Vaccine Hesitancy

WHY ARE PARENTS REFUSING VACCINES?

Vaccines are one of the most important public health achievements and save countless lives of children each year. Despite this, in a recent survey 85% of pediatricians have had a parent refuse a recommended vaccine in the previous year. So why are providers seeing an increase in parents questioning having their children receive the recommended immunizations? A number of factors are playing a role.

- For one thing the success of vaccines has made these preventable diseases almost invisible to the public. A look at the top ten child health concerns in the public's mind and infectious diseases are nowhere on the list. Studies show that when epidemics occur, immunization rates increase, and then when the epidemic abates the immunization rates start to drift downward again.
- Another factor is the changes we are experiencing in the health care system. The public no longer has the faith in medicine that it had and has come to realize that medicine does have limitations. As a result complementary and alternative medicines are put on equal footing despite a lack of scientific evidence of efficacy. Consumerism has become an important component with the resultant questioning of provider recommendations. This in itself would not be harmful if patients were able to get information from reliable sources but this is often is not the case. Too often parents are getting misinformation on the risks of vaccines from internet sites not based on science or worse yet from celebrities with personal agendas.
- Finally the media with the now continuous exposure distorts events and will misinterpret scientific research. All of these factors have resulted in providers now having to justify and convince parents on the need to immunize their children.

DEMOGRAPHICS

With the recent increase in parents that are questioning immunizations and the recommended schedules a number of studies have looked at parents who choose not vaccinate their children. While providers see many more parents hesitant about having their children receiving all or some of the recommended immunizations the number of parents who actually refuse to vaccinate their children is still small. Overall in this country < 1% of the parents refuse all immunizations. It is very unlikely these parents will change their minds on immunizations and providers should understand that it may be impossible to convince this group. Approximately 30% of the parents though are what is called "vaccine hesitant." They may have concerns about certain vaccines or schedules and they are interested in receiving more information. It is this group that providers have a chance to convince about the importance of vaccines and the need

to receive the immunizations. Studies that have looked at vaccine hesitant parents find that it is the health care provider that has the most influence on these parents decision making.

Vaccine hesitant parents tend to be white, non-Hispanic, married, slightly older, and with higher salaries. They have a higher rate of college education. This seems ironic in view of the tremendous scientific evidence in support of vaccines. But scientific reasoning loses importance when emotions become involved and this has become a very emotional issue for so many of these parents. The main emotion involved is fear. Fear that vaccines are unsafe, will overload the immune system, or will cause the disease itself. Providers need to know specifically what are the parental concerns and fears if they are to help these parents make informed decisions.

For more information on vaccine hesitant parents we suggest the following site.
www.cdc.gov/vaccines/hcp/patient-ed/conversations/index.html

GENERAL TIPS ON SPEAKING TO PARENTS

The most important thing you can do as a provider when discussing vaccines is to LISTEN to the parents. Implicit in this is that the provider will need to TAKE TIME during the visit to hear the parents' concerns. Let them talk WITHOUT INTERRUPTING. It is important for providers to NOT BE OFFENDED by the questions. Remember this is emotional topic for them and the main emotion at play is fear - concerning the safety of their child. Therefore concerns that seem irrational to providers may be very rational to parents. Nothing will do more to gain parents trust with a provider than knowing they can freely ask questions and the provider will hear them out WITHOUT BEING JUDGMENTAL. Being HONEST about possible adverse effects along without describing the benefits of immunizations further enhances their trust in the provider. This can provide a lead into CORRECTING MISCONCEPTIONS about vaccines. It also gives the provider an opportunity to provide good websites and OTHER SOURCES OF INFORMATION. Sometimes too much science can turn parents off so personal ANECDOTES especially concerning your own children and grandchildren receiving immunizations can be helpful. Above all speak to parents in SIMPLE, STRAIGHT FORWARD LANGUAGE without medical jargon. Lastly, RESPECT PARENTAL AUTHORITY in their decision making.

