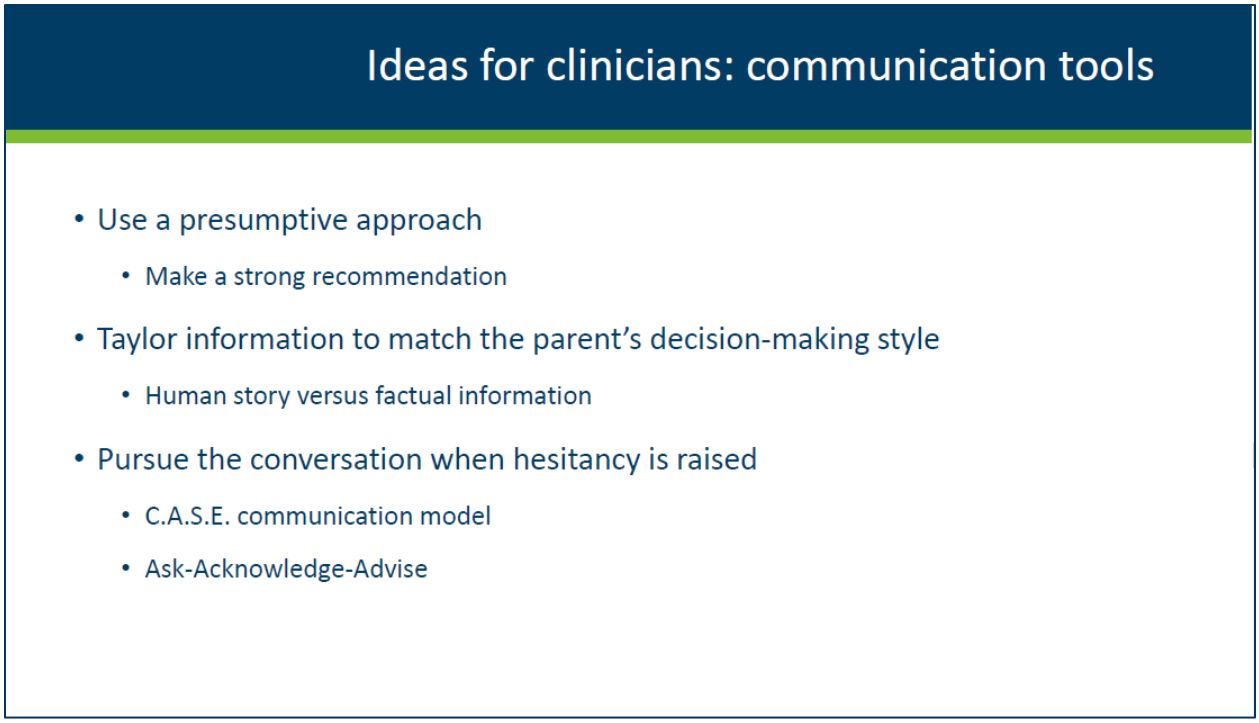
Slide image

Image web page example: Immunization Statistics

Slide text

Link to: www.health.state.mn.us/people/immunize/stats/

Slide 21: Ideas for clinicians: Communication tools



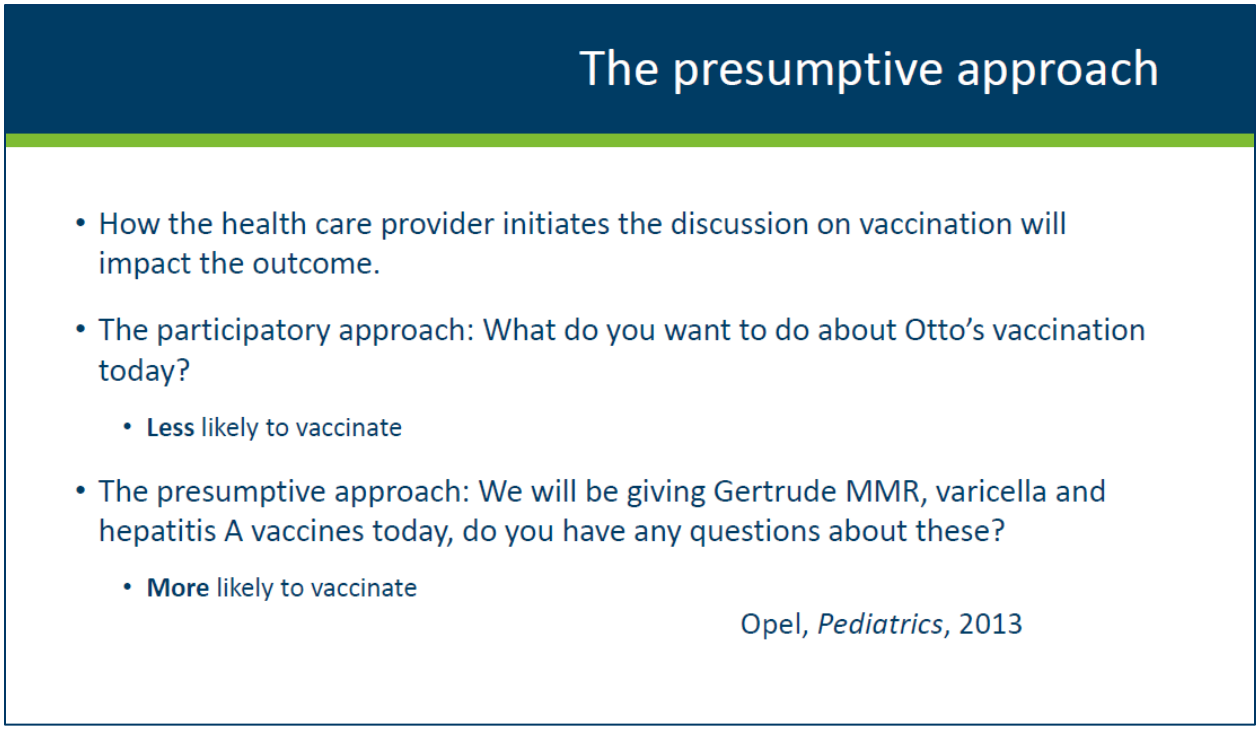
Slide text

- Use a presumptive approach
  - Make a strong recommendation
- Tailor information to match the parent's decision-making style
  - Human story versus factual information
- Pursue the conversation when hesitancy is raised
  - C.A.S.E. communication model
  - Ask-Acknowledge-Advise

