



Transforming Emergency Care

Red.Health is revolutionizing emergency response in Hyderabad by building a comprehensive database of hospitals, departments, and medical staff to power an AI-driven recommendation engine.

By- Priyanshi Rana 1572

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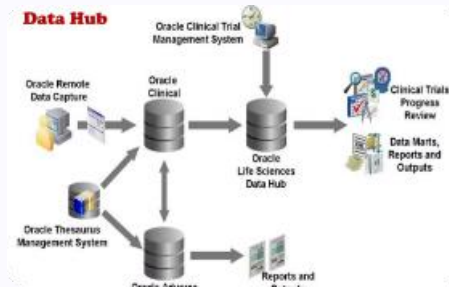
Introduction

Improving Emergency Care Through Symptom Mapping

Integrated pre-hospital emergency services, such as ambulances, play a vital role in triage and symptom identification, but often lack the necessary knowledge and coordination to deliver the most effective care. Gaps in communication, equipment, and training can result in suboptimal care during the critical initial stages of an emergency.

Bridging these gaps through enhanced data-driven symptom mapping can empower pre-hospital teams to make more informed decisions, deploy the appropriate resources, and provide stabilizing treatment en route to the hospital. This seamless integration between pre-hospital and hospital-based care can significantly improve patient outcomes and reduce the overall burden on the healthcare system.

Tangible Objectives



Comprehensive Hospital Data

Establish a robust repository of hospital data to power AI-driven recommendations.



Symptom Mapping

Enable intelligent symptom mapping to match patients with the appropriate care facilities.



Improved Patient Outcomes

Streamline emergency response and treatment to enhance patient outcomes.



Comprehensive Data Collection

Implement robust data collection processes to continuously enhance system intelligence.



Overcoming Challenges

Leverage innovation to drive advancements in emergency services and

Methodology

A cross-sectional qualitative study was carried out with the aim of gathering up-to-date hospital data and assembling emergency condition data mostly in the form of survey and in-person interviews for the target population of hospitals in Hyderabad with 24/7 ER attachment. · Primary Data Collection by Direct visits for over 50 hospitals in Hyderabad were held. A semi structured survey form in the form of mixed questionnaire consisting of both open ended and close ended questions was presented to the Emergency Room (ER) Personnel, General Managers, Marketing Team of these hospitals to gather specific data about their 24/7 emergency services, departmental details, emergency contact numbers, and doctor information.

50+ Hospitals Surveyed

Comprehensive data collected on emergency services, departments, and contact information.

Centralized Emergency Lines

Many hospitals have dedicated emergency hotlines for faster response.

Specialist Availability

Mapping of doctors and their expertise across key departments.

Symptom Mapping

The study also worked to gather information about emergency diseases or conditions, the signs and symptoms, and the relevant departments where they can be treated. So that both of these studies can be merged to form a corresponding data set for the recommendation engine. The process of gathering secondary data involves examining books and scholarly online resources, such as Google Scholar, medical websites, published research papers, etc., to obtain data on emergency diseases or conditions, the most prevalent emergency cases, their symptoms, and the most appropriate treatment departments.

Condition Database

Compiled data on common emergency diseases and their symptoms.

Department Matching

Linked symptoms to the appropriate hospital departments for treatment.

AI Integration

Powering an AI-based recommendation engine for faster, more accurate emergency response.

