Building a Responsive Health System: Linking Trauma Program with Smart Referral System

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ABOUT ORGANIZATION

Introduction:

The Medical Services Division, under the Health & Family Welfare Department, Government of Gujarat, leads the delivery of secondary healthcare across the state . It is established in 1951,the Medical services Divisonis the oldest and the most foundational divisions under the (NHM),Gujarat . It bridges clinical services with infrastructure and innovation through its various key programs. It is primarily responsible for ensuring quality healthcare delivery at District and Sub-District Hospitals, functioning as the cornerstone for accessible and reliable curative care. It also oversees the implementation and management of a range of essential health programs and interventions aimed at strengthening the healthcare ecosystem.

Key Responsibilities

- Upgradation of District and Sub-District Hospitals
- Management of Emergency Medical Services (108 EMRI)
- Operation of Specialized Services (Midwifery Units, Mental Health Programs, Smart Referral System)
- Implementation of Health Schemes like PMNDP and Trauma Care Yojanas
- Monitoring Quality Standards, Biomedical Equipment, Emergency Preparedness, and Health IT Systems

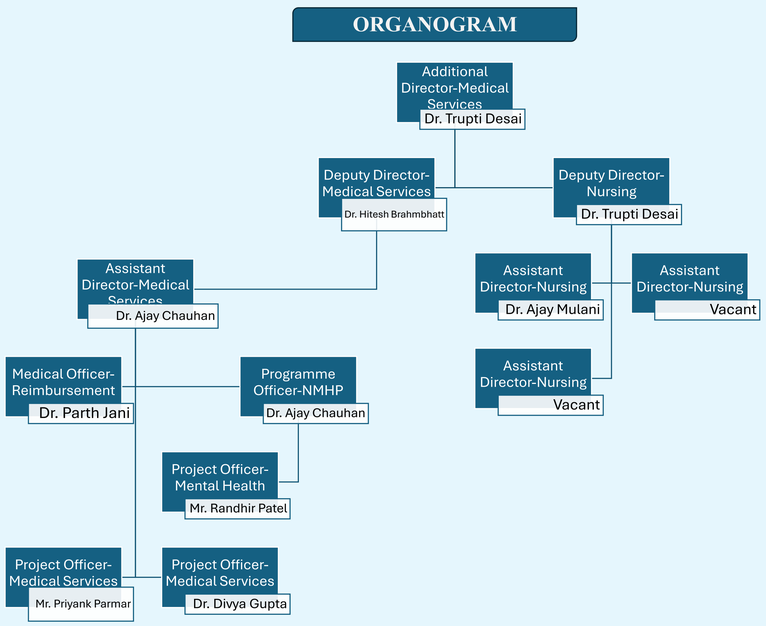
Vision: To build a responsive and patient-centric secondary healthcare system across Gujarat through timely, equitable, and quality medical services.

Mission : To deliver timely, equitable, and quality secondary healthcare through robust infrastructure, skilled workforce, and innovative hospital management.

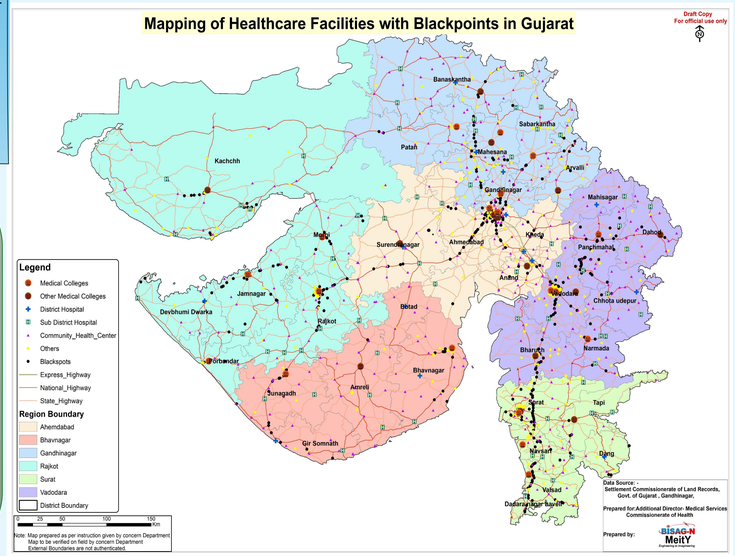
Objective

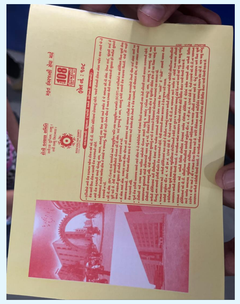
- **Secondary Healthcare Infrastructure** – Strengthen and upgrade District and Sub-District Hospitals.
- **Emergency Medical Services** – Enhance the 108 EMRI ambulance network under Green Health Services.
- **Access to Life-saving Treatments** – Expand PMNDP and Vahan Akasmat Sahay Yojana for critical care.
- **Specialized Care Models & Mental Health** – Scale midwifery-led units and integrate mental health services.
- **Smart Referrals, Quality Standards, Equipment Maintenance, Emergency Preparedness & Data Systems** – Implement Smart Referral System, enforce quality standards, ensure biomedical uptime, support public event readiness, and leverage health IT for decision-making.