Presenter notes

Start with the expectation that the parent will vaccinate their child.

Slide 22: The presumptive approach

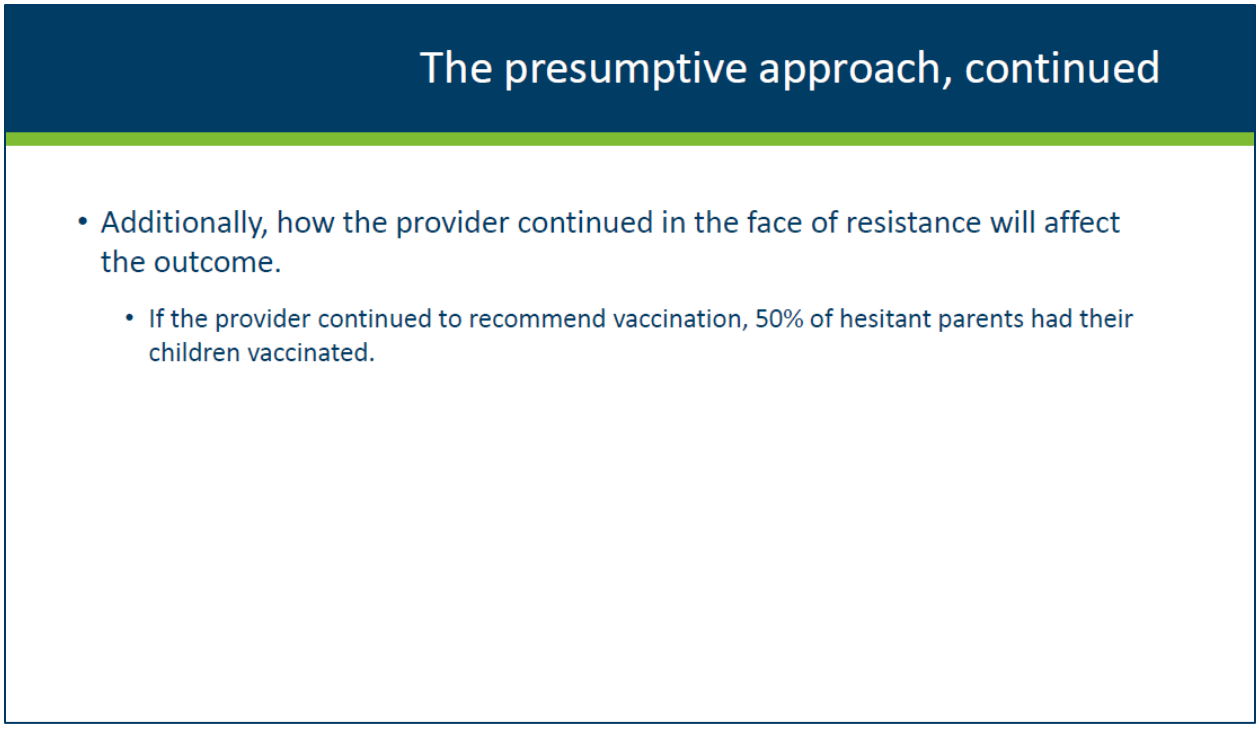


Slide text

- How the health care provider initiates the discussion on vaccination will impact the outcome.
- The participatory approach: What do you want to do about Otto's vaccination today?
  - **Less** likely to vaccinate
- The presumptive approach: We will be giving Gertrude MMR, varicella and hepatitis A vaccines today, do you have any questions about these?
  - **More** likely to vaccinate

