

Activities by Medical Department, Howrah Division

Divisional Railway Hospital, Eastern Railway, Howrah had been serving patients of Howrah Division providing secondary level care. It has also performed as a Tertiary referral centre for the treatment of complicated Orthopaedic cases from all zones in the eastern part of India over the years. Complicated surgeries like total Knee and Hip replacement as well as Limb Restructuring and Arthroscopic surgeries have been done.

The Hospital was given a new challenge as it had to be transformed into a dedicated COVID-19 (Level 2) Hospital and started admitting patients since 28th April 2020. The Officers and Health Care staff have quickly adopted to meet the threat of the Global Pandemic and successfully treated over 50% of all COVID-19 cases of Eastern Railway, as well as several cases from South Eastern Railway for which it has received recognition at the highest level.

Highlights of some of the important achievements are enumerated:-

INFRASTRUCTURE DEVELOPED

As the mainstay of management of COVID -19 cases showing moderate to severe respiratory symptoms is continuous Oxygen Therapy, a Central Gas Pipeline has been installed at Divisional Railway Hospital, Howrah. This infrastructure development could be achieved within a very short time due to the support of DRM/HWH who inaugurated the facility on 24.08.2020.

Central Medical Gas Pipeline for the Hospital has already become functional. Areas to be covered include Intensive Care Units (both Medical and Surgical), General Wards and OT Complex. 73 D Type Jumbo Cylinders have already arrived for the Manifold Room of Central Oxygen Pipeline.



**Oxygen Supply through Central Pipeline
in Wards for Treatment of COVID - 19**



**Manifold with Automated Panel and
D Type Jumbo Oxygen Cylinders**

FUNCTIONING AS A DEDICATED, LEVEL 2, COVID -19 HOSPITAL

To overcome the immediate requirement a 7 bed Isolation Ward was made ready in the Hospital. Subsequently all other wards have been converted for treatment of COVID-19 cases. Central AC has been disconnected to prevent spread of infection through vents. Adequate Exhaust Fans have been provided as well as multiple Pedestal Fans in each ward. Duty Room used by Nurses, Doctors and other HCW have been provided split AC units so that working in full PPE suit is made bearable. Separate smart phones with SIM cards have been provided in each ward for easy communication. Hospital Kitchen has started using disposable plates or serving food to minimize risk of contamination. Entire Hospital layout has also been mapped into Green and Red Zones to ensure minimal risk of spread of infection.

Salient features of the modified hospital are enumerated:

(i) SANITATION AND DISINFECTION

Special drive to ensure proper sanitation has been given due priority. At present sanitization is being carried out using 1% Sod. Hypochlorite solution and other disinfectants, including use of Mist Sprayers and Fogging Machines. Sanitization of Hospital, both Red and Green Zones is done frequently. Sanitization of Railway Colonies is done 2-3 times/week by Staff belonging to H&MI. Residences of COVID-19 Positive patients in Railway Colonies are separately sanitized. Ambulances also undergo frequent sanitization.

Adequate stock of Hand Sanitizer is provided including manufacture from raw material done initially at the Hospital and other departments of the division were initially provided guidance to do the same.



Sanitization of Ambulance done by spraying disinfectant (1% Sodium Hypochlorite)



In house preparation of Hand Sanitizer being done in QC Lab of DRH/HWH

(ii) TRAINING OF PARA MEDICAL STAFF

Repeated training of all Para Medical Staff as well as doctors have been held to acquaint them with various aspects of Management of COVID-19 cases. 23 Training sessions were already held prior to start of hospital. On the job training is continuing for all categories of staff and latest developments in the field are continuously shared and discussed.



12:18

(iii) PROCUREMENT OF PPE KITS AND ESSENTIAL EQUIPMENT

a) PPE Kits:

With the active help of Divisional authorities, Howrah Division could procure one of the best PPE Sets available in the market as per guidelines of SITRA approval and approval by the Ministry of Textiles and MoHFW. At present adequate quantity of PPE KITS is available.

b) Medical Gadgets:

DRH, HWH was a dedicated Orthopedic Hospital. Stock of existing essential medical equipments was increased where existing stock was found to be insufficient to cope up with the possible predicted high number of admissions. Newer gadgets for better management of COVID-19 patients were also procured.

