



ABSTRACT

National Health Mission -- Tamil Nadu Accident and Emergency Care Policy --
Approved - Orders - Issued.

Health and Family Welfare (EAP II-2) Department

G.O(Ms) No.266

Dated :10.06.2019
Vigari, Vaigasi - 27
Thiruvalluvar Aandu 2050

Read:

From the Mission Director, State Health Society, Tamil Nadu,
Ex-Officio Commissioner of Trauma Care, Chennai Letter
No. 2868/TAEI/NHM/2019, Dated: 15.02.2019.

ORDER:

In the letter read above, the Mission Director, National Health Mission has stated that, the predominant cause of mortality and morbidity is Non Communicable Diseases. Tamil Nadu is the seventh most populous and highly urbanized in the country with 14,257 km of National and State highways. In 2016, the State accounted for 17,311 deaths due to Road Traffic Injury (RTI) which is 12% higher when compared to 2015. In the country, the State constitutes to a share of 15.9% injuries and 10.7% deaths (MoRTH, 2015). As per the Global Disease Burden report 2017, the DALY's lost due to Injuries is 13.5 % (Unintentional injuries, Self harm and Interpersonal Violence and Transport Injuries). Road Traffic Accident (RTA) has been an overwhelming Public health challenge of the era disproportionately killing and maiming many in the economically productive age group. It results in serious physical, mental and psycho-social impairment, bringing huge catastrophic expense to the family, crashing down its peace and security.

2. The Mission Director, National Health Mission has also stated that the incidence of Accidents, Infarctions, Cerebro Vascular Accidents (Stroke), Accidental and Deliberate (Self Harm) Poisoning and Burns are increasing along with increased prevalence of those with residual morbidity due to these conditions, it is imperative to pay more and focused attention to these conditions. Hence, there is need of a dedicated programme aimed at addressing these conditions at all levels of health care viz., Primordial, Primacy, Secondary, Tertiary and Quarternary. The Mission Director, National Health Mission has further stated that, the Tamil Nadu Accident and Emergency Care (TAEC) Policy has been conceptualized and created and this will be implemented through Tamil Nadu Accident and Emergency Care Initiative and requested to approve the Tamil Nadu Accident and Emergency Care Policy.

2

3. The Government after examination, have decided to approve the Tamil Nadu Accident and Emergency Care Policy as annexed to this Government Order.

(BY ORDER OF THE GOVERNOR)

**BEELA RAJESH
SECRETARY TO GOVERNMENT**

To
The Mission Director, State Health Society, Chennai-600006.

Copy to

The Finance (Health-I) Department, Chennai – 600 009.

~~The Health and Family Welfare(Data Cell) Department, Chennai-9~~
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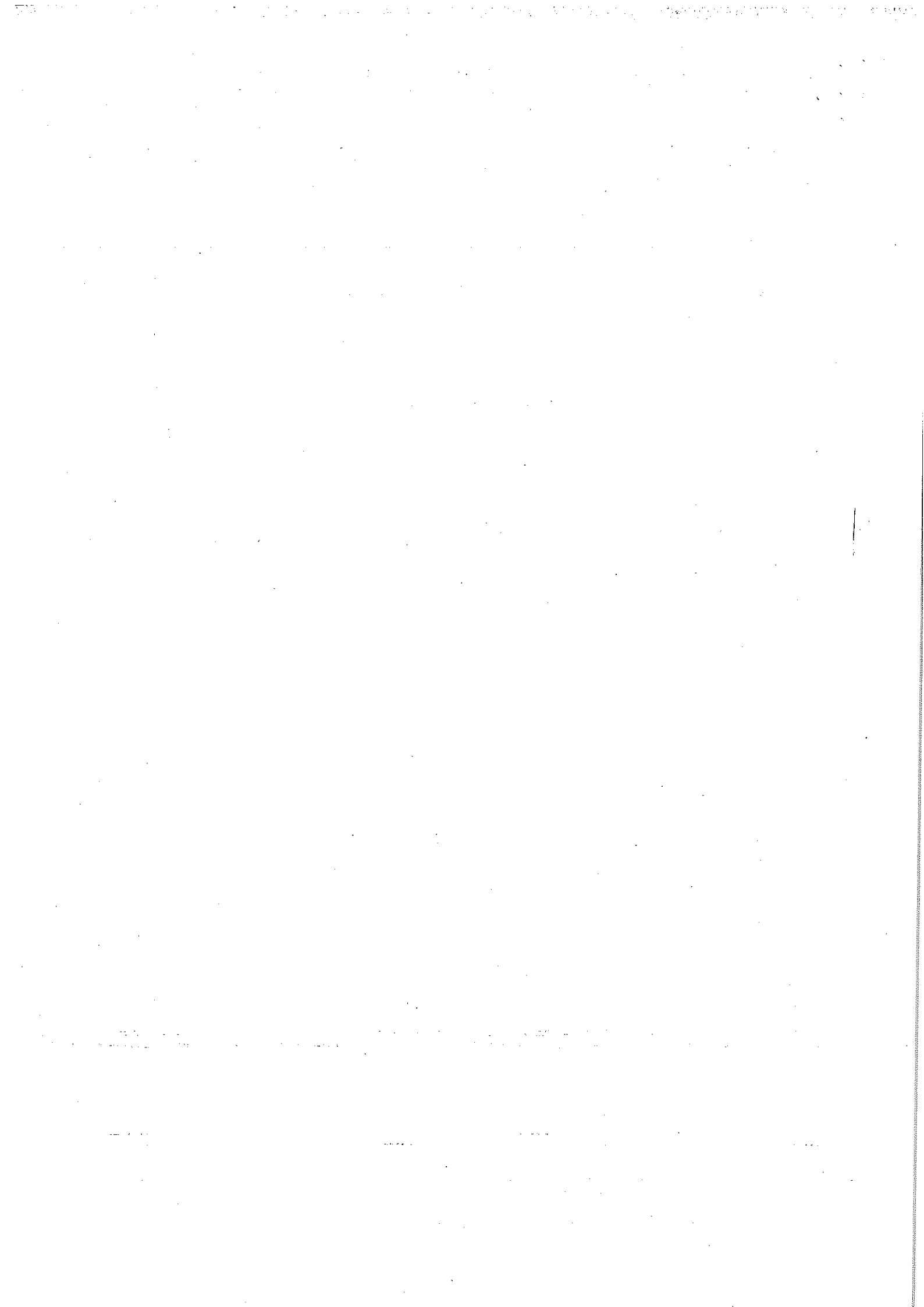
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A. V. S. S. S.
11/7/19
SECTION OFFICER

ANNEXURE

(G.O(Ms)No. 266 Health and Family Welfare (EAP II-2) Department, dated: 10.6.2019)

Tamil Nadu Accident and Emergency Care Policy



Tamil Nadu Accident and Emergency Care Policy

Need for TAEC Policy

Tamil Nadu has been the Role Model for Various states in implementing a robust and efficient health care setup. The State is also known for introducing various pro people scheme and implementing them successfully. Following the tremendous success in reducing mortality and morbidity, such schemes have been later adopted by other states as well the centre. Use of TNMSC in Drug Procurement, CEmONC Centres, Cadaver Organ Transplant Programme, SNCU for few such schemes.

Efficient and Effective Public Health System has reduced infectious diseases and now the predominant cause of mortality and morbidity is Non Communicable Diseases.

The Burden of RTA in Tamil Nadu:

The State of Tamil Nadu is the seventh most populous and highly urbanized in the country with 14,257 km of National and State highways. In 2016, the State accounted for 17,311 deaths due to Road Traffic Injury (RTI) which is 12% higher when compared to 2015. In the country the State constitutes to a share of 15.9% injuries and 10.7% deaths (MoRTH, 2015). As per the Global Disease Burden report 2017¹, the DALY's lost due to Injuries is 13.5 % (Unintentional injuries, Self harm and Interpersonal Violence and Transport Injuries). RTA has been an overwhelming Public health challenge of the era disproportionately killing and maiming many in the economically productive age group. It results in serious physical, mental and psycho-social impairment, bringing huge catastrophic expense to the family, crashing down its peace and security.

Paradigm Shift in Mortality and Morbidity Patterns

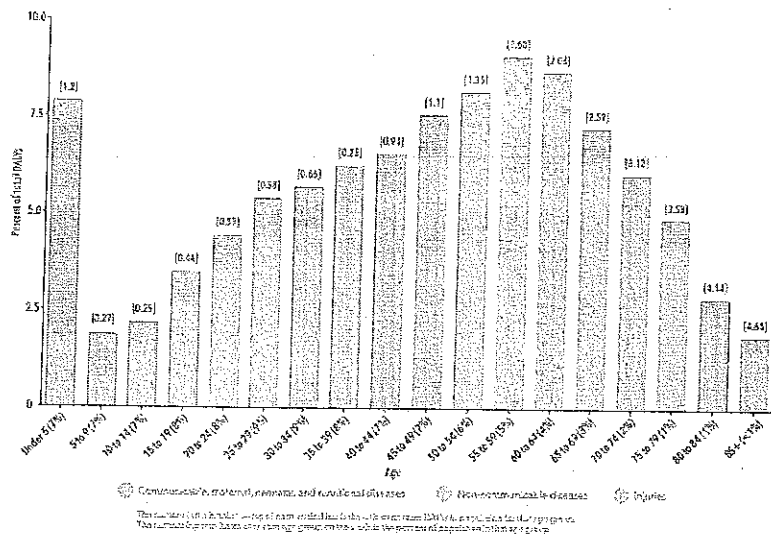
Other Non Communicable diseases are also increasing in incidence due effective management of communicable diseases as well as due to the changing socio economic profile of the state

Thirty years ago, the predominant care needed in a Hospital OP / Emergency Department was tackling Communicable Diseases. Today, there is a paradigm shift and the predominant demand is to tackle Non Communicable diseases.

Because of the increasing incidence of Accidents, Infarctions, Cerebro Vascular Accidents (Stroke), Accidental and Deliberate (Self Harm) Poisoning and Burns along with increased prevalence of those with residual morbidity due to these conditions, it is imperative to pay more and focused attention to these conditions. Hence there is need of a dedicated programme aimed at addressing these conditions at all (Primordial, Primay, Secondary, Tertiary and Quarternary) levels of health care.

