

Role of Hospitals in the Multi-Hazard Strategic Plans for Emergencies and Disasters in Nepal



Government of Nepal
Ministry of Health and Population
Health Emergency and Disaster Management Unit (HEDMU)
Health Emergency Operation Center (HEOC)

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25 Feb 2021



Background

- Nepal is beset with **multi-hazard vulnerabilities** due to its geo-ecology
 - **several lessons** that stressed the importance hospital preparedness
 - Perception of Kathmandu valley's vulnerability to earthquake led to the **multisectoral disaster risk reduction interventions** through a consortium approach
 - Health Preparedness – especially **hospital safety** was key pillars
- Key Health Sector Disaster Risk Reduction Interventions of MoHP with WHO support
 - **Designation of area specific Hub and Satellite Hospitals** Networks across the country to enable strategic and structured sharing of available resources and capacities
 - **Six networks** established to cover Kathmandu valley
 - Initial focus on managing mass casualties due to injuries from earthquakes / accidents
 - Structural, Non-structural and Functional aspects of hospital safety addressed
 - Special focus on coordination within the hub-satellite network and between the networks & MoHP through the establishment of a Health Emergency Operations Center (**HEOC**)





Needs identified for enhanced hospital response

(from Nepal Earthquake 2015 experience)

- Standardized **assessment** of structural safety through a harmonized national tool
 - **Resource commitment for systematic implementation** of assessment recommendations : structures of hospitals, emergency medical logistics warehouses, adequate stockpiles at each hub-satellite hospital network
 - **Creation and maintenance of systematic linkages** between pre-hospital care, hospital care and post-hospital care / rehabilitation components
 - **Development of context specific pre-hospital care systems** – standardization of Ambulances & Emergency Medical Technicians; networking & national dispatch center
 - Designation / development of **step-down care facilities** to serve as post-surgical and rehabilitation needs of hub-satellite hospital networks & stockpiling priority assistive devices
 - Comprehensive Hospital Emergency / Disaster **Preparedness & Response Plans**; Hub-Satellite hospitals network **communication and referral plans** with regular review & updating
 - Development & endorsement of **SOPs and guidelines** for coordination & response
 - **Capacity building** of hospital management & staff through standardized trainings including simulation exercises to orient on and update plans; coordination and response



Warehouse for emergency stockpiling of medicines & logistics

Strengthening interventions at Hub & Satellite Hospitals Network

(Post Nepal Earthquake -2015)



- WHO **Hospital Safety Index Assessment** covering 10/25 networks:
 - **Structural assessment** using a harmonized one national tool including access barriers for disabled,
 - Retrofitting of key hospitals by developmental partners
 - **Non-structural assessment** with implementation of mitigation measures
 - **Functional assessment** leading to: Hospital Disaster Preparedness & Response Plans (HDPRP); Hospital Incident Command System; Emergency Medical Logistics Ware-Houses with stockpiles, HDPRP & Hospital Preparedness for Emergency (HOPE); Basic Life Support(BLS); Advanced Life Support(ALS) & Emergency Trauma Care Trainings
 - Periodic Table Top and Simulation Exercises and After Action Reviews for major emergencies
- **Piloting and standardization** of Hospital Safety Index Plus Application:
 - Electronic capturing of information → Digital Version of HDPRP for easy updates & monitoring
 - Digital capture of WHO HSI assessment findings for prioritization, budgeting & monitoring of implementation of recommendations
- **Addressing linkages between and continuity of Emergency Care components:**
 - **Prehospital:** Emergency Medical Technicians & Ambulance Services standardization, 3 Digit number for dispatch
 - **Hospital:** District Contingency Plan, Hospital Disaster Preparedness & Response Plan; Hub-Satellite Hospitals Network Plan;
 - **Post-hospital:** Development of step-down care facility, priority assistive devices - national listing and stockpiling



Kathmandu Valley wide simulation exercise 2018

Surge Management for Infectious Hazard Emergencies

(at Hub & Satellite Hospitals Network)



