Improving Immunization Rates in the Clinic and in the Community

Karlen E. (Beth) Luthy  
*Brigham Young University - Provo, beth_luthy@byu.edu*

Arlene M. Sperhac  
*Rush University*

Sandra A. Faux  
*Rush University*

Joseph K. Miner

Follow this and additional works at: https://scholarsarchive.byu.edu/facpub

Part of the Other Nursing Commons, Pediatric Nursing Commons, and the Public Health and Community Nursing Commons

**BYU ScholarsArchive Citation**

Luthy, Karlen E. (Beth); Sperhac, Arlene M.; Faux, Sandra A.; and Miner, Joseph K., "Improving Immunization Rates in the Clinic and in the Community" (2010). *Faculty Publications*. 5230. https://scholarsarchive.byu.edu/facpub/5230

This Peer-Reviewed Article is brought to you for free and open access by BYU ScholarsArchive. It has been accepted for inclusion in Faculty Publications by an authorized administrator of BYU ScholarsArchive. For more information, please contact scholarsarchive@byu.edu, ellen_amatangelo@byu.edu.
IMPROVING IMMUNIZATION RATES IN THE CLINIC AND IN THE COMMUNITY

KARLEN E LUTHY, DNP, APRN; ARLENE M SPERHAC, PHD, CPNP; SANDRA A FAUX, PHD, RN; JOSEPH K MINER, MD, MSPH

Your ideal vantage point lets you positively influence compliance by providing accurate information and resources to parents.

Over the past decade, the United States has had tremendous success in achieving very high immunization compliance rates among children, sometimes as high as 91%. However, despite progress toward controlling the spread of communicable disease through immunizations, more than 2.1 million children nationwide are not adequately immunized. Even among US children who are adequately immunized, only about half of them actually received their immunizations on time.

Although immunization education can be a community-based effort, the improvement of childhood immunization rates in any community can begin with the involvement of a single clinical practice site that enacts interventions. Although parents of children seen in that clinic may be surveyed in order to use data to formulate specific interventions, a more immediate approach can be taken and interventions implemented based on the common concerns of parents and/or the barriers to the timely immunization of children. Some of the interventions that can be implement-

DR LUTHY is assistant professor of nursing, Brigham Young University, Provo, Utah. DR SPERHAC is professor of nursing, Rush University College of Nursing, Chicago, Illinois. DR FAUX is associate professor of nursing, Rush University College of Nursing. DR MINER is executive director, Utah County Health Department, Provo. The authors have nothing to disclose in regard to affiliations with, or financial interests in, any organization that may have an interest in any part of this article.
ed on the clinical level include: instituting a reminder program; coaching parents in how to respond to their child’s pain, crying, or anxiety when receiving an immunization; and allowing time to adequately address parental concerns regarding immunizations during office visits.

Some populations have high immunization rates, whereas other communities continue to struggle with maintaining immunization completion among community members. Communities in Utah traditionally have been such communities. States such as Utah with high birth rates typically have low infant vaccination rates, and conversely, states with low birth rates have high vaccination rates. However, in 2006, a coalition was established to improve childhood immunization rates in Utah County. Collaborating with several pediatricians’ offices, family practice offices, and the local health department, the Immun-wize Project was implemented, which ultimately improved the childhood immunization rates in the area by 11% to 87.8%.

The Immun-wize Project was specifically developed as a means to address parental concerns identified through a community-based survey. A single-page survey was developed by members of the immunization coalition and consisted of 3 questions: Why did the participants hesitate to immunize their children? What were the participants’ concerns regarding immunizations? Where did the participants receive most of their information regarding immunizations? Participants needed to be present in the clinic with a child needing at least 1 immunization that was at least 6 months overdue.

The results of the survey demonstrated that immunization concerns of parents in Utah County differed somewhat from the concerns of parents nationwide. Nationally, parents who procrastinated in obtaining their children’s immunizations did so because they had limited access to immunizations, were unable to pay for immunizations, or were unaware that their children were overdue for the next immunization. Congruent with national findings, it was discovered that in Utah County parental confusion regarding the immunization schedule contributed to the overall problem of underimmunized children. It also was discovered that one-third of parents delayed immunizing their children because they were worried about the child’s pain, crying, or anxiety. In addition, approximately 25% of parents delayed immunizations because they had concerns about immunization safety. After identifying these 3 primary parental concerns, program interventions were designed to address them.

The Immun-wize Project interventions included advertising on local television programs and banners on local news station Web sites advising when children should return for their next set of immunizations. Posters were placed in area hospitals, clinics, stores, and preschools, encouraging parents to contact their healthcare providers to see whether their child’s immunizations were up-to-date. Articles regarding immunization schedules also were published in city newsletters and in local newspapers.