Key Findings

Department Availability

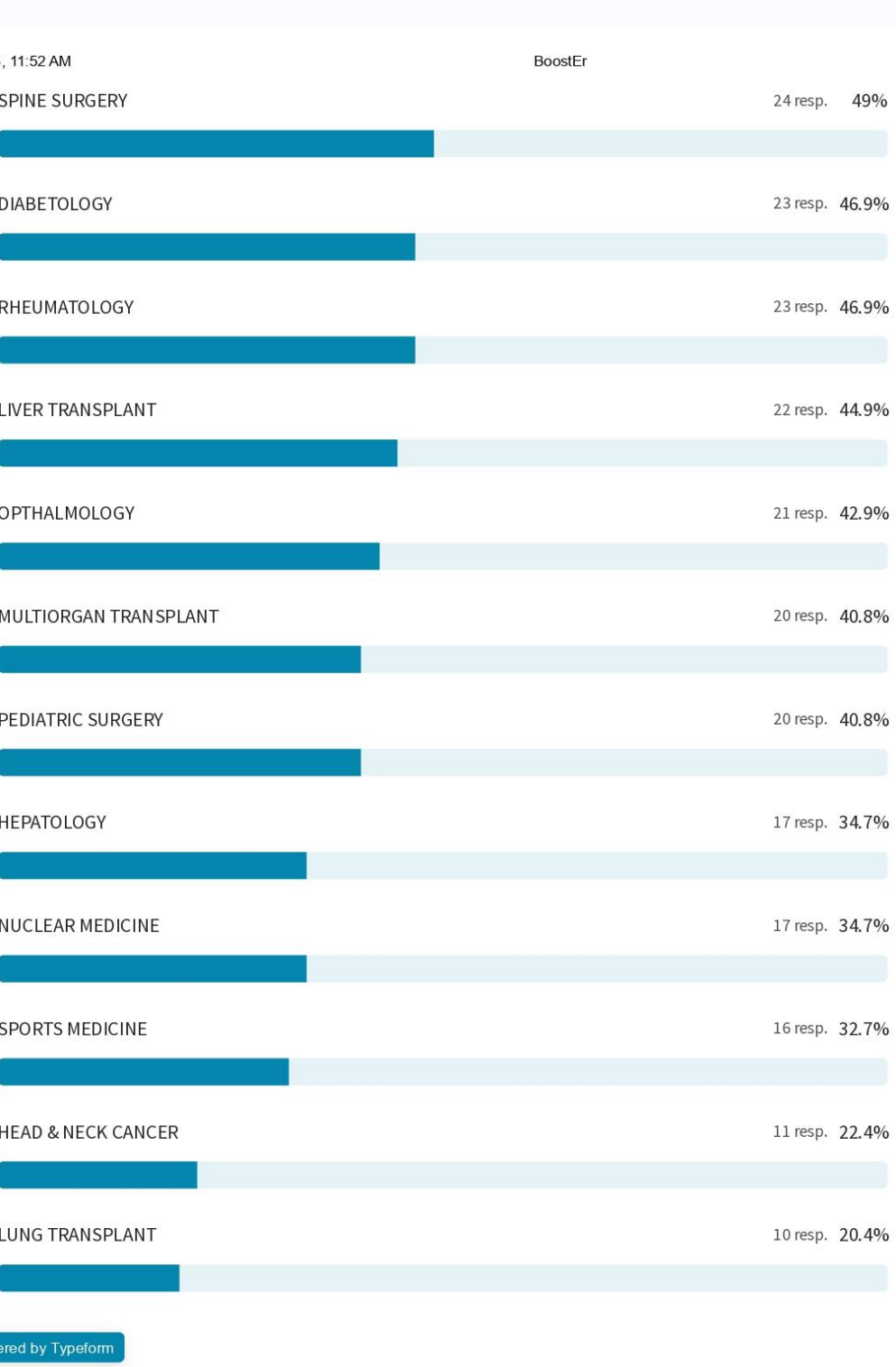
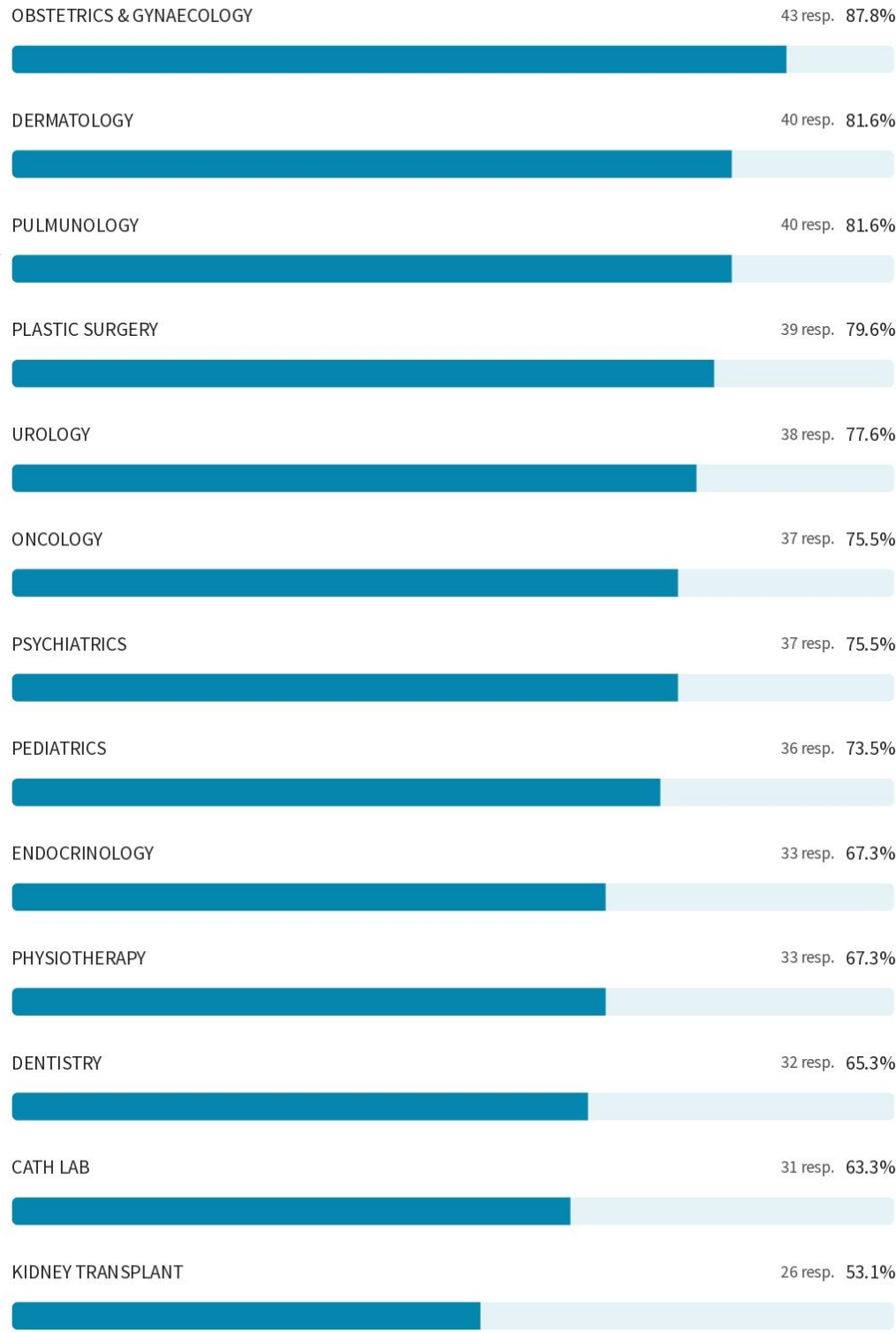
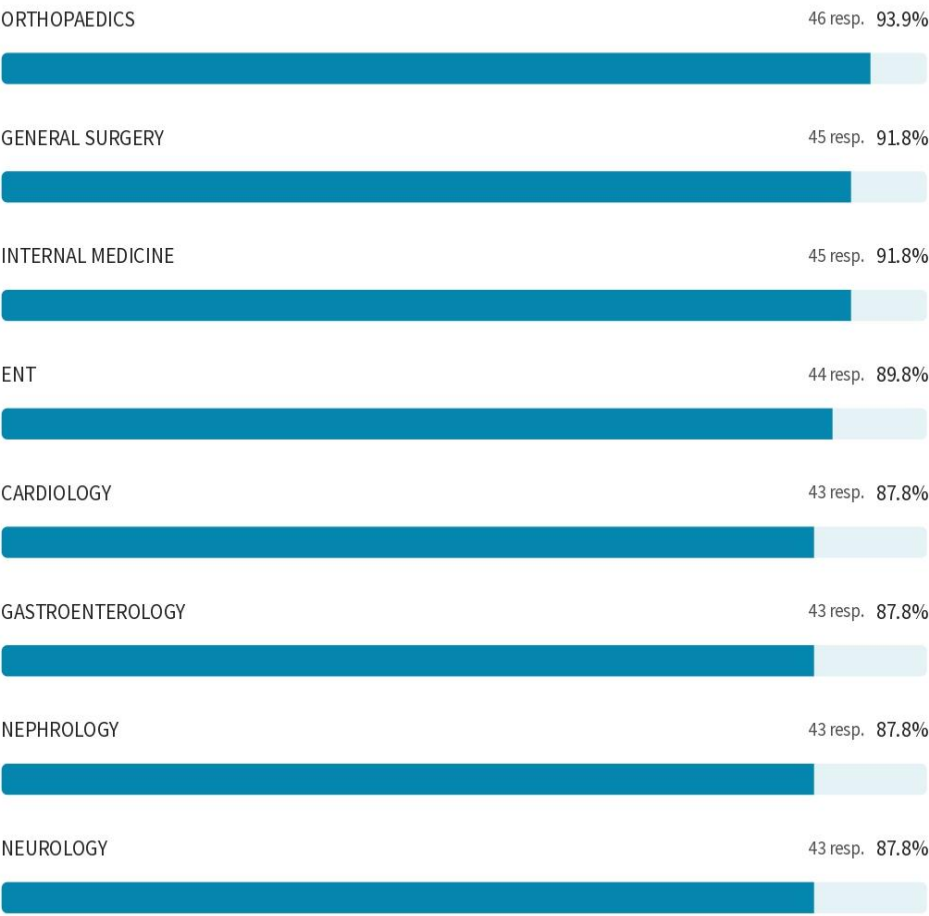
- **Orthopedics, General Surgery, and Internal Medicine:** Over 90% of hospitals offer these core emergency departments, providing a strong foundation for general emergency care.
- **Specialized Services:** Less than 50% of hospitals provide spine surgery, diabetology, and rheumatology, limiting access to critical specialized treatments.
- **Need for Wider Specialist Coverage:** The gap in specialized care emphasizes the importance of expanding the availability of specialized treatments across institutions to improve emergency outcomes.

