

Managing Immunization

Mrs S.D. WAGHOLE

ONE death in every three years in the world is the death of a child under the age of five. The major causes of deaths are infections and malnutrition. Immunisation is one of the least expensive techniques by which the major number of deaths among the children can be prevented. Through the United Nations the world has set the target of immunising the great majority of children against six main diseases by 1990. The annual benefit is the saving of over 3 million lives.

In the mid-eighties the immunisation gathered a new momentum. The director of WHO's expanded programme on immunization has repeatedly emphasized that "No committed country with a realistic EPI plan of operations need to be constrained by a lack of vaccines, cold chain equipment or supplies. The main problem is therefore not finding the vaccines or syringes or refrigerators. It is finding the political commitment, finding the management and organisational skills and finding the ways and means to inform all parents that all pregnant women need to be vaccinated against tetanus and that all children need a full course of vaccines before the age of one." So, it is necessary to launch an organised nationwide immunization programme aimed at least present coverage of targetted population groups with vaccines against preventable and communicable diseases. Such an approach would not only prevent and reduce disease and disability but also bring down the existing high infant and child mortality rate.

The goal for immunization status to be achieved by 2000 AD is as follows:

1. TT (for pregnant women)	:	100%
2. TT (for school children)	:	100%
" 10 years	:	100%
" 16 years	:	100%
3. DPT (children below 3 years)	:	85%
4. Polio (infants)	:	85%
5. BCG (infants)	:	85%
6. DT (new school entrants 5-6 years)	:	85%
7. Typhoid (new school entrants 5-6 years)	:	85%

To achieve the target it is necessary to have universal system of immunization. It requires a long term commitment to continued immunization activities. The purpose is to provide vaccinations to small children to protect them against common, frequently severe diseases. The vaccine preventable diseases included in the programme are measles,

polio, diphtheria, pertussis, tetanus and tuberculosis.

The job of managing immunization programme involves many tasks requiring special skills. These tasks are:

1. Allocate resources;
2. Manage the cold chain system;
3. Conduct vaccination sessions;
4. Evaluate vaccination coverage;
5. Supervise performance;
6. Provide training;
7. Conduct disease surveillance;
8. Ensure public participation.

Each task involves the skill and a flow chart will show the skill and the order in which the task should be performed. The task descriptions state what must be done and who will do the work.

There are two types of schedules associated with an immunization programme.

I. Immunization schedule which includes:

- (a) Vaccine to be given;
- (b) Desirable age at which to administer the first dose of each vaccine;
- (c) Number of doses which should be given of each vaccine;
- (d) Minimum time interval between successive doses of vaccines.

National Immunization Schedule

To whom	When	Vaccine	No. of doses	Route
Women	Pregnancy	TT	2	IM
Infants	6 weeks	DPT	3	IM
	12 months	Polio	3	Oral
	Birth to 12 months	BCG	1	IM
	9-15 months	Measles	1	Subcut.
	18-24 months	DPT	1 booster	IM
Children		Oral polio	1 booster	Oral
	5 years	DT	2	IM
	5 years	Typhoid	2	Subcut.
	10 years	TT	2	IM
	16 years	TT	2	IM

Give only one dose of DT & TT if vaccinated previously. Interval between doses should not be less than one month.

II. Vaccination sessions schedule: It shows that days and times at which vaccination sessions are to be

The author is Lady Superintendent, P.H. Nursing School, Nagpur. This paper was presented by her at the IV Community Health Nursing Personnel Meet at Bombay.

held. It is important that the mothers are informed of this schedule so that they will know when to bring their children for vaccinations.

The following steps are necessary to be taken for vaccination session schedule:

1. Determine the number of children to receive vaccination for the year.

Total population $\times 0.03$ = Number of children to receive vaccination for the year.

2. Determine the average number of children to receive vaccination per month.

Number of children to receive vaccination for the year $\div 12$ = Average Number of children to receive vaccination per month.

3. Determine how often to conduct vaccination session:

(a) From mothers point—daily

(b) From the point of health staff—a special day can be set.

Each visit to the health centre or vaccination site for vaccination is called "CONTACT". Three to five contacts are required for a child to receive the complete series of vaccination.

Average number of children to receive vaccination per month $\times 4$ = Number of contacts per month.

4. Determine the maximum number of vaccination sessions per month.

Number of contact per month $\div 10$ = calculated maximum number of vaccination session per month.

5. Prepare vaccination site:

(a) Select suitable site for the sessions;

(b) Organise vaccination stations.

6. Clean and sterilize the equipments.

7. Educate the mothers about immunization activities.

8. Screen the children.

9. Issue vaccination cards.

10. Prepare vaccination equipment and vaccine.

11. Administer the vaccine.

12. Perform the follow up activities.

13. Ensure that the mothers know when to bring their children for next vaccination.

14. Destroy opened vaccine and record types and quantities used.

15. Submit the report.

16. Evaluate the vaccination coverage.

Functioning of the programme

Find out from the community those people who can help e.g.