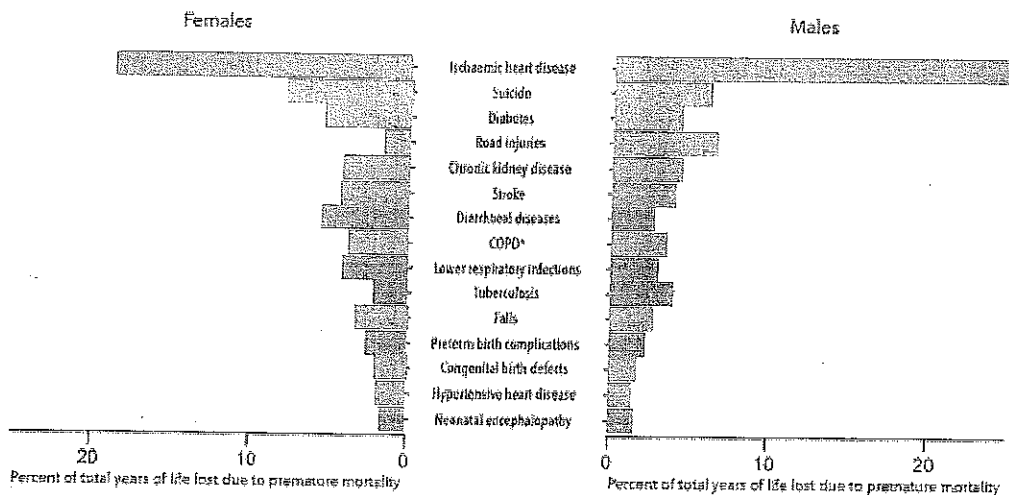
Hence Tamil Nadu Accident and Emergency Care (TAEC) Policy has been conceptualised and created and this will be implemented through Tamil Nadu Accident and Emergency Care Initiative

What caused the most death and disability combined across age groups in 2016?
Percent of DALYs by age group, both sexes, 2016

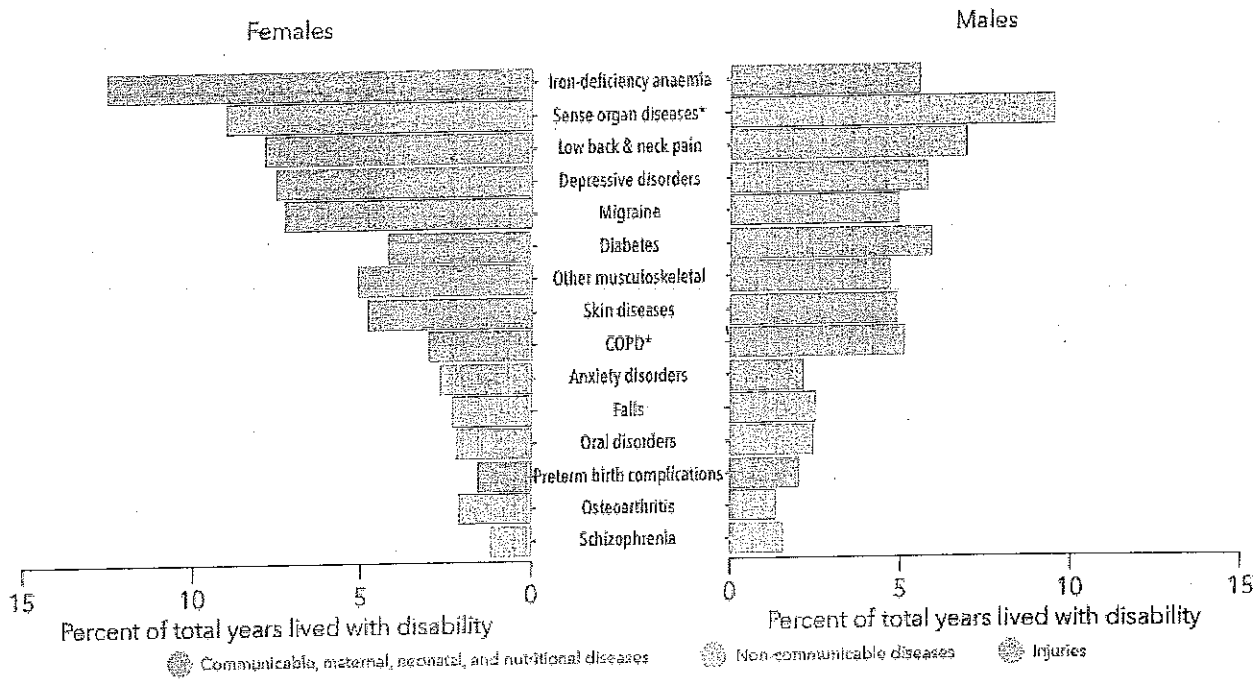


Proportion of total disease burden from:
Premature death: 62.0% | Disability or morbidity: 38.0%

What caused the most years of life lost, by sex, in 2016?
Top 15 causes of YLLs, ranked by percent for both sexes combined, 2016



What caused the most years lived with disability, by sex, in 2016?
 Top 15 causes of YLDs, ranked by percent for both sexes combined, 2016

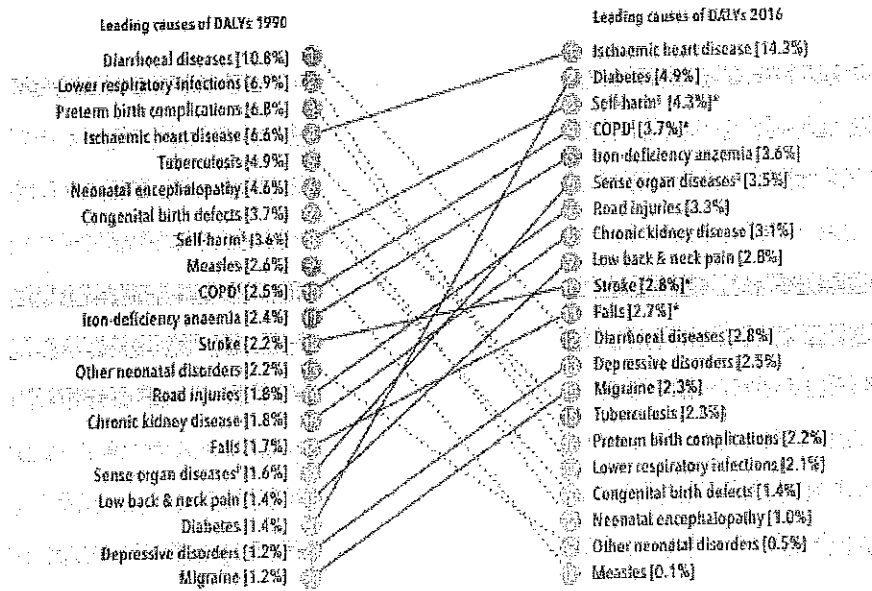


*COPD is chronic obstructive pulmonary disease.
 *Sense organ diseases includes mainly hearing and vision loss.

Proportion of total disease burden from:
 CMNNDs: 20.4% | NCDs: 65.3% | Injuries: 14.3%

How have the leading causes of death and disability combined changed from 1990 to 2016?
 Change in top 15 causes of DALYs, both sexes, ranked by number of DALYs, 1990-2016

Legend: Communicable, maternal, neonatal, and nutritional diseases; Non-communicable diseases; Injuries; — same or increase; decrease

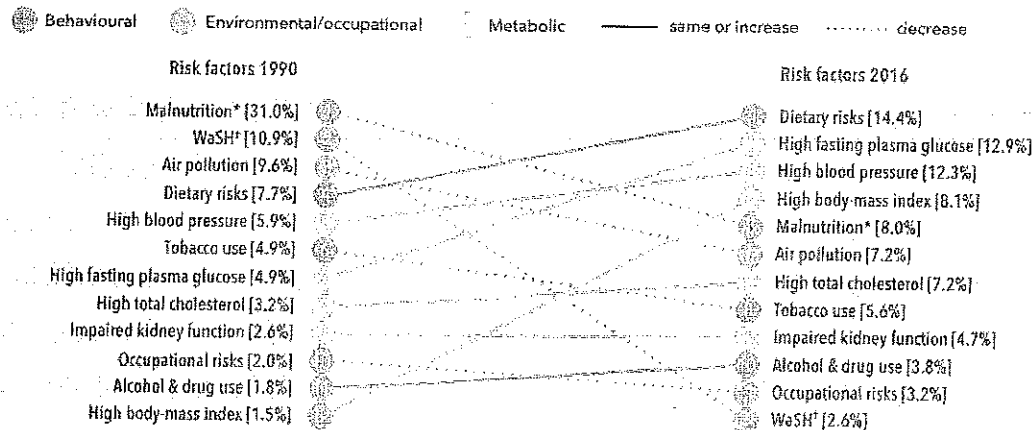


†Change not significant.
 The percent figure in brackets next to each cause is DALYs from that cause out of total DALYs.

†COPD is chronic obstructive pulmonary disease.
 *Sense organ diseases includes mainly hearing and vision loss.
 ‡Self-harm refers to suicides and the mental outcomes of self-harm.

What risk factors are driving the most death and disability combined?

Contribution of top 10 risks to DALYs number, both sexes, ranked by number of DALYs, 1990-2016

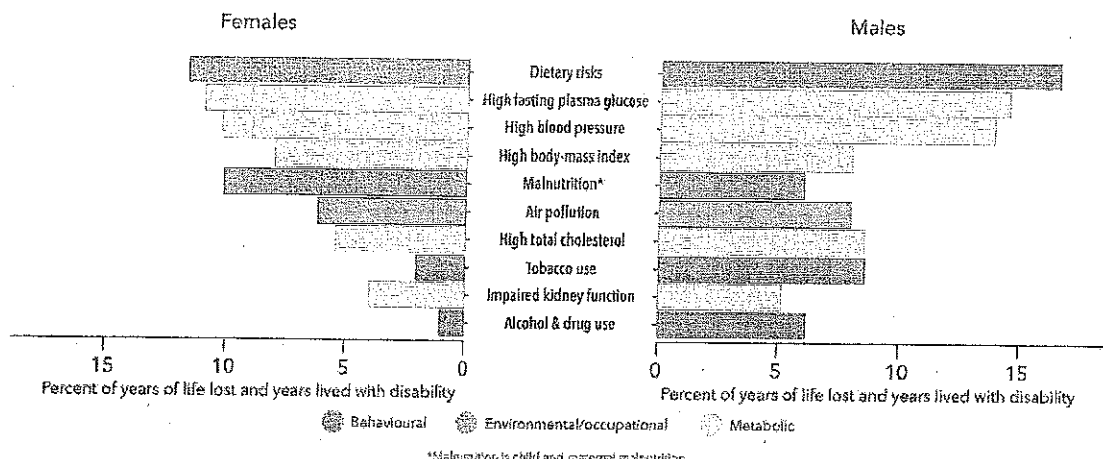


The percent figure in bracket next to each risk is DALYs from that risk out of total DALYs.

*Malnutrition is child and maternal malnutrition.
†WaSH is unsafe water, sanitation, and handwashing.

How did the risk factors differ by sex in 2016?

