Universal Immunization Programme

BY

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Contents

Introduction

- 👉 In the last one month, how many of you have seen a **child with fever, cough, or diarrhea** in OPD or ward postings?
- Almost every day, right?
- 👉 How many of those illnesses could have been **prevented by a vaccine**?
- 👉 Then How to prevent them?

UIP – Universal Immunization Programme

- **Universal Immunization Programme** is a national programme of immunization
  - against **selected vaccine-preventable diseases**
  - by **providing free vaccines** to all eligible beneficiaries.
- UIP is one of the **largest immunization programmes in the world**

History of UIP

- **1978 –** Expanded Programme on Immunization (EPI)
- **1985 –** UIP launched
- **1992 –** Part of Child Survival & Safe Motherhood Programme
- **1997 –** National Reproductive and Child Health Programme
- **2014 –** Mission Indradhanush
- **2017 –** Intensified Mission Indradhanush

Why UIP

- Reduce **morbidity, mortality & disability** due to VPDs
- Achieve **≥90% full immunization coverage**
- Reduce **infant mortality rate (IMR)**
- Eliminate/eradicate selected diseases

Diseases covered under UIP

S.No	Disease	Vaccine
1	Tuberculosis	BCG
2	Poliomyelitis	OPV, IPV
3	Diphtheria	Pentavalent
4	Pertussis	Pentavalent
5	Tetanus	Pentavalent, Td
6	Hepatitis-B	Pentavalent
7	*Hib*	Pentavalent
8	Measles	MR
9	Rubella	MR
10	Japanese Encephalitis	JE
11	Rotavirus diarrhea	Rotavirus vaccine
12	Pneumococcal disease	PCV

Why only these diseases

- The diseases had public health importance causing high rates of children morbidity and mortality
- They are preventable
- Vaccine is available for those diseases

UIP Schedule

Age	Vaccines given
Pregnant woman	Td-1, Td-2 or Td Booster**
At Birth	Bacillus Calmette–Guérin (BCG), Oral Polio Vaccine (OPV) – 0 dose, Hepatitis B birth dose
6 weeks	OPV-1, Pentavalent-1, Rotavirus Vaccine (RVV)-1, Fractional dose of Inactivated Polio Vaccine (fIPV)-1, Pneumococcal Conjugate Vaccine (PCV)-1
10 weeks	OPV-2, Pentavalent-2, RVV-2
14 weeks	OPV-3, Pentavalent-3, fIPV-2, RVV-3, PCV-2
9–12 months	Measles & Rubella (MR)-1, Japanese Encephalitis (JE)-1*, PCV Booster
16–24 months	MR-2, JE-2*, Diphtheria–Pertussis–Tetanus (DPT) Booster-1, OPV Booster

UIP Schedule

Age	Vaccines given
5–6 years	DPT Booster-2
10 years	Tetanus & adult Diphtheria (Td)
16 years	Td

- JE vaccine is given **only in endemic districts**
- ** Td booster is given if the woman was adequately immunized in a previous pregnancy within the last **3 years**

Td Vaccine in pregnancy

Vaccine	Schedule / Timing	Dose	Route	Site
Tetanus & adult Diphtheria (Td)-1	Early in pregnancy	0.5 ml	Intramuscular	Upper arm
Td-2	4 weeks after Td-1	0.5 ml	Intramuscular	Upper arm
Td Booster	If 2 Td doses were received in a pregnancy within the last 3 years*	0.5 ml	Intramuscular	Upper arm

BCG Vaccine

Vaccine	When to give	Dose	Route	Site
BCG	At birth or as early as possible till 1 year of age	0.05 ml (≤1 yr) 0.1 ml (>1 yr)	Intradermal	Left upper arm

OPV vaccine

Vaccine	When to give	Dose	Route	Site
OPV-0	At birth or within first 15 days	2 drops	Oral	Oral
OPV-1, 2, 3	6, 10 & 14 weeks	2 drops	Oral	Oral
OPV Booster	16–24 months	2 drops	Oral	Oral

IPV vaccine

Vaccine	When to give	Dose	Route	Site
Fractional IPV (fIPV-1, 2)	6 & 14 weeks	0.1 ml	Intradermal	Right upper arm

Hepatitis B vaccine

Vaccine	When to give	Dose	Route	Site
Hepatitis-B (Birth dose)	At birth or within 24 hours	0.5 ml	Intramuscular	Anterolateral side of mid-thigh

