Understanding and dealing with parental vaccine concerns

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Parents often worry more about vaccines than the diseases they prevent. This article highlights the issues that commonly concern parents and suggests appropriate information that nurses can give to reassure them and promote vaccination.

When the current generation of grandparents was born, families worried frantically about the diseases that children might get. Whooping cough, diphtheria and polio were dreaded illnesses that struck terror into the heart of every parent. Everyone knew of a family that had been affected by one of these diseases. So when new vaccines became freely available in the 1950s, parents queued in the streets outside surgeries, child clinics or makeshift vaccination centres to ensure their children were protected.

Today’s parents often worry more about the vaccines than about the diseases they prevent (Owens, 2002). For any new vaccine on the horizon, parents are more likely to be questioning, rather than queuing.

Evidence for vaccines

Effective vaccination programmes have led to a dramatic decrease in serious childhood diseases. For example, Figure 1 demonstrates the reduction in group C meningococcal disease rates in the UK after vaccination was introduced. As a result, today’s parents have never seen the effects of the serious childhood diseases we routinely vaccinate against. Many mistakenly believe these conditions are no longer a problem and that the risk of the vaccine is greater than that of the disease.

Vaccination is one of the most effective health care interventions that nurses are ever likely to make (Plotkin and Orenstein, 2004). It is hard to exaggerate the impact of vaccination on the health of the world’s people as, with the exception of safe water, no other modality, not even antibiotics, has had such a major effect on mortality (Plotkin and Orenstein, 2004).

Parental concerns

It is clear that to make an informed decision about vaccination, parents should have access to balanced information. However, with the media reporting of dramatic scare stories this balance can be distorted, resulting in an increase in vaccination myths. It is the responsibility of health care professionals to redress this imbalance. They need to use their knowledge and skills to interpret the evidence for parents, dispel the myths and answer their questions.

Are vaccines safe?

Reassurance to patients can begin with an explanation of the long and rigorous process of testing that all vaccines go through before they can be licensed. This begins with years of laboratory research. Only when the Medicines and Healthcare products Regulatory Agency (MHRA) is satisfied with the results of laboratory testing can clinical trials of a new vaccine begin. Several phases of trials will be conducted.

Initially a new vaccine, or a new combination of vaccines, will be given to a small number of adult volunteers to test the safety of various doses. To provide protection against disease a vaccine must stimulate an immune response. This can be measured by the quantity and quality of antibodies in the volunteers’ blood.

Once the safety aspects of the vaccine and correct dosages have been confirmed, further trials are carried out on larger numbers of adult volunteers. Permission must be sought from the MHRA and ethical committees for each new clinical trial, thus ensuring the monitoring of all safety and immunogenicity data accrued on the vaccine.

If a vaccine is intended for children, the later stages of the clinical trials process must involve studying groups of children given the vaccine. Safety information is collected throughout every phase of
the clinical trial process, which can take between five and ten years to complete. Even after a vaccine has been licensed for use, safety information continues to be collected to monitor for rare side-effects.

Parents can also be reassured that vaccines have to meet a higher level of safety than most drugs. This is because, while it may be acceptable for a drug such as an anti-inflammatory to have some slight undesirable side-effects such as gastric irritation, this may be seen as a ‘trade-off’ against the improvement in symptoms. Very few adverse reactions are acceptable for a vaccine given to healthy children.

Any discussions regarding safety should make it clear to parents that local injection site reactions such as redness, swelling or tenderness should be expected and include advice on how to manage fever.

However, health care professionals should not try to pretend that vaccines are 100 per cent safe. This level of safety cannot be promised for any health care intervention. But parents can be reassured that vaccines are very safe and serious reactions are rare.

Are vaccines necessary?
A simple explanation for the necessity of vaccination might include details of how babies start life with a limited amount of protection against disease. This was provided during pregnancy by the mother’s antibodies passing across the placenta, but these are short-lived and wane during the first few months of life (Offit et al, 2002).

Vaccines contain small amounts of weakened or killed viruses or bacteria. These are unable to cause disease but are able to prompt the immune system into responding. This response is twofold: antibodies are produced in the short term against the virus or bacteria, and the immune system makes memory cells so that it can rapidly make more in future.

