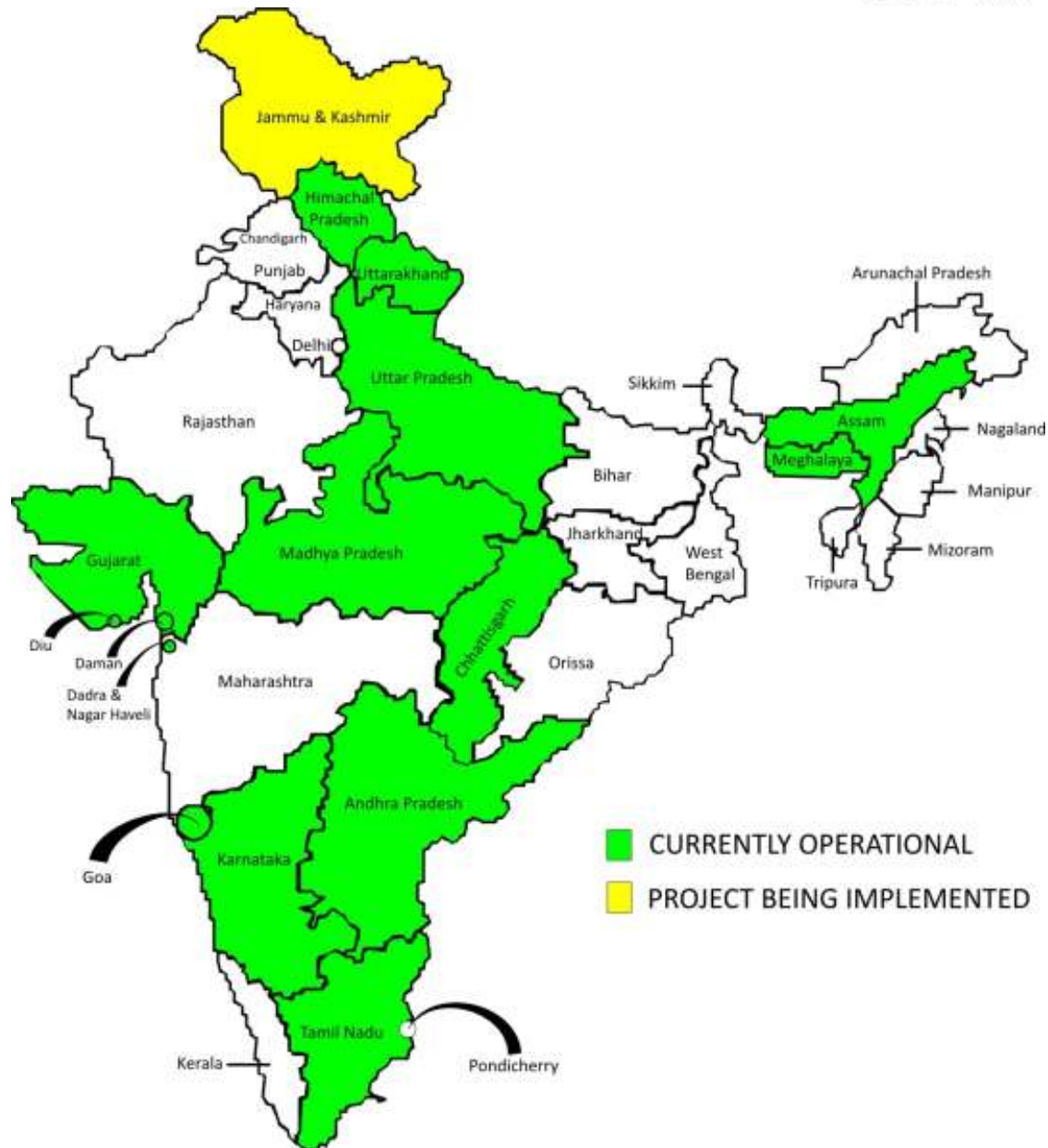


GVK Emergency Management and Research Institute

Presentation to TRAI
October 31, 2012



Operating in 12 States and 2 Union Territories



National Snapshot as on 30, Sep 2012



A. Coverage

States	:	12 States and 2 UTs
Districts	:	225
Villages	:	1,97,464

B. Reach

108 ambulances	:	3227
Emergencies	:	12,500 per day

C. Care

Total lives saved	:	5,45,027
Deliveries assisted	:	1,74,314

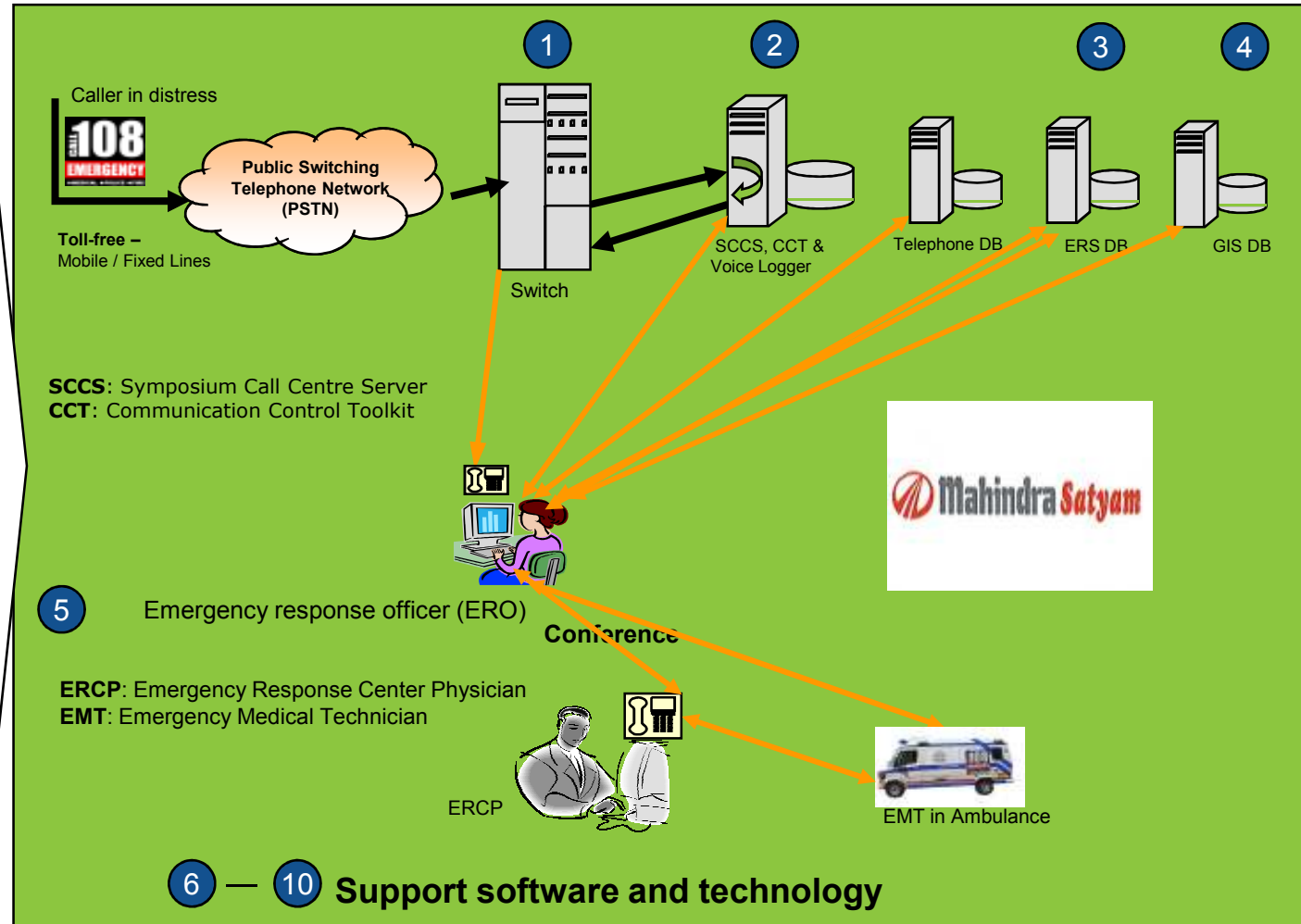
D. Man power:

Total Man power	:	17,655
Lowest:	:	74 (D&NH and Daman & Diu)
Highest:	:	Andhra Pradesh (3903)

GVK EMRI HAS CREATED A DISTINCTIVE TECHNOLOGY INFRASTRUCTURE THAT IS READILY DEPLOYABLE AND SCALABLE



- Major components**
1. Computer Telephony Integration (Software)
 2. Voice Loggers
 3. GIS/Maps
 4. GPS/AVLT
 5. ERO
 6. Allied applications (PCR, Fleet Management, Hospital facilities)
 7. IVR
 8. Webcam
 9. Oracle Financials, CRM
 10. eLearning



Handles over 165,000 Emergency Calls/day, manages over 12,500 dispatches per day and saves over 300 lives daily

BUILDING BLOCKS OF GVK EMRI'S INNOVATION



Three digit toll-free No.
Accessible from Land
lines and Mobile phones



Modern, spacious and open
ERC



GIS / GPS to locate victim /
ambulance and hospital



Cost effective
ambulances
to provide quality
care
for Indian
emergencies
with facilities for
rescuing and
balancing patient
care with public
safety and patients
relatives comfort