For parents who worried about their child’s pain, crying, or anxiety, local Mom-n-Me playgroups held classes on how to help prepare a child for an immunization visit. They recommended books, such as The Berenstain Bears Go to the Doctor, for parents to read with their child before the office visit and for healthcare providers to keep in the waiting room that would help children understand why they need immunizations and what to expect during the shots.

Because immunization safety was a concern for parents, a different immunization question or concern was highlighted each month and discussed on the Immun-wize Web site (www.immun-wize.org) and blog (http://immun-wize.blogspot.com). School nurses inserted the project’s monthly immunization article into school newsletters in Utah County, thereby sending educational messages directly home with school-aged children and successfully reaching their parents, even those who were not actively pursuing information, at no cost to the Immun-wize Project. In addition, the monthly immunization messages were distributed via wellness newsletters sponsored by various businesses. Immunizations were promoted with advertisements on public transportation and through various community events.

**Ask: Why is the patient late?**

Gathering information regarding parental barriers to immunization can be accomplished either independently or in collaboration with other community agencies. To gather specific data, medical assistants or nursing staff could identify the parents of children who are overdue for their immunizations and informally ask them why they are late. The parental responses then could be
reviewed at an office staff meeting, where interventions can be planned and instituted.

**Remind parents**

Confusion for parents regarding the immunization schedule is a common barrier to having an adequately immunized child. Instituting an individualized reminder program, in which an office staff member calls the parents with immunization reminders, can be as effective as calls to remind parents about upcoming appointments. If it is not feasible to have a staff member contact parents directly, parents could be directed to a Centers for Disease Control and Prevention (CDC) Web site (www2a.cdc.gov/nip/kidstuff/newscheduler_le), where they can enter their child's birth date and immediately receive a list of required immunizations with accompanying due dates. In addition, it may be helpful to check with the state department of health, which may have an immunization registry program capable of generating patient reminders via mail, email, or telephone. Immunization email reminders may be generated directly from the office, because some electronic health record systems have this capability. Finally, the updated handout *Parent Version of 2010 Recommended Immunizations for Children From Birth Through 6 Years Old* (www.cdc.gov/vaccines/recs/schedules/default.htm) can be distributed to parents by attaching the handout to the child's immunization card.

Generalized reminders also can be promoted. Immunization messages that are relevant to upcoming events, such as flu season or kindergarten physicals, can be posted on the office door and posted in the waiting and exam rooms. Informative posters displayed in exam rooms provide a significant amount of information without significantly increasing the length of the clinic visit. Pamphlets, handouts, or other educational materials can be obtained from the CDC (www.cdc.gov/vaccines/vac-gen/default.htm or www.immunize.org/printmaterials) or the Vaccine Education Center from the Children's Hospital of Philadelphia (www.chop.edu/service/vaccine-education-center) and offered to parents to review during waiting times.

The American Academy of Pediatrics also offers a variety of educational handouts (www.aap.org/healthtopics/immunizations.cfm) that may be helpful in addressing common parental concerns and used as a catalyst to stimulate dialogue with parents. Videos regarding a variety of pediatric topics, including immunizations, are available at no cost (www.cdc.gov/vaccines/pubs/videos-webcasts.htm). Additionally, it may be possible to include a short immunization message on the bottom of billing statements, which then are mailed to patients' homes.

**Support parents**

The influence of a child's pain, crying, or anxiety on parents' unwillingness to immunize their children on time cannot be underestimated. Unfortunately, children who experience intense feelings of anxiety both before and during immunizations may increase anxiety for the parents, which may promote parental procrastination of future immunizations. Parents should be educated on how to help relieve their child's anxiety before and during immunizations. A handout including tips for parents during an immunization visit could be distributed to parents during clinic visits or made available on the clinic's Web site. To relieve anxiety, parents should be encouraged to do the following:

- **Start early.** Bring along a stuffed toy or blanket for the child to hold during the immunization. It also is helpful to reinforce ahead of time that the healthcare provider's office is a nice place where people want to help the child stay healthy.
- **Be honest.** Explain why immunizations are necessary and what the child may feel when getting an immunization. Never say that it won't hurt.
- **Stay with the child.** Remain with the child during the immunization. Use distractions such as singing, TV, or reading while waiting. Tell the child that you will sit next to him or her or hold the child during the procedure.
- **Set firm limits.** Know it is acceptable for a child of any age to cry; however, the child should also know that kicking and screaming are not acceptable.
- **Remain calm.** Stay calm and in control while in the examination room. Don't give the child the control to postpone the inevitable by giving reasons why the child is not ready for the immunization.
- **Reward.** Praise your child and go somewhere special afterward to celebrate.

