



ABSTRACT

Tamil Nadu State Health Society — Establishment of TAEI Steering Committee under the chairmanship of the Principal Secretary to Government and TAEI administrative structure – Orders issued.

Health and Family Welfare (EAP II-1) Department

G.O.(Ms) No.214

Dated :05.06.2018
Vilambi, Vaikasi-20
Thiruvalluvar Aandu 2049

Read:

- 1) G.O(Ms)No.147 Health and Family Welfare (F1)department Dt:20.04.2012
- 2) G.O(Ms)No.214 Health and Family Welfare (H1)department Dt:26.09.2013
- 3) G.O(Ms)No.268 Health and Family Welfare (EAP II-2)department Dt:20.04.2012
- 4) G.O(Ms)No.32 Health and Family Welfare (EAP II-2)department Dt: 4.02.2014
- 5) G.O(Ms)No.67 Health and Family Welfare (F1)department Dt:27.02.2014
- 6) G.O(Ms)No.122 Health and Family Welfare (EAP II-1)department Dt:24.10.2014
- 7) G.O(Ms)No.231 Health and Family Welfare (EAP II-1)department Dt:22.06.2017
- 8) G.O(Ms)No.273 Health and Family Welfare (EAP II-1)department Dt: 3.08.2017.
- 9) From the Mission Director, National Health Mission, Chennai-06, Lt.No.3632/NHM/Trauma Care /2017,dt. 14.06.2017

ORDER:

Tamil Nadu is lauded for being the forerunner in the health front of the country and is continuously striving hard in setting up health for its entire people. It is well known for effective planning and implementation of strategies with which various health care challenges are overcome. One such success behind substantially reducing maternal deaths and infant mortality in the state was by a special program called "The 24 Hours Comprehensive Emergency Obstetric & Newborn Care Centers (CEmONC)" in Government hospitals @ 2 to 3 per district and establishment of Neonatal Intensive Care Unit (NICU) Services in many hospitals.

2. The Government has initiated various measures to reduce the increasing fatality due to RTA by establishing:

- a) Accident and Emergency wards in all major hospitals located in its National and State Highways.
- (b) Specialized Trauma care centres in 22 hospitals located in the Golden Quadrilateral highways with assistance from Government of India under the 11th five year plan.
- (c) State funded Trauma care centres
- (d) Seat belt and helmet laws in the State.
- (e) Pre-hospital care component through 108 Emergency Ambulance Services
- (f) Emergency Care Centers
- (g) "Road Safety Committee" under the chairmanship of the Principal Secretary, Home department who is designated as Road Safety Commissioner of the State
- (h) Administrative Approval for 24 hours comprehensive emergency Trauma care centres in 59 hospitals. Thus the ultimate aim of the Government is to have one 24 Hours Comprehensive Emergency Trauma Care Centre for every 50 to 60 kms stretch in the National and major State Highways.

3. There are several pre-hospital and Health system challenges identified in the State.

- (a) Pre-hospital care

The "Scene to Hospital Time" which is the response time needs to be improved and

Patients referred to Multiple Centres: No Standard Trauma Treatment Centres and there is delay in accessing the Correct Centre there by Loss of Golden Hour

- (b) At the Institution level

There is a demand and Supply mismatch with more accidents. There is no protocol for standard emergency care resulting in Low Quality of Care. Moreover there is confusion in Hospitals over prioritisation of treatment as there is no proper system of Triage and Patients relatives swarm inside ICUs because of apprehension and lack of communication about the status of the Patient or the treatment being given.

Lack of Co-ordination between various Medical and Paramedical Staff involved in Trauma Care aggravates the issue on hand. Moreover, lack of Standard Treatment Protocols and Training for the Stake Holder results in poor outcomes for

the victims. Hence it is proposed to roll out a State level trauma care initiative called the Tamil Nadu Accident and Emergency Care Initiative

v) The Tamil Nadu State Trauma Care Policy:

SDG Goal:

To halve the number of deaths and injuries from road traffic accidents by the year 2020 globally.