Trained personnel for providing PHC

Medical Equipment

- Collapsible Auto loading stretcher
- Scoops Stretcher – For patients with Spinal Injuries
- Spine Board
- Suction Apparatus
- Oxygen Manifold system
- Fire extinguisher
- Warning torch.
- Bi Phasic Defibrillator
- Airway related equipment
- All emergency drugs including necessary consumables including Anti Snake Venom
- Automatic B P Apparatus in addition to manual apparatus, Glucometer, Spacer, Digital Pulse Oxy meter
- Water dispenser, Clock in Patient compartment
- Extrication Kit – Rescue Tools
- Multi-Para Monitor



GVK **EMRI**
Your Right to Safety

CALL **108**
EMERGENCY
CRIMINAL + POLICE + FIRE



Fabrication

- Air conditioning with dual Insulation for Thermoregulation, Fire Retardant and low noise levels.
- Electrical Power Source - 220 Volts A/c, 12 Volts DC, In patient compartment
- Invertors, 90 Amps alternator, additional battery back up 2 x 75 AH and external charge port.
- Hard furnishings – Medical storage space, wash basin, fresh water / drain water tanks, foot operated sprout, space for storing medical records, seating for Crew paramedic and attendants. Waste Disposal System
- Floor loading height of 700 mm for easy loading of patient into cabin, Anti Static Flooring

Serving the most needy against all odds

GVK **EMRI**
Your Right to Health

CALL 108
EMERGENCY
A MEDICAL & POLICE SERVICE

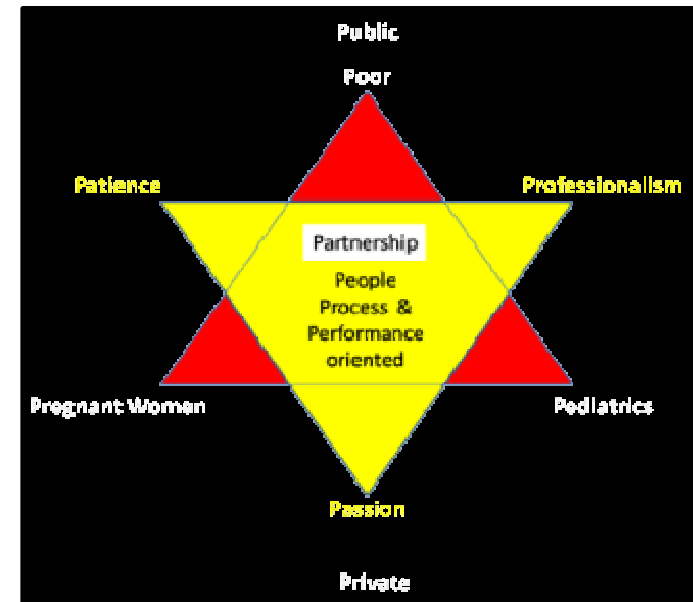


Serving the most needy against all odds



Value Proposition of a PPP FRAMEWORK

- **P**olitical will, **P**ublic Servants' commitment and **P**ublic Support
- 100% of Capital expenditure and Operational expenses by Government (Public)
- GVK drives Leadership, Innovation (Infrastructure, Process), Collaborations, Research and Training, Knowledge transfer and Quality assurance
- Mahindra Satyam provides IT solutions as technology partner
- GVK EMRI manages and leverages government resources for better outcomes to serve poor
- IPR with GVK EMRI



GVK EMRI'S DESIGN EXCEEDS 911 ON CERTAIN PARAMETERS



Sense

Key service parameters

US 911

GVK EMRI 108

- Non-existent
- Best-in-class
- GVK EMRI service levels potentially superior to 911

- Response within two rings



- Call taker free in 90 seconds for next call



Reach

- Percentage of population covered



- Percentage of cases reached within defines service metric ('golden hour'/ ten minutes)



Care

- Number of owned fully equipped ambulances

Owned by EMS Providers



- MOUs with hospitals to treat GVK EMRI patients for 24 hours

Obligated to provide



- Existence of on-call medical assistance (ERCPS)



Research

- Research wing to predict trends and analyze data



- Public – Private Partnership model of organization



Organization

- Free Service- With Govt Support



Media Coverage



Emergency response today is far better than yesterday

Emergency response today is far better than yesterday. The article discusses the evolution of emergency services and the role of 108 in providing timely medical aid.

मसीहा है एंबुलेंस 108

28 मौतों की भी महिलाओं की भी मदद की 108 ने

एंबुलेंस के लिए जेहन... 108 ने जेहन जेहन जेहन... 108 ने जेहन जेहन जेहन...

108 FASTER THAN 911

Study Says India's Emergency Service Has Outpaced The US Version With Its Expansion Model And Innovation

Parth Shrestha & Kumar Manish | 7w

108 A GUJARAT PERSPECTIVE

- 99.12% calls made to 108 are answered in one ring which is above global standards.
- 15,44,967 total emergencies since launch in Gujarat.
- 33% pregnancy-related emergencies.
- 17% Road traffic accident cases.
- 5% Cardiac-related cases.
- 5% respiratory-related cases.
- 6% other trauma cases.
- 65,000 average emergencies handled per month in Gujarat.
- 68,427 lives saved in Gujarat till date.