Opel, Pediatrics, 2013

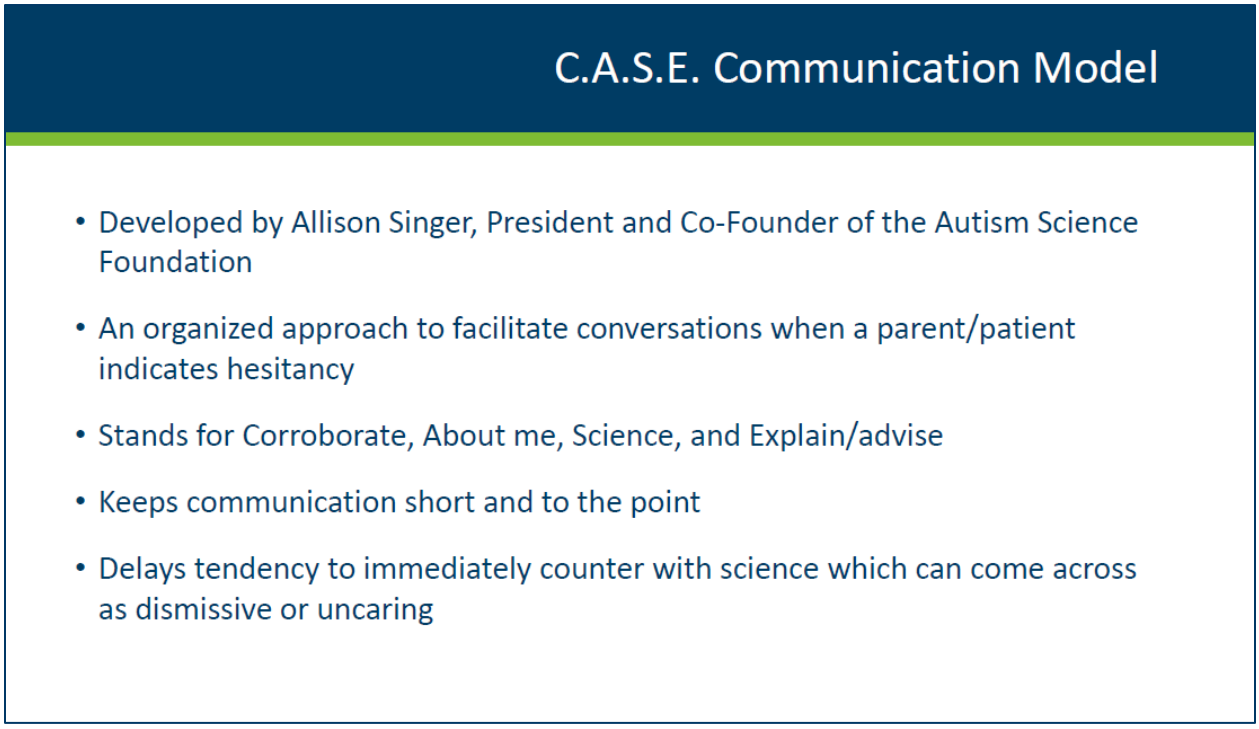
Slide 23: The presumptive approach, continued



Slide text

- Additionally, how the provider continued in the face of resistance will affect the outcome.
  - If the provider continued to recommend vaccination, 50% of hesitant parents had their children vaccinated.