Percent of total DALYs attributable to top 10 risks, ranked by percent for both sexes combined, 2016



*Malnutrition is child and maternal malnutrition.

Aims and Objectives of Tamil Nadu Accident and Emergency Care (TAEC) Policy

The Various Aims of Tamil Nadu Accident and Emergency Care (TAEC) Policy are

1. To Initiate and Maintain and Health Care Setup to provide Comprehensive Service to All Medical and Surgical Emergencies aimed at Reducing the Mortality and Morbidity
2. To Develop and Implement Protocols for Uniform and High Quality Care in Emergency Departments across All Hospitals
3. To Develop and Implement Protocols for effective Management to Reduce Mortality and Morbidity associated with Non Communicable Diseases, especially (1) Accidents and Trauma (2) Myocardial Infarction (3) Cerebro Vascular Accidents (Strokes), (4) Burns (5) Poisoning (6) Paediatric Emergencies
4. To Provide the above services
 - a. based on Clinical Needs for all patients
 - b. with Compassion
 - c. with highest standards of excellence and professionalism

- d. working across organisational boundaries and in partnership with other organisations in the interest of patients, local communities and the wider population
- e. in the most effective, fair manner with sustainable use of finite resources.
- f. being accountable to the public, communities and patients

The Various Objectives of Tamil Nadu Accident and Emergency Care (TAEC) are

1. To attain the SDG Goal: To halve the number of deaths and injuries from road traffic accidents by the year 2020 globally.
2. To attain the State Goal: To achieve halve the number of deaths (8500) and injuries from road traffic accidents by year 2023 in Tamil Nadu State.
3. To Standardize Managements of All Medical and Surgical Emergencies into predefined and distinct stages and to have specific and clear protocols for management in each stage
4. To Triage Patients into Red, yellow and Green Categories and to institute appropriate management
5. To ensure definitive treatment for the injured within the Golden Hour and to have "Time Norms" for procedures in the Emergency Department
6. To ensure that all patients who get Pre Arrival Intimation regarding Stroke / Head Injury be shifted directly to the CT Room from Ambulance and only after the CT Brain has been taken, the patient should be shifted to ER. The Neurosurgeon / Neurologist / Surgeon / Other Doctors may look directly at the CT Monitor and begin prompt treatment as per TAEI and SCRIPT Protocols without waiting for the report. The CT Film may be handed over to the patient or Relative if they pay for it. If the Patient or Relatives do not pay, the Cost can be met from the Institutional Fund (as is being done for Unknown Patient)
7. To Start the Process of Rehabilitation as early as possible
8. To identify and designate TAEI Centres on the basis of need (caseload) and location (national highways, Connecting two capital cities, Connecting major cities other than capital city, Connecting ports to capital city, Connecting industrial townships with capital city etc) as Level-1, Level-2, Level-3 centres with Assured Care in Each Centre based on the level
9. To Augment the Hard (Civil Works, Equipments, Consumables, Drugs) and Soft (Human Resources- New Posts as well as Filling Vacancies, Training) Infrastructure in these centres as per need and implementation of Standard Operating Procedures in these centres
10. 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.
11. To initiate the development of a state-wide referral network with both public and private hospitals through empanelment of CMCHIS Insurance Scheme with forward and backward linkages.
12. To establish "State Trauma Surveillance Centre" with real time reporting of accident & trauma cases for the Trauma Registry which will provide evidence based decision for policy formulation on road safety, injury preventive interventions with component for improving of quality care and better outcomes and rational utilization of resources and Continuous physical & financial monitoring of the programme.
13. To converge and co-ordinate with engineering, road safety, law enforcement and Transport departments.

14. 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.

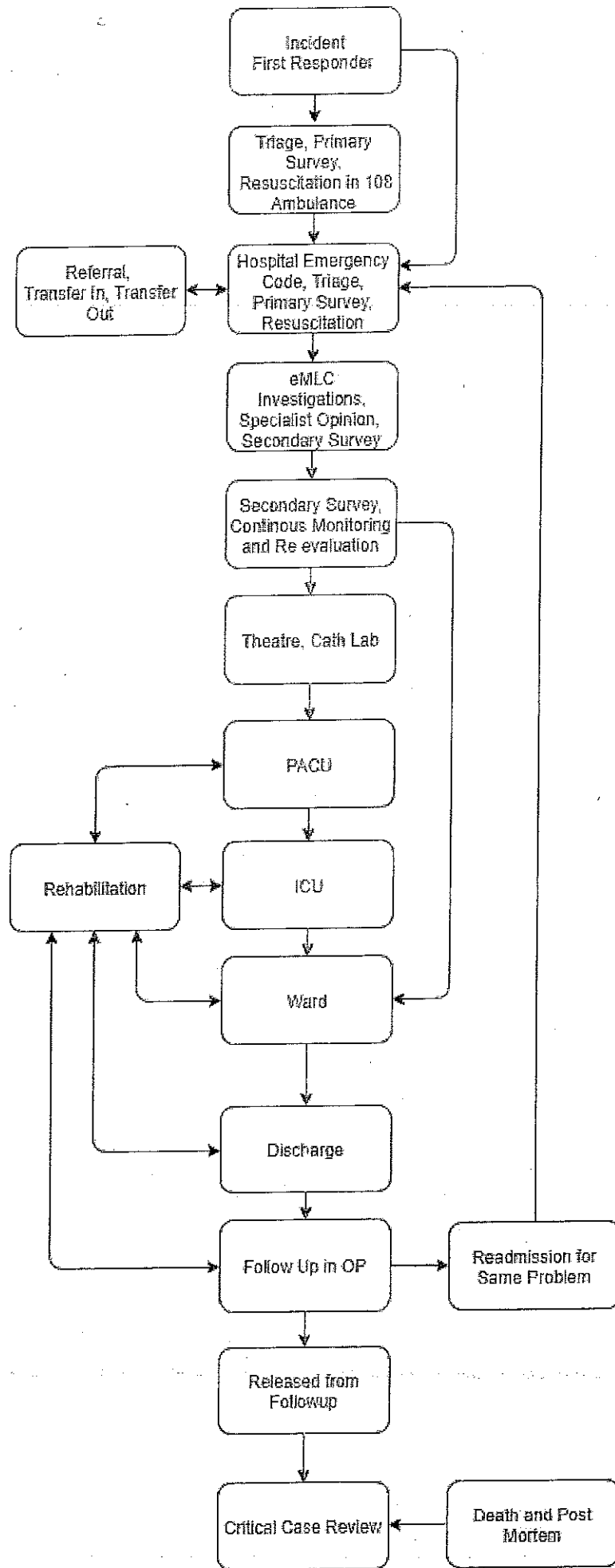
Innovations in Tamil Nadu Accident and Emergency Care Initiative (TAEI)

TAEI introduces few key concepts and paradigm shifts in patient care in Tamil Nadu Medical Services.

1. Stages in Patient Care

The Entire TimeLine From the moment of "Incident" (more about the Incident in a subsequent chapter) to Discharge of the patient from the Hospital after completion of treatment can be divided into various stages. These stages are for ease of understanding and are not discrete events. They overlap each other and happen simultaneously and the patient receives care in continuum. For Example, Triage and Primary Survey overlap. Primary Survey and Resuscitation happen together. It is again emphasised that the care the patient receives is in continuum.

	Code	Stage	Description
Onset	IN.1	Incident	The Onset of Emergency
	IN.2	First Responder Care	By Standers doing First Aid
Pre-Hospital	PH.1	Call	Patient or Relative Calling 108
	PH.2	Reach	From Call to Picking Up the Patient by 108 Ambulance
	PH.3	Transit	Picking Up the Patient by 108 Ambulance to Reception in TAEI Care Centre
Transfer	RE.1	Referral	Referral Out from One Hospital to Referral In to Next Hospital
	RE.2	Intra Hospital Transfer	Transfer of Patients from One Ward to Another
Hospital Emergency Codes	HE.1	Pre Intimation to Hospital and Hospital Preparation	Hospital Being Ready to Immediately Start Treatment
ER Care	ER.1	Triage	Red, Yellow or Green
	ER.2	Primary Survey	Check ABCDE
	ER.3	Resuscitation	Manage ABCDE
	ER.4	AR Entry	AR Entry / eMLC
	ER.5	Secondary Survey	Detailed Examination
	ER.6	Investigations	Imaging and Blood Investigations
	ER.7	Specialist Opinion	Opinion and Management if needed
	ER.8	Monitoring and Re evaluation	Continuous post resuscitation monitoring and re evaluation
Hospital Care	HC.1	Emergency Intervention	Emergency Surgery / Thrombolysis / Angio/ to Shifting to MDCCU / ICCU / PICU / SNCU / IMCU / SICU Wards
	HC.2	Elective Intervention	Elective Surgery
	HC.3	PACU Care	PACU
	HC.4	ICU Care	ICU
	HC.5	Post Op Care	Post Op Ward
	HC.6	Ward Care	Ward
	HC.7	Rehabilitation	Physiotherapy, Speech Therapy
	HC.8	Outcome	Discharge / Death
Care Post Discharge	PD.1.a	Follow Up	Following Discharge
	PD.1.b	Post Mortem	Following Death
	PD.2	Completion	Released to Primary Care
Administrative Follow Up	AD.1	Critical Case Review	To Modify the Protocols and to Improve the Patient Care



2. Time Norms for Hospital Services

In addition to being Money elsewhere, Time is Muscle in heart and Neuron in Brain. The Outcome of a Thrombolysis does not depend only on the efficacy of the drug. It also depends on how quickly circulation is restored to the heart. The Outcome following Evacuation of an extradural hematoma does not only depend on the Skill of the neurosurgeon, but also on how quickly it has been done. In addition to "what to do", "who to do" and "how to do" we also need to know "when to do". It is in finding answers to this last question, we come across the concept of Time Norms.

Time Norms are commonly used in almost all fields. They are used by many departments and individual doctors in an informal manner. Codification of few "Time Norms" in Emergency Department and making them part of a protocol is yet another initiative of TAEI, which is likely to be adopted by all departments in future. For those who find this odd or difficult to understand may please imagine the board like the one here which would be seen in all banks. Just like how a bank assures certain services in certain time span, we need to complete certain procedures within stipulated time. However, it is being stressed that hospital resources are finite and limited. In cases more than one patient is being received at the same time, it may not be able to follow these norms. These norms are for guiding the health care provider. If the time limit could not be adhered to due to various factors, it does not constitute negligence and these time norms cannot be used as a criteria to evaluate Negligence or Deficiency of Care. For Example the norms here state that Emergency Decompression has to be started within 45 minutes of receiving the patient. However, if the Surgeon is already operating on another patient or engaged in some other live saving work, it is obvious that surgery for this patient who has now come will be delayed. This does not constitute a medical negligence.