According to the study, GVK Emergency Medical Research Institute (EMRI)-led 108 emergency service is fast emerging as a leading organization in emergency health sector worldwide owing to its cost-effective method and public-private partnership model. This has led to it reaching out to 366 million persons in Gujarat, Uttarakhand, Goa, Chhattisgarh, Rajasthan, Karnataka and Assam, making it the world's largest emergency management entity in just few years. The paper states that 108 service has outperformed the US 911 service with its huge expansion model and innovation. EMRI spent only 30 cents per person treated to build the infrastructure in India, compared to \$100 in the US. The expense per ambulance unit is less than \$55, vs a \$100 in the US, states the paper.

As the only emergency responder in the world with a research institute, EMRI is at the forefront of identifying ways to improve knowledge and practices. It archives all calls and analyses data to compile regional public health profiles. For the first time in India, data on the timing and nature of medical emergencies is available, states the study.

Bala Thomas, head of HRD of Gujarat GVK EMRI, said "108 that Gujarat has a share in the success story. With an emergency management centre opening in Gandhinagar this month, Gujarat has become one of the states with exemplary speed, scale and cost-effective measures. The state also contributes to continuous research that we undertake to study the patterns of emergency and most vulnerable groups," he said.

The Gujarat model was also presented by Sudeesh Soteywadi, COO of Gujarat chapter in US last month in front of representatives of World Bank, United Nations Population Fund, United States Agency for International Development.

Bad food leaves 500 sick

Food factory workers complain contaminated dishes were served

WALIDRE. The New Year didn't have unfolded in a joyous way for workers of a garment factory in Maharashtra here after several hundreds were taken to hospital in a suspected case of food poisoning before being referred to Narayana Hospital's Care Centre on Monday.

Complaining of stomach ache and dizziness, the workers of the factory, located in the town of Pimpri, were taken to the hospital throughout the day. An army and police force were deployed to guard the workers, many of whom were taken to the ICU at Maharashtra State Cancer Care Centre. Health Department officials said trouble began when workers started to report symptoms of food poisoning. They did not suspect anything at one by one they died in pain.

Health officials said that the incident occurred because the food that was served to workers was contaminated. The Health Department is now directed to investigate the matter to ensure that the food is safe for consumption.

Local Mahatma Jyoti Bhabha's doctor, however, advised the food poisoning was "an acute gastrointestinal infection." He suggested that the workers should rest and take fluids.

It has happened within the last few years. Officials indicated that the factory's catering agency was not in contact since December 31, 2009 and that it was not being renewed.

Food and Drug, Gujarat, one of the garment workers, said "I was feeling bitter only after having lunch at the factory on Thursday. But after coming home today, I developed pain and severe stomach ache."

Kartha, another worker who was admitted to the hospital, complained that "After walking into the factory and drinking water, I developed severe burning sensation in my stomach and heavy vomit. Later, I also vomited water."

He said that the workers had not complained at the time. If getting better, he would have reported the problem to the hospital.

गर्भावस्था में तरदान बनी 108

भोपाल। कम से समय में मरीजों को अस्पताल तक पहुंचाने के लिए प्रख्यात 108 एंबुलेंस अब गर्भावस्था में महिलाओं के लिए भी वरदान साबित हो रही है।

तीन सालों में अभी तक 108 एंबुलेंस ने गर्भावस्था से संबंधित करीब 67 हजार से अधिक मामलों में महिलाओं को समय पर अस्पताल पहुंचा चुकी है। इतना ही नहीं एक हजार 750 महिलाओं को एंबुलेंस में सुरक्षित प्रसव भी करवाया। इनमें से ग्रामीण इलाकों में करीबन 56 हजार से अधिक गर्भावस्था के मामलों में पीड़िता को 108 एंबुलेंस की सहायता से अस्पताल पहुंचाया गया। इसके अलावा एंबुलेंस में प्रसव के लिए भी उपयुक्त किट और प्रशिक्षित इमरजेंसी मेडीकल टेक्नीशियन भी एंबुलेंस में मौजूद रहते हैं, जो 24 घंटे मौजूद रहते हैं।

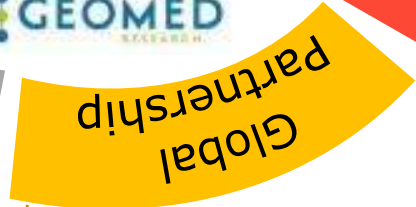
SCALABLE LEARNING CENTER MODEL



- **Global Alliances- Sense, Reach and Care processes include best-in-class industry innovations.**
- Detailed process understanding and well defined responsibilities throughout the organization

• Robust Training Process - Trained 47,441 people

- Continuous education system to EMTs & Pilots. Training given in basic to advanced course
- Active engagement with Medical industry by providing training to their staff and also develop integrated protocols.



