

Salient Strengths and Areas for Improvement: ARARIA

Criteria	Strengths	Areas for Improvement
E2: Temperature	<ul style="list-style-type: none"> Good knowledge about temperature record, freeze sensitive vaccine, heat sensitive vaccine. Temperature logbook found at most of the sites. 	<ul style="list-style-type: none"> Working thermometer was not found in each and every equipment. Cold chain handler (CCH) not able to read thermometer at some facilities. Temperature logbook not regularly reviewed by Medical Officer-in-Charge (MoIC)/District Immunisation Officer (DIO)/any other district official. No mention of remarks such as power failure, defrosting, make and model number of cold chain equipment (CCE).
E3: Storage Capacity	<ul style="list-style-type: none"> All antigens stores in ice lined refrigerator (ILR). Staff knowledge about emergency vaccine management found satisfactory. 	<ul style="list-style-type: none"> As per target population, vaccine storage capacity ice lined refrigerator (ILR) found inadequate in most of the sites. Vaccine not stored in proper ILR baskets. Proper stocking of vaccine in ILR not as per standard operating procedure (SOP). Vaccine contingency plan not highlighted as per SOP. No dedicated dry space.
E4: Building, equipment, transport	<ul style="list-style-type: none"> CCE found functional in existing building, well protected from rainwater. Floors dry and reasonably levelled. 	<ul style="list-style-type: none"> Building in majority lack minimum required standards such as ventilation, cleanliness, safety, free from cracks, seepage, and safe electrical wiring. Many repairable CCEs and condemned equipment found at all of the sites. No space for passive containers. Regular preventive maintenance plan of building and fire extinguisher not found. Job aids not found in the cold chain store. Vehicle user manual not followed and vehicle logbook not updated. Generator backup not found in some stores; stand by generator under-utilized in some store; no sufficient fuel supplies for generator. Functional voltage stabilizer not found in most of the stores. Telecommunication link not functional at most of the sites.
E5: Maintenance	<ul style="list-style-type: none"> Visual evidence of maintenance of building found at some sites. Defrosting of ILR found at most sites. 	<ul style="list-style-type: none"> Planned preventive maintenance of building and equipment not found. No dedicated person assigned to carry out routine maintenance. No written planned overhaul programme for vehicle. Vehicles not maintained in accordance with the manufacturers service manual.
E6: Stock management	<ul style="list-style-type: none"> Ice pack conditioning done during vaccine transportation. 	<ul style="list-style-type: none"> Vaccine stock management system is not up to date. Challan book is not used for every transaction. No effective pre-delivery or pre-collection notification

	<ul style="list-style-type: none"> Record of all antigens and diluents found in stock register. Name of vaccine manufacturer, batch number, expiry date of antigens found in some site. 	<ul style="list-style-type: none"> system in place. Completed arrival voucher not found for every delivery. Physical count of vaccine and diluents does not match with stock register at most of the sites.
E7: Distribution	<ul style="list-style-type: none"> Effective vaccine distribution plan exists in health facility. Health facilities distributing vaccines to session site through alternate vaccine delivery (AVD) mechanism. Frozen, expired and damaged vaccine not found at most of the site. 	<ul style="list-style-type: none"> No effective vaccine distribution plan exists at district vaccine store (DVS) and above. No specific dates for delivery and collection of vaccine. Number of short shipments for different antigens and different timings. No accurate knowledge of cold box packing. Open vial not labelled properly at most places. No concept of arrival checks and notification. Vaccine supply often influenced by quantity rather than planning. Haphazard vaccine supplies and distribution system.
E8: Vaccine management	<ul style="list-style-type: none"> Good knowledge about vaccine vial monitor (VVM). Utilization of diluents and vaccine from same manufacture being practiced. Safety pit found in almost all sites. VVM found in stage 1 at most sites. 	<ul style="list-style-type: none"> Poor knowledge about shake test. Though multi dose vial policy (MDVP) is implemented, no records found in stock register and no record of vaccine wastage at any level. Knowledge about MDVP is poor. Poor supportive supervision for routine immunisation (RI) and cold chain. Poor immunization waste management.
E9: MIS, supportive Functions	<ul style="list-style-type: none"> RI micro plan, analysis of vaccine utilization and wastage rate is used for vaccine forecasting. SOP manuals found satisfactory and guidance in the SOPs follow World Health Organisation (WHO) recommendations. 	<ul style="list-style-type: none"> Vaccine distribution routes and job aids not exhibited in most of facilities. CCE inventory is not satisfactory.

