Salient Strengths and Areas for Improvement: SIWAN

	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 log book not reviewed by Medical Officer-in-Charge (MoIC)/District Immunisation Officer (DIO)/any other district officer. • No mention remarks such as power failure, defrosting, make an model number of cold chain equipment.
E3: Storage Capacity	• 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.	• 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	• Cold chain equipment found functional in existing buildings, well protected from rain water. • All floors dry and reasonable level.	• Buildings in majority lack minimum required standards such as ventilation, cleanliness, safety, free from cracks, seepage and safe electrical wiring. • 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 backup is not found in some store and no sufficient reserve supply for generator. • Functional voltage stabilizer not found in most of the stores. • Telecommunication link is not functional in most of sites.
E5: Maintenance	• Visual evidence of maintenance of buildings found at some sites. • Defrosting of ILR found in most sites.	• Planned preventive maintenance of buildings and equipment not found. • No dedicated person assigned to carry out routine maintenance. • No written planned Vehicles not maintained in accordance with the manufacturers service manual.
E6: Stock Management	• Ice pack conditioning done during vaccine transportation.	• Though computerized stock control, system is installed no antivirus, vaccine presentation (vial size) is available.

	• Record of the antigens and diluent found in all stock registers. • Name of vaccine manufacturers, batch number, expiry dates, antigens found in most sites. • Computerized stock control system is found in district vaccine store (DVS) Siwan. • Vaccine vial monitor (VVM) status taken into consideration for effective stock management.	• No regular data backup practice being followed. • 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	• Effective vaccine distribution plan exists in health facilities. • Health facilities distributing session site trough alternate vaccine delivery (AVD). • Frozen, expired and damaged vaccine is not found most of the sites.	• No effective vaccine distribution plan exists at DVS and the above. • No specific dates of vaccines delivery and collection. • Number of short shipments for different antigens and different timing. • No accurate knowledge of cold box packing. • Open vials not labeled properly at most 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	• Good knowledge about VVM. • Utilization of diluents and vaccines of the same manufacturers being practiced. • Safety pit found in almost all sites. • VVM found in stage 1 at most of the sites.	• 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	• 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.	• Vaccine distribution roots and job aids not posted in most of the sites. • Cold chain equipment inventory not satisfactory.

Salient Recommendations: SIWAN

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 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 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) 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 District Immunization officer. • 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 store. • 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 preferably on ground floor.
Equipment	• 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 vaccine stores must have a stand by generator. • All cold chain equipment should have functional thermometer/ data logger. • Each vaccine store has tool kit and vaccine float assembly. • Ensure equipment is 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 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 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/blog level official for supportive supervision of RI.
Improvement in practice	• Strengthened sector meetings (weekly) and monthly meeting at blog 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 for 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 vehicle. • Improved immunization waste management practices.
Supportive Supervision	• Development of supportive supervision micro plan including monitoring matrix at all level. • 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 decision and prioritization. • Involvement of development partners and medical college faculties for supportive supervision.