A patient is expected to be in the Emergency Department for 6 hours and hence the norms are fixed for few activities

Door Time in Hours	Door Time in Minutes	Steps to be completed
	2	1. Triage Sorting the Patient into Red, Yellow, Green Criteria should be completed within 2 minutes of Receiving the Patient. Red and Yellow Patients have to be taken to the Resuscitation Bay as per need. Green Patients Taken to Green Area and managed accordingly.
	4	1. Quick Primary Survey for Red and Yellow Patients (Quick Primary Survey is explained in Detail in subsequent chapters)
	8	1. Resuscitation for Red and Yellow Patients Resuscitation involves Management to Maintain ABCDE. 2. Primary Survey and Resuscitation are done simultaneously for Red and Yellow Patients for whom the following as to be done Within 8 minutes of Patient entering the Hospital Premises (2 minutes + 6 Minutes) <ul style="list-style-type: none"> • Airway : Suction / ET / Tracheostomy • Breathing : Ambu / Ventilator • Circulation : Peripheral IV Line / Central Line + Draw Blood for Investigations

		<ul style="list-style-type: none"> • Disability : Cervical Collar / Spine Board • Exposure : Remove Source of Poison / Maintain Temperature
	15	<ol style="list-style-type: none"> 1. Complete eFAST and Mobile X Ray for Red and Yellow Patients 2. Dispatch to Lab all Samples Collected from Red and Yellow Patients 3. Complete Catheterisation, ICD if Needed 4. Start Thrombolysis if Indicated 5. Shift to CT if Indicated
	30	<ol style="list-style-type: none"> 1. Complete AR Entry. Please note that as per TAEI Protocol AR Entry follows Resuscitation 2. Closed Reductions to be completed 3. Complete CT If Indicated 4. Shift to MRI if Indicated
	45	Emergency Decompression Cath Lab Procedures Complete Secondary Survey
1	60	Complete Treatment for Green Patients Complete Spine MRI if Indicated
2	120	Complete Specialist Opinion
3	180	Spine Fixation in Case of Instability
6	360	Shift Patient from ER to Respective Departments, if Indicated

3. Easy to Implement Standardised Protocols and Guidelines for Common Conditions and Common Procedures in Emergency Department have been formulated

The next innovation under TAEI is the use of Standardised Protocols and Guidelines for Common Conditions and Procedures in Emergency Department for Patient Management. These will be updated every six months

4. Capacity Building & Training:

All Cadres of Staff (From Doctors to Stretcher Bearers) will be give continuous and structured training. Tamil Nadu Accident and Emergency Care (TAEC) Policy envisages has Four Levels of Capacity Building for Four Categories of Individuals

1. **IEC** Activity for General Public
2. **TAEI FRC** (TAEI First Responder Care) for Those who are more likely to deal with an Emergency. This will be a one Day Training with 9 Sessions. This would include all Components of **Heart Saver + BLS** (Basic Life Support) Course
3. **TAEI Protocols Training** for all Health Care Workers including Undergraduate Medical and Paramedical Students. This will be for 3 Days and will be equivalent to FRC + 2 Days. This would include all Components of **Heart Saver + BLS + ACLS** (Advanced Cardiac Life Support) Courses
4. **TAEI Skills Grading** for those who are posted in Emergency Departments and Postgraduate Medical Graduates for eight days. This would be for a duration of 3 (TPT) + 5 days and would include All Components of **Heart Saver + BLS + ACLS + ATLS** (Advanced Trauma Life Support) Courses

5. Check Lists to help Health Care Workers are being used

Check Lists at various stages along with innovative case sheets are aimed at reducing the work load of the health care workers. The check lists will be explained in corresponding chapters

6. Standardisation of Registers

The Registers and Reporting Formats will be standardised across all Emergency Departments

7. Deputy Superintendent TAEI

An interested and Capable Medical Officer will be designated as Deputy Superintendent TAEI in Each Hospital and he/she would be the Nodal Person for Carry Out the TAEI Programme in each Hospital along with the Head of the Institution

8. Duty Trauma Nurse Coordinator

The Senior Most Staff Nurse in Duty will be called as Duty Trauma Nurse Coordinator and he/she will be incharge of ER at the shif

9. Uniform for Workers

All Workers in TAEI Wards will be give an distinct Uniform and this will be common across all hospitals

10. TAEI Number & Trauma Case Sheet:

Each Admission will be given an unique TAEI Number and there will be an eight Page Case Sheet. This Case Sheet will follow the patient from institution to institution. Entries will be made in this case sheet with a carbon copy in the hospital case sheet. This will serve as referral form and hence the time delay in preparing discharge summary will be avoided

11. Cath Labs and Hub and Spoke Management of MI and Stroke

There will be a Hub and Spoke Management of Myocardial Infarction and Stroke involving both Pharmacological and Invasive Treatments

12. Emergency Department

Emergency Department will be started in all institutions. This will include Emergency Room (ER) and Hybrid High Dependency Unit (HHDU) / Multi Disciplinary Critical Care Units (MDCCU)

13. Concept of Emergency Rooms

Casualty, Zero Delay Ward, Zero Delay Casualty, Triage Wards, Trauma Ward, Accident Ward, Accident and Emergency Ward will all be merged into a Single ER. The ER will have Triage Area, Resuscitation Bay, Red, Green and Yellow Zone

The Emergency Room will be Color coded as RED, YELLOW, GREEN based on the nature of the emergency. Color codes will be the first step in triage.

14. Concept of Hybrid High Dependency Unit (HHDU) / Multi Disciplinary Critical Care (MDCCU)

This will be a Intensive Care Unit attached to ER and under the control of Emergency Department in which patients requiring intensive care would be treated before being taken over by a department

15. Pre Arrival Intimation

The Hospital to which a patient is being transferred will be informed in advance

16. Hospital Emergency Codes

The Various Hospital Emergency Codes as per NABH Norms (Code Blue, Code Pink, Code Red etc) will be introduced. This will be tied with Pre Arrival Intimation too

17. Code Blue Brain Protocol

This Ensures that all patients who get Pre Arrival Intimation regarding Stroke / Head Injury be shifted directly to the CT Room from Ambulance and only after the CT Brain has been taken, the patient should be shifted to ER. The Neurosurgeon / Neurologist / Surgeon / Other Doctors may look directly at the CT Monitor and begin prompt treatment as per TAEI and SCRIPT Protocols without waiting for the report. The CT Film may be handed over to the patient or Relative if they pay for it. If the Patient or Relatives do not pay, the Cost can be met from the Institutional Fund (as is being done for Unknown Patient)

18. Concept of Triage

Concept of Triage will be introduced in TAEI to evaluate the patient based on Standard Criteria and to optimally use the resources to deliver quality of care. ERs will have Triage Area

19. Application of Philadelphia Collars and Pelvic Binders

Suspected Neck Injury and Pelvic Injury will be managed with Application of Philadelphia Collars and Pelvic Binders

20. Resuscitation Bay

Resuscitation bay will be setup in All Institutions. Patients who are sorted under Red and Yellow Criteria will be received in Resuscitation Bays and managed as per Protocols

21. Uniform Position of of Drugs and Consumables in Crash Carts in All Centres

This will facilitate treatment and reduce time needed for a procedure

22. eFAST

eFAST will be performed on all patients with suspected Abdominal injuries who are admitted in ER

23. Mobile X Ray

Mobile X Ray instrument will be available in all ER

24. Point of Care Testing

POCT will be made available in all ER to have rapid investigations

25. Registration of Medico Legal Cases

AR Entry will be made ONLY AFTER RESUSCITATION. Web Based Interface will be provided for AR Entries and the Printed Forms can be signed and filed. It is proposed to develop software in coordination with NIC for registering medico-legal cases

26. Rehabilitation to start from ER

Rehabilitation will be started as soon as possible and not after discharge

Is an integral part in trauma care as it is estimated that nearly 100% of the RTA casualties with severe injuries, 50% of those with moderate injuries and 10-20% of those with mild injuries carry disabilities of physical and psychological nature requiring long term rehabilitation (Gururaj,2000) Hence good rehabilitative services need to be ensured at all levels of care.

Under TAEI, comprehensive Medical and Psychological rehabilitation program will be developed

27. App Based Reporting and MIS

It is proposed to develop an Management and Information System (MIS) in Emergency Room. It is also proposed to install Display Boards (electronic / Hand Written) mentioning the status of the patient, treatment plan and the completion status of the recommended diagnostics and investigations to minimize apprehension among the patient relatives and thus enhance care and service delivery.

It is also proposed to generate unique ID by integrating the Emergency Room admission MIS with the CMCHIS software platform Remedinet.

28. TAE Registry

A comprehensive Accident and Emergency Registry will be setup

29. Critical Case Review

There will be multi layered Critical Case Review at

1. Ward Level
2. Department Level
3. Institution level
4. District Level
5. Speciality Level
6. State Level

30. Monitoring and Evaluation:

It is proposed to measure tangible outcomes of Trauma care services based on the data collected from all the centres.

31. Research studies

It is proposed to conduct regular Research Programmes to enable creating better protocols and guidelines.