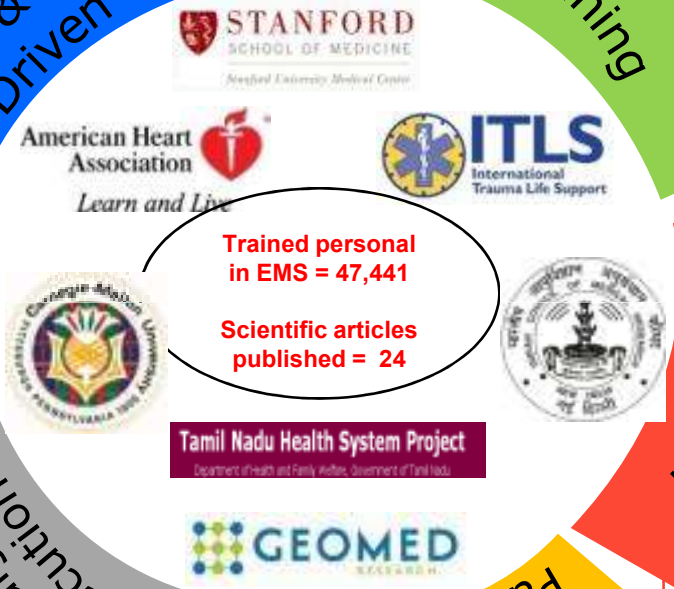
Captive Research to improve Emergency Care

- No. of research paper published- 20
- No. of National/ International Conferences attended- 17
- No. of GVK EMRI Research Chapters included in Published Books- 4
- No. of Collaborated Research Project- 4
- No. of Issues of Indian Emergency Journal Published- 12

- **Model operational in 11 states* covering 400 M population (40% of Indian population)**
- Model that works across different local conditions- Different terrains, Different Languages, Inadequate hospital facilities, Lower literacy levels, Hostile weather conditions

Trained personal in EMS = 47,441

Scientific articles published = 24



Strategy towards achieving Safe mother



Reduction in MMR

• Active global partnerships to continuously innovate and improve care delivery

EMT – A (Stanford – GVK EMRI 2-year PGPEC program – collaboration)



Collaboration for transfer of Knowledge and Technology know-how, Best practices, Research & Training



Overlap with Disaster Management



Emergency Response Center (ERC):

- 24 x 7 X 365 services
- 3 digit number for easy & quick alert
- Inbuilt call surge capacity (40 K - 200 K)
- ERC with Police/ Fire Dept. network
- PRA lines (dual)
- Multi-mode communication (Cellular/ RF)
- Geo-spatial information (digital maps – Road/landmarks)
- Service organization information (hospitals, fire/police)
- ERC –special seating for MCI & Disasters

Ambulance (Land/ Boat) with

- Life support medical equipment
- Patient transport equipment
- Rescue and extrication tools
- Base location –close to community
- Response – U/ R app. 20 Mts.
- Carry 1 critical and 4 mild injury patients
- Communication facility with patient, ERCP, hospital.
- Automatic Vehicle Location Tracking
- Ability to mobilize additional fleet to scene

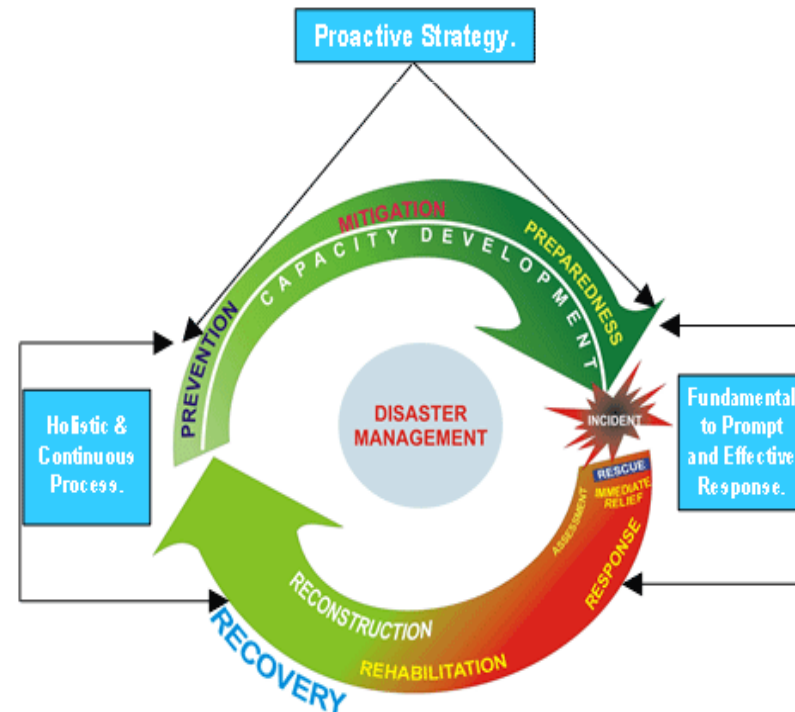
Pre-Hospital Care

- Trained Emergency Medical Technician
- Protocols to deal medical and trauma emergencies
- On-Line Medical Direction by qualified doctors 24 X7 at ERC
- Availability of Advanced Life Support Medication
- Protocols attested by Stanford School of Medicine
- Trained in Disasters and MCI
- Hospitals in Working Agreement (HWA) for Care Continuum
- Inter-facility Transfer Process
- Interception process
- Do Not Resuscitate Process
- PCR Document
- Patient Assets Documentation provision