Discussions could also include information about how being healthy and well nourished helps the body’s defences fight infection, but that this alone will not prevent disease.

Including an explanation of why breastfed babies still require vaccinations can be helpful. Breastfeeding provides a particular type of antibody, known as IgA, that helps to protect against gastrointestinal and viral respiratory infections. However, the protection provided by breast milk is incomplete, protection disappears quickly when breastfeeding stops, and it may not be adequate if the child is exposed to a large amount of bacteria or virus (Offit et al, 2002). Breastfeeding is therefore not a substitute for vaccination.

Do multiple vaccines damage immunity?
Following the enormous publicity and calls for the separation of the measles, mumps and rubella vaccine, parents have been questioning whether multiple vaccines might overwhelm or damage a child’s immune system. The common assumption is that an infant’s immune system is too immature to deal with several vaccines at once. This is a myth. Reassurance can be given by explaining why multiple vaccines are used and how long this has been common practice.

Since the 1950s advances in vaccinology have meant an increase in the number of serious diseases that vaccination can protect against. In an effort to keep the number of injections children receive to a minimum, many vaccines have been combined. To help explain that a child’s immune system is able to cope with combined vaccines, it may be useful to remind parents that from the moment of birth, an infant is exposed to lots of microbes and bacteria. The infant’s immune system must deal with the potential infection of the umbilical stump, it may have to cope with thrush in the mouth or on the skin and perhaps stickiness of the eyes. Simply being in contact with other people, such as close relatives, means a child’s immune system must respond to multiple antigens. For example, getting a cold means responding to between four and ten antigens, while having a streptococcal sore throat can mean dealing with more than 1,800 antigens (Halsey, 2001). By the age of two

References


Joint Committee on Vaccination and Immunisation (2004) Draft minutes of the meeting held on Friday 1 October 2004. www.advisorybodies.doh.gov.uk/jcvi/mins011004.htm


Use the following points to write a reflection for your PREP portfolio:

- Write about where you work and why this article is relevant;
- Reflect on the last time that you discussed vaccination with a parent;
- Identify any information within this article that you could have used in this situation;
- Write about how you will use this knowledge in your future practice;
- What will you do to follow up this learning?

Providing information
Nurses and health visitors can do a lot to reassure parents. They are well placed to relay the basic principles of vaccination using easily understood terminology. And where parents need further information there are several credible internet sites that they can be guided towards:

- www.immunisation.nhs.uk – NHS immunisation information website providing up-to-date and accurate information on vaccines, diseases and immunisation. Provides leaflets and information that can be downloaded or ordered (including many in different languages) while health professionals can register their details to receive updates and factsheets. Chief medical officer’s letters detailing recent changes are available via the publications link;
- www.mmrthefacts.nhs.uk – NHS website on the MMR vaccine with detailed answers to parents’ questions and information in many different languages;
- www.nhsdirect.nhs.uk – Health information service. There is also a 24-hour telephone advice line for those unable to access the internet (0845 4647);
- www.dh.gov.uk – DoH website where you can access the Immunisation Handbook (Green Book), including new and updated pages;
- The World Health Organization (WHO) has a listing of all vaccine safety websites that meet WHO criteria for providing essential and reliable information on vaccination at www.who.int/immunization_safety/safety_quality/approved_vaccine_safety_websites/en;
- www.uvig.org – website of the UK Vaccine Industry Group. Addresses safety issues and provides an overview of the vaccine production process and a useful glossary of vaccination terms;
- A helpful overview of immunology and vaccination is available from www.jennermuseum.com

Conclusion
Following several years of adverse publicity it is unsurprising that a significant number of parents are doubtful about the safety of childhood vaccination. This is, unfortunately, the modern-day legacy of a successful immunisation programme that has stopped serious childhood illnesses, such as measles, from being a common concern for parents.

It is important to understand that parents will be worried by negative media coverage of vaccines. However, the role of the health care professional is to help them look beyond this by providing evidence and information. Listening to parents’ concerns and answering their questions will take time and effort. But a well-rehearsed and evidence-based answer, delivered confidently by a health professional, can be a powerful tool for reassurance.

To restore trust in vaccination, all health care professionals must help parents to become fully informed so that they can make the correct choice for their child’s health.