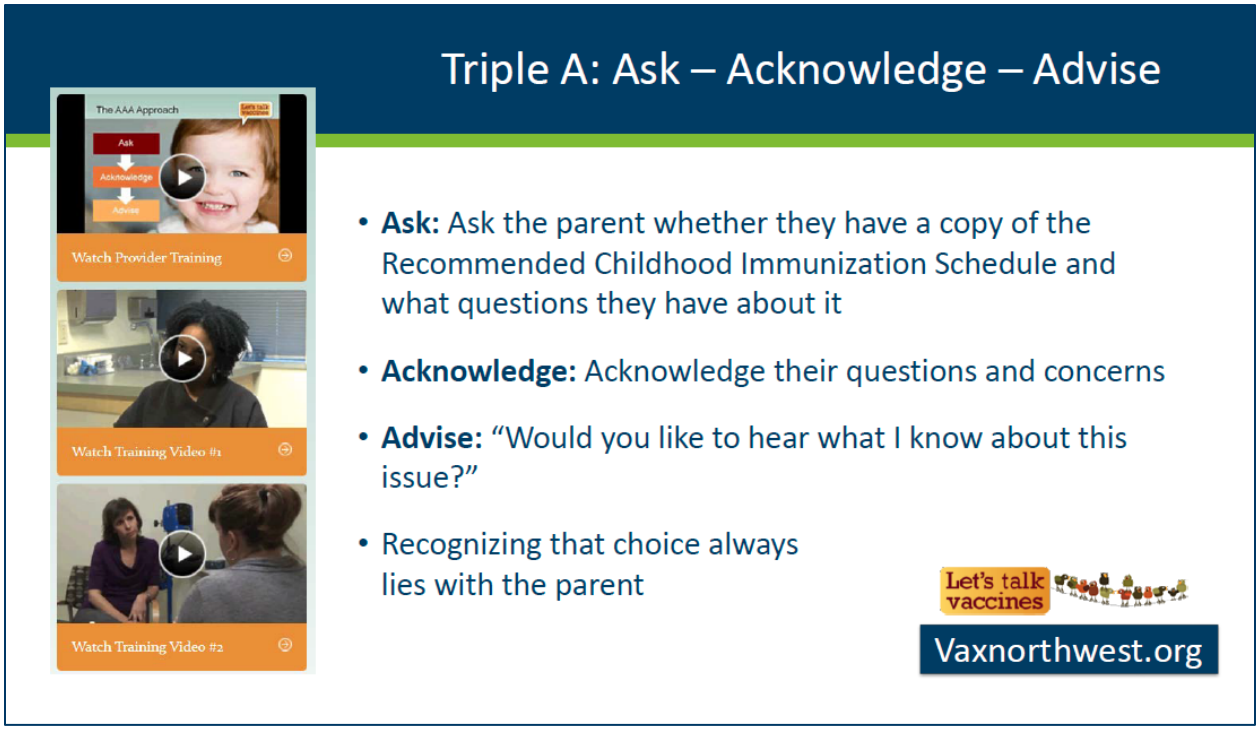
Slide 24: C.A.S.E. communication model



Slide text

- Developed by Allison Singer, President and Co-Founder of the Autism Science Foundation
- An organized approach to facilitate conversations when a parent/patient indicates hesitancy
- Stands for Corroborate, About me, Science, and Explain/advise
- Keeps communication short and to the point
- Delays tendency to immediately counter with science which can come across as dismissive or uncaring

Slide 25: Triple A: Ask – Acknowledge – Advise



Slide image

- Screenshot of videos discussing the AAA approach
- Logo of Let's Talk Vaccines and URL

Slide text

- **Ask**: Ask the parent whether they have a copy of the Recommended Childhood Immunization Schedule and what questions they have about it
- **Acknowledge**: Acknowledge their questions and concerns
- **Advise**: "Would you like to hear what I know about this issue?"
- Recognizing that choice always lies with the parent

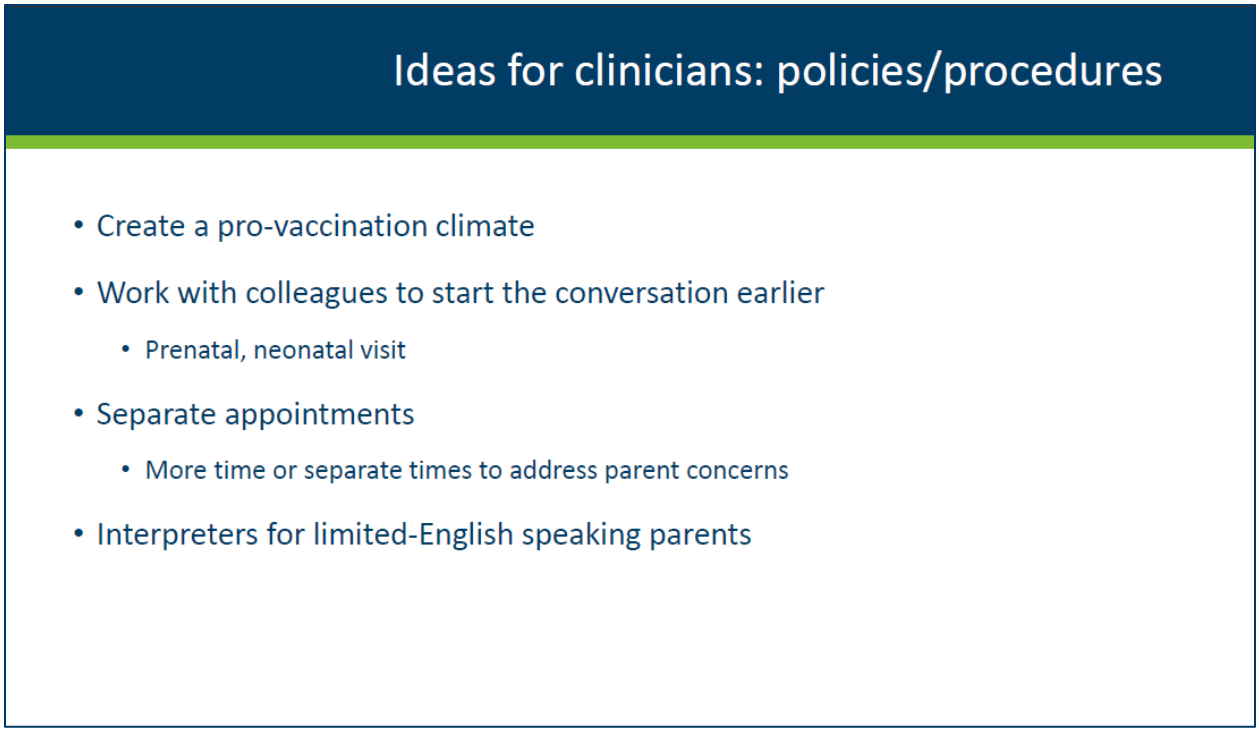
vaxnorthwest.org (now located at: https://immunitycommunitywa.org/)