Research and Training

Emergency Medicine Learning Center (EMLC) with Simulation labs and qualified instructor teams for training community based First Responders, Basic and Advanced EMTs, Doctors and Nurses on BLS/ ACLS/ PALS/ ITLS. Disaster Preparedness exercises – Table Top, Mock Drills . Emergency Rooms in PPP at Goa Operations, Systems and Clinical Research Approach Unique On-Line Medical Research Division Indian Emergency Journal

DISASTER MANAGEMENT CONTINUUM



Awareness Generation/PR Marketing activities



Ambulance Road shows:

at major cross roads, Film theatres, Bus Stations, Railway Stations and Major Temple, Mosque and Churches.

Pre planned Village/Town Meetings: Participate in village meetings to drive awareness and communicate program benefits. Ambulance Demonstration (Govt offices, Schools, colleges, Industries & Auto Unions)

Display GVK EMRI slides at Film Theatres/Short film (Concept movies). Cable TV, radio

Hoardings near Bus Stations, film Theatres and Railway Stations (Small 12X4 flexes).

Important junctions in big villages/towns. Flexes in buses/major maternity centers/hospitals

Co Branding: Bulk sms free of cost about GVK EMRI services with BSNL, TATA, Airtel, Aircel, Idea, Vodafone, Reliance, Uninor etc people for co branding of Hoardings, Flute boards, leaflets and Bus branding also.

Sharing best cases with Media: Each ambulance at the end of the day shares the best case with media along with Photograph. The emphasis here is on local and vernacular media

108 Saviors: Best cases are published and circulated to media and other key stakeholders monthly across the country

Beneficiaries meets: Beneficiaries are the best ambassadors so we conduct monthly beneficiaries meets and share the info with media

EDD Outbounding: 100% outbounding on 14 day lead EDD NRHM db

14 day upcoming pregnancy expected list covered in a planned manner

Coordinated Visits: School Children, key Government Officials, foreign dignitaries, major opinion makers in society to GVK EMRI Emergency response Center

Other Marketing activities



Emergency Management

Weekly Media briefing on major cases handled MCI, disasters, complex emergencies etc.

Joint briefing with District admin e.g. collector, SP etc

Monthly district coordination meeting- EMcare and R&R in front of media

Quarterly Press briefing with emergency statistics and program highlights/updates

National Media briefings in case of major events like awards, launch, e- live,

Govt announcement etc. Delegation visits to campus and media interaction

Research

Major health awareness using GVK EMRI data e.g. world stroke day, world heart

Case studies e.g. Harvard Business Review on Gandhian Innovation

Save a heart foundation

ICMR research and MMR/IMR Reduction by 108

Institute (EM Learning)

CME and media coverage (1/quarter/state)

Launch of new programs (e.g. RYK, PGPEC)

Glimpse of Awareness activities:



Minister's and Dist Collector review



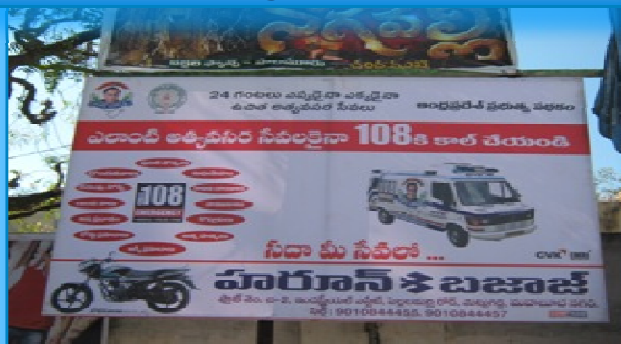
Sakshi 12-8-2010 page-4
Beneficiaries meet



Awareness camp for NCC



Hoarding at Film Theatre



Hoarding at Govt Hospital



Glimpse of Awareness activities:



108 సేవలను సద్వినియోగం చేసుకోండి

మద్యం, ఆల్కహాల్ 24 (ఆన్ క్యూ) ప్రభుత్వ ఆసుపత్రులకు 108 సేవలను సద్వినియోగం చేసుకోవాలని ముంబయీ నగరపాలక సంస్థలో 108 సేవలను వినియోగించే అవగాహన కార్యక్రమం నిర్వహించారు. ఈ కార్యక్రమంలో పాల్గొన్న వారందరినీ పోలీసులు, ప్రజలు పోల్సావారు.