Pentavalent Vaccine

Vaccine	When to give	Dose	Route	Site
Pentavalent-1, 2, 3	6, 10 & 14 weeks	0.5 ml	Intramuscular	Anterolateral side of mid-thigh

Rotavirus vaccine

Vaccine	When to give	Dose	Route	Site
Rotavirus Vaccine (RVV)	6, 10 & 14 weeks	5 drops	Oral	Oral

PCV vaccine

Vaccine	When to give	Dose	Route	Site
PCV-1 & PCV-2	6 & 14 weeks	0.5 ml	Intramuscular	Anterolateral side of mid-thigh
PCV Booster	9–12 months	0.5 ml	Intramuscular	Anterolateral side of mid-thigh

MR vaccine

Vaccine	When to give	Dose	Route	Site
MR-1	9–12 months	0.5 ml	Subcutaneous	Right upper arm
MR-2	16–24 months	0.5 ml	Subcutaneous	Right upper arm

JE Vaccine

Vaccine	When to give	Dose	Route	Site
JE-1*	9–12 months	0.5 ml	Subcutaneous	Left upper arm
JE-2*	16–24 months	0.5 ml	Subcutaneous	Left upper arm

DPT vaccine

Vaccine	When to give	Dose	Route	Site
DPT Booster-1	16–24 months	0.5 ml	Intramuscular	Anterolateral side of mid-thigh
DPT Booster-2	5–6 years	0.5 ml	Intramuscular	Upper arm

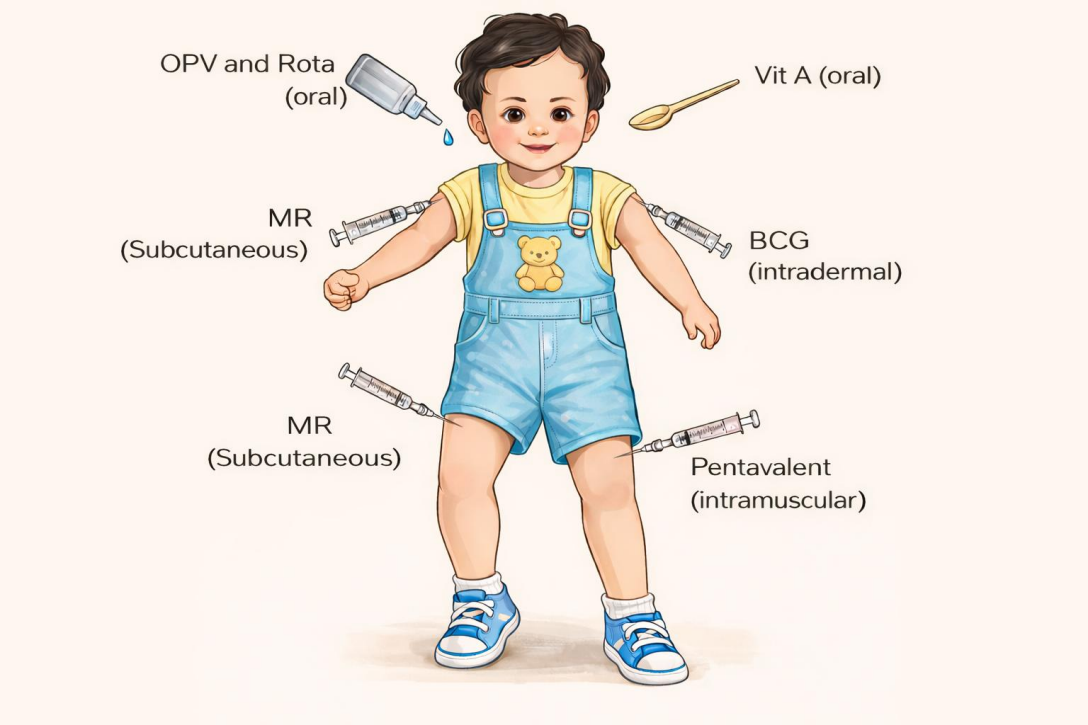
Td vaccine in children

Vaccine	When to give	Dose	Route	Site
Td	10 years	0.5 ml	Intramuscular	Upper arm
Td	16 years	0.5 ml	Intramuscular	Upper arm

Vitamin A solution

Vaccine	When to give	Dose	Route	Site
Vitamin A (1st dose)	9 months	1 ml (1 lakh IU)	Oral	Oral
Vitamin A (2nd–9th dose)	Every 6 months up to 5 years	2 ml (2 lakh IU)	Oral	Oral

Site of Vaccination



AD syringes

- AD syringes are **single-use syringes** designed to **automatically lock or break after one injection**, making reuse impossible.
- **Purpose:** To **prevent reuse of syringes** and thereby reduce **transmission of blood-borne infections** such as **HIV, Hepatitis B, and Hepatitis C**.
- **Mandatory for all injectable vaccines** under the **Universal Immunization Programme (UIP)** in India.