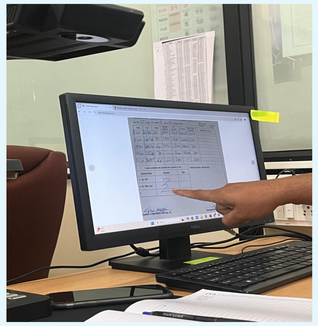
ORGANOGRAM

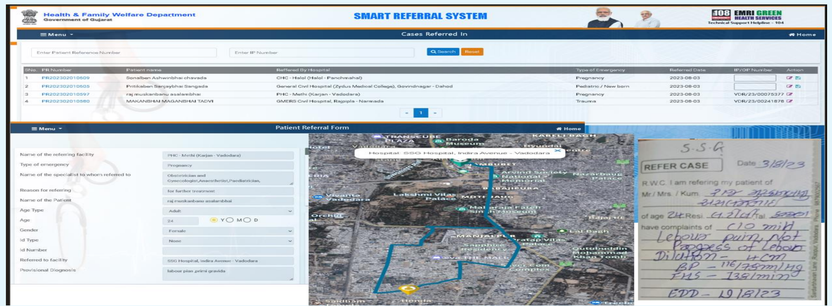


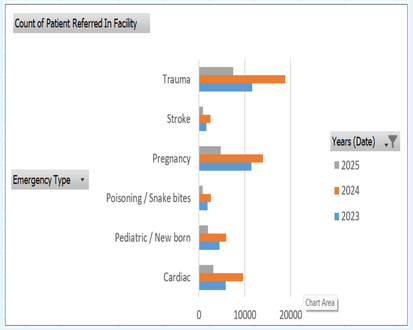
Objective : 1. To identify the key challenges and gaps faced in the Smart Referral System (SRS) portal and processes, and to explore potential solutions for enhancing its efficiency and usability.
Objective: 2. To study the integration of the Smart Referral System with trauma care services in order to strengthen and streamline emergency referrals for better patient outcomes.





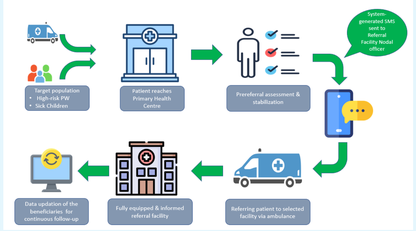






Challenges faced during Internship

- Difficulty in obtaining accurate, complete data from MIS portals and field units.
- Required persistent follow-up with multiple levels of officers.
- Juggling data analysis, report writing, and field visits within limited duration was demanding.



Practical learning Vs Theoretical Understanding

While theoretical learning gave me a structured understanding of healthcare delivery systems, practical exposure revealed the challenges, gaps, and human factors that affect how these systems function in real life. It helped me develop a more realistic, problem-solving perspective.

In theory, the Smart Referral System ensures real-time updates and smooth coordination. But in practice, many facilities don't update the portal regularly, especially for bed availability, causing delays and manual intervention.

This showed me the gap between system design and on-ground implementation

SWOT ANALYSIS

Top 10 Hospitals from where the patient has reffered out	Count of Patient Referred Out
General Civil Hospital, Godhra - Panchmahal	3646
GMERS Civil Hospital, Rajpipla - Narmada	2430
General Civil Hospital, Bharuch City - Bharuch	2290
Sub District Civil Hospital(SDH), Jetpur - Rajkot	2237
UCHC - Bamroli (Surat City - Surat)	2108
General Civil Hospital, Ahwa - The Dang	2100
General Civil Hospital, Nr Distric Court - Amreli	2023
General Civil Hospital, Vyara - Tapi	2016
Bhavsinhji General Civil Hospital, Rani Baug - Porbandar	1905
CHC - Shehra (Shehra - Panchmahal)	1790

Major Learnings

- Gained practical understanding of NHM, Trauma Care, SRS , Dialysis Programs.
- Learned how dashboards and health indicators guide planning and policy.
- Observed real-world implementation challenges like staffing and logistics.
- Understood the value of coordination between technical and administrative teams.

Suggestions

- Last Updated Timestamp for Live Facility Info
- Smart Alert System Based on Traffic + Distance + Facility Load
- Flag Top Referring Facilities for SRS Strengthening.
- Public Dashboard for Trauma Centre Availability
- GIS-Based Live Trauma Routing via BISAG Integration.
- Build a **voice/typing-based chatbot** in SRS (or mobile app) that answers.
- MIC Activation Protocol Button on SRS for Trauma Centers.
- A dual mode alert system should be implemented WhatsApp for high-connectivity zones and **auto-triggered SMS fallback** for rural/remote areas.
- Traffic-Integrated Trauma Routing with Live Diversions
- Auto-Training Module in SRS for New MOs