

“Immunization Mobile” Brings Protection to Children in Southeastern Idaho

LILA STANGER, RN

Ms. Stanger's proposal won second prize in the contest for the Secretary's Award for Innovations in Health Promotion and Disease Prevention.

When Ms. Stanger prepared the paper, she was a full-time student at Idaho State University in Pocatello, pursuing a bachelor's degree in health administration. She also worked part time at the District Seven Health Department in Idaho Falls.

Tearsheet requests to Lila Stanger, RN, 250 Eleventh St., Idaho Falls, ID 83401.

Synopsis

The problem that needs to be addressed is the 58 percent immunity level among 2-year-olds in southeastern Idaho, a level created by the indifference or fear of parents. Southeastern Idaho has the

highest birth rate of any region in the State, and this situation has created a large group of children susceptible to vaccine-preventable diseases.

The mobile unit, which consists of a specially equipped motor home, allows easy access to immunizations for groups of children and their parents. A search of the computerized record system installed in the mobile unit can provide data on past immunizations for each registered child. The target audience for the mobile unit's visits is church groups because of the particular cultural demographics of this region.

In 1987, the District Seven Health Department, a State- and county-funded agency, expects to increase the number of doses of vaccine given by 3,000 over the 19,953 given in 1986. The "Shots for Tots" program is unique in the State of Idaho. Its expansion may be anticipated as the unit becomes better known in the region. The alternative to using aggressive, innovative techniques to motivate people to become immunized is disease.

PARENTS TODAY REPRESENT a generation untouched by death and illness resulting from epidemics of vaccine-preventable disease. This mind set has given them a false sense of security that, combined with sensationalized reports in the media concerning vaccine safety, has resulted in parents being fearful of their children receiving the vaccines. The result of fear and apathy has been inertia; parents are less motivated than ever before about getting their children vaccinated. The immunity level of 2-year-olds in southeastern Idaho has dropped from 87 percent of all children in 1981 to 69 percent in 1983 to the present level of 58 percent (1-3).

When immunization levels drop, the potential for communicable disease increases. The present 58-percent level of 2-year-olds being completely immunized poses a severe threat to the health and well-being of susceptible children. The first vaccine-preventable disease to surface as immunity levels decreased in Idaho was pertussis. Since August 1985, the State has reported more cases of whooping cough than in the last 20 years (4). Infants of less than 1 year usually require hospitalization for 7 to 10 days for pertussis and often

require transfer to tertiary care facilities. Death occurs in 1 of 100 cases of pertussis among children under 1 year.

The vaccines, in addition to that for pertussis, recommended by the American Academy of Pediatrics, are for protection against diphtheria, tetanus, poliomyelitis, measles, mumps, rubella, and *Haemophilis influenzae* type b (Hib). The District Seven Health Department now administers all of the childhood vaccines to approximately 30 percent of the children in the area.

Immunizations are one of the most cost-effective preventive health services. According to a 1985 congressional report, "Opportunities for Success: Cost Effective Programs for Children," \$1 spent on the Childhood Immunization Program saves \$10 in subsequent medical costs.

Immunizations are carried out by the District Seven Health Department with federally supplied vaccine and in accordance with Federal standards. The department has a contract with the State of Idaho, which is the recipient of a Federal immunization grant. District Seven receives funding annually from the State as well as from each county in its service area.

Sample letter

TO: Parents of Preschoolers

FROM: Janice McNee, R.N.
Telephone: 624-7585

RE: Mobile Immunization Clinics

The preschoolers in the eight counties in District 7 Health Department have the lowest immunization level in nine years. Only 50% of the two year olds in Fremont County have the number of immunizations that they should for their age. Idaho doctors have reported more children with whooping cough in the last year than they have in the last twenty years. District 7 Health Department will soon be offering a new program to increase immunizations. The program is a mobile immunizing vehicle that will be available to come to churches, schools or day care centers. We would like you to complete the portion below the dotted line and return it to your Group Contact Person so that we will have a better idea about who is interested in taking advantage of this new service.

Parents Name _____

Children <1 ___ 1 ___ 2 ___ 3 ___ 4 ___ 5
6 ___ 7 ___ 8 ___ 9 ___

(Please mark your children's ages above.)

Would you use this service if it was provided to your group?