BoostEr

50 responses

SCOPE OF SERVICES

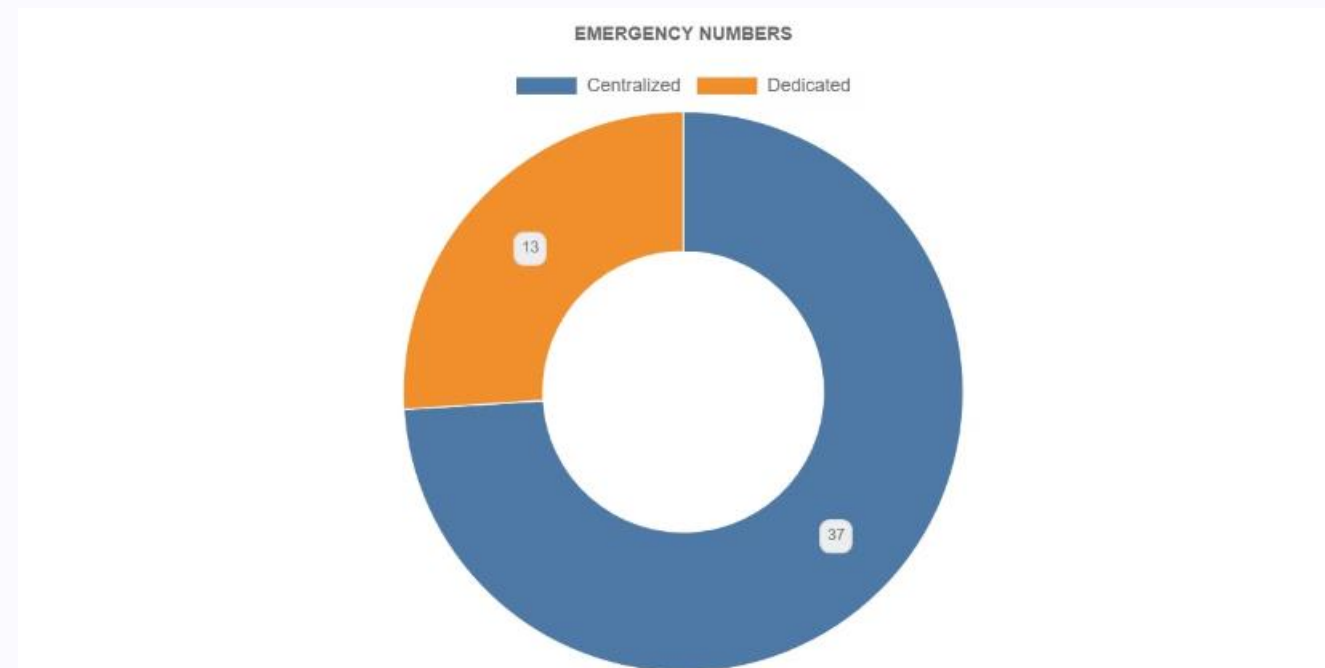
49 out of 50 answered



Created by Typeform

Emergency Contact Information

Every hospital included emergency contact information. According to the survey, a large majority of hospitals have centralized emergency lines, while others have separate lines for each department. This information is crucial for Red Health Emergency Ambulance Services to make prompt and accurate referrals during an emergency.





Discussions

Improved Patient Outcomes

1

Faster Triage

Accurate symptom matching reduces time to appropriate care.

2

Streamlined Referrals

AI recommendations guide patients to the right hospital departments.

3

Enhanced Survival Rates

Timely emergency response and treatment can save more lives.



Challenges

Inconsistent Data Formats

Standardizing information across different hospital systems.

Outdated Contact Details

Ensuring emergency contact numbers were up-to-date.

Varied Information Levels

Collecting comprehensive data from all participating hospitals.

Recommendations

1

Specialized Departments

Integrate advanced medical services to enhance comprehensive care.