Presenter notes

Ensure that you will acknowledge the parent's decision.

Respond according to parent's communication style.

Slide 26: Ideas for clinicians: Policies/procedures



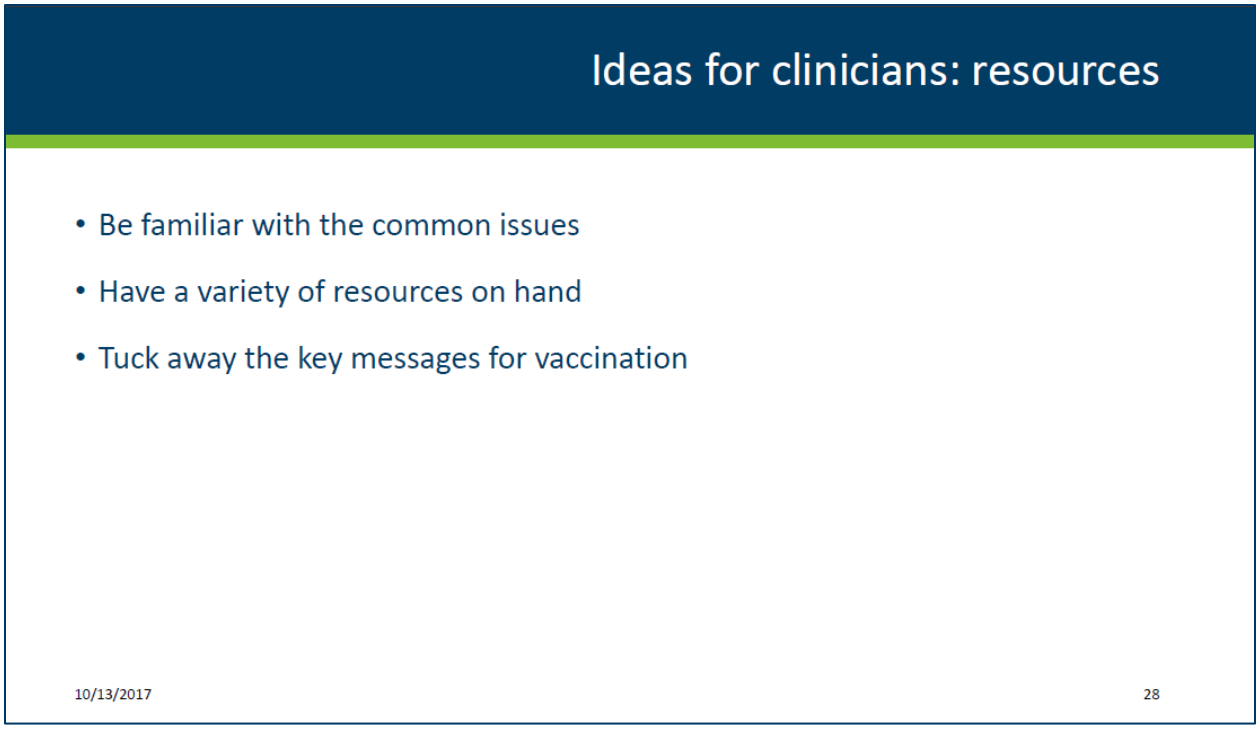
Slide text

- Create a pro-vaccination climate
- Work with colleagues to start the conversation earlier
  - Prenatal, neonatal visit
- Separate appointments
  - More time or separate times to address parent concerns
- Interpreters for limited-English speaking parents

Presenter notes

Share these ideas with colleagues in your jurisdiction.