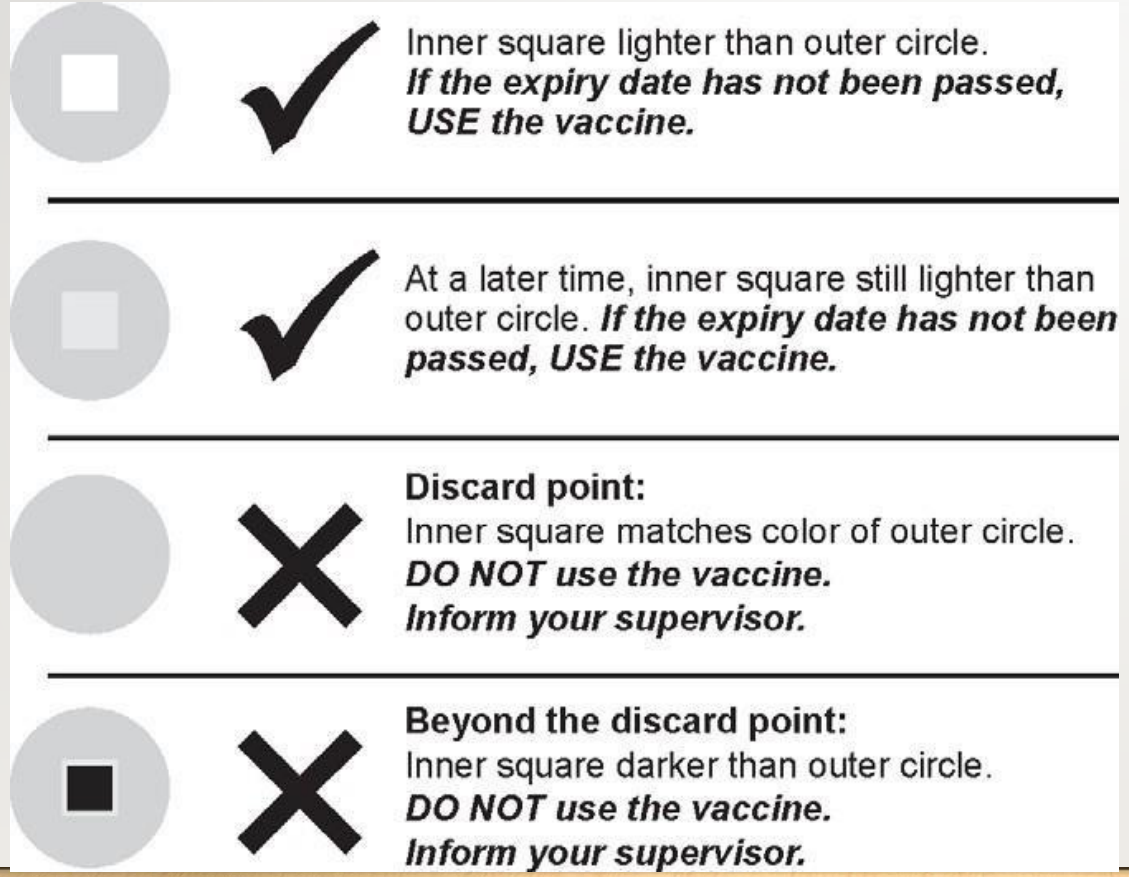
Hub cutter

- A hub cutter is a **needle-destroying device** used to **separate and cut the needle from the syringe hub immediately after injection**.
- **Mechanism:**
  - The needle is inserted into the cutter slot
  - On pressing, the **needle is cut and collected** into a sealed container
  - The syringe body becomes **non-reusable**
- Used at **immunization session sites** for **safe disposal of injection equipment**