- Surge response for several outbreaks of Seasonal Influenza, Dengue, Scrub Typhus, Food Borne Diseases etc. **could not be addressed using the HDPRP developed for managing Mass Casualty incidents**
- **Specific Contingency Plans for Infectious Hazards Management (CP-IHM)** - modelled for Influenza was developed and incorporated as part of the Hospital Emergency Preparedness & Response Plans and tested through TTX & SIMEX
- **Standardized national training and management manuals** for clinical teams (doctors, nurses, paramedics & health information personnel) based on Integrated Management of Adult/Adolescent Illnesses (IMAI) focused on priority infectious hazards and conditions that mimic them was developed with support from international and national experts, Training for Trainers conducted and rolled out to cover all hub and satellite hospitals networks



Nepal Earthquake 2015



Health Sector response to Flood and Landslide
2017



Hub & Satellite Hospitals Network

(involvement in COVID-19 Response)

- **Rapid adaptation** of HDPRP & CP-IHM for COVID-19 response by a leading Hub-hospital (PAHS)
- HEOC & WHO **facilitated the training** of other Hub and Satellite Hospitals to adapt their HDPRP and CP-IHM for COVID-19 response based on the PAHS plan and using PAHS experts
- As all hub hospitals did not have adequate IPC, Isolation & Critical Care facilities, specific hospitals (hubs or satellites) **with such resources and capacities were designated as COVID-19 hospitals**: Level 1 (Mild case Rx): **24**; Level 2 (Moderate case Rx): **18**; Level 3 (Severe/Critical Case Rx): **7**
- Based on the progression of the pandemic in the country (cases load and needs) **additional hospitals were designated and designated hospitals returned** to routine care to ensure continuity of essential health services
- **Designated hospitals were supported** with additional infrastructure, equipment, supplies, medicines, staffing, technologies, trainings, networking and funds as needed





Capacity strengthening

(Hospitals & Health Care Workers (HCW) for COVID-19 Response)

- **Rapid Assessment of all Level 2 COVID-19 designated hospitals** on:
 - IPC, Clinical Preparedness, WASH and Health Care Waste Management
 - Gaps were identified and action plans with timelines and prioritization for implementing the recommendations were jointly developed and monitored
- **Training based on assessment** findings were conducted
- Pocket **guides** on IPC and clinical management were developed and distributed
- **Oxygen** demand and needs assessment for non-invasive and invasive ventilation was undertaken
- **Quality assured** COVID-19 Lab diagnostic services enhanced at national level to 83 labs covering the entire country
- **Hospital information management** was strengthened to ensure reporting etc
- **Psychosocial support** through in-person and call center-based counselling provided
- Reproductive Health **Kits** and NCD kits for emergencies supplied for enhanced provision of essential critical care
- **Tele rehabilitation** services developed to address ongoing needs of the disabled and for assessment & management
- **Telemedicine services** being established at national & provincial level to enable expert support for clinical management of COVID-19 and continuity of critical services by district and sub-district hospitals
- Emergency Medical Deployment Teams (**EMDT**) being constituted at national and provincial levels, trained and provided with deployment kits for support surge response at hospitals in need
- HCWs administered COVID-19 vaccination from the first lot of vaccine available to the country



COVID-19 Emergency Medical Deployment Teams (EMDT)
Mobilization Guidelines
(Approved date: May 28, 2020)



