

# Emergency Management – EMRI\*

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## 1. Goals & Objectives

Emergencies can happen anytime, anywhere and to anyone. *In India:*

- More than 3 lakh people face a medical emergency each day
- 2.4 M Deaths on Health Diseases; Suicides / Accidents; Thefts / Murders / Sexual Assaults
- 80% of deaths in hospitals happen in the first hour of admission

Thus to establish a proper emergency response service required a lot of researching and innovative thinking. The first step was to study already established EMS systems and adapt them to our environment. It was in this context that EMRI was born, a brainchild of Mr B. Ramalinga Raju, Founder and Chairman of Satyam Computer Services – a center which provides free emergency service in Public Private Partnership (Police, Medical and Fire) with a call to a single number (108), accessible from both fixed (land lines) and mobile phones and made toll free across the state for all emergencies. Envisaging a comprehensive coverage of Medical, Police and Fire emergencies through Public-Private Partnership, the Government of Andhra Pradesh recognized Emergency Management and Research Institute (EMRI), a not-for-profit institute, as the nodal agency to provide comprehensive emergency management services by a MoU signed in April 2005. Presently, the Govt. of Andhra Pradesh has committed to this project fully, and through another MoU under the Rural Emergency Health Transportation Scheme, has handed over 732 ambulances and 15 first responder two wheeler vehicles, which are operationalised by EMRI. EMRI's other focus is on Research and Analytics. The increasing incidence of various types of emergencies is a cause for concern. This is a fully established wing, with the following objectives:

- Analyse, interpret and estimate the trends of technology, education systems, training standards on the speed and quality of patient care in emergencies
- Help in policy making (level of health care institutions, Integration of hospital facilities, Public education and Public health)
- Integrate developments impacting policies and resource deployment
- Transfer of knowledge (Publications, conferences)
- Understand patient impact (significant reduction in morbidity and significant reduction in mortality, treatment at hospital and cost effective health care) EMRI Vision 2010
  - a. Respond to 30 million emergencies and save 1 million lives annually – We propose to achieve this by establishing “108” services across the entire nation by 2009. We have already scaled up our operations to six states as on date and will cover at least another 4 states by end of this year. By 2009, we hope to cover the entire nation.

- b. Deliver services at global standards through leadership in collaborations, innovation, technology and research for prevention and training - With global partners, we are imbibing the best practices from these service providers and adapting them to our operations. At present we have 12 global partners in various fields of emergency management, comprising of, pre and hospital care, communications, research and training.
- c. Recognized as best-in-class – we are benchmarking ourselves with the best emergency service providers.

## **2. Spread of Project service users**

- External
  - a. The entire nation covering 1.1 billion population will be benefited from ‘108’ services. At present about 147 million people have benefited from our services.
  - b. 40,000 lives have been saved. And EMRI believes that when one life is saved, the members of the family are also impacted. One can say that most of them have been given a fresh lease of life.
- Internal
  - a. We have been able to provide employment to about 8,500 people till date. By 2010/11, we hope to provide employment to 100,000 people.
  - b. Enhancement of skilled training to our employees

## **3. Services provided**

- Emergency Response services through a single toll free number ‘108’
- Training to hospital doctors and nurses regularly as part of our effort to increase skill in emergency care
- First responders training to the public as part of our effort to create awareness and encourage people to provide first aid till medical help arrives
- Research projects to understand the highest occurrence of various types of emergencies in the Indian scenario

## **4. Geographical spread of project implementation**

We started in the state of Andhra Pradesh on 15 August 2005. Today, “108” services are available in 6 states and 4 more states will be covered by our services by the end of 2008, covering 147 million till date. “108” services will be accessible to the entire nation by 2009 covering a population of 1.1 billion people.

## **5. Project Timelines and milestones**

By 2010/11, 1.1 billion population to be served with 10,000 ambulances, 25 call centers and 5 research and training institutes. EMRI will employ 100,000 skilled personnel.

- Emergency Number 108 has been made toll free across the entire state of Andhra Pradesh, from both land line and mobiles.
- We have entered into Public Private Partnership with various agencies: We have signed MoUs with several State Governments (are already operational in 6 states and ready for launching our services in a few other states by end of this year). Apart from these, we have 12 Global partnerships in various areas of emergency management and care, including research and training.
- Total of 40,000 lives were saved since inception till 31 August 2008.