TEN TIPS FOR SPEAKING TO VACCINE HESITANT PARENTS

- LISTEN
- TAKE TIME
- WELCOME QUESTIONS
- DON'T INTERRUPT
- DON'T BE OFFENDED
- DON'T BE JUDGMENTAL

- BE HONEST
- CORRECT MISCONCEPTIONS/PROVIDE INFORMATION SITES
- SPEAK WITHOUT USING MEDICAL JARGON
- RESPECT PARENTAL AUTHORITY

TALKING POINTS ON SPECIFIC VACCINE QUESTIONS

Autism

Probably the biggest fear of parents is that vaccines cause autism. This first came to the public concern following a study published in the Lancet purporting a link to MMR vaccine (see below) and autism. Numerous celebrities came into the picture declaring autism was caused by vaccines. The media spotlights of course gave these individuals much air time. The Lancet study has since been refuted after it was found out the main author falsified data and was receiving financial incentives from attorneys representing parents of children suing vaccine manufacturers. This information didn't come to light until much damage had been done. Numerous well controlled studies have been done since this original article came out and none of these studies show a link between vaccines and autism. Still the misinformation on vaccines and autism persists. Some key points:

- Autism is a genetic disorder that science hasn't determined a cause.
- Interestingly vaccines have been studied more than anything else in terms of a possible link and studies have continued to show that there is no link between the two.
- Studies looking at mercury which was used as a vaccine preservative have shown no association (see below).
- In 2004, the Institute of Medicine (IOM) reported on a large study looking at Autism and Vaccines and came to the conclusion there was no link.

MMR Vaccine

In 1998, Dr. Andrew Wakefield published a study in the Lancet that linked the MMR vaccine to Autism. The study has since been discredited and Dr. Wakefield had his license stripped as a result. Some key points:

- The original article has been discredited and no articles since have found a connection.
- The IOM has examined this issue and has not found a link.
- The National Vaccine Compensation Program in three separate rulings has declared there is no link.
- Measles is not a benign illness with a rate of encephalitis 1-2/1000 and death also 1-2/1000.
- Mumps also can cause significant problems causing orchitis in 4/10 adult males with the infection and meningitis in 4-6%.

Thimerosal

Another claim by vaccine opponents has been that the small amount of mercury used as a preservative in some vaccines was the cause of autism. As a result of concerns, despite a lack of evidence of any actual link, thimerosal was removed from children's vaccines in 2001. The result has been that since 2001 autism rates have actually increased. Some key points:

- With the exception of some flu vaccines mercury is no longer used as a preservative.
- Autism rates have continued to rise despite the removal of mercury.
- The mercury used in preservatives was ethyl mercury, rather than methyl mercury, which is found in nature. Ethyl mercury is less likely to cause harm.
- A large study of over 500,000 children done by the CDC and the Danish Medical Research Council showed no association between thimerosal and autism.

Too Many Shots

One of the newest attacks on vaccine safety purports that children are getting "too many shots" and their immune systems are unable to handle this overload of antigens. Again science doesn't support this claim. Key points:

- The average child is exposed to between 2,000-6,000 different antigens each day normally.
- Small pox vaccine alone had 200 different antigens and in the current vaccine schedules the total number of antigens of ALL vaccines in the first two years of life is slightly greater than 200 (211 to be exact).
- In 1980, the number of antigens from fewer vaccines was over 3,000. So today children are actually being exposed to fewer antigens with more vaccines.
- The January 2013, IOM issued a report concerning the current immunization schedule and the number of antigens a child is exposed to. The report stated: "In this most comprehensive examination of the immunization schedule to date, the IOM committee uncovered no evidence of major safety concerns associated with adherence to the childhood immunization schedule..."

Alternative Schedules

Concern about exposure to too many antigens as mentioned above has led some parents to request "alternative vaccine schedules." These schedules spread out the receipt of vaccines over a much longer time span. This soon gained popularity after a pediatrician, Dr. Bob Sears, published a book advocating for an alternative schedule (see Dr. Paul Offit's article refuting the recommendations in this book). Once again science doesn't support these claims, but as we have seen when dealing with emotions, facts take a back seat. Key points:

- Based on misinformation about the immune system (see information above under "Too Many Shots").
- The IOM in January 2013 published a report looking at the current recommended schedule and concluded no safety issues are associated with the schedule.

• There is no scientific evidence the alternative schedules offer a benefit.

• An alternative vaccine schedule means coming into the office for more visits and may actually put more stress on the child.

Natural Immunity is Better

Some parents believe that "natural immunity" is better for the child than immunity from vaccines. While natural immunity may last longer there is no evidence that it is somehow better. Experience with vaccines has shown that while periodic booster shots may be needed vaccines have proven to be effective in decreasing the disease burden.

Not Serious Diseases

This is somewhat related to the above argument. Most parents have not seen the diseases vaccines prevent. As a result they rely on anecdotes from relatives that "they had the measles and it wasn't so bad." These diseases are serious and in many instances deadly. The following information has been gleaned from the CDC's Pink Book and the AAP's Red Book. This information can be used when talking to parents about the seriousness of the diseases.