(a) Political leaders;

(b) Community leaders;

(c) Traditional Birth Attendants;

(d) School teachers;

(e) Government staff;

(f) Women organisations;

(g) Village health guides;

(h) Religious leaders;

(i) Youth organisations, etc.

Find out the right people from the community and educate them regarding immunization, its importance and target to be achieved. Take their help in motivating the people.

Contact each family and stress the importance of immunization, so that they can take the immunization regularly.

Establish good rapport with the community.

Be punctual, friendly and polite.

Give effective results to have good experience to the community.

Let the community participate actively in the programme.

The immunizations available in India under the expanded programme on immunisation are those against:

(1) Tuberculosis—BCG

(2) Diphtheria

(3) Pertussis DPT

(4) Tetanus

(5) Poliomyelitis

(6) Measles

(7) Typhoid.

The health workers' responsibilities related to immunization are:

(1) To administer BCG vaccine to all children from 3 months to 4 years of age;

(2) Administer three doses of DPT vaccine and oral polio vaccine to all infants from 3 months to two years of age;

(3) To administer two doses of tetanus toxoid to all pregnant women;

(4) To give DT & TT and typhoid vaccine to school child;

(5) To educate the community about the necessity for immunization;

(6) To plan activities related to immunization with other health workers;

(7) To maintain the required records and submit reports.

Contraindications for immunization

(1) High Fever; (2) Acute illness; (3) History of convulsions.

Methods of administering immunisation

To maximize the effectiveness, immunizations are administered by various routes. Before giving any vaccine you must make sure that you know the proper route for administering it, e.g.

(Continued on page 96)

ption of this speciality by Indian Nursing Council may take long time. Meanwhile the need to employ the nurses in industries is showing an increasing trend. Our country is also facing fast industrial and technological growth, inviting the attention of planners for nursing education to re-orient and re-structure the nurses training tailored to the needs of changing social structures. More nurses than ever before are becoming interested in the field of occupational health. Some are looking for an alternative to traditional in-hospital nursing. Others want to find new adventurous field. Many are very curious about what occupational health offers as a career. To give interested nurses an opportunity to learn about occupational health, as an alternative career, we are planning to offer a short one week consolidated certificate programme and also distant learning postal correspondence course on long term basis.

The programme will offer the emerging role of occupational health in the modern industrial scenario of management/labour, organisational structure, occupational hazards, occupational diseases, ergonomic, toxicology and the nurses relationship to other professionals on the occupational health team will be covered. Epidemiology, first-aid treatments, screening programme, hazard detection, control, disaster management, computer, health statistics etc. will be given equal importance⁴ in the training scheme.

In general, the training will provide an opportunity for the integration of fundamental nursing theory and practice with the advanced role of the

nurse as a leader, manager and vital member of occupational health care services team.

The interested candidate may contact the author for full details.

Ongoing research programme at Industrial Medical Centre, Neyveli Lignite Corporation Limited

1. Clothing design for nurses in India.
2. 'Backache'—Relation to Nursing.
3. Prevalence of communicable diseases among nurses—An occupational relation perspective.
4. Contact dermatitis among nurses due to drug handling.
5. Social problems of nurses in the community.
6. Shift—Health effects in nursing profession.
7. Dual role of nurses as working staff—and mother in the family—A cross sectional study.

References

1. *The Nursing Journal of India*—December 1985. Award and Prizes "Growth of Nursing Services in Industrial Hospital", N.L.C. Limited. PP. 326.
2. Gnanadeepam M "Perspective of Industrial Nursing"—*The Nursing Journal of India*—December 1985. PP. 307-309.
3. Aleyamma Jacob "Occupational Health Nursing in an Industrial Complex"—*The Nursing Journal of India*—December 1985. PP. 308-309.
4. Ginny Lepping, RN, COHN—"Mentorship in Occupational Health Nursing"...*OHN* November 1985. PP. 547-551.

Managing Immunization

(Continued from page 88)

- (a) By mouth—poliomyelitis vaccine;
- (b) Interadermal—BCG vaccine;
- (c) Interamuscular—DPT vaccine;
- (d) Subcutaneous—TT for mother and measles vaccine.

Care and storage of vaccine

All vaccines must be:

- (a) Stored at a temperature below 8°C;
- (b) Protected from sunlight;
- (c) Prevented from contact with antiseptic solutions such as spirit or savlon;
- (d) Maintain the cold chain.

Reaction after vaccination

- (1) Mild fever;
- (2) Local pain and swelling at the site of injection;
- (3) Mild rash one week after measles vaccine;

(4) A lump or papule appears the 3rd or 4th week after BCG vaccination;

(5) In rare cases convulsions or collapse after DPT vaccination have been observed.

Complications

(1) Abscess formation is usually due to unsterilized or inadequately sterilized syringes and needles;

(2) Contaminated vaccine can lead to severe reactions.

Health education

Educate the workers thoroughly regarding immunization programme.

Educate the people about the programme, importance and mild reactions so that they will come forward for completion of the immunization for all the children.

Mass media propaganda.