## **6. Direct Cost and Time savings to avail services**

There is absolutely no cost to the user. Any person in distress can access '108' number either by mobile or landline. This number is toll free. Any person availing our services is provided free pre-hospital care and shifted to a hospital. (Sheet attached)

Our services are available to the person in distress within 15 minutes and patient is reached to professional medical help within an average of 35 minutes.

## **7. Direct Cost and Time savings to deliver services**

Because of our partnership with the State Governments, the operational expenses have been absorbed by the respective governments. This kind of service is generally available only in developed countries. However cost of call taking is less than 1\$ in India as compared to 43\$ in USA. Ambulance service costs about 10\$ per trip against 400\$ or so in other countries. Many developing countries can afford this service.

Since there was very little scope for professional medical help to reach the remotest areas, advent of '108' operations has minimized the emergency to a great extent, thus reducing maternal mortality (a major cause of death in rural India)

## **8. Replication**

The project is highly replicable. In fact, the model was implemented in Andhra Pradesh and has now been operationalised in 5 other states (Gujarat, Uttarakhand, Goa, Rajasthan, Tamil Nadu), with 4 more to follow by the end of this year

## **9. Implementation model**

Emergency Management Research Institute (EMRI) is a Non Profit organization having PPP (Public Private Partnership) framework as the Implementation Model.

## **10. Technologies**

EMRI is using high level technology architecture for ambulance tracking, maintaining patient records, attending patients in ambulance etc. o Computer Telephony Integration o Voice Loggers o GIS / Maps o GPS / AVL o Mobile Communication o Application

software for Sense, Reach and Care o ePCR (Electronic Patient Care Record) Also with Satyam as our Technology partner, we continue to “Renovate” and “Innovate” to serve EMRI’s core mission.

## **11. Capacity building**

Emergency Medicine Learning and Care (EMLC) business is responsible for Capacity Building. Having realized the importance of advanced paramedics, EMLC, in collaboration with Stanford University, is offering a two year PG Program in Emergency Care (PGPEC). Stanford teams train the trainers as well as the students. In addition,

- Emergency Medical Technicians and Pilots (drivers): Every ambulance needs three each. Thus, 10,000 ambulances across India would need 30,000 EMTs and 30,000 Pilots to be trained, often times at a short notice. This Herculean task is accomplished by starting EMLC centers in each of the states as well. Even Pilots are put through a 7-day program that includes soft skills and first aid/CPR.
- Training to hospital doctors and nurses regularly as part of our effort to increase skill in emergency care
- First responders training to the public as part of our effort to create awareness and encourage people to provide first aid till medical help arrives.
- Volunteers are trained as well

## **12. Process and Legal Reforms**

We have innovated in 9 areas:

- Process (S – R – C) • 1-0-8
- Infrastructure
- Technology
- Ambulance
- Human Resources
- Partnerships
- Analysis and Research
- Training

## **13. Project Financials/Sustainability**

The project cost works out to be Rs 15/- (approximately) per person per year! Having seen the tremendous impact, 7 governments have agreed to fund upto 95% of the operational expenses (and 100% capital expenses) where as EMRI contributes the remaining 5% as well as other leadership and research costs. Thus, this PPP model is win-win for all.

## **14. Project Teams and Leadership**

The driving force of EMRI is its following board members

- Chairman-Emeritus of EMRI
- Founder & Chairman, Satyam Computer Services, Chairman of EMRI

- Co-Founder & CEO, Satyam Computer Services
- Chairman, ISB Board
- MD & CEO, ICICI Bank
- Tarun Das, Chief Mentor, CII
- Carnegie Mellon University
- Harvard Business School
- National Co-ordinator, Lok Satta
- 10., Chairman, Suchitra Group
- Former President, NASSCOM
- CEO, EMRI EMRI also believes that each and every member of the organisation is a key player in its success.

Thus we have about 8,500 employees, who play a crucial role in our operations.

## 15. Key project Outcomes

With a vision in a time frame, EMRI is slowly but steadily working its way to realize this.

