Salient Strengths and Areas for Improvement: BUXAR

Criteria	Strengths	Areas for Improvement
E2: Temperature	• Good knowledge about temperature record, freeze sensitive vaccine, heat sensitive vaccine. • Temperature logbook found at most of the sites.	• Working thermometer is not found in each and every equipment. • Cold chain handler (CCH) not able to read thermometer properly in 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.
E3: Storage Capacity	• All antigens stored in ice lined refrigerator (ILR), knowledge of stocking of vaccine is found good. • Knowledge about stocking of vaccine in ILR is good. • Ice pack freezing capacity is found good. • Staff knowledge about emergency vaccine found satisfactory.	• As per target population vaccines storage capacity in ILR found inadequate in most of the sites. • Vaccine not stored in proper ILR baskets. • Vaccine contingency plans not highlighted as per standard operating procedure (SOP). • No dedicated dry space.
E4: Building, equipment, transport	• Cold chain equipment (CCE) found functional in existing buildings, well protected from rain water. • Floors are dry and reasonably levelled.	• 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	• Visual evidence of maintenance is found at some sites. • Defrosting of ILR found at most sites.	• Planned preventive maintenance of buildings and equipment not found. • No dedicated persons assigned to carry out routine maintenance. • No written planned overhaul programme. • Vehicles not maintained in accordance service

		with the manufacturers service manuals.
E6: Stock management	• Ice pack conditioning done during vaccine transportation. • Record of antigens and diluents are found in all stock register. • Name of vaccine manufacturers, batch number, and expiry dates of antigens is found in most sites. • Vaccine vial monitor (VVM) status is taken into consideration for effective management system.	• Though computerized stock control system is installed at district vaccine store (DVS), stock management is not up to date, and no antivirus, and vaccine presentation (vial size). • No regular data backup practice being followed. • Challan book is not used for every transaction. • No effective pre-delivery or pre- collection, notification system in place. • Completed arrival voucher not found for any delivery. • Physical count of vaccines and diluents are not matched with the register in most of the sites.
E7: Distribution	• Effective vaccine distribution plan exists in health facility. • Health facilities is distributing in session sites through AVD. • Frozen and damaged vaccines are not found at most of the sites	• No effective vaccine distribution plans are exist at DVS and above. • No specific dates of vaccines delivery or collection. • Number of short shipments for different antigens and different timings. • No accurate knowledge of cold box packing. • Open vials not labeled properly at most places. • No concept of vaccine arrival and notifications. • Vaccine supply often influenced by quantity rather than planning. • Haphazard vaccine supply and distribution system.
E8: Vaccine management	• Good knowledge about vaccine vial monitor (VVM). • Utilization of diluent and vaccines of the same manufactures being practiced. • Safety pit found in almost all sites. • VVM found in stage 1 at most sites.	• 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 immunization (RI) and cold chain. • Poor immunization waste management.
E9: MIS, supportive Functions	• RI macro plan, analysis of vaccine utilization, wastage is used to vaccine forecasting. • SOP manuals found satisfactory and guidance in the SOP follows World Health Organisation (WHO) standard.	• Vaccine distribution route and job aids not exhibited in most of the facilities. • Cold chain equipment inventory is not satisfactory.

Salient Recommendations: BUXAR

Area	Recommendations
Management Policy	• 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	• 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	• 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	• 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 disposable of condemned equipment as per government of India (GoI) guideline.
Planning & Documentation	• 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	• 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	• 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	• 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.