State Goal:

To achieve halve the number of deaths (8500) and injuries from road traffic accidents by year 2023 in Tamil Nadu State. (Annexure I)

vi) As per the Government of India guidelines the State Government has committed to upgrade the hospitals for providing trauma care in terms of Level I, Level II and Level III based on the Hub and Spoke model (Annexure II)

vii) Interventions planned under the Tamil Nadu Accident and Emergency Care Initiative (TAEI) :

(a) Administrative Structure at State Level

- State Trauma Care Steering Committee (Constitution as per Annexure III)
- State Trauma Surveillance Centre which includes a Centre for Injury Surveillance and Trauma Registry. (Constitution as per Annexure IV)
- Ex officio Commissioner for Trauma Care (G.O Received)

b) Administrative Structure at District Level

District Program Unit

- District Collector will be the Chairman for Trauma care (TAEI)
- Joint Director of Health Services will be the District Trauma Care Nodal Officer (DTNO)

(c) Structure at Hospital Level

- Hospital Trauma Care Nodal Officer (HTNO) will be designated
- Dedicated multidisciplinary Team with specialist and super specialist will be identified at the facility level with the Duty Trauma Nurse Co-ordinator and Triage nurse for effectively managing care and co-ordination in the Emergency room and for definitive treatment.

The roles and responsibility of District Trauma Nodal Officer, Hospital Trauma Nodal Officer, District Trauma Nurse Coordinator, Duty Trauma Nurse Coordinator are enclosed as Annexure V

(d) Branding

(e) Color Coding

f) Standard Protocols and Emergency Manuals for Trauma Care Management

g) Training

h) Technical Support

i) MIS

j) e Registration of Medico Legal Cases

k) Pilot Project

l) Monitoring and Evaluation

m) Rehabilitation

n) Trauma Critical Case Review

o) Base line and Research studies

viii) Expansion Plan (Annexure VI A&B)

The year-wise expansion plan based on the RTA/Trauma load to implement the Hub and spoke model (TAEI) is as follows:

| Level | Present Centres – 2017 | Expansion in six years | Total Centres – 2023 |
|-----------|---------------------------|---------------------------|-------------------------|
| Level I | 0 | 7 | 7 |
| Level II | 6 | 13 | 19 |
| Level III | 15 | 24 | 39 |
| ECC | 03 | 47 | 50 |

3. The Mission Director, National Health Mission has requested necessary orders in this regard.

4. The Government after careful examination of the proposal of the Mission Director, National Health Mission decided to accept it and accordingly issue following orders:

- i. The administrative structure for TAEI be approved as follows:
 - a. State Level
 - i. TAEI Steering Committee under the Chairmanship of the Secretary to Government, Health and Family Welfare Department.
 - ii. State Trauma Surveillance Centre.

- iii. Designation of Ex- Officio Trauma Care Commissioner (Mission Director , NHM) and TAEI Core Team
- b. District Level
 - i. District Level TAEI Unit : District Collector – Chairman
 - ii. Strengthening the existing Road Safety Committee at District level
 - iii. Joint Director of Health Services – Designated as District Trauma Nodal Officer (DTNO)
- c. Hospital Level
 - i. Nodal Officer (HTNO)
 - ii. Roles and responsibilities of all staff in ER
- ii. A) The TAEI Steering Committee be constituted under the chairmanship of the Principal Secretary to Government, Health and Family Welfare department with the following members:

| S. No. | Name of The Official | Designation |
|--------|---|------------------|
| 1 | Principal Secretary, Health and Family Welfare Department | Chairperson |
| 2 | Ex Officio Commissioner of Trauma Care (Mission Director NHM, TN) | Member Secretary |
| 3 | Director of Medical Education | Member |
| 4 | Director of Medical and Rural Health Services | Member |
| 5 | Director of Public Health and Preventive Medicine | Member |
| 6 | Project Director, Tamil Nadu Health Systems Project | Member |
| 7 | Managing Director, Tamil Nadu Medical Supplies Corporation Ltd | Member |
| 8 | Director of Trauma Care (for Level-1 facility @ Chennai) | Member |
| 9 | State Head 108 Ambulance services | Member |
| 10 | Head, Chief Minister Comprehension Health Insurance Scheme | Member |
| 11 | President, Indian Medical Association, Private Hospitals network | Member |
| 12 | Representation from Police, Road Transport, Highways Departments | Member |