It was ensured that the following equipments were in sufficient numbers to treat COVID-19 patients:

Facility	Quantity	Facility	Quantity
Oxygen Cylinders B Type (10.2 L)	205	Crash Cart Trolleys	8
Oxygen Cylinder D Type (46.7 L)	73	Non-Contact Infrared Thermal Scanners	24
Integrated High Flow Nasal Oxygen Therapy Device	5	Finger Tip Pulse Oxymeter	161
Oxygen Concentrators	54	Non Re-breathing Oxygen Masks	100
Multipara Monitors	44	Venturi Masks	100
Arterial Blood Gas Machine	4	Vacuum Suction machine	20
Syringe Pump Infusion Sets	59	Ventilator	3
Portable X-Ray Machines	2	Glucometer	280
Defibrillators	9	BIPAP	3



HFNO therapy equipment (Inbuilt flow sensor/blender/ compressor) capable of Oxygen upto 60L/min used for severe COVID - 19 patient.



ABG (Arterial Blood Gas Analyzer) Machine in use by Doctor in COVID Ward

Preparedness and plans to manage paediatric COVID Cases at Orthopaedic Hospital, Howrah:

1. Arrangement for infants and pre-school children: Both patient(children) and mother will be accommodated in the ward.
2. Medicines and consumables; Medicines and consumable for treatment of children have already been procured. Paediatric NRBM Mask, IV Microdrip set, Ambu bag, Ryle's Tube, Suction Catheter, Syrups and oral medicines for paediatric age group are available.
3. Appliances: Appliances for paediatric age group like BP instrument, stethoscope etc are available.
4. Diet; There are arrangements to provide milk and baby food supplement to admitted children.

(iv) TESTING

- (a) Nasopharyngeal and oropharyngeal samples for RTPCR test have been collected at DRH/HWH from admitted suspect cases as well as on OPD basis by ADMO/Pathology and other on duty Medical Officers and mainly sent to National Institute of Cholera and Enteric Diseases (NICED) which has one of the best virology laboratories in the eastern part of the country.
- (b) **Rapid Antigen Test Kits for Novel Corona Virus (SARS-Cov-2)** : In compliance with Government of West Bengal guidelines, prior permission from Swasthaya Bhavan, Govt. of West Bengal and CMOH, Howrah District was obtained for performing **in-house** Rapid Antigen Tests. These tests can give result within one hour and are about 80% accurate. **The PCMD/ER has advised to facilitate the arrangement of RAT for COVID-19 screening 24X7 for all patients before admission at different hospitals in Eastern Railway.**

(c) CARE OF COVID – 19 PATIENTS

Divisional Railway Hospital Howrah has been in the forefront of battle against COVID – 19 and has successfully cared for a large number of patients of Eastern Railway.

Treatment provided to the admitted patients has been as per latest protocols of Ministry of Health & Family Welfare, GOI. Apart from the routine treatment provided, latest systems for efficient Oxygen Therapy including Venturi Masks, Non Re-breathable Masks, Oxygen Concentrators and High Flow nasal Oxygen Systems have been introduced. Sufficient Pulse Oximeters, Multipara Monitors as well as ABG machines for quick measurement of Arterial Blood Gas has been made available. Latest Anti-viral drugs that have shown initial promise against SARS CoV 2 like Remdesevir and Flavipavir have been procured and already have been used for critically ill patients as indicated.

COVID CARE AT DRH, HWH



(a) Performance of Different Key Areas:

KEY PARAMETERS	2020-2021	2021-2022
OPD Attendance	110557	145848
Indoor Admission	1588	2245
Bed Occupancy Rate(BOR)	55%	85%
Ortho Surgery (Special)	66	140
Major Surgery	12	518
Minor Surgery	4	422

OTHER AWARENESS PROGRAMME: Dengue awareness programmes were organized at work place focusing on preventive measures, diagnosis and medical care. Other health awareness programmes such as World Population Day, World Mental Health Day and Hepatitis Day, World AIDS Day were also organized to spread awareness taking appropriate measures like social distancing.

UMID REGISTRATION :

The data of UMID registration of railway beneficiaries as per umid.digitalir.in is given below.

