

Salient Strengths and Areas for Improvement: ROHTAS

	Strengths	Areas for Improvement
E2: Temperature	<ul style="list-style-type: none"> • Good knowledge about temperature record, freeze sensitive vaccine, heat sensitive vaccine. • Temperature log book found at most of the sites. • Cold chain handler able to read thermometers. • Working thermometer is found at most sites. 	<ul style="list-style-type: none"> • Cold chain handler (CCH) not able to read thermometer properly in some facilities. • Temperature log book not regularly reviewed by Medical Officer-in-Charge (MoIC)/District Immunisation Officer (DIO)/any other district official. • No mention 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 stored in ice lined refrigerator (ILR). • Knowledge about stocking of vaccine is found good, ice pack freezing capacity is found to be good. • Staff knowledge about emergency vaccine management found satisfactory. 	<ul style="list-style-type: none"> • As per the target population vaccine storage capacity in ILR found inadequate in most of the sites. • Vaccine not stored in proper ILR baskets. • No vaccine contingency plans as per standard operating procedure (SOP). • No dedicated dry space.
E4: Buildings, equipment, transport	<ul style="list-style-type: none"> • Cold chain equipment found functional in existing buildings, well protected from rain water. • All floors dry and reasonably levelled. • Electrical wiring is satisfactory at most sites. 	<ul style="list-style-type: none"> • Buildings in majority lack minimum required standards such as ventilation, cleanliness, safety, free from cracks, seepage. • Many repairable cold chain equipment and condemned equipment found at most of the sites. • No space for passive containers. • Regular preventing maintenance plan of buildings and fire extinguisher not found. • Vehicle user manual not followed, vehicle log book is not updated. Generator back up is not found in some stores and no sufficient reserve supply for generator. • Functional voltage stabilizer not found in most of the stores. • Telecommunication link is not functional in most sites.
E5: Maintenance	<ul style="list-style-type: none"> • Visual evidence of maintenance of buildings found at some sites. • Defrosting of ILR found in most sites 	<ul style="list-style-type: none"> • Planned preventive maintenance of buildings 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. • Record of the antigens and diluent found in all stock registers. 	<ul style="list-style-type: none"> • Though computerized stock control system is installed no antivirus, no vaccine presentation (vial size) is available. • No regular data backup practice being followed.

	<ul style="list-style-type: none"> Name of vaccine manufacturers, batch number, expiry dates, antigens found in most sites. Computerized stock control system is found in district vaccine store (DVS). VVM status taken into consideration for effective stock management. 	<ul style="list-style-type: none"> Challan book is not used for every transaction. No effective pre-delivery, pre-collection, notification system in place. Completed arrival voucher not found for any vaccine delivery. Physical count of vaccines and diluents does not match with the registers.
E7: Distribution	<ul style="list-style-type: none"> Effective vaccine distribution plan exists in health facilities. Health facilities distributing session site through alternate vaccine delivery (AVD). Frozen, expired and damaged vaccine is not found in most of the sites. 	<ul style="list-style-type: none"> No effective vaccine distribution plan exists at DVS and above. No specific dates of vaccine delivery and collection. Number of short shipments for different antigens and different timing. No accurate knowledge of cold box packing. Open vials not labelled properly at most of the places. No concept of vaccine arrival checks and notification. Vaccine supply often influenced by quantity in stock rather than planning. Haphazard vaccine supply and distribution system.
E8: Vaccine management	<ul style="list-style-type: none"> Good knowledge about vaccine vial monitor (VVM). Utilization of diluents and vaccines of the same manufactures being practiced. Safety pit found in almost all sites. VVM found in stage 1 at most of the sites. 	<ul style="list-style-type: none"> Poor knowledge and practice of shake test. Though multi dose vial policy (MDVP) is implemented, no records found in stock registers, no records of vaccine wastage at any level. Knowledge about MDVP is poor. Poor supportive supervision for routine immunization (RI) and cold chain. Poor immunization waste management.
E9: MIS, supportive functions	<ul style="list-style-type: none"> RI microplan, analysis of vaccine utilization and wastage rate is used for vaccine forecasting. SOP manual found satisfactory and guidance in the SOPs follows World Health Organization (WHO) recommendation. 	<ul style="list-style-type: none"> Vaccine distribution routes and job aids not posted in most of the sites. Cold chain equipment inventory not satisfactory.

Salient Recommendations: ROHTAS

Areas	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 Bihar Vaccine Logistics and Management System (BVLMS) dashboard for vaccine and logistic distribution. • Vaccine notification system should be implemented. • Utilization of effective vaccine management (EVM) dashboard for evidence regarding vaccine and logistics management. • Strict adherence to immunization SOPs. • MDVP implementation as per guidelines. • Budgetary provision for vaccine and logistics managers and loading and unloading of vaccine at all level.
Human resource	<ul style="list-style-type: none"> • Dedicated and well-recognized (ANM/MP/pharmacist) cold chain handler (CCH) should 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 vaccines.
Infrastructure	<ul style="list-style-type: none"> • Dedicated dry store to be developed in all the cold chain stores. • Renovation of buildings to meet required standards such as ventilation, cleanliness, safety, free from cracks and safe electrical wirings. • Area to be marked for loading and unloading of vaccine under the shade. • Adequate hand washing facilities must be provided. • Dry store and cold store must be under one roof 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 cold chain equipment must be attached to functional voltage stabilizer. • All vaccines stores must have a stand by generator. • All cold chain equipment should have functional thermometer and data logger. • Each vaccine store should have tool kit and float assembly. • Ensure cold chain equipment placed on wooden frame. • Speedy disposal of condemned equipment as per Government of India (GoI) guidelines.
Planning and documentation	<ul style="list-style-type: none"> • Planned preventive maintenance of buildings, equipment, and vehicles. • Separate temperature log book for every equipment, separate vehicle logbook and generator logbook maintained at all sites. • Effective vaccine distribution plan must be developed and used at all sites. • Location of vaccine displayed at equipment and register. • Maximum –minimum inventory control mechanism must for vaccine and logistics 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 cold chain of all DIO, MO, HW and cold chain handler (CCH) (Pentavalent, MDVP, shake test etc.). • Capacity building of data entry operators in BVLMS, NCCMIS, Health Management Information System (HMIS) and Mother Child Tracking System (MCTS). • Capacity building of DIO and MOs in using Immunization data for action. • Regular refresher training of CCT. • Capacity building of state/regional/district/block level official for supportive supervision of RI
Improvement in practice	<ul style="list-style-type: none"> • Strengthen sector (weekly) meetings and monthly meetings at block and district level especially for routine immunization. • Regular quarterly meeting for RI at divisional and state level. • Knowledge and practice of shake test, conditioning of ice packs, 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 vaccines. • Development and display of standard emergency vaccine preparedness plan. • Display of current vaccine stock position at all sites. • Regular preventive maintenance of cold chain equipment, buildings and vehicles. • Improved immunization based practices.
Supportive supervision	<ul style="list-style-type: none"> • Development of supportive supervision microplan including monitoring matrix at all levels. • Recognition of supervisors for supportive supervision at all levels. • Mobility support to supervisor. • Monitor using of monitoring coverage charts. • Use of android based technology for technology supervision. • Use of NCCMIS, BVLMS, EVM and supportive supervision dash board for evidence based decision and prioritization. • Involvement of development partners and medical college faculty for supportive supervision.