32. Branding

This initiative aims to establish and strengthen the Hub and spoke model of Trauma care under the name– Tamil Nadu Accident and Emergency Care Initiative (TAEI). It is proposed to brand all the centres with a logo and tagline "Saving Lives is Our Mission"

33. Technical Support

The technical support and knowledge exchange is proposed between Our Hospitals and

1. AIIMS
2. IIT Madras, Chennai
3. Alfred Hospitals, Australia

Pillars of TAEI

As discussed earlier, Tamil Nadu Accident and Emergency Care Initiative rests on the following 6 pillars, namely

1. Trauma Care
2. Management of Acute Myocardial Infarction (STEMI and NSTEMI)
3. Management of Stroke with SCRIPT
4. Management of Burns
5. Management of Poisoning
6. Management of Paediatric Emergencies with PREM

Building Blocks of TAEI

1. Protocols
2. Human Resources
3. Capacity Building (Training)
4. Electronic and Paper Record Maintenance
5. Rehabilitation
6. Quality of Care, Monitoring & Evaluation
7. Research
8. Administrative & Institutional Framework
9. Building
10. Equipments
11. Consumables
12. Drugs
13. Linkage to Safe Systems
14. Health Care Financing
15. Interdepartmental, National and International Collaboration

Policy for Protocols in TAEI

1. The Protocols for Management of Patients in TAEI Centres will be released by the Commissioner of Trauma Care. This will include
 - a. Protocols for Recruitment of for Human Resources
 - b. Protocols for Use of Electronic and Paper Record Maintenance
 - c. Protocols for Rehabilitation
 - d. Protocols for Quality of Care, Monitoring & Evaluation
 - e. Protocols for Research
 - f. Protocols for Administrative & Institutional Framework
 - g. Protocols for Building
 - h. Protocols for Equipments
 - i. Protocols for Consumables
 - j. Protocols for Drugs
 - k. Protocols for Linkage to Safe Systems
 - l. Protocols for Health Care Financing
 - m. Protocols for Interdepartmental, National and International Collaboration
 - n. Protocols for Management of Trauma
 - o. Protocols for Management of STEMI / NSTEMI Heart Attacks
 - p. Protocols for SCRIPT
 - q. Protocols for Management of Burns
 - r. Protocols for Management of Poisoning
 - s. Protocols for PREM
2. Suggestions / Modifications may be suggested by Users Online at <http://www.taenline.com/book>
3. The Technical Division of SPMU will collate these protocols at the Protocol Review Meeting to be held twice a year
4. Protocol Review Meetings

- Will be Conducted twice a year at First Tuesday of January and First Tuesday of July or the next working day if the above days fall on Government Holidays
- There will be a meeting of Sub Committees for (1) Trauma (2) MI (3) Stroke (4) Poison (5) Burns (6) PREM in the morning to go into detail of each suggestion and offer their remarks as to the whether the suggestions can be Accepted, Accepted with Modifications, Kept in Abeyance to be discussed later, More Clarifications needed from the Proposer or Rejected
 - The Expert Technical Committee for Protocols will meet in the afternoon and decide about adopting recommendations of the sub Committees
 - The Commissioner of Trauma Care will amend Protocols based on the Recommendations of the Expert Technical Committee and the same will Published Online within a week.
 - The Protocols published Online will be considered as the Latest version and has to be followed by the Hospitals
 - The Commissioner of Trauma Care will have the power to call for Protocol Review Meeting any time, in addition to the stipulated biannual meetings

Policy for Capacity Building (Training) in TAEI

Policy for Capacity Building (Training & Certification)

TAEI has Four Levels of Capacity Building for Four Categories of Individuals

- IEC Activity for General Public
- TAEI FRC** (TAEI First Responder Care) for Those who are more likely to deal with an Emergency
- TAEI Protocols** for all Health Care Workers including Undergraduate Medical and Paramedical Students
- TAEI Skills** for those who are posted in Emergency Departments and Postgraduate Medical Graduates

Level I : IEC Activity for General Public

Aim & Objectives

- To Sensitise All Citizens of Tamil Nadu about Emergency Care
- To Make them Call 108 Ambulance Immediately after an Incident
- To Avoid Delays in Treatment

Recipients

- All Citizens of Tamil Nadu

Mode

- Books
- Brochures
- Print and Visual Media
- Social Media

Duration

- Continuous Activity

Examination Certificate

- Not Needed

Level II : TAEI FRC (TAEI First Responder Care)

Aim & Objectives

- To Prepare the First Responders Deal with any potential Emergency
- To Prevent or At least Reduce the Secondary Injuries (Injuries happening due to acts of commission or Omission after the Incident)
- To Maximise Management within the Golden Hours

Recipients

- School and College Teachers
- Industrial Workers
- Employees of Transport Department
- Shopkeepers, Fuel Station Workers and other common public along the highway.
- Workers of Unorganised Sectors
- Any Other category of personnel who are more likely to deal with an Emergency

Mode

- Class Room Teaching
- Demonstration with Models and Mannequins

Duration

- One Day (8 Hours)

Course Contents

- Structure and function of the human body
- Dressing & Bandages
- Respiration & Asphyxia
- Wounds & Bleeding
- Shock
- Injuries to Bones
- Injuries to muscles and joints

8. Nervous system and unconsciousness
9. Burns & Scalds
10. Poisoning
11. Miscellaneous condition
12. Blood donation
13. Handling & Transport of injured persons
14. Contents of First Aid Box
15. HEART ATTACK
16. CPR – Cardio Pulmonary Resuscitation
17. ABC & Recovery position

Examination

1. MCQ Examination

Certification

1. TAEI FRC Certificate and Badge will be issued. In addition to this, Digital Certificate will be issued to the candidates Aadhar Linked Digilocker

Level III : TAEI Protocols

Aim & Objectives

1. To train all healthcare workers to work in Unison and as a Team
2. To Standardize the Care, Skills, Protocols across all government Hospitals

Recipients

1. All Health Care Workers
2. All Undergraduate Medical Students
3. All Paramedical Students

Prerequisite

1. None. However, those who have undergone TAEI FRC in the past 6 months can skip Day one

Mode

1. Class Room Training
2. Lectures
3. Demonstration with Models & Mannequins
4. Hands on Training

Duration & Course Contents

1. 3 days For those who have not undergone:
 - a. Day 1 will be the TAEI FRC Training and exam will be conducted at the end of the day and Certificate and Badge will be issued
 - b. Day 2 will have lectures and Demonstration and Hands on Training about Primary Survey, Resuscitation, and Other Stages of Patient Care in ER
 - i. RE.1 Referral
Referral Out from One Hospital to Referral In to Next Hospital

- ii. RE.2 Intra Hospital Transfer of Patients from One Ward to Another
- iii. HE.1 Pre Intimation to Hospital and Hospital Preparation Hospital Being Ready to Immediately Start Treatment
- iv. ER.1 Triage Red, Yellow or Green
- v. ER.2 Primary Survey Check ABCDE
- vi. ER.3 Resuscitation Manage ABCDE
- vii. ER.4 AR Entry AR Entry / eMLC
- viii. ER.5 Secondary Survey Detailed Examination
- ix. ER.6 Investigations Imaging and Blood Investigations
- x. ER.7 Specialist Opinion and Management if needed
- xi. ER.8 Monitoring and Re evaluation Continuous post resuscitation monitoring and re evaluation

- c. and 3 will have lectures about TAEI Protocols in the morning and Exam in the Afternoon Session
2. 2 Days for those who have undergone TAEI FRC in the past 6 months
 - a. Day 1 will have lectures and Demonstration and Hands on Training about Primary Survey, Resuscitation, and Other Stages of Patient Care in ER
 - b. and 2 will have lectures about TAEI Protocols in the morning and Exam in the Afternoon Session

Examination

1. TAEI FRC Exam at the End of Day One
 - a. MCQ Exams
2. TAEI Protocols Exam at the End of Day Three
 - a. MCQ Exams
 - b. Clinical Demonstration

Certificate

1. "TAEI FRC" Certificate and Badge will be issued. In addition to this, Digital

Certificate will be issued to the candidates Aadhar Linked Digilocker

2. "TAEI Protocols" Certificate and Badge will be issued. In addition to this, Digital Certificate will be issued to the candidates Aadhar Linked Digilocker

Level IV : TAEI Skills Certification

Aim & Objectives

1. To Impart Specialised and Advanced Training to Health Care Workers posted in Emergency Departments

Recipients

1. Those posted in Emergency Departments
2. Postgraduate Medical Graduates

Prerequisite

1. TAEI Protocol Training

Duration

1. 5 days

Mode

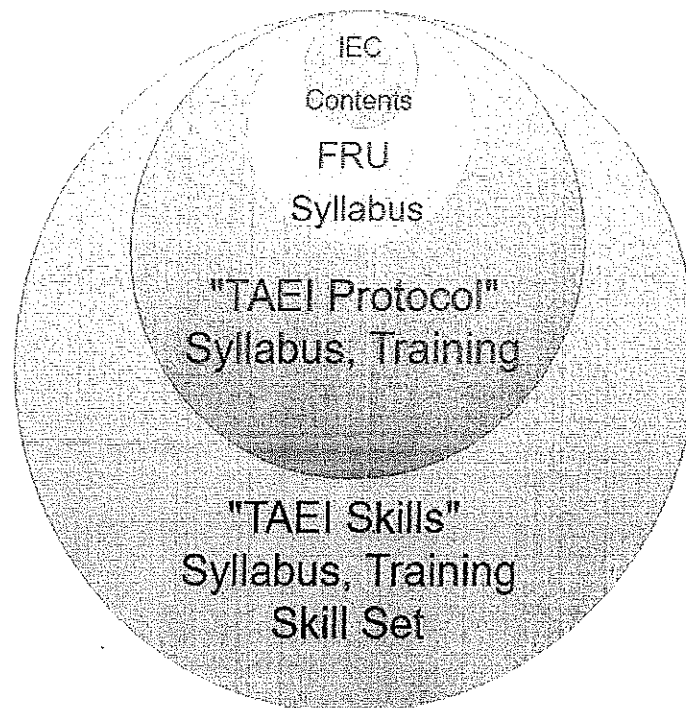
1. Class Room Training
2. Lectures
3. Demonstration with Models & Mannequins
4. Hands on Training
5. Clinical Posting in an ED in a Medical College / Training Institute

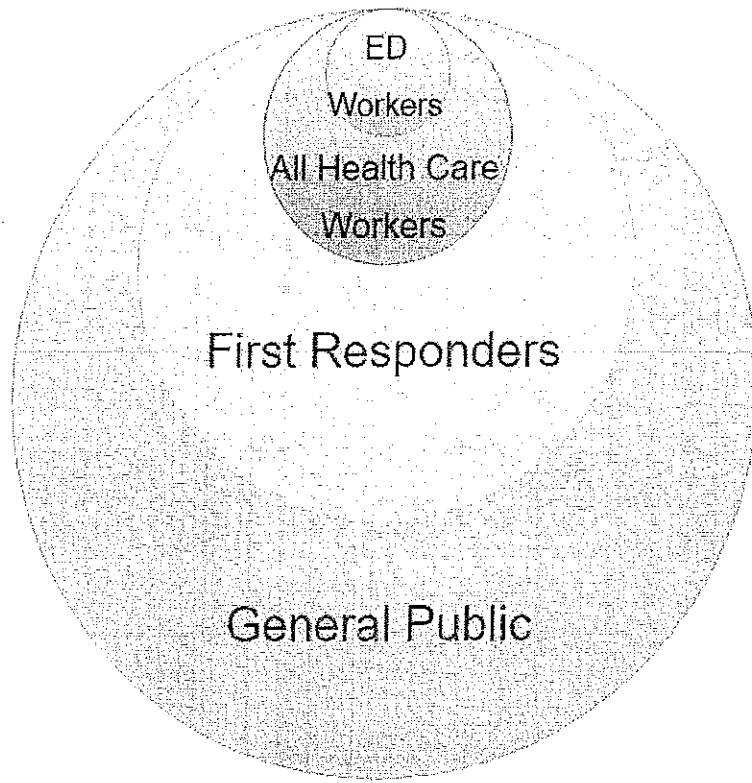
Examination

1. OSCE

Certificate

1. "TAEI Skills" Certificate and Badge will be issued. In addition to this, Digital Certificate will be issued to the candidates Aadhar Linked Digilocker