Vaccine Vial monitor

- A Vaccine Vial Monitor is a **time–temperature–sensitive label** attached to vaccine vials that **indicates cumulative heat exposure** of the vaccine.
- **It** ensures **potency and safety** of vaccines, Helps health workers decide **whether a vaccine can be used or should be discarded**
- **Structure:** Consists of a **light-colored outer circle** and a **heat-sensitive inner square**
- **Principle:** The **inner square darkens with heat exposure,** Comparison of inner square with outer circle determines usability

Vaccine Vial monitor interpretation



Open Vial policy

- Open Vial Policy refers to the **reuse of certain opened multi-dose liquid vaccine vials** in subsequent immunization sessions, **provided specified conditions are fulfilled**.
- Opened vials can be used for **up to 28 days** after opening.
- Reduces **vaccine wastage**
- Improves **cost-effectiveness** of UIP

Open Vial policy

Vaccines covered under OVP	Vaccines NOT covered:
OPV **DPT / Pentavalent** **TT / Td** **Hepatitis-B**	**BCG** **Measles / MR** **JE (reconstituted vaccines)**

AEFI

- AEFI is defined as **any untoward medical occurrence that follows immunization and does not necessarily have a causal relationship with the usage of the vaccine**.
- **Purpose of AEFI surveillance:**
  - To ensure **vaccine safety**
  - To maintain **public confidence** in immunization programmes
  - To detect **programmatic errors** early

AEFI Classification

Type of AEFI	Cause / Description	Example
Vaccine reaction	Due to inherent properties of the vaccine	Fever, pain, swelling
Programmatic error	Due to errors in storage, handling, preparation, or administration	Abscess due to unsterile injection
Injection reaction	Due to anxiety or pain of injection	Syncope, breath-holding spells
Coincidental event	Temporally associated but not causally related to vaccination	Onset of illness after vaccination
Unknown (Idiopathic)	Cause cannot be determined	—

AEFI Classification

Severity	Description	Examples	Management
Minor	Mild reactions, self-limiting	Fever, local pain, swelling	Symptomatic treatment (e.g., paracetamol)
Severe	Non-fatal but serious reactions	Convulsions	Immediate medical evaluation and treatment
Serious	Life-threatening or fatal reactions	Anaphylaxis, hospitalization, death	Immediate referral, emergency management, and reporting

AEFI reporting

- **All serious AEFIs must be reported immediately:** Events like **death, hospitalization, anaphylaxis, or life-threatening reactions** should be reported **within 24 hours**.
- **Reporting is mandatory under UIP:** AEFI reporting is an **integral component of the Universal Immunization Programme** to ensure vaccine safety.
- **Minor AEFIs are also reported:** Minor reactions such as **fever, pain, and swelling** are reported **periodically** for monitoring trends.
- **Standard AEFI reporting formats are used:** Reporting is done using **prescribed AEFI case reporting forms** through the health system.
- **Purpose of reporting is safety, not blame:** AEFI reporting is a **non-punitive system** aimed at improving programme quality and maintaining public confidence.

Who will implement

District	District Immunization Officer
PHC	Medical Officer

- Pharmacist
- Health Supervisors

Subcentre	MPHW (M F)

- ASHA

Session monitoring

Session Monitoring Format for Routine Immunization

Name of Monitor: ..... **Organization:** ☐ Govt. ☐ NPSP ☐ UNICEF ☐ Others ..... **Designation:** .....

Date : dd / mm / yy **Time:** ..... **Day:** ☐ Wed ☐ Fri ☐ Sat ☐ Other .....

State	
District	
Block/Planning Unit	
Sub Center / Urban Post	
Address of the Area	

Settings: ☐ Rural ☐ Urban ☐ Urban Slum **HRA :** ☐ Yes ☐ No **Session Site:** ☐ Facility ☐ Sub Centre ☐ AWC ☐ Others .....