**Answer questions**

Exposure to misleading information can undermine parents' confidence in immunization safety and affect their decisions. Unfortunately, the concern that a relation-continued on page 59
IMMUNIZATION RATES

CONTINUED FROM PAGE 56

ship exists between autism and immunizations remains worrisome for some parents, despite educational efforts to relieve this concern. Perhaps the *Lancet*’s retraction of Andrew Wakefield’s 1998 study showing a connection between the measles-mumps-rubella immunization and autism will help restore parental confidence in childhood immunizations. When answering a parent’s questions about the safety of immunizations and autism, it is important that the healthcare provider convincingly state that the question has been thoroughly studied and that immunizations do not cause autism.

It is troubling that in one community, some parents delayed their children’s immunizations because they believed that too many immunizations given too close together would overload the child’s immune system. Parental worry regarding the vaccination schedule is, at least, partially because of writings and media appearances by some who recommended alternative vaccine schedules, saying that parents should allow only 2 immunizations at a time to reduce the risk of “chemical overload” and to give the immune system time to “detoxify the chemicals,” a recommendation that has been disputed. Parents should be encouraged to adhere to the schedule recommended by the American Academy of Pediatrics, the Centers for Disease Control and Prevention, and the American Academy of Family Physicians (www.cdc.gov/vaccines/recs/schedules/child-schedule.htm).

Healthcare providers are in an ideal position to provide accurate immunization information and to positively influence compliance, and they have the strongest influence on whether parents immunize their children. As a result, it is important to allow time to address parents’ questions during an office visit. Parents may be more willing to immunize when there is time to address their concerns. However, time to adequately address parental concerns during clinic visits may seem unrealistic for some healthcare providers. If this is the case, there are immunization handouts available from the CDC (www.cdc.gov/vaccines/spec-grps/parents.htm#questions) or information found on credible Web

---

**Gebauer**

**Patient Comfort SOLUTIONS**

**Less Painful Injections Instantly**

**Gebauer’s Pain Ease® Topical Anesthetic Skin Refrigerant**

Children do not need to experience the pain associated with the increasing number of injections. Gebauer’s Pain Ease non-drug topical anesthetic skin refrigerant spray is fast, easy, and safe. Gebauer’s Pain Ease, unlike other topical anesthetics containing lidocaine, prilocaine, or benzocaine, is not absorbed into the bloodstream and there is no systemic toxicity. No waiting as with anesthetic creams. No prescription to write for each patient. Just spray 4 to 10 seconds prior to immunizations, injections, venipunctures, IV placement, and minor surgical procedures for immediate anesthetic effect. Approved for use on minor open wounds and intact oral mucous membranes. Temporary numbing lasts approximately one minute and can be reapplied as needed. Nonflammable. Mist and Medium Stream Sprays.

**Important Risk and Safety Information**

- Published clinical trials support the use in children three years of age and older
- Do not use on large areas of damaged skin, puncture wounds, animal bites or serious wounds
- Do not spray in eyes
- Over spraying may cause frostbite
- Freezing may alter skin pigmentation
- Use caution when using product on diabetics or persons with poor circulation
- Apply only to intact oral mucous membranes
- Do not use on genital mucous membranes
- The thawing process may be painful and freezing may lower resistance to infection and delay healing
- If skin irritation develops, discontinue use
- Rx only

Gebauer Company

The Most Trusted Name In Skin Refrigerants For Over 100 Years*

800.321.9348 • www.GebauersPainEase.com/cp
sites (www.cdc.gov/vaccines/vac-gen/6mishome.htm or www.immun-wize.org) where parents can find the answers to commonly asked questions. Parents who have general immunization questions can be directed to call the CDC Contact Center (1-800-CDC-INFO). Medical assistants, nurses, and mid-level providers also can be a valuable immunization resource and can provide parental education, once they are familiar with the common parental immunization concerns.

Community involvement
Collaboration with other community agencies such as local hospitals, churches or faith groups, community health centers, daycare centers, city and county governments, private nonprofit agencies, the local health department, local universities, or school districts in your area may help improve immunization rates on a larger scale. Often these agencies are looking for ways to distribute immunization information and may be able to provide resources, such as pamphlets or information about credible Web sites specific to a patient population. With the involvement of a pediatric clinic, parental concerns or perceived barriers to timely immunization of children can be identified, helping to pave the way for useful and effective interventions that can be instituted on a larger, community-wide scale.

Taking action
To positively influence childhood immunization rates on a community level, pediatric healthcare providers can identify barriers to immunization that are specific to their patient population using a simple survey method. The institution of a reminder-call system promotes timely return for immunizations; however, if this intervention is not feasible, then healthcare providers should consider referring parents to a government-sponsored reminder system. Coaching parents on how to respond to their child’s pain, crying, or anxiety when receiving an immunization will help relieve parental anxiety as well as the child’s anxiety. Finally, it is important to adequately address parental concerns regarding immunizations by allowing time during office visits or supplementing parental education with credible Web sites or an immunization hotline number.

REFERENCES