

Refusals and Delay of Immunization Within Southwest Alberta

Understanding Alternative Beliefs and Religious Perspectives

Judith C. Kulig, RN, DNSc¹

Cathy J. Meyer, MSc, DipEd²

Shirley A. Hill, BN³

Cathy E. Handley, RN⁴

Sue M. Lichtenberger, BN⁴

Sharon L. Myck, BN⁴

ABSTRACT

Background: Immunization is a necessary component of well child services within public health. Despite the documented effectiveness of vaccines, some parents choose to refuse or delay immunization for their children. Adherence to different beliefs has affected immunization coverage in one Regional Health Authority in Southwest Alberta.

Methods: This qualitative study involved exploratory, descriptive open-ended interviews with a sample of 47. The sample included people of Dutch ethnic background, Hutterites, and parents and practitioners who engage in alternative health beliefs and practices.

Results: Major findings include: 1) among the Dutch, most noted their decision to refuse to immunize was based on religious beliefs; 2) the Hutterites' decision not to immunize was due to their experiences with adverse reactions but was further supported by their use of alternative health; and, 3) the alternative health group are more concerned with the safety of vaccines with regard to the short- and long-term effects on their children's health.

Discussion: All three groups conveyed a common concern of child health and safety. Educational initiatives need to be implemented to allay parents' fears. Community development activities with individuals of the groups included here who support immunization will increase acceptance of immunization.

The translation of the Abstract appears at the end of the article.

School of Health Sciences, University of Lethbridge, Lethbridge, AB

1. Associate Professor, School of Health Sciences, University of Lethbridge, Lethbridge, AB; Academic Consultant, Chinook Health Region

2. Research Assistant, School of Health Sciences, University of Lethbridge

3. Assistant Program Manager, Wellness Services, Chinook Health Region, Lethbridge, AB

4. Public Health Nurse, Wellness Services, Chinook Health Region

Correspondence and reprint requests: Prof. Judith C. Kulig, School of Health Sciences, University of Lethbridge, 4401 University Drive, Lethbridge, AB T1K 3M4, E-mail: kulig@uleth.ca

Funding for this study was provided by Alberta Health and Wellness, and Chinook Health Region. An earlier version of this paper was presented at: Rural and Remote Health: Exploring the Issues, Making the Connections, October 21-23, 2000, Ottawa, ON, Canada. Findings from this study were also presented at the Alberta Public Health Association Conference, June 21-22, 2001, Red Deer, AB.

Acknowledgements: Thanks are extended to the participants and personnel involved in this study.

Immunization is a necessary and effective component of well child services within public health, but some parents choose to refuse or delay immunization for their children. Reasons given for this include concerns with side effects, adherence to specific religious beliefs, or a disbelief in the effectiveness of the immunization.¹⁻³ Adherence to such different beliefs has affected immunization coverage in one Regional Health Authority (RHA) in Southwest Alberta. The measles rate in this area (20/100,000) is significantly higher than within Canada and the United States combined (6.5/100,000).⁴ The 1999-2000 measles outbreak (2,961 cases) in the Netherlands resulted in the deaths of three children yet the local Dutch participants in Canada failed to acknowledge measles as a serious disease. When the outbreak occurred in Southwest Alberta from Dutch visits (i.e., 28 cases in Canada with 17 cases in Southern Alberta),⁵ most participants were indignant that their school was closed by the RHA and stringent control measures were taken.⁶

In addition to the Dutch population, the RHA identified two other groups (i.e., the Hutterites and parents and practitioners who engage in alternative health beliefs and practices) who either refused or delayed immunization. The findings reported here were generated from a research study conducted with these three groups to answer the question: What are the beliefs of persons who choose not to immunize or to delay immunization for their children?

METHODS

A qualitative study was conducted because there was no information available regarding immunization beliefs and decisions to immunize among the Dutch, Hutterites and alternative health proponents in our region. An exploratory, descriptive study was conducted consisting of open-ended interviews with a sample size of 47. The purpose of the study was to determine the ideas and beliefs of the groups noted above who advocate for refusal or delay of immunization among children. Ethical approval had been obtained from the first author's university and the RHA. All of the interviews were audio-taped and confidentially transcribed after informed consent was obtained and demographic information

collected. A research guide developed by the authors was then used to conduct the interview and field notes were prepared. There were core questions for each group, but unique questions were developed to ensure the full understanding of the context of refusing and delaying immunization among each of the groups. Despite the sensitivity of the issue being studied, adequate sample size was achieved and individuals spoke freely about their beliefs. On average the interviews lasted 60 minutes and were conducted in the participants' homes, except for the practitioners where they were held in their offices. The analysis consisted of frequent reading of the transcripts to identify themes.