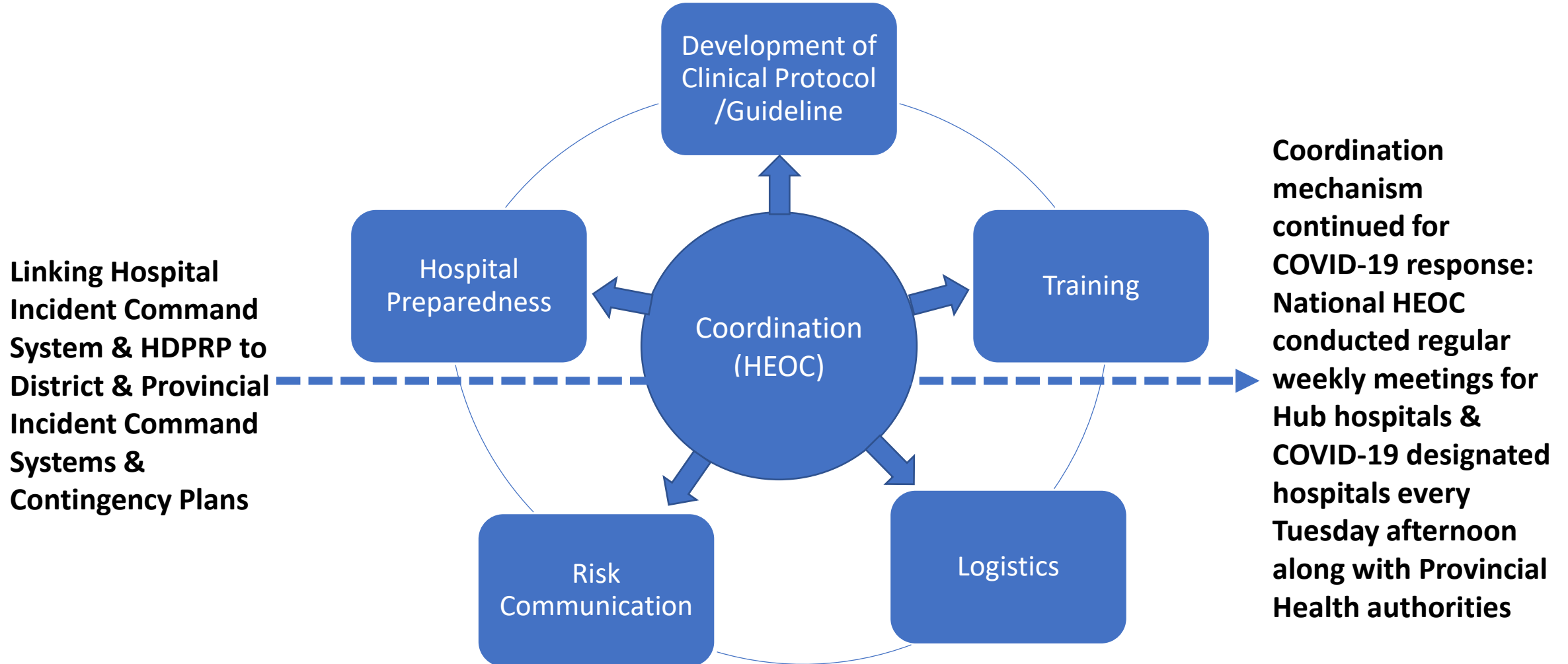
Major SOPs and Protocols issued

(for COVID-19 management & Service Continuity)

- Interim Guideline for **COVID and Non-COVID** Health Services during COVID-19 Pandemic 2020
- Infection Prevention and Control (**IPC**) when COVID-19 is suspected
- Interim **Clinical Guidance for Care** of Patients with COVID-19 in Health Care Settings
- Clinical approach to a patient with suspected COVID-19
- Protocol for ILI Clinics (COVID-19 Screening Fever Clinics)
- Interim Pocket Book of **Clinical Management** of COVID-19 in Healthcare Setting
- Pocket Book for IPC Measures for COVID-19 in the Healthcare setting
- Interim Guidance for RMNCH services in COVID-19 Pandemic



Coordination by Health Emergency Operations Centers





Health Sector Response to COVID-19

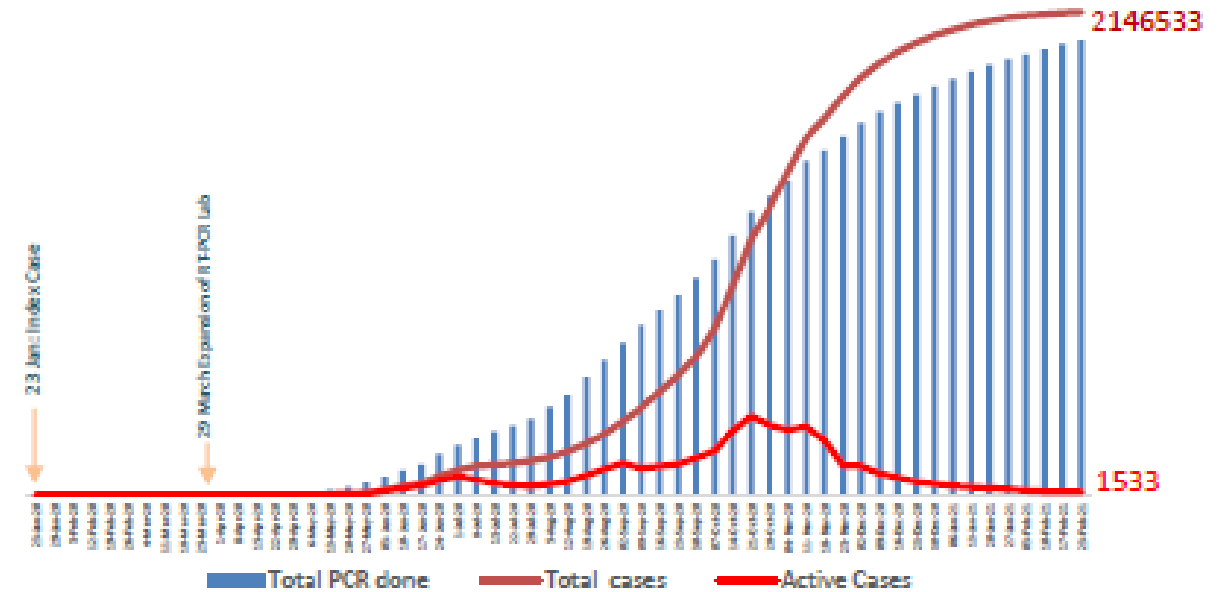
Tuesday | 23 February 2021 (11 Falgun 2077)