Salient Recommendations: ARARIA

Area	Recommendations
Management Policy	<ul style="list-style-type: none"> • Bihar vaccine and logistics management system (BVLMS) should be scaled up. • Regular on the job training or refresher training for stock management and stock update. • Utilization of BVLMS dashboard for vaccine and logistic distribution. • Vaccine notification system should be implemented. • Utilization of effective vaccine management (EVM) dashboard for evidence based decision regarding vaccine and logistics management. • Strict adherence to immunization SOPs. • MDVP implementation as per guideline. • Budgetary provision for vaccine logistics manager at regional and district level and for loading and unloading of vaccine at all levels.
Human Resource	<ul style="list-style-type: none"> • Dedicated and well recognized (ANM/MPW/pharmacist) and cold chain handler (CCH) must be in place. • Each district should have dedicated full time cold chain technician (CCT). • Each district should have dedicated full time DIO. • Vaccine logistics manager must be placed at regional and district level. • Recognized staff for loading and unloading of vaccine.
Infrastructure	<ul style="list-style-type: none"> • Dedicated dry store to be developed in all cold chain stores. • Renovation of all building to meet required standards such as ventilation, cleanliness, safety, free from cracks and safe electrical wiring. • Area to be marked for loading and unloading of vaccine under shade. • Adequate hand washing facilities must be provided. • Dry store and cold store must be under one roof and preferably on ground floor.
Equipment	<ul style="list-style-type: none"> • Additional ILR and deep freezer (DF) must be supplied at all levels to meet the storage capacity. • All CCE must be attached to functional voltage stabilizer. • All vaccine stores must have a standby generator. • All CCE should have functional thermometer/data logger. • Each vaccine store should have tool kit and vaccine float assembly. • Ensure equipment are placed on wooden frame. • Speedy disposal of condemned equipment as per government of India (GoI) guideline.
Planning and Documentation	<ul style="list-style-type: none"> • Plan preventive maintenance of building and vehicles. • Separate temperature log book for every equipment, generator log book and vehicle log book to be maintained at all sites. • Effective vaccine distribution plan must be developed and used. • Location of vaccine displayed at equipment and in register. • Maximum- minimum inventory control mechanism for vaccine logistic management. • Earliest-expiry-first-out (EEFO)/First-in-first-out (FIFO) practice for vaccine distribution. • BVLMS must be update regularly. • National cold chain management information system (NCCMIS) must be updated regularly.

Capacity Building	<ul style="list-style-type: none"> • Refresher training on RI and CC of all DIO, Medical Officer (MO), Health Worker (HW) and CCH (Pentavalent, MDVP, Shake test etc.). • Capacity building of data entry operators in BVLMS, NCCMIS, Health management information system (HMIS) and Mother and child tracking system (MCTS). • Capacity building of DIOs and MOs in using Immunization data for action. • Regular refresher training of CCTs. • Capacity building of state/regional/district/block level official for supportive supervision of RI.
Improvement in practice	<ul style="list-style-type: none"> • Strengthened sector meetings (weekly) and monthly meeting at block and district level specifically for routine immunization. • Regular quarterly meeting for RI at divisional and state level. • Knowledge and practice of shake test, conditioning of ice pack, packing of cold box, use of thermometer and MDVP. • Regular defrosting and physical verification of stock. • Efficient use of vaccine to minimize wastage. • Use of challan for vaccine distribution and vouchers for issue of vaccine. • Development and display of standard vaccine emergency preparedness plan. • Display of current vaccine stock position at all sites. • Regular preventive maintenance of all CCE, building and vehicles. • Improve immunization waste management practices.
Supportive Supervision	<ul style="list-style-type: none"> • Development of supportive supervision micro plan including monitoring matrix at all levels. • Recognition of supervisors for supportive supervision at all levels. • Mobility support to supervisor. • Monitor coverage of RI using coverage monitoring chart. • Use of android based technologies for supportive supervision. • Use of NCCMIS, BVLMS, EVM and supportive supervision dashboard for evidence based decisions and prioritization. • Involvement of development partners and medical college faculties for supportive supervision.