Sampling

Purposeful sampling was used to obtain the sample of alternative health practitioners and therefore the research assistant (RA) identified and telephoned all local alternative health practitioners (30 chiropractors and 3 naturopaths). Although the Canadian Chiropractic Association advocates vaccines as safe and effective,⁷ 3 of the chiropractors had strong negative views on immunization and refused to be interviewed. In total, 8 chiropractors and 2 naturopaths were selected for interviewing. If the practitioners were also parents, they were asked further questions regarding immunization status for their own families.

To meet the privacy clauses within the RHA, both the Dutch and alternative health parents were contacted by letter and asked to participate in the study. Members of the advisory committee were also public health nurses (PHN); they sent the letters, did telephone follow-up and kept a list of names that was passed on to the RA. The alternative health group (modal age = 33 years) consisted of 16 participants (10 professionals and 6 laypersons) representing 13 families having a total of 50 children. In total, 21 Dutch participants (modal age = 30 years) were interviewed. This included 16 families having a total of 70 children.

Hutterites are one of the Anabaptist groups who live a communal lifestyle. The first author had a pre-existing professional relationship with one of the colonies and thus established first contact through this means. As this is a closed society, permission was obtained for the first and second authors to come to the colony and discuss immu-

TABLE I
Perspectives of Participants

| | Alternative Health (%) | Dutch (%) | Hutterites (%) |
|--|------------------------|-----------|----------------|
| All immunization is acceptable | 31 | 5 | 30 |
| Certain immunizations are acceptable | 38 | 24 | 30 |
| Against all immunizations | 31 | 71 | 30 |
| "Church" influenced decision not to immunize | n/a | 24 | n/a |
| "Religion" cited as influence not to immunize | n/a | 76 | 50 |
| Farm animals are immunized | n/a | 93 | n/a |
| Influenced by alternative health community | 100 | 80 | 80 |
| Uses alternative health care | 100 | 80 | 90 |
| Participant is fully immunized | 81 | 24 | 100 |
| Participant's spouse and parents are fully immunized | 100 | 10 | 100 |
| Participant is partially immunized | 19 | 76 | 0 |
| Participant has not immunized own children | 31 | 71 | 30 |
| Participant has partially immunized own children | 44 | 24 | 40 |
| Participant has fully immunized own children | 25 | 5 | 30 |
| Participant accepts concept of herd immunity | 38 | 5 | 30 |
| Participant mistrusts pharmaceutical companies | 56 | 71 | 80 |
| Fears adverse side effects of vaccines | 94 | 71 | 70 |

nization with the colony boss. After this initial contact, the RA visited three other colonies. There were 10 Hutterite participants (modal age = 38 years) representing 10 families having a total of 42 children.

RESULTS

Table I highlights the major findings from all three groups. Note that not all of the comments about immunization were negative. Of the 10 alternative health care practitioners, 3 supported immunization and 2 others had neutral stands. The practitioners who support immunization see it as complementary to their own alternative health practice. All of the 6 laypersons had either been fully or partially immunized. Among this group, 2 supported immunizations but had delayed vaccinations with 2 of their children for specific reasons. In one case, the child had developed a fear of needles, and the other had a reaction after the vaccine. Among the Hutterites, interviews were conducted with the Lehreleut (pro-immunization) and Dariusleut (anti-immunization) sects. The Lehreleut minister who was interviewed for the study confirmed that he supports the colony members in receiving vaccinations. One Lehreleut woman who supported immunization was also interviewed. The remaining 8 participants were all members of the Dariusleut sect who indicated that the decision to immunize rests with the mother and not with the church.

