Salient Strengths and Areas for Improvement: NALANDA

	Strengths	Areas for Improvement
E2: Temperature	• 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 found at most sites.	• 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 • No mention 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 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 reasonably levelled. • Electrical wiring is satisfactory at most sites.	• 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 preventive 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 store and no sufficient reserve supply for generator. • Functional voltage stabiliser not found in most of the stores. • Telecommunication link is not functional at 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. • Record of the antigens and diluent	• Though computerized stock control system is installed at district vaccine store (DVS), stock management is not up to date. No antivirus,

	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 DVS Nalanda. • Vaccine vial monitor (VVM) status taken into consideration for effective stock management.	vaccine presentation (vial size) is available. • No regular data backup practice is 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 through alternate vaccine delivery (AVD). • Frozen, expired and damaged vaccine not found in most of the sites.	• No effective vaccine distribution plan exists at DVS and 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 labelled 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 manufacturer being practised. • Safety pit found in almost all sites. • VVM found in stage 1 at most of the sites.	• Poor knowledge and practise of shake test. • Though 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 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 Organisation (WHO) recommendation.	• Vaccine distribution routes and job aids not posted in most of the sites. • Cold chain equipment inventory not satisfactory.

Salient Recommendations: NALANDA

Areas	Recommendations
Management policy	• BVLMS should be skilled up • Regular on the job training or refresher training for stock management and stock update. • Utilization of BVLMS dash board for vaccine and logistics distribution. • Vaccine notification system should be implemented. • Utilisation of EVM dashboard for evidence regarding vaccine and logistics management. • Strict adherence to immunization sop. • MDVP implementation as per guidelines. • Budgetary provision for vaccine and logistics managers and loading and unloading of vaccine at all level.
Human resource	• Dedicated and recognised (ANM/MPW/public/pharmacist) cold chain handler (CCH) should be in place. • Each district should have dedicated full time cold chain technician. • Each district should have dedicated full time DIO. • Vaccines, logistic manager must be placed at regional and district level. • Recognised staff for loading and unloading of vaccines.
Infrastructure	• 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	• 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 standby generator. • Each 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	• Planned preventive maintenance of buildings, equipment and vehicles. • Separate temperature logbook for every equipment, separate vehicle log book and generator log book maintained at all sites. • Effective vaccine distribution plan must be developed and used at every site.

	• 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 updated regularly. • National cold chain management information system (NCCMIS) must be updated regularly.
Capacity building	• Refresher training on RI and CC of all DIO, MO, HW and cold chain handler (CCH) (Pentavalent, MDVP, shake test etc.). • Capacity building of data entry operators in BVLMS, NCCMIS, HMIS and 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 practise	• 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 shack 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's. • Improve immunization waste management practices.
Supporting 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.