- B) The roles and responsibilities of TAEI Core Team is detailed in Annexure- III
- C) The roles and responsibilities of the District level functionaries and Hospital level functionaries are detailed in Annexure –V
- iii. Standard Emergency Rooms be established with the following:
- Triage
 - Pre-Arrival Intimation (PAI)
 - Colour coding of ER
 - Patient Management Checklist from Admission to Discharge
 - Emergency Manual
 - Advanced Trauma Life Support (ATLS) Protocols
 - Appropriate linkage with Multi Disciplinary Teams at Hospital levels
 - Appropriate linkage with 108 Ambulance Services
 - MIS
 - Display Boards
 - Branding
- iv. Continuous Capacity Building and Training to the Medical, Nursing and Paramedical Personnel at all level to handle trauma cases be provided
- v. Trauma Critical case review (2% on RTA's) be conducted as being done in case of maternal death.
- vi. monitoring indicators to achieve the State goal in reducing mortality and morbidity be approved as in Annexure VII.

(BY ORDER OF THE GOVERNOR)

J.RADHAKRISHNAN
PRINCIPAL SECRETARY TO GOVERNMENT

To
 The Mission Director, National Health Mission, Chennai – 600 006.

Copy to

The Special P.A to Honble Minister for Health, Chennai-9

✓ Data Cell/SF/SC.

//Forwarded by Order//

[Handwritten Signature]
SECTION OFFICER

Annexure I

Objective of State Trauma care policy:

- To ensure definitive treatment for the injured within the Golden Hour
- To identify and designate Trauma Care Centres as Level-1, Level-2, Level-3 centres in Tamil Nadu State after a feasibility analysis of existing trauma care facilities with assured referral linkages based on the hub and spoke model.
- To establish "State Trauma Surveillance Centre" with real time reporting of accident & trauma cases to provide evidence based decision for policy formulation on road safety, injury preventive interventions with component for improving of quality care and better out comes and rational utilization of resources.
- To converge and co-ordinate with engineering, road safety, law enforcement departments.
- Selection of Government Hospitals for developing various levels of Trauma Care Centres on the basis of road infrastructure and connectivity (State Government hospitals on the national highways, Connecting two capital cities, Connecting major cities other than capital city, Connecting ports to capital city, Connecting industrial townships with capital city).
- To develop rehabilitation centers for trauma casualties.
- To initiate the development of a state-wide referral network with both public and private hospitals through empanelment of Chief Minister Comprehension Health Insurance Scheme with forward and backward linkages.
- To incorporate on-going initiatives of multiple sectors like road transport authority and highways authority & EMR division for successful management of trauma.
- To install the Basic Life Support Ambulances Level -IV on an evidence based approach along the Highways and Advanced Life Support Ambulance at Trauma Care Facilities for inter facility transfer and expand the ECC facilities provided already to all high accident density areas.
- To initiate IEC/ BCC activities for educating the public about the risk factors and to reduce the incidence of road traffic accidental injuries and spread awareness regarding injury prevention and road safety.
- Continuous physical & financial monitoring of the programme.

Annexure II

- Level I Trauma care Centre: Facility will provide the highest level of definitive and comprehensive care for patient with complex injuries. Emergency physicians, nurses and surgeons would be in-house and available to the trauma patient immediately on their arrival. The services of all major super specialties associated with trauma care would be available 24x7. These should be tertiary care centers to which patients requiring highly specialized medical care are referred.
- Level II Trauma care centre : Provides definitive care for severe trauma patients. Emergency physicians, surgeons, Orthopaedicians and Anesthetists are in-house and available to the trauma patients immediately on arrival. It would also have on-call facility for neurosurgeons, pediatricians. If neurosurgeons are not available, general surgeons trained in neurosurgery for a period of 6 months in eminent institutions would be made available 24x7. The centre should be equipped with emergency department, intensive care unit, blood bank rehabilitation services. The existing medical college hospitals or hospitals with bed strength of 30 to 50 should be identified as level II trauma centre.
- Level III Trauma care Centre: Facility provides initial evaluation and stabilization (surgically if appropriate) to the trauma patient. Comprehensive medical and surgical inpatient services would be made available to those patients who can be maintained in a stable or improving condition without specialized care. Emergency doctors and nurses are available round the clock. Physicians, surgeons, Orthopedic surgeon and Anesthetist would be available round the clock to assess, resuscitate, stabilize and initiate transfer as necessary to a higher - level Trauma care service. Such hospitals will have limited intensive care facility, diagnostic capacity, blood bank and other supportive services. The district / taluk hospitals with a bed capacity of 10 to 20 beds would be selected for level III care.
- Level IV Trauma care: This would be provided by appropriately equipped and manned mobile ambulance services. These shall be provided by 108 integrated. Emergency ambulance service 108 AS. National Highway