Major reasons for refusing or delaying immunization

Three of the alternative health practitioners were firmly anti-immunization and one

believed immunizations should be delayed. Several shared anti-immunization literature with their clients but others would not do so unless specifically asked. Within the alternative health and Dutch groups, there were concerns expressed about the use of the hepatitis B vaccine. Some of the practitioners indicated that this vaccine is only appropriate if children become drug users or prostitutes. The parents of both these groups shared a similar concern; they believed the hepatitis B vaccine was only useful to prevent sexually transmitted diseases for which they did not believe their children were at risk.

A number of the alternative health proponents did not believe that their children were at risk for diseases such as polio or diphtheria. Instead, they saw these as affiliated with third-world countries. The belief was that if they did obtain these diseases, it would provide the person with life-long natural immunity that would be superior to any synthetic vaccine.

The Dutch noted their religion had an impact on their refusal to immunize, particularly for the members of the Netherlands Reformed Church or the Reformed Congregation of North America. All indicated that an anti-immunization stance is not discussed during the formal church service but that a religious interpretation for why they do not immunize is based upon the Psalter.⁸ The latter indicates that immunizing children challenges the will of God. They furthermore commented about man's sinful behaviour leading ultimately to illness.

This group compared the acceptance of immunization to the beliefs surrounding assurance versus insurance. In other words,

they felt that if their children contracted communicable diseases, it was the Lord's will, but if the children were handicapped from the immunization, it was the parents' fault. Despite these comments, some vaccinations – i.e., rubella for girls and vaccines to prevent tetanus – were acceptable among some families. However, young couples were reminded by their relatives that their children should not be immunized. Most of the participants' parents were not immunized and had related stories of adverse reactions to support their decision.

Some of the Hutterites also explained that it was God's will that determined the health status of the children and that he would care for them even if they were not immunized. This group noted that other countries, including those in Europe, had discontinued vaccinations with no harmful effect on their population. Such information was derived from magazines obtained in health food stores that are frequented by this group. As an alternative to injectable vaccines for diphtheria, pertussis and tetanus, some Hutterites use a liquid "Rx Vaccination DPT" available from a homeopathic caregiver in a nearby metropolitan city who sees and prescribes this liquid to both children and adults.

Risks associated with vaccines

Among both the alternative health practitioners and laypersons, there was a belief that a variety of disorders, including autism and crib death, were attributed to vaccinations. However, their information sources were non-scientific articles from alternative health magazines or materials prepared by individuals with an anti-immunization viewpoint. For some of this group, there was a concern about giving immunizations to children whose immune systems were not fully developed. Immunizations were believed to potentially weaken the immune system and to cause diseases such as asthma or allergies, and hence must be avoided.

Most of the Hutterite participants did not believe that the vaccines were effective and that in fact they were harmful to their children because booster shots are required. One such incident was of a 21-year-old Hutterite male who is crippled and helpless. His current health state is attributed to a vaccination he received at

nine months of age. Other stories of the perceived harmful effects of vaccinations included children losing a significant amount of weight or being cranky and having a fever.

Among the Dutch, there was also concern about perceived risks from having the vaccines administered (i.e., fever, crankiness, brain damage, cancer). They also believed that vaccines could be overused and become ineffective. Compared to the other groups, the Dutch felt that they had received minimal explanation from the PHN about the risks of vaccines. However, like the other two groups, the Dutch frequented health food stores and accessed the internet to support their decisions not to immunize.

A final area of concern among both the alternative health and Dutch participants was the actual ingredients of the vaccines. Substances such as mercury, formaldehyde, aluminum, lead and preservatives were listed by the participants as being in the vaccines and were perceived as further endangering people's health.

DISCUSSION

Although three different groups were included in the study, the findings reveal a common concern about child health and safety. Participants noted perceived harmful effects (i.e., the infant being cranky, running a fever, a decreased appetite) that are normal reactions for a short period of time after the vaccine is given. The safety of the

vaccines was also questioned but common adjuvants have been used safely for 70 years to help the immune response at the cellular level, e.g., aluminum salts found in diphtheria, hepatitis B and tetanus vaccines. To prevent contamination in vaccines by bacteria or fungi, a mercury-based compound (Thimerosal) was, but no longer is, commonly used. Some anti-immunization groups promote fear because they do not understand that the use of small amounts of adjuvants and preservatives in vaccines is a safe practice.⁹⁻¹²

Anti-vaccine notoriety has snowballed from a handful of books to a plethora of web sites. The lay person is expected to decide but usually is not equipped to separate fact from fiction, or correlation from causality. In addition, when clients' needs are not met, they seek alternative health care where these practitioners spend longer times during visits and tend to accommodate their clients' special needs more fully. These practitioners might not provide a balanced perspective regarding immunization. For the Dutch participants, their religious viewpoints do not allow them to accept immunization, indicating a need for tolerance for adherence to faith-based decisions.