108ను సద్వినియోగం చేసుకోండి

ముంబయీ నగరపాలక సంస్థలో 108ను సద్వినియోగం చేసుకోవాలని ఈ సందర్భంగా అందరినీ పోలీసులు, ప్రజలు పోల్సావారు.

సేవతోనే గుర్తింపు

జి.ఎం.టి.ఎస్ సర్జనల్ మన్వల్ కార్యక్రమం

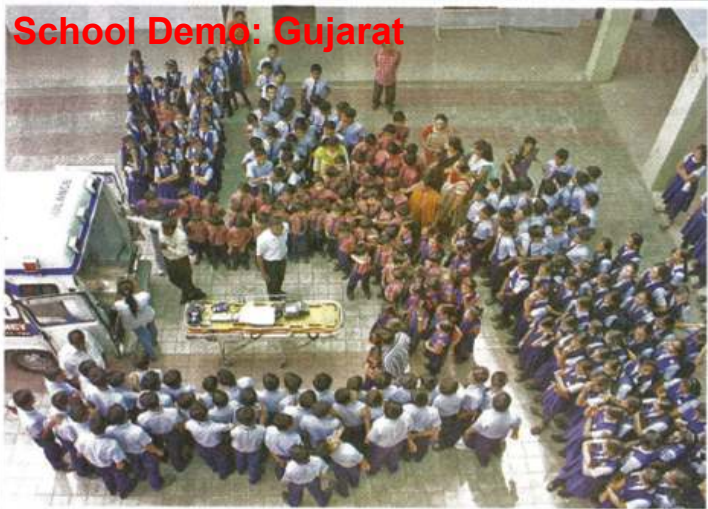
108 సేవలను సద్వినియోగం చేసుకోండి

Independence Day August 15th, 2012



Creative awareness

School Demo: Gujarat



સામાજ્યોમાં હવે બ્યામકોને સમાજ જીવન વિષયમાં ફરજિયાત શિક્ષણ આપવાનો પરિપત્ર પાટી અનેક સામાજ્યોમાં સમાજ ઉપયોગી વિષયો પર લાઈવ શિક્ષણ આપવામાં આવે છે. ત્યારે નિકોલની સામે પર સ્કૂલમાં ૧૦૮ એમ્બ્યુલન્સ સેવાની વિદ્યાર્થીઓને માહિતીગર કરવામાં અવાયા હતા. જેમાં સ્ટ્રેચર પર એક વિદ્યાર્થીને સુવાહીને રેમો આપવામાં આવ્યો હતો. તેમજ ૧૦૮ એમ્બ્યુલન્સમાં રહેલી તમામ ઉમરજન્ની સવલતોની માહિતી આપવામાં આવી હતી.



Madhya Pradesh



Karnataka



Karnataka



Karnataka



Creative awareness



World Photography Day - UK

CME on Wilderness Medicine by Dr. Lusana – 22nd Aug 2012 to Mekhara Medical College students- GG



Evacuating Victims of Cloud Burst
15 September 2012



First Aid training in HP

Creative awareness



Himachal Pradesh



Dadra & Nagar Haveli



Karnataka

Creative awareness



GVK EMRI EMERGENCY INFRASTRUCTURE WAS LEVERAGED DURING THE RECENT TERROR BLASTS

May 18 blasts, Hyderabad

- Bomb blasts at Mecca Masjid area in Hyderabad injuring 40 and killing 12
- GVK EMRI deploys ambulances immediately after the first call
- Victims transported by GVK EMRI to local private and government hospitals with treatment on the way



“GVK EMRI took off a lot of the burden from our shoulders by arriving on time and taking up the responsibility of getting the injured persons to hospitals.”

- Government of Andhra Pradesh

“I reached the hospital on the 108 ambulance... the person on the ambulance removed a splinter that was lodged in my arm”

- Victim

“People immediately dialed 108 – a single, easy to remember number, within minutes... the calls were directed to one centre, which enabled us to deploy vehicles.”

- CEO GVK EMRI

GVK EMRI EMERGENCY INFRASTRUCTURE WAS LEVERAGED DURING THE FLOODS SITUATION IN ANDHRA PRADESH



Feb '10, Floods, Kurnool, ANDHRA PRADESH

GVK EMRI Infrastructure was optimally utilized when 57 villages (Kurnool) were completely ruined & 195 others were partially affected due to heavy floods. GVK EMRI ambulances provided medication through fixed health care camps & transferred patients to hospitals for better health care. GVK EMRI also created awareness on health education to prevent the secondary damage to human health.