☑ *Tick, whichever is applicable*					
1.	Whether Session held	☐ Yes	☐ No		
	a. If 'No', Reason for session not held *(See bottom of the format)*$^{\Delta}$	☐ A	☐ B	☐ C	☐ D.....
	b. If 'Yes', whether the session being held as per Microplan	☐ Yes	☐ No		
2.	Beneficiaries are being mobilized to session site by *	☐ ICDS worker	☐ ASHA	☐ Others	☐ None
3.	How Vaccines & logistics were brought to session site from PHC/Block	☐ AVD$^{\#}$	☐ ANM	☐ Supervisor	☐ Others .....
4.	Whether all available vaccines & diluents are placed in zipper bag in vaccine carrier having 4 Ice-Packs	☐ Yes	☐ No		
5.	Which of the vaccines are available at session site*	☐ BCG ☐ Measles ☐ tOPV	☐ BCG Diluent ☐ Measles Diluent ☐ mOPV	☐ DPT ☐ DT ☐ TT	☐ JE ☐ JE Diluent ☐ Hepatitis B
6.	Whether any of the vaccine vial is/are found without VVM*	☐ BCG ☐ Measles	☐ DPT ☐ DT	☐ OPV ☐ TT	☐ Hep-B ☐ JE
7.	Whether any vaccine vial is found in the mentioned condition, if 'Yes', *Tick* ☑ and ***record*** the vaccine*	☐ Without label / Unreadable label ..... ☐ VVM Stage III or IV ..... ☐ Expired Vaccine Vial ..... ☐ Frozen Vaccine (DPT, TT, DT, Hepatitis -B)			
8.	Which of the mentioned Logistics are available at session site*	☐ AD (0.1ml) Syringes ☐ AD (0.5 ml) Syringes ☐ Functional Hub Cutter ☐ Blank RI Card ☐ Red & Black Bag	☐ Vitamin-A Solution ☐ Plastic Spoon for Vitamin-A ☐ Nutritional Supplements ☐ Due list of Beneficiaries ☐ Counterfoils of previous session	☐ ORS Packet ☐ IFA Tablet ☐ Paracetamol ☐ Weighing machine ☐ B P Apparatus	
9.	Whether adequate quantity of 5ml Disposable Syringes for reconstitution are available at session site *(=BCG + Measles +JE vials)*	☐ Yes	☐ No	☐ Not Available	
10.	Whether Time of reconstitution written on reconstituted BCG/Measles/JE vials	☐ Yes	☐ No	☐ N/A	
11.	Whether AD syringe is used for injectable vaccines	☐ Yes	☐ No	☐ N/A	
12.	Whether DPT vaccine given on outer (anterolateral) aspect of mid thigh	☐ Yes	☐ No	☐ N/A	
13.	Whether ANM is touching any part of the needle while giving injection	☐ Yes	☐ No	☐ N/A	
14.	Whether each used syringe being cut with hub cutter immediately after use	☐ Yes	☐ No	☐ N/A	
15.	Whether Session Tally Sheet is being filled for each child vaccinated	☐ Yes	☐ No	☐ N/A	
16.	Whether all counterfoils are being updated following each vaccination today	☐ Yes	☐ No	☐ N/A	
17.	Whether Four Key Messages are being given to the parents	☐ Yes	☐ No	☐ N/A	