RT-PCR Test	RT-PCR Test / Million	Total Positive Cases	Confirmed cases in isolation	Recovered	Recovery Rate	Deaths	People in Quarantine
2146533	72907	273666	1533	270068	98.7%	2065	65

COVID-19 Summary (Last 24 hours)

Total RT-PCR Test done	3218
Recovered	102
Death details received in last 24 hours	4
Death(s) in last 24 hours	4
Confirmed Cases	110
	Female: 39;
	Male: 71

Trend of RT-PCR and COVID-19 cases

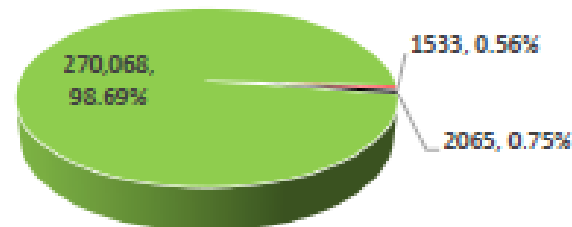


Information on COVID-19 Vaccination Campaign

165 Vaccination Centre's **428924** Total people vaccinated

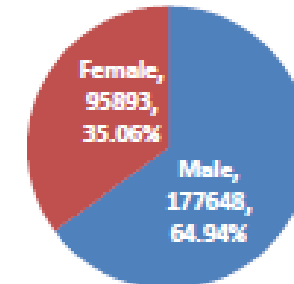
Updated as of 22 February 2021, 17:00 hrs

COVID-19 Recovered, Active and Death cases



Recovered Active Cases Deaths

Gender wise distribution of COVID-19 Cases





Challenges & Gaps

- Coordination between three tiers of government and their hospitals
- Delay/non-activation of Hospital ICS after emergency declaration
- Availability and quality of HDPRP not uniform among hospitals
- Most hospitals did not have Contingency Plans for Infectious Hazard Management
- Hub & Satellite hospitals network-wide resources not adequately mapped & utilized
- Sub-optimal IPC capacity at most hospitals
- Inadequate numbers and capacity of human resources for critical care
- Difficulties in training and monitoring due to lock-downs
- Lack of effective hospital information management systems
- Delays in implementing tele-medicine services and EMDT deployment



Way Forward

- Enhance structural and non-structural mitigation interventions
- Update Hub & Satellite Hospitals Network HDPRP, CP-IHM, Network plans etc based on comprehensive review of COVID-19 response and learning
- Tailor made standardized training for HDPR and hazard specific contingencies
- SOPs, trainings and capability enhancement for continuity of critical services
- Periodic TTX SIMEX to evaluate preparedness and response capacities
- Dedicated web portal for running the expand HSI+ Application at all key hospitals
- Process flow based ICT platform for hospital information management
- Enhanced capability for ICU and Ventilatory care at key hospitals with equitable service access and availability
- Strengthen Emergency Care System:
 - Global Emergency and Trauma Care Initiative
 - Integrated Ambulance and Prehospital Care service
 - Emergency Medical Deployment Teams
 - Telemedicine Services
- Tele Mental Health and Tele Rehab Services



THANK YOU!