Slide 27: Ideas for clinicians: Resources



Slide text

- Be familiar with the common issues
- Have a variety of resources on hand
- Tuck away the key messages for vaccination

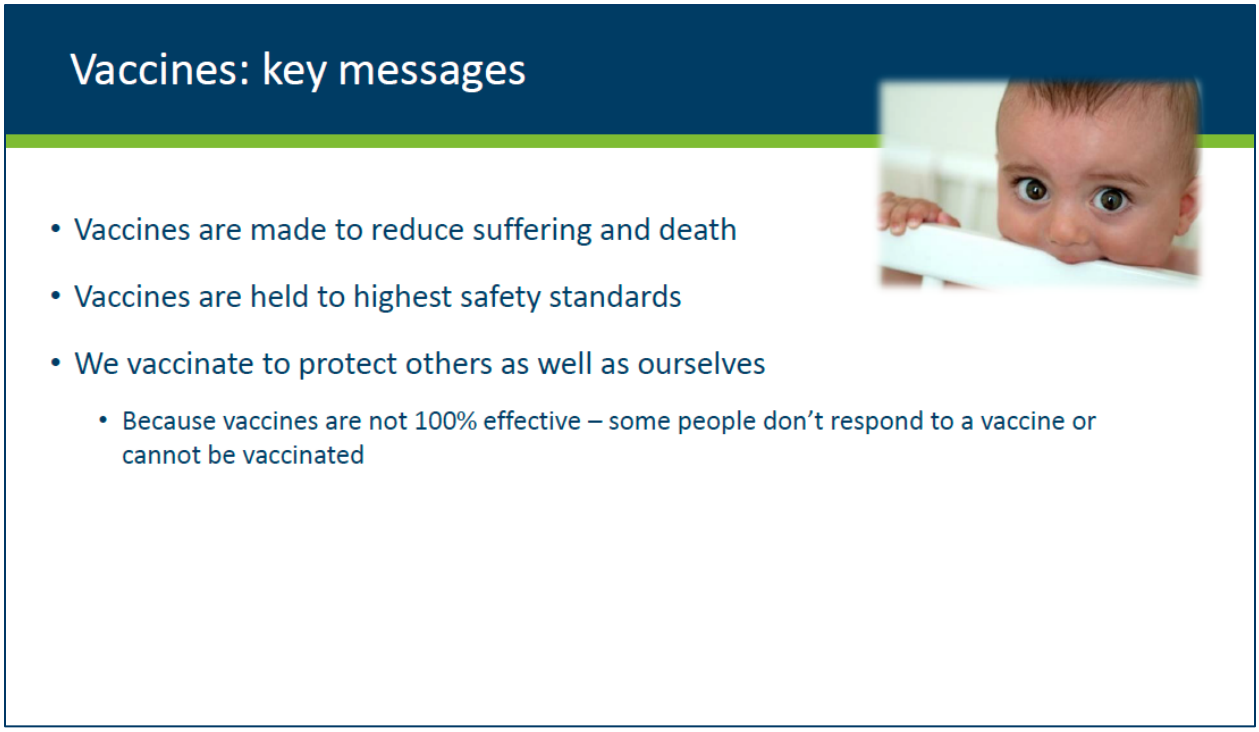
Presenter notes

Visit anti-vaccine websites.

Read articles that are cited.

Tailor resources to match the decision-making process a parent uses.

Slide 28: Vaccines: Key messages



Slide image

Baby in crib

Slide text

- Vaccines are made to reduce suffering and death
- Vaccines are held to highest safety standards
- We vaccinate to protect others as well as ourselves
  - Because vaccines are not 100% effective –some people don't respond to a vaccine or cannot be vaccinated

Presenter notes

Have these key messages handy and share them in local papers and on your health department's website.

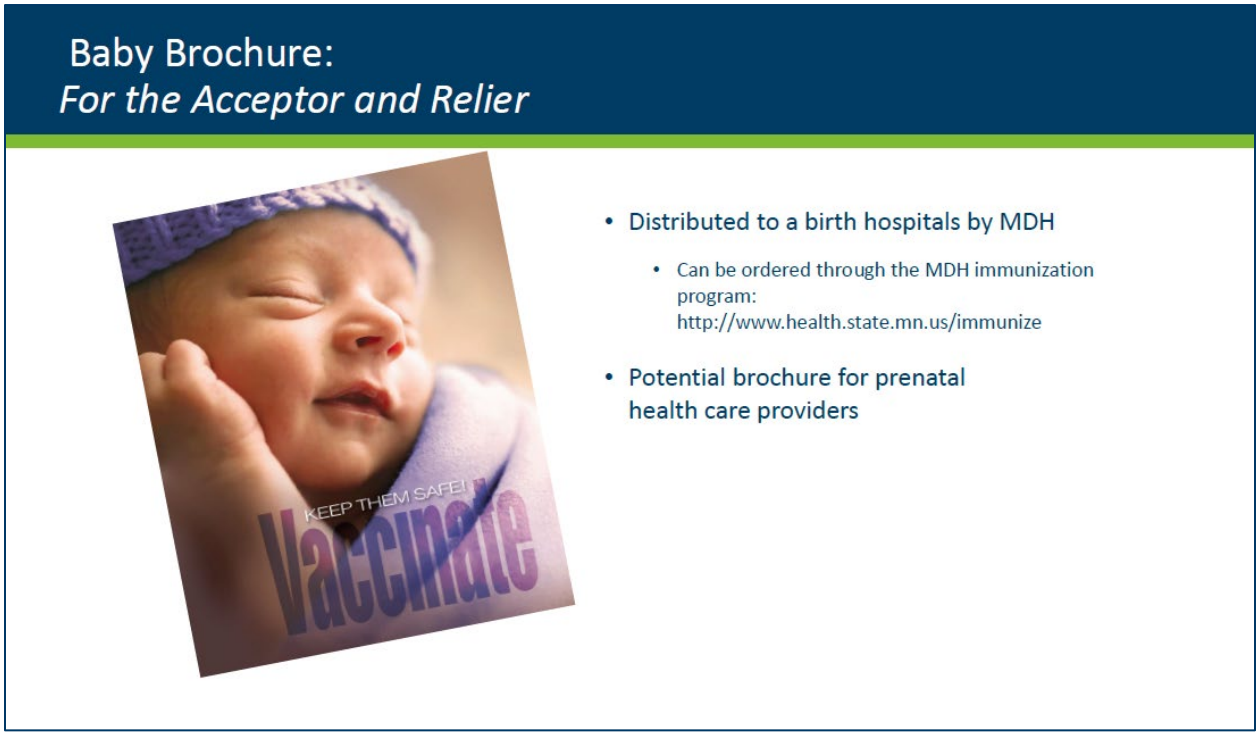
Another important piece of information to keep in mind is that because we are giving vaccines to healthy people, FDA has the strictest standards that a manufacturer must use to get vaccines licensed in the U.S. Vaccine manufacturers must include tens of thousands people in their clinic trials.

