

IMMUNIZATION

The Basics of Primary Health Care

A Students' View

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"Today's Child is tomorrow's citizen."

"A healthy nation is a wealthy nation".

"Healthy child can build a wealthy nation".

These are said wisely. Therefore Healthy population is the nation's *Prosperity*. The Health of the child should be preserved for making the nation wealthy.

Immunization is a basic ingredient in preservation of the Health of child as the Immunizations help to prevent diseases as it is wisely said "Prevention is better than cure". Prevention is cheap whereas cure is costly for a country like ours. Prevention saves lives and money and builds a healthy population.

Immunity: Immunity is the ability of the body to protect itself against disease producing virus and bacteria.

Immunization: Immunization is process of giving vaccine or vaccines to create body protection against specific diseases.

To Immunize is an effective way to prevent diseases than to treat them after they occur.

The six major diseases of childhood for Immunization

(1) *Measles:* Measles caused by virus—one dose of weakened (attenuated) virus is given in one dose subcutaneously at the age of 9th month of child.

(2) *Diphtheria*, (3) *Pertusis*, (4) *Tetanus:* Caused by Bacilli. The combined vaccine is called D.P.T. vaccine, protects the child for 10 years and is given in 3 doses at an interval of 4 weeks or more.

(5) *Polio:* Polio caused by virus. This is a crippling disease. The vaccine is given orally (O.P.V.) in 3 doses at an interval of 4 weeks or more.

(6) *B.C.G.:* Caused by myco-bacterium. Tuberculous vaccine is given intradermally immediately after birth or earliest possible age.

How to Implement Universal Immunization

The following factors contribute to the success. They are:

(1) The mother and families in the community should know the availability of immunization.

(2) The programme should have committed workers with knowledge as how to give safe vaccination and when.

(3) The vaccines should be stored and handled at right temperature and right condition.

(4) Sterilization of equipment should be properly done.

(5) The records, schedules, management & money are essential for implementation of programme.

(6) The vaccine should be available where and when needed.

(7) The political commitment should be at all levels available.

For whom and what age?

All children should be immunized as per the schedule for immunization as recommended by W.H.O. and the schedule is given in these columns.

The schedule should be followed and each child should get the complete immunization by the age of 9 months.

By immunizing women neo-natal tetanus can be prevented. If the pregnant mother is given 2 doses that is at 24th week and 32nd week two doses of Tetanus toxoid. In case a woman had 3 doses of D.P.T. at her early childhood, her infants protection will be increased. However, aseptic cord treatment can also prevent neo-natal tetanus but immunization to the mother is more effective.

Remember: One child, One needle, One syringe. This is for the safe immunization.

What is Cold Chain?

This is the means by which vaccines are continuously maintained at required temperature from the time of manufacture till they reach the Child in the remote place. This requires maintenance of cold storage at every level of transportation and storage at international, national, district—down to the remote rural area. This cold chain can be maintained successfully by responsible trained personnel, reliable transportation, proper refrigeration, central supply system with regular stock. Cold boxes and vaccine carriers made available at the place of immunization and above all regular maintenance and repair of equipment is essential.

What problems you may face in the implementation of this programme?

(a) Breakdown of vehicles and equipment as repairs and shortages are likely to occur.

(b) Undersupply of vaccines and needles and syringes.

(c) Inefficient utilization of available equipment.

If the cold chain breaks down the temperature will not be maintained and vaccines will not be effective (even small amounts of heat caused due to the opening of refrigerator several times). Once a vaccine is spoiled it cannot be restored.

Immunization Schedule :

Age	Vaccine	Reason
Birth	BCG*, OPV*	BCG given at the earliest possible age protects against the possibility of infection from other family members. The extent of protection against polio is increased the earlier the OPV is given.
6 Weeks	DPT(1)* OPV(1)	An early start with DPT reduces the chances of severe pertussis.
10 Weeks	DPT(2) OPV(2)	Four-week intervals between doses give effective protection,
14 Weeks	DPT(3) OPV(3)	and reduce the time a child is exposed without protection, particularly to pertussis.
9 Months	Measles	At least 80 per cent of measles in children in the third world can be prevented by immunisation at this age.

N.B. : *BCG : Bacillus Calmette Guerin (against TB)
*OPV : Oral Poliovirus Vaccine (dose at birth is in addition to the standard schedule of 3 doses)
*DPT : Diphtheria, Pertussis, Tetanus Toxoid.

In case the child cannot be brought on the right day the immunization must be given as soon as possible. The series of immunisation once begun, must be completed even if the time is longer between immunizations than recommended. There is no need to restart from the beginning even the completed series of immunization adequately protect the child. The missing dose can be overcome by observing mass immunisation days.

Health education about Immunization and side effects to make the people accept immunization :

Families must be involved and must be taught to have their children immunised and the importance. The people in the community should have the knowledge of side effects from vaccinations. The community may have the problems as : (1) Knowledge about Vaccination (2) Non-availability of Health Facilities. (3) Fear of side effects. (4) Non-availability of information about the purpose of immunisation. The seasonal effects may reduce the opportunity of immunisation. (rainy season, harvest season etc.).

This can be overcome by informing the parents where, when and how often. The child should be immunised by motivating the parents to take their children for follow-up doses. The child bearing mothers should be taught about immunization against Tetanus. The people should be explained of the reactions to immunization and their fears should be allayed.

Reactions of Immunization

Measles Vaccination : The child may feel on well with mild fever and for rash up to 10 days after vaccination.

DPT : Side effects include fever, redness and swelling at injection spot.

Polio : NIL.

BCG : An ulcer forms at the injection spot and heals without treatment leaving a scar behind.

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