Authority of India ambulances in coordination with 108 AS MoRTH / NHAI / NRHM / State Government etc.,

- Concept of Emergency Stabilization centre (ECC): first one hour after the trauma is called the "Golden Hour" if proper first aid is given, road accident casualties have greater chance of survival and a reduction in the severity of their injuries. ECC centers Stabilize critical trauma Patients and medical emergencies within the golden hour, thereby providing a longer window for survival and reduces complications.

Annexure III

TAEI Core Team

Roles and Responsibilities

| S.No | TAEI Core Team | Roles and Responsibility |
|------|--|--|
| 1 | Mission Director & Commissioner of Trauma Care | <p>Be the overall in-charge of the State Trauma Care Services (TAEI) Designate an officer as the State Program Manager for Trauma care to co-ordinate the activities in National Health Mission.</p> <p>Convene meetings with the Head of the Departments to finalize the Medical officers/Specialists/Super specialists/ Staff nurses and other paramedical staff deployment/ redeployment in the already existing Trauma Care Centers to provide comprehensive Trauma Care Services.</p> <p>Incur expenditure wherever required within the discretionary powers of the Mission Director for operationalization of services Undertake baseline survey and other activities required in the pilot hospitals for the roll out of the TAEI.</p> <p>Streamline the daily reporting of the Trauma Care Centers in order to set up the Trauma care registry Start the process of review of the Critical cases related to Road Traffic Accidents based</p> |

| | | |
|---|---|---|
| | | <p>on the IP/Death summary/Post mortem reports obtained from the hospitals.</p> <p>Branding the Centers as approved in the GO</p> <p>Conduct review meetings with Joint Director, Deans and Hospital Trauma Care Nodal Officers.</p> <p>Capacity building/ Ensure Training of doctors and health professional in Trauma Care.</p> |
| 2 | State Program Manager - TAEI | <p>Overall Co-ordination, operationalisation?" and management of TAEI.</p> <p>Carry out administrative approvals required for setting up full fledged TAEI centers in the State</p> <p>Ensure Training, Meetings</p> <p>Streamlining the daily reporting and setting up of Trauma Registry, etc.</p> <p>Financial approval up to 1 lakh</p> |
| 3 | Nodal Officer | Provide technical support for TAEI activities. |
| 4 | Assistant Program Officer | Assist in TAEI activities in coordination and technical support. |
| 5 | Consultant-Nursing/ Public Health specialist | Provide support for nurse driven model and coordination of TAEI activities. |
| 6 | Consultant (Training) | Provide support for all training activities. |

| | | |
|---|------------------------------|--|
| 7 | Consultant (STEMI/STROKE) | Provide, conduct and support for STEMI and SCRIPT training. |
| 8 | MIS Data Analyst | Coordinating and monitoring of data for TAEI centers. |
| 9 | Bio Medical Engineer | Provide support for strengthening of Emergency Room and equipment functioning. |

Annexure IV

State Trauma Surveillance Center :

Aim of STSC:

- To collect, compile, analyze & disseminate injury, trauma related information and share with policy makers for reducing the burden of morbidities & mortality resulting due to injuries and to build capacity for providing quality care to the injured.

Objectives:

- To collect, compile, analyze the information from designated trauma care centres for the use of policy formation and preventive intervention.
- To link the injury surveillance as per Government of India data capture format with all the designated trauma care centres for collection of injury surveillance related data.
- Coordination for training in field of trauma care.
- To collect information on Pre Hospital Care given to trauma casualties.
- Reporting to National Injury Surveillance Trauma Registry Centre (DGHS, MoHFW).