When new vaccines get added to the schedule, the vaccine manufacturer must prove that the new vaccine works with already recommended vaccines; they must prove that the other vaccines still work with the new vaccine and they must prove that giving them together doesn't increase the risk of bad reactions.

Despite a very safe product, it is important to acknowledge…

- Very rarely, vaccines may cause an adverse reaction in a person
- Common: Irritability, slight fever, soreness and swelling at the injection site
- More serious events after vaccination are extremely rare and should always be reported

Slide 29: Baby brochure: For the acceptor and relier



Slide image

Screenshot of baby brochure

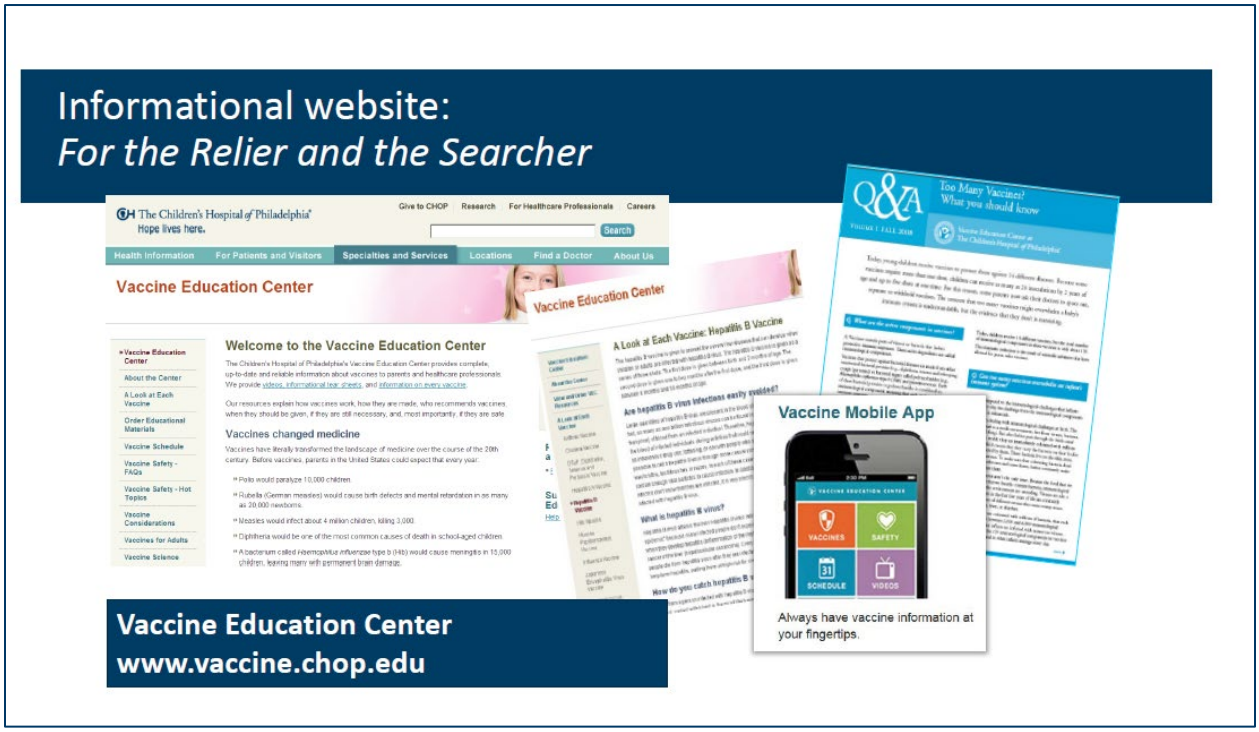
Slide text

- Distributed to a birth hospitals by MDH
  - Can be ordered through the MDH immunization program: www.health.state.mn.us/immunize
- Potential brochure for prenatal health care providers

Presenter notes

Here are examples of resources that can be provided based on how a parent makes decisions. This MDH brochure is for parents in who tend to be “acceptors” or “reliers.”