Employees	UMID Generated	Pensioners	UMID Generated
26165	25265(96.6%)	40723	10670(26.2%)

Laboratory at Orthopaedic Hospital, Howrah:

The following equipments have been installed at the laboratory of Ortho Hosp Howrah in 2021. The brief of the tests performed by the instruments are mentioned below.

SL No.	Name of the Equipment	Date of Installation	Test Performed
01	FIA	01.06.2021	TROP-T, Procalcitonin, NTproBNP, HSCR
02	Nephelometer MISPA i2	09.07.2021	D DIMER, FERRITIN, CRP, IGE
03	3Part Hematology Cell Counter ERBA	12.7.2021	COMPLETE HEMOGRAM, HB, PLATELET, TC, DC
04	Full Auto Biochemistry Analyser	8.11.2021	ROUTINE BIOCHEMISTRY, FBS, UR ,CR LIPID, LFT, CA , PO4 AMYLASE CPK MB, URIC ACID, LDH
05	CLI Maglumi800	15.11.2021	HORMONE Assay: Thyroid, LH, FSH, PRL, BETA HCG, TUMOR MARKER- CA 125, CEA, CA 19.9, PSA. VIT-D, VIT- B12, ANA
06	ELISA PLATE READER & WASHER	29.5.2021	BLOOD BANK SEROLOGY HIV .HBSAG. HCV, Dengue etc.

New Project implemented at Orthopaedic Hospital/DRH Howrah:

- (A) **DORMITORY:** A 20 bedded new Dormitory was inaugurated by Shri Manish Jain, DRM/HWH on 31.08.2021. The facility is being used by Relatives of Critical patients. The New Building also contains the office of AHO/HWH, H&MI/HWH Colony, FSO/HWH and Quality Control Laboratory of HWH.



- (B) **Central Medical Oxygen Gas Pipe Line:** CMGPS has been installed to supply oxygen to 179 beds (100%) as on 01.12.2021.

- (C) **Liquid Medical Oxygen Storage System:** A 6 KL Capacity Liquid Medical Oxygen Storage System was installed at DRH, HWH on 16.06.2021. It was inaugurated by Dr R.Bhattacharya, PCMD/ER.



- (D) **SMS Based Reporting System** for laboratory test was inaugurated at Orthopaedic Hospital, Howrah on 08.11.21 by Shri Manish Jain, DRM/HWH, This System will help the Patients to get the test reports on their mobile phones.
- (E) **HMIS:** HMIS for efficient patient management is being introduced in a phased manner. General OPD Registration under HMIS has already been started at Orthopaedic Hospital, Howrah and 11 Health Units of Howrah Division since 25.10.2021.
- (F) **Micro-wave Based Disinfection System (OPTIMASER-30)** has been installed at DRH, HWH on 20.07.2021. This system is for disinfection of the Bio-medical waste generated at DRH, HWH before handing over to the Agency for final Disposal.



Patient Transportation:

The Hospital has five (05) Private Ambulances available round the clock. There are one Advance Life Support (ALS) Ambulance and 02 Basic Life Support (BLS) Ambulances. One (01) Ambulance is available round the clock at Howrah Station. One (01) Ambulance is also available at BDC Health Unit.

Other Health units provide hired ambulance for any emergency utilizing local imprest.



(i) RECOGNITION

The efforts of Divisional Railway Hospital, Howrah have been praised by many beneficiaries who have been cured at the hospital as well as higher authorities.

DRM/HWH has announced cash award of Rs.10000/- for quick installation of Central Medical Gas Pipeline for DRH, HWH and excellent management of COVID patients.

Most notable has been the recent observation of Honorable General Manager, Eastern Railway during Safety and Punctuality Meeting on 30.07.2020

“GM, further, said that about 500 Railway employees and beneficiaries had contacted COVID and more than half of them were treated / are being treated at Howrah. This is a commendable

performance by DRM/HWH, CMS/HWH, doctors, nurses and para-medics who deserve appreciation.”

On Independence Day GM/ER again mentioned about excellent work of DRH/HWH and on 18/10/2020 he was pleased to announce a cash award of Rs. 25,000/- for the Hospital in recognition of its leading role in successfully treating a large number of Railway beneficiaries afflicted with COVID -19.

Comprehensive Health Care Shield was awarded to Medical Department of Howrah Division, at 65th Railway Week Awards function at General Manager's level on 13.08.21.