Injury Surveillance:

- Injury Surveillance is important need for generating authentic information about the injury related information, timely pre hospital care given to the trauma casualties.
- This will lead to improved quality of trauma care as well as assist in developing evidence based policies.
- Injury Surveillance will do collecting, collating, analysing and propagating activities through data capture from the designated trauma care facilities help the policy makers in order to formulate injury prevention and management strategies.

Trauma Registry:

- Creation of real time online based Trauma Registries at various levels of Trauma Care Centre's including private hospitals and networking of all the registries to State and National Databank.

- The registry will be setup by National Health Mission in co-ordination with IIT, Madras , Rajiv Gandhi Government General Hospital , Chennai, and experts.
- The Trauma Registries to be outcome based so that the morbidity and mortality data can be compared across the trauma care centres and more relevant critical gaps can be found in the management strategies.

This State trauma surveillance center will be part of State Health Society, National Health Mission and located at an appropriate place.

Annexure V

Roles and Responsibility of District Collector:

1. TAEI has a three tier monitoring and evaluation system.
2. At the District level, the District Collector will be the chairman of the TAEI steering committee.
3. He / she will chair the monthly TAEI review meetings with:
 - a. District Trauma Nodal Officer (DTNO)
 - b. NHM Nodal Officer, DMS side
 - c. Hospital superintendent
 - d. Hospital Trauma Nodal Officer (HTNO)
 - e. District Trauma Nurse Co-ordinator (DTNC)
 - f. Administrative officer- JD office
 - g. Superintendent of Police
 - h. Regional Transport Officer
 - i. Chief education officer
 - j. District Manager, 108 Ambulance Service
 - k. Chief engineer, Highways Authority
 - l. National Highways Authority
 - m. District Fire Officer
 - n. District Free Hearse Service (FHS) officer
4. He / she will promote road safety, prepare road safety plans with special attention to the accident prone spots/ stretches, maintenance of roads, drivers training, accident analysis, publicity initiatives and efforts, traffic planning, highway patrol, passenger amenities etc. in the Districts.
5. He / She will conduct the TAEI Critical Case Reviews of the fatal RTA cases (died within 2- 6 hrs of reception in the TAEI center) and near miss RTA cases in TAEI center.
6. He / she will review the TAEI center activities at the District level and aid in strengthening and upgradation of TAEI network hospitals.

a) District Trauma Care Nodal Officer (DTNO)

- Joint Director of Health Services will be the District Trauma Care Nodal Officer of the District by providing direction
- He will coordinate for all Trauma Care Services in the District which includes 108 Emergency Ambulance Services, Trauma Care Centres in Medical College Hospitals, designated Trauma Care Centres and other institutions both public and private, where Trauma and Emergency patients are admitted , treated and rehabilitated.
- He will obtain daily report from the Trauma care centres and after consolidation send the daily report to the State level nodal officer.

- He will ensure availability of sufficient specialist HR, equipment, consumables and other logistics in the Trauma care centres under his control in the districts.
- He will monitor the progress of the referred out cases to the higher centres
- He will conduct review meetings every month to start with to monitor the program in the district and to improve it by setting right any bottle necks in the smooth functioning of the program in the district.
- He will conduct sensitization program in the district to create awareness among the health care providers both public and private and in the community regarding the facilities available in the Trauma care centres for treatment of Trauma cases.
- He will conduct periodical training programs for the health care providers at various levels engaged in the Trauma care program, BLS and ALS.
- He will conduct IEC program through media and by other means to create awareness in the community regarding the factors responsible for the road traffic accidents and for prevention of accidents.
- He will conduct a critical death audit of Trauma deaths occurring in the hospitals / referral institutions by utilizing the services of senior medical officers of the concerned specialty and submit the report to the District Collector and to the State Trauma care Commissioner. The Trauma death audit shall be conducted @ 2 percent cases per month in the districts. The cases shall be selected based on a matrix to be provided by the State Trauma care Commissioner.
- He will attend along with the Trauma care centre Nodal Officers in the districts the monthly video conference on Trauma deaths to be conducted by the State Trauma care Commissioner.
- He shall ensure all eligible trauma case are included under Chief Minister Comprehension Health Insurance Scheme
- He shall represent the trauma care facilities and their usage in the monthly Road safety meeting at the collector's office to the collector and get his instructions.
- He/She have to identify more hotspots and take remedial actions/ to prevent accidents/ Stationing an Ambulance nearby.