Slide 30: Informational website: For the relier and the searcher



Slide image

- Screenshot of Vaccine Education Center website: www.vaccine.chop.edu
- Screenshot of vaccine mobile app
- Screenshot of Vaccine Education Center fact sheet
- Screenshot of Too Many Vaccines? fact sheet

Slide text

Vaccine Education Center:
www.vaccine.chop.edu

Presenter notes

These web resources might be helpful to parents who tend to be "reliers" or "searchers."

Slide 31: Informational website: For the searcher

Slide image

Screenshot of MedlinePlus website

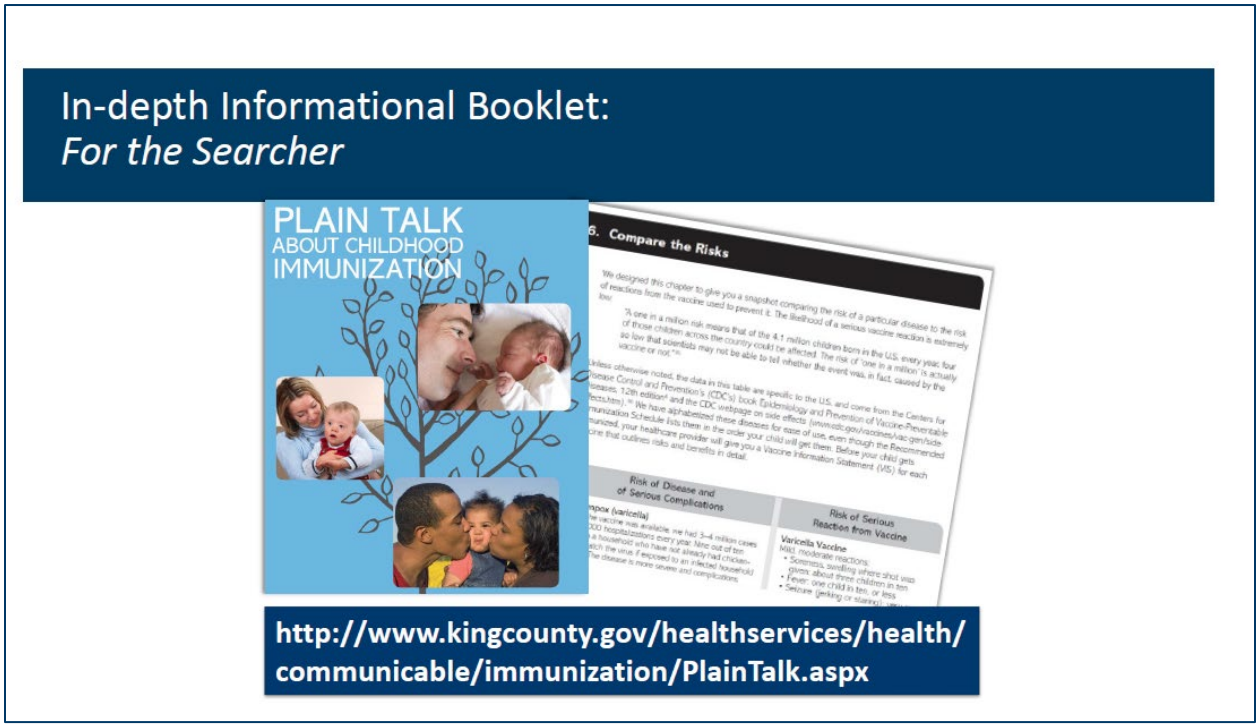
Slide text

Medline plus: https://medlineplus.gov/

Presenter notes

Another good website for parents for are “searchers.”

Slide 32: In-depth informational booklet: For the searcher



Slide image

Screenshot of booklet: Plain talk about childhood immunization

Slide text

Booklet URL, now located at: www.kingcounty.gov/depts/health/communicable-diseases/immunization/child/plain-talk-about-childhood-immunizations.aspx

Presenter notes

This booklet from King County, WA, may be helpful to parents who are searching for more information on vaccines.

Slide 33: Advocacy

Slide image

Screenshot of Minnesota Childhood Immunization Coalition Facebook page

Slide text

Minnesota Childhood Immunization Coalition: www.facebook.com/MnCIC

Presenter notes

A statewide child coalition has was established to support and promote immunizations in Minnesota. The members consist of parents and any others interested in taking a more active role in promoting immunization.

Slide 34: Thank you!

Slide text

Thank you!

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