TAEI Training

S.No	TAEI Capacity Building Programme	Target Audience	Duration	Batch Strength	Equivalent	Examination	Certification
1	IEC	All Citizen of TN	-				
2	FRC (First Respondent Care)	<ol style="list-style-type: none"> 1. All Health Care Workers 2. All Medical and Paramedical Students 3. School and College Teachers 4. Industrial Workers 5. Employees of Transport Department 6. Shopkeepers, Fuel Station Workers and other common public along the highway. 7. Workers of Unorganised Sectors 8. Any Other category of personnel who 	1 Day	30	Heart Saver + BLS	MCQ Exam + Demonstration	"FRC" Certificate and Badge will be issued. In addition to this, Digital Certificate will be issued to the candidates Aadhar Linked Digilocker

		are more likely to deal with an Emergency					
3	TPT (TAEI Protocol Training)	1. All Health Care Workers in Tamil Nadu Medical Services 2. All Medical and Paramedical Students	FRC + 2 Days	30 (12 Doctors + 18 Nurses) Preferably 3 Nurses and 2 Doctors from Same Institution	Heart Saver + BLS + ACLS (Advanced Cardiac Life Support)	MCQ Exam + Demonstration	"FRC" Certificate and Badge "TPT" Certificate and Badge Digital Certificate will be issued to the candidates Aadhar Linked Digilocker
4	TSG (TAEI Skill Grading)	1. All Health Care Workers in ER in Tamil Nadu Medical Services 2. All Medical and Nursing Students	TPT + 5 Days	15 (6 Doctors + 9 Nurses) Preferably 3 Nurses and 2 Doctors from Same Institution	Heart Saver + BLS + ACLS + ATLS (Advanced Trauma Life Support) Courses	MCQ Exam + Demonstration	"FRC" Certificate and Badge "TPT" Certificate and Badge "TSG" Certificate and Badge And Digital Certificate in Digilocker

- **FRC Training :** 1 Day Training with 9 Sessions : Includes All Components of **Heart Saver + BLS (Basic Life Support) Course**
- **TAEI Training :**
- **TFF :** TAEI Protocols Training : 3 Days : FRC + 2 Days : Includes All Components of **Heart Saver + BLS + ACLS (Advanced Cardiac Life Support) Courses**
- **TSG :** TAEI Skills Grading: TPT + 5 days : Includes All Components of **Heart Saver + BLS + ACLS + ATLS (Advanced Trauma Life Support) Courses**

TSG Detailed Schedule

Days	Course
Day 1 :	FRC and Day 1 of TPT and TSG
Days 2,3 :	Days 2,3 of TPT and TSG
Days 4,5,6,7,8 :	Days 4,5,6,7,8 of TSG
Course :	Days
First Responder Care (FRC) :	Day 1
TAEI Protocol Training (TPT) :	Days 1,2,3,
TAEI Skill Grading (TSG) :	Days 1,2,3,4,5,6,7,8

Day	Duration	Title	Description	Faculty	Remarks
	09:00 to 09:30	Registration			
1	09:30 to 10:00	Pre Test		Course Co Coordinator	MCQ based Test of 30 Questions

Date	Duration	Title	Description	Faculty	Remarks
1	10:00 to 10:45	Human Physiology	<ol style="list-style-type: none"> 1. Basic Physiology 2. Importance of Circulation, 3. Respiration, 4. Brain Function 	Faculty from EMRI	Didactic Lecture with Slide Shows and Videos
	10:45 to 11:00	Tea Break			
1	11:00 to 11:45	ABCDE & First Aid Basics	<ol style="list-style-type: none"> 1. Airway <ol style="list-style-type: none"> a. Importance of Recovery Position b. Techniques for relief of foreign-body airway obstruction (choking) for adults, children and infants 2. Breathing <ol style="list-style-type: none"> a. Signs of someone needing CPR b. Artificial Respiration, c. Mouth to Mouth and Barrier Device d. Effective ventilations with a barrier device e. AMBU, f. Importance of high-quality CPR and its impact on survival g. High-quality CPR skills 	Faculty from EMRI	Didactic Lecture with Slide Shows, Videos and Demonstration Demonstration of AED Demonstration of CPR

Date	Duration	Title	Description	Faculty	Remarks
1	4	11:45 to 12:30	acquisition for adults, children and infants h. Ventilator 3. Circulation a. Cardiac Massage b. Importance of early use of an AED c. AED skill demonstration d. 4. Disability a. AVPU b. Blood Sugart 5. Environment a. Dressing 1. Scene Safety and Assessment 2. Application of the steps of the Chain of Survival 3. Multi rescuer resuscitation and skill acquisition 4.	Faculty from EMRI	
		Lunch to Break			
1	5	13:30 to 14:15	How to React in Various Scenarios 1. Injury Hand and Feet a. Bleeding b.	Faculty from EMRI or Professor of	Socratic Discussions with Demonstrations encouraging the trainees to ask more scenarios other than the conditions mentioned

Date	Duration of the	Description	Faculty	Remarks
1	6 14:15 to 15:00	Common Scenarios How to React in Various Scenarios 11. Neck Injuries f. Kite	Professor of Surgery or Surgery or doctor	<ol style="list-style-type: none"> 1. Direct Compression of Bleeding Site (Head, UL, LL) <ol style="list-style-type: none"> a. Dressing b. Bandage c. TT <ol style="list-style-type: none"> i. Inj TT ½ cc IM stat d. Anti biotics <ol style="list-style-type: none"> i. Ampicillin 1 gm + Inj GM 80 mg iv stat e. Analgesics <ol style="list-style-type: none"> i. Inj Diclo 1amp IM Stat (Paracetamol Rectal Suppository for kids) Inj ii. 2. How to preserve the amputated part 3. Cuff and Collar, Check for Pulse 4. Thomas Splint, Check for Pulse, FND 5. Philadelphia Collar / Spine Board / Scoop Board / 6. ICD, Needle Thoracocentesis 7. <p>Socratic Discussions with Demonstrations encouraging the trainees to ask more scenarios other</p>

Date	Duration / Title	Description	Faculty	Remarks
		<ul style="list-style-type: none"> g. Hanging 12. Drowning / Submersion 13. Chest Injuries <ul style="list-style-type: none"> h. Fracture Rib i. Pneumothorax j. Hemothorax k. Pericardial Tamponade 14. Stab Injury Abdomen <ul style="list-style-type: none"> l. Bull Gore 15. Blunt Injury Abdomen 16. Pelvic and Perineal Injuries including Bladder Injuries 17. Multiple Injuries / Polytrauma 18. Vomiting <ul style="list-style-type: none"> m. Hematemesis 19. Acute Abdomen <ul style="list-style-type: none"> n. AGE o. APD p. Acute Pancreatitis q. Renal Colic r. Urine Retention s. Ectopic Pregnancy 20. Labour and Obstetric Emergencies <ul style="list-style-type: none"> t. 	nominated by him/her	<p>than the conditions mentioned</p> <ul style="list-style-type: none"> 8. Philadelphia Collar / Spine Board / Scoop Board / 9. ICD, Needle Thoracocentesis 10. Vomiting 11. How to Manage Acute Abdomen in ER <ul style="list-style-type: none"> a. Ask for <ul style="list-style-type: none"> i. LMP (in case of females) ii. b. Look for <ul style="list-style-type: none"> i. Anemia (Ectopic) ii. Jaundice (Pancreatitis due to Obstruction) iii. Tenderness iv. PR v. PV c. Do <ul style="list-style-type: none"> i. eFAST ii. ECG - All Leads including Limb Leads. ECG to Rule out Inferior Wall Ischemia iii.

Date	Duration	Title	Description	Faculty	Remarks
					12. <ul style="list-style-type: none"> e. <ul style="list-style-type: none"> iv. Investigation <ul style="list-style-type: none"> i. USG ii. Plain X Ray Abdomen iii. CT Abdomen
1	7 15:15 to 16:00	Common Scenarios	21. Breathlessness <ul style="list-style-type: none"> u. Asthma 22. Heart Attack / Chest Pain <ul style="list-style-type: none"> v. Importance of AED and CPR 23. Head ache 24. Stroke 25. Fits <ul style="list-style-type: none"> w. Dos and Don'ts 26. Burns 27. Anaphylaxis / Allergic Reactions / Fever 28. Poison / Drug Overdose 29. Snake Bite / Scorpion Sting 30. Unconscious Patient 	Professor of Medicine or doctor nominated by him/her	Socratic Discussions with Demonstrations encouraging the trainees to ask more scenarios other than the conditions mentioned Apply Cuff and Collar #Stabilisation of UL and LL 13. Unconscious Patient <ul style="list-style-type: none"> a. FBS, Urea, Creatinine, Electrolytes b. Ketone Bodies c. Jaundice d. CT e. USG indicated in <ul style="list-style-type: none"> i.

Date	Duration	Title	Description	Faculty	Remarks
1	8 16:00 to 16:45	Legal Aspects and Mass Casualty	x. Munchausen Syndrome 31. Alcohol Intoxication / Agitated Patients 32. General Aches and Pains 1. Disaster inside Hospitals 2. Legal Aspects in Emergency 3. How to Get Help a. Whom to call b. What all to tell i. Where are you ii. How many need help iii. What is the emergency iv. What help you need c. 4. Mass Casualties / Natural Disasters	Faculty from EMRI	14.
1	9 16:45 to 17:15 17:15 to 17:45	Post Test Valedictory		Course Coordinator	MCQ based Test of 30 Questions
	09:00 to	Registrati on			

Date	Time	Topic	Description	Faculty	Remarks
2	09:30 to 10:00	Pre Test		Course Coordinator	MCQ based Test of 30 Questions
2	10:00 to 10:45	Introduction PAI and Referral and Callouts	<ol style="list-style-type: none"> 1. TAEI Introduction 2. Pillars of TAEI 3. Management Flow Chart 4. How is TAEI Different 5. Pre Arrival Intimation and Referral 6. Hospital Codes 7. c. Initiate primary and secondary management necessary within the "golden hour" for the emergency care of acute life-threatening emergencies. 	Faculty from SPMU or District TAEI Trainer or DS TAEI or HTNC	Code Blue Heart Code Blue Brain To be Practised
2	10:45 to 11:00	Tea Break			
2	11:00 to 11:45		<ol style="list-style-type: none"> 8. Triage 9. b. Establish management priorities in a trauma situation. 10. Universal Precautions 11. Critical Care Transport <ol style="list-style-type: none"> a. Pre, Per, Post Observations 	Faculty from SPMU or District TAEI Trainer or DS TAEI or HTNC	