b) Hospital Trauma Care Nodal Officer (HTNO)

- He/She shall be the link between the hospital and the trauma network.
- He/She will attend the meetings concerned with TAEI as and when required .
- He/She will be updating the other trauma team in the hospital regarding in academics and induce them to update themselves.
- He/She will monitor and maintain rotation of shifts for doctors, staff nurse, other staff involved with the emergency room for smooth functioning.
- He/She will maintain appropriate reporting pattern / hierarchy
- To conduct everyday trauma meeting at fixed time to review the cases in order to analyse how better the team could have managed the case.
- To monitor the strict adherence of protocols and monitor SOP and improvise hospital wise and update the state team the change of SOP
- To monitor the working of the equipments and escalate the problems to the the higher authority for solutions
- To keep record of preventive maintenance maintenance of equipments with the BME
- He/She will do Institutional death audit.
- He/She will maintain records of trauma cases
- He/She will ensure follow up of the trauma cases
- He/She will ensure a viability of trauma care casualty
- Preparation of Standard Operating procedure for triaging at casualty level.
- Gap analysis of the diagnostic and investigation facility
- Training needs assessment at hospital level
- Continuing medical education
- Daily reporting format of RADAMS, 108 AS and Trauma care hospital data.
- Certification of trauma care centers in the same line as CEmONC centers
- Co-ordination with DME/DMS/DPH/108

c) District Trauma Nurse Co-Ordinator:

- Extensive field-based training, monitoring and evaluation of TAEI needs to be undertaken at the district level.
- Setting up of ER in PHC/GH/ DHQH/ MCH as per TAEI standard Protocols.
- He / She will ensure availability and sufficient HR, Equipment, Consumables.

- He / She will conduct training for Nurses / Support workers in the district
- Will attend meetings on TAEI, along with DTNO, HTNO, Duty Trauma Nurse Coordinator
- Preferably an accreditation nurse in hospitals that are accredited.
- Responsible for Continuing Nursing Education (CNE) at District level in conducting classes on topics related to Accident & Emergency. Will prepare and submit monthly CNE work plan.
- Conduct Mock drills and disaster drills in the district in collaboration with HTNO under the leadership of the DTNO (Joint Director Health Service)
- Will be the overall in charge of the district TAEI nurses. Will review the Duty Trauma Nurse Coordinator and ensure the nurses template case sheets and crash cart checklist are recorded and maintained properly.
- Should be instrumental in designing simulation lab along with the HTNO and DTNO at District level.
- Conduct critical case reviews of Post mortem reports along with the doctor and 108 Amby team
- Supervision of Trauma Registry
- collect, code, score, and develop processes for validating data design registry to facilitate performance improvement, trend reports, and research while maintaining confidentiality

d) Duty Trauma Nurse Co-ordinator

- a. The Duty Trauma Nurse Co-ordinator is the Senior Most Staff Nurse of the ER / Trauma Ward.
- b. Will be the single point of contact for TAEI activities
- c. During duty timings, will be in possession of the Hospital TAEI Mobile.
- d. After completion of shift, will hand over the mobile and charger to the next person on shift.
- e. It is duty to ensure that the mobile is charged and reachable all the time.
- f. Will liaison with the Other Hospitals and Ambulances for Transfer, Referral and Reception of patients

- g. Can Initiate All Variants of Code Blue Herself based on the Call from 108 or Other Hospitals.
- h. Will Receive Pre Arrival Intimation from EMT
- i. Will follow up the survival status and recovery of the cases in the referral hospitals
- j. Will alert the TAEI Team during emergencies, mass casualty incidents and disasters
- k. Will furnish everyday TAEI app details – Daily Reporting

e) Roles of Triage Nurse

He/she:

- Should be A registered nurse
- Will play pivotal role in Emergency Room
- Should be prepared with emergency equipment and keep environment accessible at any point of time
- Will collect information upon patients arrival to the hospital Emergency Room.
- Will prioritize and sort out patients for care and treatment based on standard guidelines
- Should be good at clinical judgement, critical thinking, communication skills and accurate/sharp decision making skills.
- Should be trained in ATCN(Advanced Trauma Care for Nurses).

Accident Prone Zones Grid Analysis by TN EMRI:

Annexure VI A