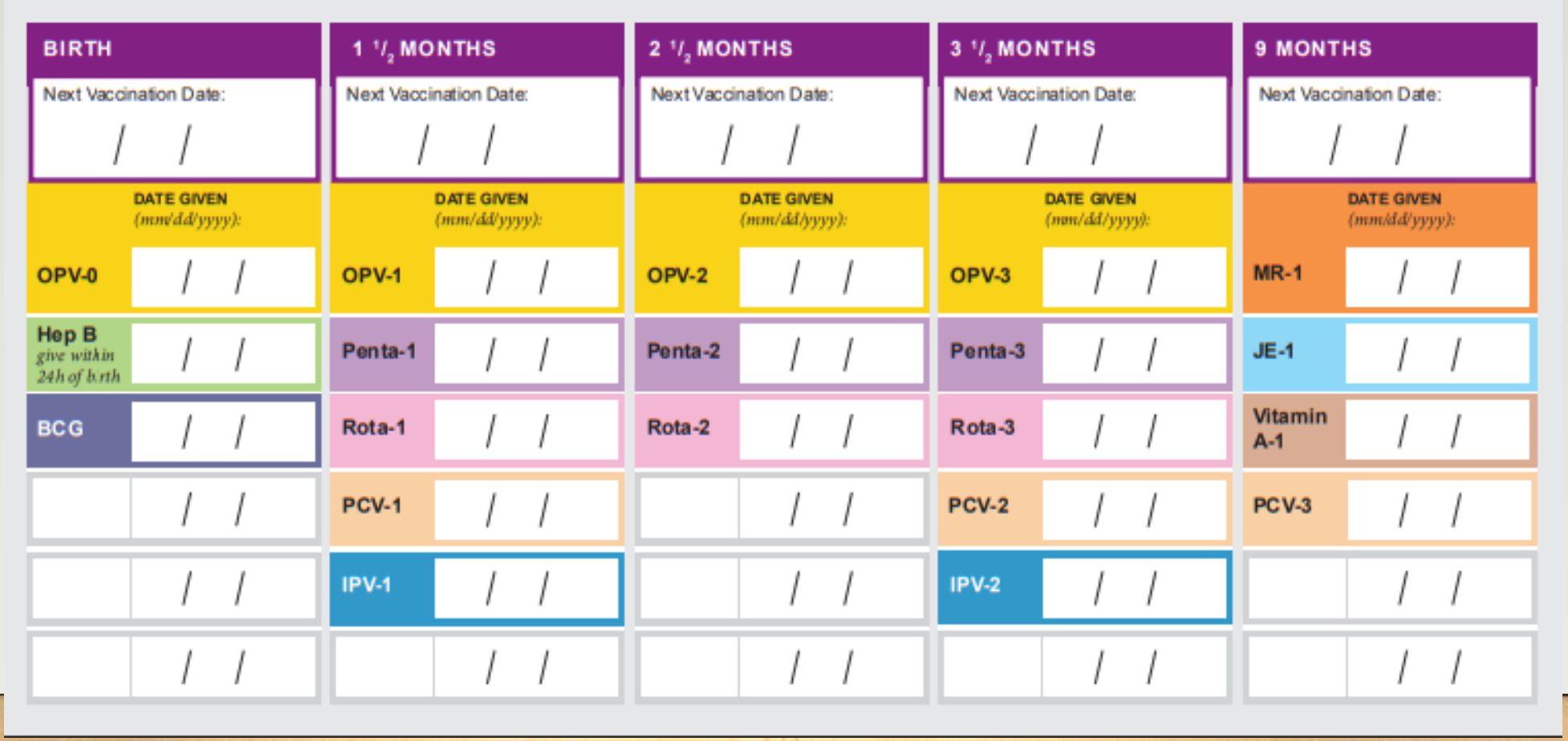
Δ (Q. 1a): **A**=*Both ANM/vaccinator as well as vaccines/logistics are not available* **B**=*ANM/vaccinator present but vaccine/logistics not available* **C**=*Vaccine/logistics available but ANM/vaccinator absent,* **D**- *Others (specify*

(Q. 3): ***AVD***=*Alternate Vaccine Delivery;* * *Multiple responses may be applicable*

4 key messages to parents

1. **What vaccine was given and what disease it prevents**
2. **When and where to come for the next visit**
3. **What minor adverse events could occur and how to deal with them**
4. **To keep the immunization card safe and bring it along for the next visit**

Immunization card



BIRTH	1 ½ MONTHS	2 ½ MONTHS	3 ½ MONTHS	9 MONTHS
Next Vaccination Date: / /	Next Vaccination Date: / /	Next Vaccination Date: / /	Next Vaccination Date: / /	Next Vaccination Date: / /
DATE GIVEN (mm/dd/yyyy):	DATE GIVEN (mm/dd/yyyy):	DATE GIVEN (mm/dd/yyyy):	DATE GIVEN (mm/dd/yyyy):	DATE GIVEN (mm/dd/yyyy):
OPV-0 / /	OPV-1 / /	OPV-2 / /	OPV-3 / /	MR-1 / /
Hep B *give within 24h of birth* / /	Penta-1 / /	Penta-2 / /	Penta-3 / /	JE-1 / /
BCG / /	Rota-1 / /	Rota-2 / /	Rota-3 / /	Vitamin A-1 / /
/ /	PCV-1 / /	/ /	PCV-2 / /	PCV-3 / /
/ /	IPV-1 / /	/ /	IPV-2 / /	/ /
/ /	/ /	/ /	/ /	/ /

Summary

- **UIP** is a **national programme** providing **free vaccines** to prevent major **vaccine-preventable diseases** and is one of the **largest immunization programmes in the world**.
- The programme aims to **reduce morbidity, mortality, disability**, and **infant mortality rate (IMR)** while achieving **≥90% full immunization coverage**.
- **National Immunization Schedule** ensures protection from **birth through adolescence**, including **pregnant women**, with special provisions for **endemic areas** (e.g., JE).
- **Effective communication with parents**—including key messages, immunization card use, and follow-up—is vital for **complete immunization and programme success**.


भूल न जाना,
टीकाकरण
ज़रूर करवाना!

Thank you…