The major limitation of this qualitative study lies in the lack of generalizability of its findings. Nonetheless, these findings do suggest directions for future action in the RHA of southern Alberta.

Educational initiatives to allay the parents' fears of adverse reactions need to be
(continues next page)

RÉSUMÉ

Contexte : Dans le domaine de la santé publique, l'immunisation est une composante essentielle des services à l'enfance. Bien que des recherches aient prouvé l'efficacité de la vaccination, certains parents refusent de faire vacciner leurs enfants ou tardent à le faire. Un bureau régional de la santé du Sud-Ouest de l'Alberta a ainsi constaté que des croyances diverses ont réduit la couverture vaccinale.

Méthode : Cette enquête qualitative a comporté des entretiens en profondeur avec 47 répondants. L'échantillon comprenait des personnes d'origine hollandaise, des membres de la communauté hutterite, ainsi que des parents et des médecins favorables aux médecines parallèles (médecines douces).

Résultats : L'enquête indique que la majorité des répondants d'origine hollandaise s'opposent à la vaccination en raison de leurs croyances religieuses. Les répondants de la communauté hutterite, pour leur part, sont réfractaires à la vaccination en raison de réactions fâcheuses dues aux vaccins, combinées à leur habitude de recourir aux médecines douces. Enfin, les répondants appartenant au groupe des parents et médecins qui font appel aux médecines douces s'inquiètent des effets à long et à moyen terme des vaccins sur la santé des enfants.

Interprétation : On constate que les trois groupes de répondants partagent des inquiétudes similaires concernant la santé et la sécurité des enfants. Il faudrait mettre en œuvre des mesures éducatives pour apaiser les craintes des parents. En associant aux activités de développement communautaire des membres de ces groupes favorables à la vaccination, on favoriserait une plus grande adhésion à la vaccination.

implemented. This may include working with alternative health practitioners who support immunization, the agricultural sector, and individuals within the three groups who do immunize to create community development activities that will increase acceptance of immunization. The clients of today also need access to more appropriate web sites that present a more balanced perspective regarding immunization. The RHA web site could be developed to address their questions.

REFERENCES

1. Etkind P, Leh S, Macdonald P, Silva E, Peppe J. Pertussis outbreaks in groups claiming religious exemptions to vaccinations. *Am J Diseases Children* 1992;146:173-76.
2. Salmon DA, Haber M, Gangarosa EJ, Phillips L, Smith NJ, Chen RT. Health consequences of religious and philosophical exemptions from immunization laws. *JAMA* 1999;282(1):47-53.
3. Streefland P, Chowdhury AMR, Ramos-Jimenez P. Patterns of vaccination acceptance. *Soc Sci Med* 1999;12:1705-16.
4. Health Canada. Measles. *Can Commun Dis Rep* 1999;25(5).
5. Available at: <http://www.hc-sc.gc.ca/hpb/lcdc/publicat/vacprev/cov7-3/index.html>
6. van Steenberg JE, Langendam MW, van de Kerkhof J, Ruijs W. Measles outbreak - Netherlands, April 1999-January 2000. *JAMA* 2000;283:2385-86.
7. Campbell JB, Busse JW, Injeyan HS. Chiropractors and vaccination: A historical perspective. *Pediatrics* 2000;105(4):e43.
8. Netherland Reformed Congregation. *The Psalter*. Grand Rapids, MI: Wm B Eerdmans, 1987;Catechism 4.
9. Malakoff D. Aluminum is put on trial as a vaccine booster. *Science* 2000;288:1323-24.
10. Delves PJ, Roitt IM. The immune system. *N Engl J Med* 2000;343(1):37-49.
11. Plotkin S. Letters. *JAMA* 2000;283:2104-5.
12. Halsey N. Letters. *JAMA* 2000;283:2105.

Received: March 2, 2001
Accepted: October 3, 2001