Yes _____ No _____

Parish
Name _____

Group Contact
Person _____

Specify most convenient time/day:
Morning _____ Afternoon _____ Eve _____

LS:kl:cat

Regional Characteristics

The department serves eight counties that lie along the northern and eastern edges of southern Idaho—Bonneville, Custer, Clark, Fremont, Jefferson, Lemhi, Madison, and Teton. This area

encompasses 16,986 square miles. The eastern edge is located in the foothills of the Continental Divide. Running through the east central portion is the Snake River Plain. The western portion is a desert rising to the north slope of the Sawtooth Mountains, with the Salmon River and its tributaries forming many east-west corridors.

In 1980, the estimated population for the eight-county area was 126,117. Population density varies from 0.5 persons per square mile in Clark County to 41.2 in Madison County (5). According to the Idaho Bureau of Vital Statistics, the birth rate for the district was 25.1 per 1,000 compared to the national rate of 15.7, and the number of 2-year-olds was 1,603.

The predominant religious group in the area is the Church of Jesus Christ of the Latter Day Saints (LDS Church). Approximately 40 percent of the people in Bonneville County and 80 percent of those in Madison County belong to this denomination. In southeastern Idaho the LDS Church has a well-defined social structure, and the church hierarchy supports childhood immunizations.

Project Objectives and Methodology

To combat apathy and fear about immunizations, the public health nurses at District Seven Health Department began providing immunization services in February 1987, using a modified motor home equipped with a computerized system of immunization records. The "Shots for Tots" mobile allows the health department to use the strong community-based groups in organizing clinics. This vehicle is used to bring immunizations to church groups, day care centers, and other gatherings of young children. The District Seven Health Department has provided 10,101 doses of vaccine in the first 5 months of 1987; 1,264 through the motor home.

The primary focus in southeastern Idaho is on church groups because of the strong religious-social structure. The existence of this structure will enable large numbers of people to have their small children protected against disease at their convenience. The organization of the active church groups can facilitate clinic attendance. Invitational letters, individualized to each county, have been sent to church groups, day care centers, and schools to make them aware of the mobile clinic services (see sample letter).

A major deterrent to outreach immunization programs is the lack of access to records of past immunizations. The mobile unit, equipped with

records copied from the health department's IBM system 36 computer, allows accurate evaluation of the current immunization status of the children who have received doses of vaccine at the District Seven Health Department in the past.

Feasibility

As a District Seven Health Department nurse, I proposed this project to the Community Hospital Board, Inc., of Idaho Falls. The board funded the purchase of a 34-foot modified motor home with a portable computer and duplicate records, for a total of \$43,286.

It was necessary to factory-order the vehicle because two doors were required. All of the beds were removed, and an examination table was installed in the back bedroom. This required adjustments of the water heater placement and some minor structural changes. The refrigerator is used for vaccine storage. It was decided not to use the running water, the toilets, and showers.

The public health nurses in the district have experience in providing immunizations and other clinical services in this rural area by using community resources and social structures, and the leadership of the health department has given the immunization program a number one priority. Details of the funding follow.

Year 1 budget

Provided by community agency:	
Motor home	\$39,086
Computer system	\$ 4,200
Provided by health department:	
Vehicle registration, fuel, maintenance, insurance	\$ 1,000
Professional staff	\$ 1,500
Signs	\$ 250
 Total	 \$46,036

Impact on the Community

Through the use of the mobile unit, the District Seven Health Department can increase the number of immunizations given substantially, creating a higher level of immunity. It is expected that an additional 3,000 immunizations will be provided to children in 1987, the first year of the project, a significant increase over the 7,759 children who received 17,295 doses of vaccine at District Seven Health Department clinics in 1985, according to the "Vaccine Accountability Report" of the department for fiscal year 1985. The total cost of administering the vaccines at \$11.28 per child is



far more cost effective than the illness, financial expenditure for resulting health care, or long-term side effects of any of the vaccine-preventable diseases.

The mobile unit also increases the visibility of the immunization program, making the receipt of vaccines more readily available to the population. Once the primary objective of reaching a safe immunity level for the community has been accomplished, this facility can be used to meet other health needs of children and adults. Provision of outreach clinics to senior citizens, cancer screening clinics, family planning clinics, and blood pressure clinics are but a few examples of the possible expansion of services.

References

1. Idaho Department of Health and Welfare Immunization Program: Immunization survey of two year old children, 1981. April 1982.
2. Idaho Department of Health and Welfare Immunization Program: Immunization survey of two year old children, 1983. April 1984.
3. Idaho Department of Health and Welfare Immunization Program: Immunization survey of two year old children, 1985. April 1986.
4. Idaho Department of Health and Welfare, Bureau of Preventive Medicine: Pertussis increase in Idaho; immunizations urged for children. Apr. 11, 1986. Press release.
5. District Seven Health Department: Public health plan, fiscal years 85-86.