- Thus within 3 years, we have established ‘108’ services in 6 states and 4 more will be covered by the end of this year.
- Our sustainability and scalability is evident by our expanding operations in other states. c) A few excerpts from some of our beneficiaries expresses the satisfaction that ‘108’ services has provided to those who have felt the need for our services.
- Empowerment is reflected by the fact that the state governments have entrusted the operationalization of ‘108’ services in their respective states
- In a country where pre-hospital care has not been given much attention, EMRI offers skilled pre-hospital care to persons in distress. Our role does not end with providing this care. After handing over the patient at the hospital, a 48 hour follow up is done to confirm if the patient has recovered.

## 16. Service users Feedback Mechanism

These are the various feedbacks we receives showcasing some of our success stories. Respected Satyam Computers RamalingaRaju uncle, My Namaskarams. I am A.Teja studying in 5th Class. On September 30th I reacted to some medication that I took to control vomiting and had convulsions. It was 11.00 PM and my parents were very worried. The government hospital is 10 kilometers from our place. They immediately called 108, I was taken at once to the hospital, my condition improved and I am now good. 108 services are very good. I am happy that you are from Krishna District. I wish that the Vijayawada Goddess Kanaka Durga will shower her blessings on you at all times. I shall study well at school. When I grow up I shall do good work like you. I wish to become a collector. Neonatal Nandigama –midnight - A newborn baby (4 hours old) – umbilical cord along with small intestine (25 cms) exposed - With ERCP advice - Umbilical cord covered sterile gauze, shifted to Govt hospital Vijayawada – Baby survived. 3 Hour Neonate (Baby Girl) Buried Narayanapeta – Mahabubnagar – 8th July,

07 – 3 Hour New Born was buried by parents (3rd girl child) – Sarpanch rang up 108 – Ambulance reached the spot took the baby out – Cleared and maintained airway – Stabilized in the local PHC and shifted to Nilofer Hospital, Hyderabad Appreciation comes in the form of following awards too :

- Best CSR Award – Award by ITM Business School and DNA (Daily News & Analysis)- 19 Jan. 2006
- TERI Corporate Award for the best CSR initiative of Satyam Computer Services Ltd.- May 2007
- Presidential NENA Award for 108 Emergency Services in Andhra Pradesh – June 2007
- 2007 Microsoft Citizenship Partner Award to Satyam Computer Services – Best application developed for EMRI- Award of USD 50,000/- to EMRI
- Pink Slip Award in March 2008
- Computer World Award in June 2008 7) eIndia 2008 Award for “Best NGO Initiative”

## 17. Implementation Challenges

Since this was a new concept in India, one of the foremost challenges was:

### *EXTERNAL* Initiating and sustaining the Public Private Partnership

- Scalability – from a fleet of 30 ambulances we are now operating 502 in Andhra Pradesh, in Public Private Partnership. We have started with 51 ambulances in Gujarat which will soon become 400 in 2008 to cover the entire state.
- Co-operation from government. Due to sustained collaboration and our own success in running the ‘108’ services, the governments have begun extending support including financial assistance.
- Awareness – Educating the masses across the state on ‘108’ services. For example, we display short capsules in all the movie theatres across Andhra Pradesh.
- Conducting awareness programs across the state with the help of volunteers drawn from various fields of different economic and social background, through our VoICE (Volunteer in Case of Emergency) program

### *INTERNAL* Resources –

- Manpower – Recruitment of the right people at all levels, particularly for field operations (medical technicians). The mission of EMRI (Saving Lives), is being realized by these individuals who are passionate about the service being rendered, and perform their work with patience and professionalism.
- Technology – With Satyam as our Technology partner, Integrated Systems were developed from scratch with no prior experience in Emergency Management. We continue to “Renovate” and “Innovate” to serve EMRI’s core mission.

## **18. Key Lessons learnt**

The most effective way to realize our vision is to

- Synergize Leadership, Innovation and Technology and thereby make things happen
- There is no better way to serve the public than with Passion, Patience, Performance and Professionalism
- Key partnerships in crucial areas of our operations are essential. Hence, we have 12 global partnerships.

## **Project Contact Details**

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