2

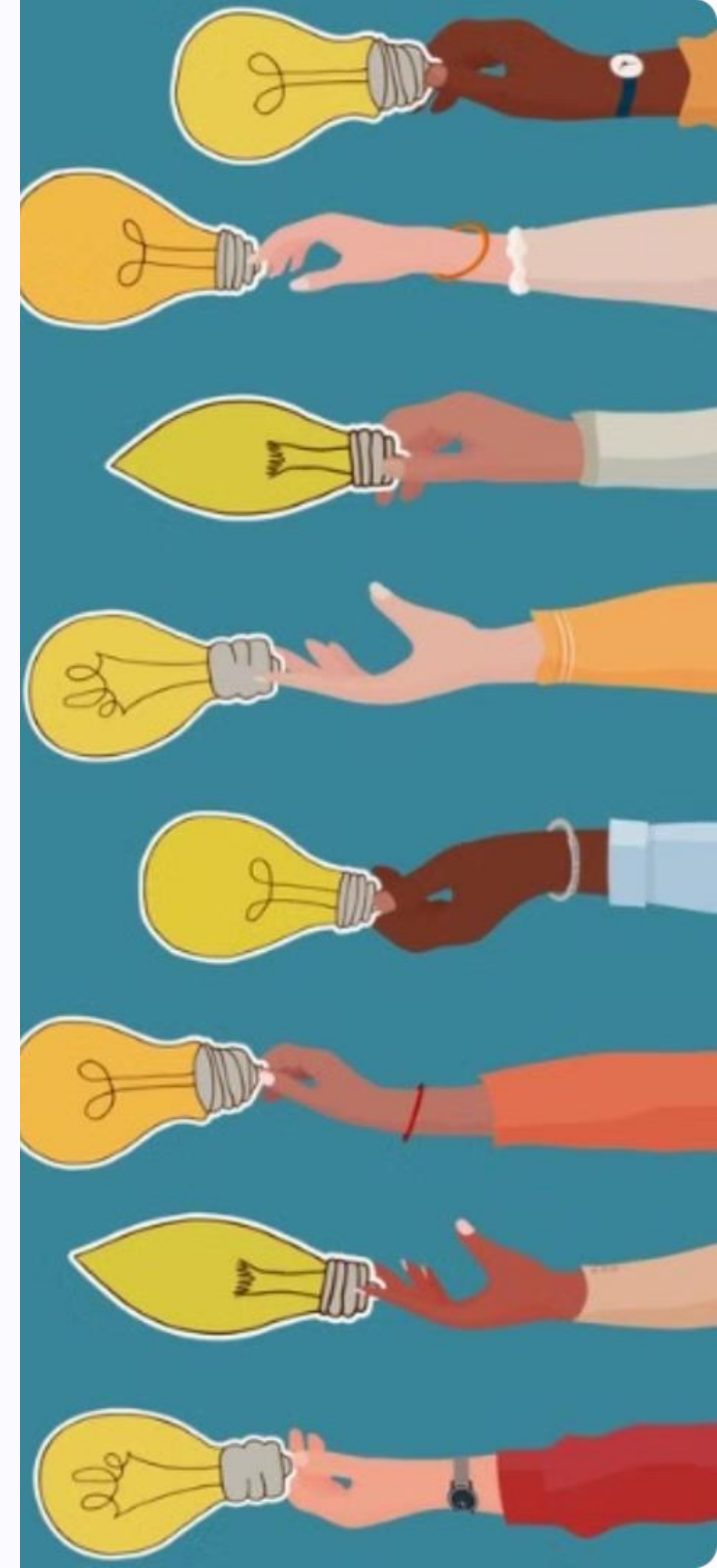
Staff Training

Invest in continuous professional development programs and trainings.

3

Pre-Hospital Services