Measles

• 1/20 will get pneumonia

• 1/10 will get an ear infection

• 1/1000 will get encephalitis

• 2/1000 will die

• Kills 1 million children each year worldwide

• Symptoms of high fever of 103-105 are common

• Will require isolation for at least four days after the onset of the rash

Chickenpox

• Hospitalizations two-three per 1000 cases

• One death per 60,000 cases

• Complications include serious bacterial skin infections, pneumonia, dehydration, encephalitis

• Will require isolation for at least five days after onset of rash

Pertussis

• Paroxysmal cough can last up to six weeks

• Greater than 60% of children less than six months of age with pertussis will be hospitalized

• 1/10 children less than six months of age will develop pneumonia

• 1/100 children less than two months of age with pertussis will die

• Children with pertussis should be excluded from school and daycare until they have completed a five day course of therapy.

Haemophilus Influenzae type B (HIB)

• Complications include pneumonia, meningitis, epiglottitis, cellulitis

• 2-5/100 children with meningitis die despite appropriate antibiotic treatment

• 20% of children with meningitis develop permanent hearing loss

Pneumococcus

• Complications include pneumonia, meningitis, blood stream infection, ear infection

• 5/100 children with meningitis will die despite antibiotic treatment

• 1/100 children with blood stream infections die despite antibiotics

We have included a number of handouts that can be given to parents on these concerns. In addition, the following web sites can be passed on to parents for vaccine information:

AAP: www.aap.org
CDC: www.cdc.gov
KDHE: kdheks.gov

WHEN PARENTS REFUSE IMMUNIZATIONS

Despite our best efforts some parents are going to refuse to vaccinate their children. They may refuse all immunizations or only certain ones. It is highly recommended that you carefully document your discussion and their refusal. We have provided a sample form that was produced by the AAP for this purpose. In addition we have included a handout from the CDC that can be given along with VIS material. It is recommended that this topic be revisited at subsequent preventative care visits and you again provide the information and document this discussion. The decision to continue to keep these patients in your practice is a personal one. While the American Academy of Pediatrics recommends providers continue to see them in their offices they understand this is a decision that can only be made by the provider.

Childhood Vaccine Ingredients:http://www.immunize.org/concerns/vaccine_components.pdf

Vaccine Fact Sheets:

http://www.chop.edu/export/download/pdfs/articles/vaccine-education-center/too-many-vaccines.pdf

http://www2.aap.org/advocacy/releases/autismparentfacts.htm

Vaccines for Infants: http://www.cdc.gov/vaccines/hcp/patient-ed/conversations/downloads/talk-infants-bw-office.pdf

Risks and Responsibilities: http://www.cdc.gov/vaccines/hcp/patient-ed/conversations/downloads/not-vacc-risks-color-office.pdf

Talking to Families Resource Listing

Talking to Parents Recent news stories have led to even more parents questioning the safety of vaccines. In order to help you address parental concerns, the AAP and CDC encourage you to visit the following sources below:

Answers to frequently asked questions on infant immunization and vaccine safety: http://www.cdc.gov/vaccines/vpd-vac/faqs-vpd-vac.htm

In the news- http://www.aap.org/en-us/search/pages/results.aspx?k=autism%20news&s=All%20sites

Information on vaccine safety concerns- http://www.immunizationinfo.org/issues/vaccine-safety/concerns-about-vaccine-safety

Resources for providers on parental hesitancy- http://www2.aap.org/immunization/pediatricians/refusaltovaccinate.html

Mitochondrial disorder FAQ from CDC- http://www.cdc.gov/ncbddd/autism/mitochondrial-faq.html

Fighting for the reputation of vaccines- http://pediatrics.aappublications.org/cgi/content/full/121/3/621

Aluminum Adjuvants in Vaccines: The National Network for Immunization Information provides information to address parental concerns about aluminum in vaccines. To access the website, visit: http://www.immunizationinfo.org/vaccine_components_detail.cfv?id=61

What to Expect – Guide to Immunizations The What to Expect Foundation has created a practical parent guide called What to Expect – Guide on Immunizations which can be downloaded for free at: http://www.whattoexpect.org/resources/WhattoExpect_Guideto_Immunizations.pdf

Facts for Parents About Vaccine Safety:
http://www2.aap.org/immunization/families/VaccineSafety1pagerEnglish.pdf
http://www2.aap.org/immunization/families/VaccineSafety1pagerSpanish.pdf

Vaccine Safety: The Facts
http://www2.aap.org/immunization/families/VaccineSafety_parenthandout.pdf