- 24/7NEWS CHANNEL



GVK EMRI EMERGENCY INFRASTRUCTURE WAS LEVERAGED DURING THE RECENT BUILDING COLLAPSE DISASTER

Feb 5th Building Collapse, Hyderabad

- 10 laborers and a 2-yr-old boy were buried alive under the debris after a 5-flr building under construction collapsed here on the bustling Hyderabad
- GVK EMRI reach immediately after the first call
- Victims transported by GVK EMRI to local private and government hospitals with treatment on the way



“GVK EMRI is an agency we can always count on for the responsibility of getting the injured persons to hospitals.”

- Government of Andhra Pradesh

“Fluids and oxygen were provided to the victims while we were still under the fallen building (debris)”

- Victim

“Call regarding a building in construction collapse received, caller mentioned that many people got buried in the rubble. 108 reached the scene of accident & played the role of the rescuers by doing extrication.

- CEO GVK EMRI

Impact ..



Size	<ul style="list-style-type: none">• One Center for 40 M population against one for every 0.05 M population in USA• 60 Crore population covered in 12 States and 2 Union Territories (increased reach of health care in rural , hilly and tribal areas)• Trained 86,089 people like EMTs, Doctors, Nurses• Over 1,50,000 calls attended per day• 12,500+ emergencies handled per day• 3360 Ambulances• 17,000+ GVK EMRI Associates
Speed	<ul style="list-style-type: none">• Went live in less than 4 months from signing MoU• 91% calls taken in first 2 rings• ~ 15 minutes (urban) and ~ 25 minutes (rural) Ambulances reached



Impact



Types of Emergencies	<ul style="list-style-type: none"> • Total Emergencies cases handled since inception- 1.7 crores, Medicolegal cases (with police or fire dispatches involved) = 26% or ~ 40 lakh emergencies involved police dispatch • 300+ lives were saved per day (5.45 lakhs cumulative) and 1.74 lakhs deliveries were assisted by 108 EMTs in GVK EMRI operating states • Disaster planning & Training (e.g. Biodiversity/Cop11) and DR Recent UKD cloudbursts & Assam floods/ethnic clashes, Koshi floods, Terror blasts AP/GJ
Costs	<ul style="list-style-type: none"> • Cost effective services provided in 12 States and 2 UTs
Qualitative Outcomes	<ul style="list-style-type: none"> • Angel of Mercy – 108 Ambulance • Successful PPP, very high brand recall • Well documented systems, comprehensive EMT training, high order management competence • A historic landmark in health care delivery system • Built more trust in the health system as a whole • Increased institutional deliveries and reduced maternal mortalities by 20 – 25% • A model for replication across the Country in any state



Assam launches Integrated Emergency Helpline Number 108

Assam Chief Minister Tarun Gogoi today launched the Integrated Emergency Helpline Number 108 at State Secretariat conference hall in Dispur today. The meeting was jointly organised by Assam State Disaster Management Authority and National Rural Health Mission, Assam in collaboration with GVK-EMRI.

Apart from health, the integrated helpline will encompass police, fire and other disaster related incidents. Such a one point Crisis Response Helpline is the first ever launched in the country.

Speaking at the inaugural function, Chief Minister Tarun Gogoi said the 108 Emergency Service have had already created an impact on the State's health services, especially in dealing with accident related cases and timely care for pregnant women. "The 108 ambulance service has become very popular in the State and as such its network has been further widened by encompassing other services like police, fire and disaster-related incidents" he said.

The Chief Minister said the launching of the Integrated Emergency Helpline would provide the much-needed impetus to the people living in the far-flung and interior areas, including hilly areas. "The integrated service will go a long way in providing timely relief to the affected people at the time of exigencies," he added.

Minister for Revenue & Disaster Management, Prithivi Majhi said the integrated service would help the common man to derive prompt services in health care, police, fire and other emergency services.

Minister for Health & Family Welfare, Dr Himanta Biswa Sarma said the 108 service under the aegis of NRHM has been rendering yeoman services in the health sector and the integrated service would further tone up health and other emergency services in the coming days. "The launching of the integrated services will help the poorest of the poor in getting access to health and disaster related emergency services," he said.

Dr Sarma further said that 100 small ambulances have been pressed into service for the hill areas under 108 service. For referral cases another fleet of ambulances will be placed shortly, he added.

Chief Secretary, NK Das, Commissioner & Secretary, Health & Family Welfare, Prateek Hajela and CEO, GVK, S. Satyabadi also spoke on the occasion. Principal Secretary, Revenue & Disaster Management, V.K. Pipersenia, Principal Secretary, Home & Political, Sailesh and other senior officials were present.

It may be mentioned here that Health Department has been designated as a Nodal department for implementing the Integrated Emergency Helpline as it has been already partnering GVK-EMRI 108 Helpline service. 655 police and fire stations have been connected with BSNL PRI lines to EMRI Call Centre 108. 4,355 emergency response personnel of fire brigade and police have been trained for this purpose.

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- **July-Aug 2010**



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