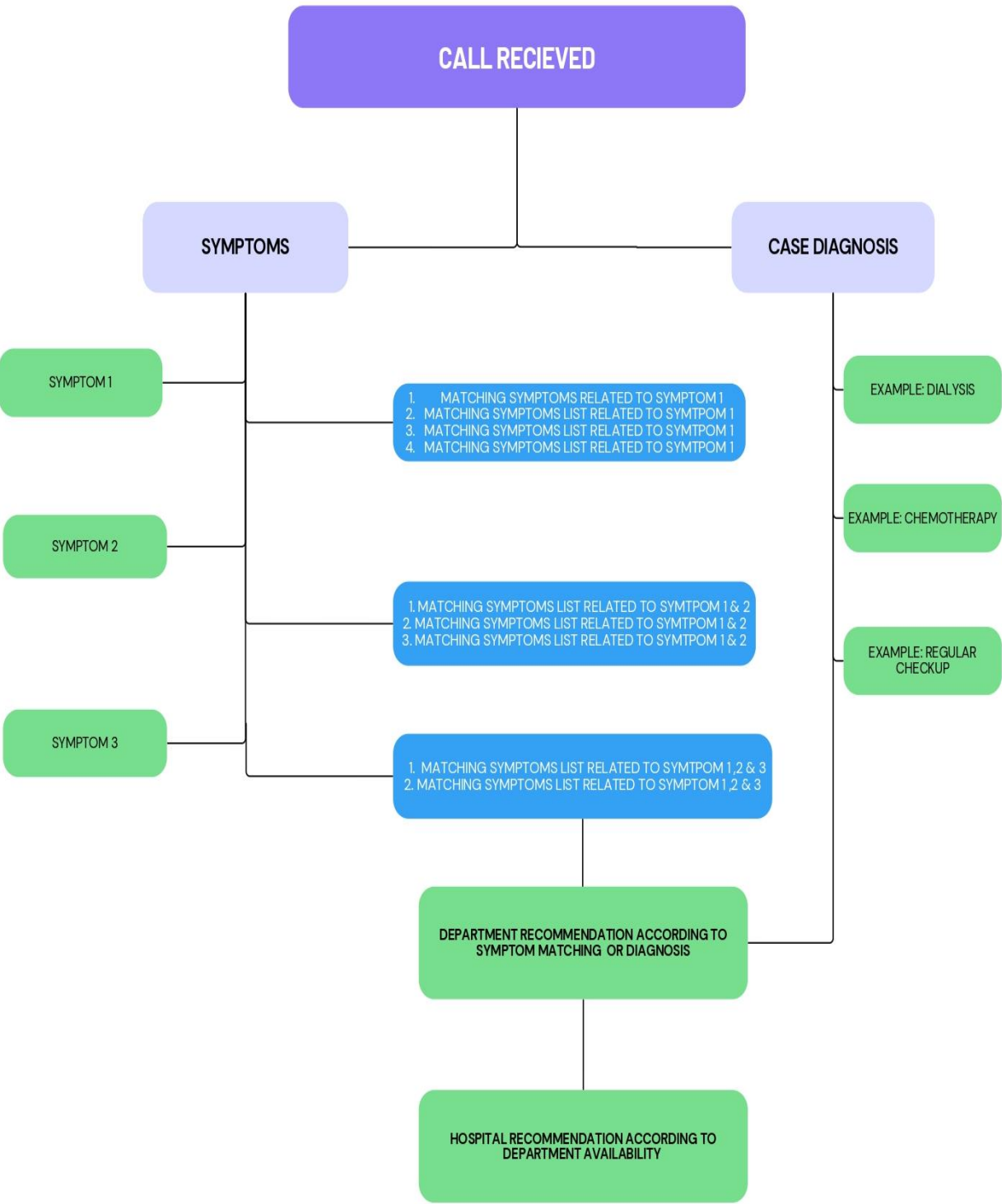
Strengthen emergency response with equipped ambulances and trained staff with recent technology and knowledge.



Implications for Red Health Emergency Ambulance Services

The collected data is crucial for enhancing the efficiency of ambulance services by ensuring accurate and timely referrals to appropriate hospitals based on the patient's needs. This information will help Red Health Emergency Ambulance Services streamline their operations and improve patient outcomes.

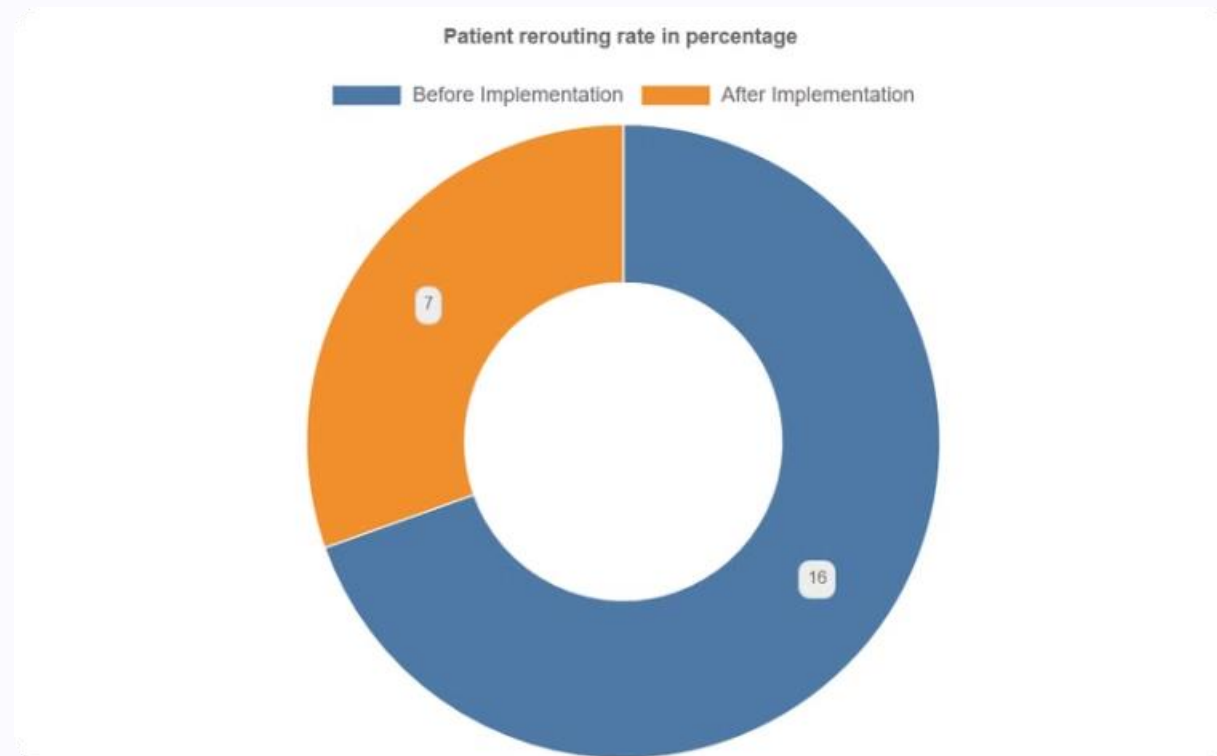
Brainstorm Concept Map For BoostER





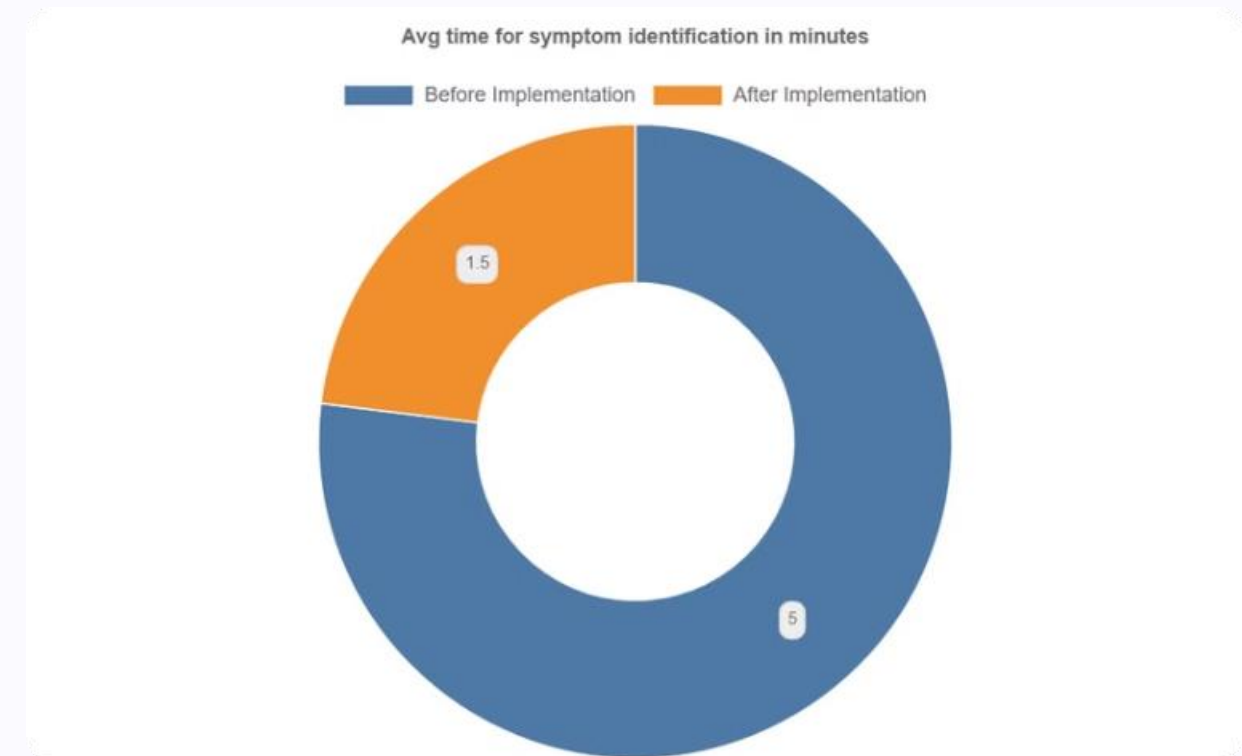
Call Pilot

Conclusion



Patient Rerouting Rate

The patient rerouting rate decreased from 16% to 7% after implementation, demonstrating the effectiveness of the symptom matching system in directing patients to the right hospital on the first call.



Symptom Identification Time

The average time for call agents to identify patient symptoms and suggest appropriate medical facilities was reduced from 5 minutes to 1.5 minutes, thanks to the streamlined processes and symptom matching technology.

Tangible Impact



Patient Rerouting

Reduced by 56% with the AI-driven recommendation system.



Response Time

Average symptom identification time cut by 70%.



Improved Referrals

Patients directed to the right hospital departments on first call.

Technology Integration Effects

- **Streamlined Operations** - Integration of digital tools and platforms has improved operational efficiency across hospital departments.
- **Enhanced Patient Experience** - Seamless data sharing and AI-powered recommendations have led to more personalized and responsive care.
- **Increased Collaboration** - Real-time data exchange between hospitals and emergency services has fostered better cross-functional coordination.
- **Informed Decision-Making** - Analytics and visualizations derived from comprehensive data have empowered healthcare leaders to make more strategic choices.
- **Cost Optimizations** - Automation and digitization have reduced administrative overhead, enabling hospitals to allocate resources more effectively.