Date	Duration	Title	Description	Faculty	Remarks
2	1 2	11:45 to 12:30	Evaluation of Triage	Faculty from SPMU or District TAEI Trainer or DS TAEI or HTNC	
2		Lunch to Break			
2	1 3	13:30 to 14:15	12. Team Work 13. Primary Survey 14. 15. Resuscitation 16. a. Demonstrate concepts and principles of primary and secondary patient assessment. 17. e. Primary and secondary assessment of a patient with simulated, multiple injuries	Faculty from SPMU or District TAEI Trainer or DS TAEI or HTNC	Team Dynamics
2	1 4	14:15 to 15:00	Evaluation of Primary Survey and Resuscitation		
2	1 5	15:00 to 15:45	18. Airway including Intubation 19. f. Established a patent airway and initiating one- and	Professor of Anaesthesiol ogy or	Manual – Head Tilt and Chin Lift Accessory Airway - Advanced Airway – Advanced Airway

Date	Duration (Time)	Description	Faculty	Remarks
2	15:45 to 16:00	Tea Break		
2	16:00 to 16:45	Evaluation of Airway and Intubation	Professor of Anaesthesiology or doctor nominated by him/her	
2	16:45 to 17:30	23. Respiratory Arrest Management 24. Breathing : Ambu and Ventilators 25. l. Pleural decompression via needle thoracentesis and chest tube insertion 26. n. X-ray identification of thoracic injuries	Professor of Anaesthesiology or doctor nominated by him/her	Basic Settings
2	17:30 to 18:15	Evaluation of Breathing and Ventilators	Professor of Anaesthesiology or	

Date	Duration	Title	Description	Faculty	Remarks
3	19 09:00 to 09:30		27. Circulation : iv Lines and Central Lines 28. Post Cardiac Arrest management 29. Brady Cardia, Tachycardia Algorithms 30. j. Assessment and management of the patient in shock, including initiation of percutaneous venous access and recognition of life-threatening hemorrhage 31. k. Venous cutdown (optional) 32. m. Pericardiocentesis 33.	doctor nominated by him/her Professor of Cardiology or Medicine or doctor nominated by him/her	ECG REcognition Cardiac Arrest Management Algorithms Hypovolemic Shock Fluid Calculation
3	20 09:30 to 10:00		34. eFast 35. o. Peritoneal lavage, ultrasound, and CT evaluation of the abdomen 36. CPR and BLS	Professor of Radiology or Surgery or doctor nominated by him/her EMRI Faculty or	

Date	Duration	Title	Description	Faculty	Remarks
	10:45			Professor of Cardiology or Medicine or doctor nominated by him/her	
3	10:45 to 11:00	Tea Break			
3	2 11:00 to 11:45		Evaluation of eFAST	Professor of Radiology or Surgery or doctor nominated by him/her	
3	2 11:45 to 12:30		Evaluation of CPR and BLS	EMRI Faculty or Professor of Cardiology or Medicine or doctor nominated by him/her	
3	12:30 to 13:30	Lunch Break			
3	2 13:30 to 4		33. Disability -34. p. Head and neck trauma	EMRI Faculty or	Stroke Management

Date	Duration	Title	Description	Faculty	Remarks
3	14:15		assessment and management with GCS scoring 35. q. Identification of intracranial lesion by CT scan 36. r. X-ray identification of spine injuries 37. s. Neurotrauma evaluation 38. Brain Stem Dysfunction 39. t. Musculoskeletal trauma assessment and management 40. Environment	Professor of Neurology or Neurosurgey or Medicine or doctor nominated by him/her EMRI Faculty of Professor of Orthopaedic is doctor nominated by him/her	
3	14:15 to 15:00				
3	15:00 to 15:15	Tea Break			
3	15:15 to 16:00		41. Legal Aspects in Emergency Care 42. Team Work	Faculty from SPMU or District TAEI Trainer or DS TAEI or HTNC	
3	16:00 to	Post Test		Course Co Ordinator	MCQ based Test of 30 Questions

D. No.	Date	Time	Title	Description	Facility	Remarks
		16:30 to 17:00	Valedictory			
4		09:00 to 09:30	Registration			
4		09:30 to 10:00	Pre Test	This is same as the Post Test of TPT. This is not needed if they had taken TPT just the previous day		
4	28	10:00 to 10:45		Cardiac Arrest and Team management		Defibrillator Mannequin and Defibrillator Machine, Monitor, Lap top with Software installed (Laerel)
4		10:45 to 11:00				
4		11:00 to 11:45		Tachyarrhythmia Management Skills including ECG learning (Synchronized Cardio Version)		Defibrillator Mannequin with Defibrillator Machine, Moinitor, Lap top with Software installed (Laerel)
4		11:45 to 12:30		Brady Cardia Management including ECG learning		Trans Cutaneous Pacing method
4		12:30 to 13:30				
4		13:30 to		Intubation		Airway Mannequin- Adult / Peadiatric/ Infant

Date	Duration	Title	Description	Facility	Remarks
	14:15				Airway Devices, (basic, Advance and Definite) AMBU bag and Mask, face mask, NRBM, OPA (All size), Venture Mask, NPA (All size), Laryngoscope with all size Blades, Battery set, ET tube all size, LMA all size, Combitube, J-Gel.
4	14:15 to 15:00		Central Line Training (IJV, Subclavian, Femoral Venous puncture)		Central Line Mannequin with accessories
4	15:00 to 15:15				
4	15:15 to 16:00		Needle Decompression Intercostals Drainage Open Pneumothorax Management		Needle Decompression Mannequin with Large bore venflan ICD Mannequin with ICD Tray and Tube accessories 3 way valve dressing. Adhesive dressing
4	16:00 to 16:30		Rib Fracture management		
4	16:30 to 17:00		Cervical Collar Application, Pelvic Binder application and Spine Immobilization & Log roll Techniques		Philadopheal Collar and Spine Board with Straps and Belts
5	09:00 to		Fracture stabilization technique both Upper Limb and Lower Limb		Traction Splints, Pads, Cuff and Collar, etc

Date	Duration @Hr	Title	Description	Faculty	Remarks
5	09:30 to 10:00		E- FAST technique		E- FAST machine, Cot , patient for Demo the Areas.
5	10:00 to 10:45		Ventilators Setting (Basic and Advance)		Ventilator Machine and Test Lung
5	10:45 to 11:00				
5	11:00 to 11:45		Fluid Calculation For Hypo volumic shock, Burns , Dehydration , ARDS, etc.		
5	11:45 to 12:30		Vasopressors Calculation For Common Conditions.		
5	12:30 to 13:30				
5	13:30 to 14:15		Cricothyroidotomy (A: Needle Cricothyroidotomy B: Surgical Cricothyroidotomy)		
5	14:15 to 15:00		Intraosseous Puncture (IO Needle access)		
5	15:00 to 15:15		Pericardio Centesis (optional)		

Date	Duration	Title	Description	Faculty	Remarks
5	15:15 to 16:00		Reading of CT scan (Basic)		
5	16:00 to 16:30		Reading of Xray in case of Spine Injuries.		
5	16:30 to 17:00		Compartmental Syndrome: Assessment and Management		
6	09:00 to 09:30		Decontamination techniques: Gastric Lavage, Antidots and Dosage		
6	09:30 to 10:00		Management of Amputated Limb & Transport techniques		
6	10:00 to 10:45		Multi-Casualty Incidents and Triage		
6	10:45 to 11:00				
6	11:00 to 11:45		Drowning, Barotrauma, and Decompression Injury		
6	11:45 to 12:30		Team Management in Poly trauma Victim		

Date /	Time on	Title	Description	Faculty	Remarks
6	12:30 to 13:30				
6	13:30 to 14:15		Broselow tape		
6	14:15 to 15:00		Stroke Management		
6	15:00 to 15:15				
6	15:15 to 16:00		Chest Pain and MI management (STEMI and NSTEMI)		
6	16:00 to 16:30		Respiratory Emergencies (ARDS, Anaphylaxis, Asthma, COPD etc)		
6	16:30 to 17:00		TAEI - Scoring system which including GCS, AIS, ISS, MHIPS, Karnofsky Performance Status Scale, Japanese Orthopedic Association Score (JOAS)		

TAEI Skill Grading Pilot Batches Detailed Schedules for Hands on Demonstration and Clinical Observership Days 4 5 6 7 8						
Date	Day	Duration	Title	Description	Faculty	Remarks
	4	09:00 to 09:30	Registration			
	4	09:30 to 10:00	Pre Test			
	4	10:00 to 13:00	Cardiac Emergencies other than Infarction	1. Cardiac Arrest and Team Management 2. BLS 3. ACLS 4. Tachy Arrhythmia 5. Brady Arrhythmia 6. ECG Reading 7. Pericardiocentesis	Course Co Coordinator Dr. Dhavapalani Dr. Prathima (Apollo)	MCQ based Test of 30 Questions Brief Lectures with Hands on Demonstrations in Mannekins Demonstration of AED Demonstration of CPR ECG Recognition Cardiac Arrest Management Algorithms
	4	13:00 to 14:00	Lunch			
	4	14:00 to 14:45	STEMI Protocols Basics	STEMI Protocols Basics	Cardiologist RGGGH	Brief Lecture with Clinical Scenarios and asking the Trainees to Tell the Management Code Blue Heart To be Practised
	4	14:45 to 15:30	SCRIPT Protocols Basics	SCRIPT Protocols Basics	Neurologist RGGGH	Brief Lecture with Clinical Scenarios and asking the Trainees to Tell the Management Code Blue Brain To be Practised
	4	15:30 to 17:00	Head Injury Basics	Head & Neck Injury Basics	Dr. Bruno, NHM	Clinical Scenarios and Asking the Trainees to give the

LEVEL 1 Skill Training Pilot Batches - Detailed Schedules for Hands on Demonstration and Clinical

Date: **Day: 1** Duration: **Time: 08:00 AM to 05:00 PM** Observership: **Days 4,5,6,7,8,** Faculty:

Day	Duration	Time	Observation	Faculty	Remarks
					Correct GCS, AVPU, Further Management
5	09:00 to 11:00	Skeletal Injuries	Spine Injury Pelvic Injury Injury of Extremities	Orthopaedician, RGGGH	Philadelphia Collar, Pelvic Binder, Cuff and Collar, Thomas Splint, Spine Board, Scoop Board, Log Roll,
5	11:00 to 13:00	Soft Tissue Injuries	Abdominal Injury Degloving Injury Amputation	General Surgery, RGGGH	Transport of Amputated Part Direct Compression of Bleeding Site Needle Decompression ICD Open Pneumothorax Management Rib Fracture Management eFast
5	13:00 to 14:00	Lunch			
5	14:00 to 17:00	Toxicology	Snakebite Scorpion Sting All Poisons and Drug Overdose	Physician, RGGGH	
6	09:00 to 13:00	Airway	Airway (Airway Mannequin- Adult / Paediatric/ Infant Airway Devices , (basic, Advance and Definite) AMBU bag and Mask, face mask, NRBM , OPA (All size), Venture Mask, NPA (All size),Largoscope with all size Blades, Battery set, ET tube all size, LMA all size, Combitube, I-Gel.)	Anaesthesiologist RGGGH	Manual – Head Tilt and Chin Lift Inubation Ventilator Cricothyrodeotomy
6	13:00 to 14:00	Lunch			
6	14:00 to 17:00	Breathing and Circulation	Pneumothorax, ICD, Burns, Ambu Breathing Ventilator	Anaesthesiologist RGGGH	Hypovolemic Shock Fluid Calculation

TAEI Skill Grading - Pilot Batches - Detailed Schedules for Hands on Demonstration and Clinical Observership - Days 15 6 7 8

Date	Day	Duration	Title	Description	Faculty	Remarks
				Fluid Management Dehydration, Hypovolemic Shock, ARDS Fluid Management		Central and Peripheral Cannulation
7		07:00 to 13:00	ER Observership	Stanley Team + Thiruvallur Team		
7		13:00 to 19:00	ER Observership	Kilpauk Team + Kancheepuram Team		
7		19:00 to 07:00	ER Observership	Royapettah Team + Tambaram Team		
8		09:00 to 10:00	Post Test			
8		10:00 to 13:00	Presentation	Each Trainee will Present for 5 Minutes about what they have learned in the training and scope for improvement		
8		13:00 to 14:00	Lunch			
8		14:00 to 15:00	Valedictory	Group Photo and Valedictory Function		

List of Topics to be covered in TAEI Protocol Training

The Following are the List of Topics Proposed to be included in the TAEI Protocol Training for Health Care Personnel working in Emergency Rooms. Please give in your suggestion at www.taeionline.com/book

S.No	Scenario	Includes	Ask for	Look for	Do (Doses are for a 60 kg Adult. Modify Dose as needed)	Investigate	Specialist Opinion
1	Injury Hand, Feet	1. Abrasions (Bruises), 2. Cuts, 3. Lacerations 4. Contusions 5. Deformities		1. Other Injuries	1. Wash with NS 2. Dressing 3.		1. Plastic Surgeon 2. Ortho Surgeon 3. General Surgeon
2	Traumatic Amputations and Crush Injuries of Fingers, Toes, Extremities,	1.	1. Amputated Parts 2.	1. Pulse All Four Limbs 2.	1. Safeguard the Amputated Part a. Wash the Part in Normal Saline. b. Wrap it in Sterile Gauze soaked in Ampil, GM c. Wrap it in Sterile Moist Towel d. Place in Plastic Bag e. Keep in Crushed Ice f. Avoid Freezing Isotonic Solution 2. Injection Tetanus Immunoglobulin if needed		1. Plastic Surgeon 2. Ortho Surgeon 3. General Surgeon
3	Fracture Dislocation Upper Limb	1. Clavicle, 2. Shoulder, 3. Humerus, 4. Elbow, 5. Radius, 6. Ulna, 7. Wrist	1.	1. Capillary Refill Time 2. Peripheral Pulse 3.	1. Cuff and Collar 2. Urgent Ortho Call Over if there is no or feeble pulse on the affected limb	1. X Ray 2.	1. Ortho Surgeon 2. Vascular Surgeon
4	Fracture Dislocation Lower limb	1. Hip 2. Femur 3. Knee 4. Tibia 5. Fibula 6. Ankle		1. Capillary Refill Time 2. Peripheral Pulse	1. Thomas Splint 2. Urgent Vascular Surgeon and Ortho Call Over if there is no or feeble pulse on the affected limb 3. Pelvic Binder for Hip Injuries 4. Don't Catheterise in case of Doubtful Urological injuries	1. X Ray 2.	1. Ortho Surgeon 2. Vascular Surgeon

S.No	Scenario	Includes	Ask for	Look for	Do (Doses are for a 60 kg Adult. Modify Dose as needed)	Investigate	Specialist Opinion
5	Spine Injuries including Cervical Spine	1. Atlas to Sacrum 2.		1. Motor Deficit 2. Sensory Deficit 3. Bladder Involvement 4. Bowel Involvement	1. Philadelphia Collar 2. Pelvic Binder for Hip Injuries 3. Spine Board 4. Log Roll for Pain / Stepping Deformity	1. MRI Spine 2. CT Spine	1. Neurosurgeon 2. Orthosurgeon 3.
6	Pain / Loss of Movement in Extremities	1. Gangrene 2. DVT 3. Compartmental Syndrome 4. Neuropathy		1. Capillary Refill Time 2. Peripheral Pulse		1. Doppler 2.	1. Vascular Surgeon 2. General Surgeon 3. Ortho Surgeon
7	Head Injury	1. Scalp Injuries 2. Fracture Skull 3. EDH 4. SDH 5. ICH	1. Exact Time of Loss of Consciousness 2. Headache 3. Vomiting 4. ENT Bleed 5. Fits	1. AVPU 2. Vision 3. Pupils 4. Eye Movements 5. Weakness 6. Neck Injuries 7. Face Injuries 8. Signs of Increased ICP 9. Bradycardia and Hypertension	1. Philadelphia Collar for All Unconscious Patients 2. Intubation and Elective Ventilation for a. All patients with GCS 9 or Less than 9 b. Patients with Diffuse Injuries c. Patients with Clinical or Radiological signs of increased ICP 3. Inj Phenytolm 100 mg iv tds 4. Inj Ranitidine 150 mg iv tds 5. iv Antibiotics 6. Syp KCl 7. Syp Antacid 8. Head Shave 9. Ryles Tube 10. Catheterisation 11. Head End at 15° to 20° Elevation 12. Spine Board a. Log Roll for Pain / Stepping Deformity	1. CT Scan Brain 2. CT Scan Orbit if there is Sub Conjunctival Hemorrhage or Facial Injuries	1. Neurosurgeon 2.
8	Maxillofacial Injuries	1. TMG 2. Dyslocation Dental Injuries		1. Vision 2. Eye Movements 3. Neck Injuries 4. Head Injuries 5. Loose Tooth	1. If there are any bleeding or if there is suspicion of bleeding, Intubation or Tracheostomy irrespective of GCS to prevent Aspiration 2. Nasal Packing or Throat Packing ONLY AFTER Intubation / Tracheostomy		1. ENT Surgeon 2. Neurosurgeon 3. Ortho Surgeon 4. Plastic Surgeon 5. Dental Surgeon
9	Ocular Emergencies	1. Eye Injuries 2. Loss of Vision		1. Vision 2. Pupils	1. Eye Irrigation with Normal Saline for 15 to 20 minutes	1. CT Scan Orbit	1. Ophthal Surgeon 2. Neurosurgeon

SNo	Scenario	Includes	Ask for	Look for	Do (Doses are for a 60 kg Adult. Modify Dose as needed)	Investigate	Specialist Opinion
10	Foreign Body Nose and Throat	1. Choking		3. Extra Ocular Movement	2. Cover the Eye with Sterile Gauze Soaked in Normal Saline and cover with a Sterile Towel and Rigid Shield 3. iv Antibiotics : Inj Cipro 200 mg iv bd and Inj Metro 500 mg iv tds	2. CT Scan Brain 3. CT Angio Neck Vessels and Cerebral Vessels	1. Anaesthesiologist 2. ENT Surgeon 3. Chest Physician
11	ENT Bleed	1. Base of Skull Fracture 2. Epistaxis 3. Hemoptysis 4. Hematemesis 5.	1. History of Anticoagulan ts 2. History of Bleeding Disorders	1. Hypertension 2. Facial Injuries 3. Chest Injuries 4. Abdomen Injuries 5.	1. If there are any bleeding or if there is suspicion of bleeding, Intubation or Tracheostomy irrespective of GCS to prevent Aspiration 2. Vitamin K 3. Streptovit 4. Tranexemic Acid 5. Nasal Pack in case of Confirmed Epistaxis 6. Anti HT in case of Elevated BP 7. Intubation is source of Bleed is other than Lungs	1. PT, aPTT, INR 2.	3. ENT Surgeon 4. Chest Physician 5. MGE 6. SGE 7. General Surgeon 8.
12	Neck Injuries & Asphyxias	1. Kite String 2. Hanging 3. Mechanical Asphyxia 4. Drowning (Submersion)	1. Mode of Injury Time 2. 3.	1. Look for Bony, Arterial, Venous, Muscular Injuries Cardiac Arhythmia 2. JVP	1. Philadelphia Collar 2. Hypothermia Management 3.		1. ENT Surgeon 2. Psychiatrist in case of Suspected Self Harm
13	Chest Injuries	1. Rib Fracture		1. JVP	1. Needle Thoracostomy		1. CTS

S.No	Scenario	Includes	Ask for	Look for	Do (Doses are for a 60 kg Adult. Modify Dose as needed)	Investigate	Specialist Opinion
		<ol style="list-style-type: none"> Pneumothorax Hemothorax Pericardial Tamponade All Other Blunt Injuries All Other Penetrating Injuries 		<ol style="list-style-type: none"> Oxygen Saturation Hypotension 	<ol style="list-style-type: none"> ICD Pericardiocentesis Occlusive Dressing taped on three sides 3 Way Valve Dressing 		<ol style="list-style-type: none"> General Surgeon General Physician
14	Abdomen and Pelvic Injuries	<ol style="list-style-type: none"> Penetrating Injuries of Abdomen and Pelvis Bull Gore Injuries Evisceration Emasculation Perineal Injuries Blunt Injuries 	<ol style="list-style-type: none"> Mode 	<ol style="list-style-type: none"> Anemia Bleeding Urethra Bladder Injuries PR / PV 	<ol style="list-style-type: none"> Don't touch the Objects if they are in contact with the body or partially inside the body Shift to Theatre as soon as possible Cover the Open Areas With Sterile Towels soaked in Normal Saline Apply Pelvic Binders Don't Catheterise in case of Doubtful Urological injuries 	<ol style="list-style-type: none"> X Ray Chest to Rule out Diaphragmatic Heria X Ray Abdomen Erect USG CT Abdomen 	<ol style="list-style-type: none"> General Surgeon SGE Urologist
15	Multiple Injuries / Polytrauma	<ol style="list-style-type: none"> 		<ol style="list-style-type: none"> Rapid Trauma Survey Seat Belt Injuries Helmet Injuries 	<ol style="list-style-type: none"> Helmet Removal Philadelphia Collar Pelvic Binder Thomas Splint eFast 	<ol style="list-style-type: none"> Electrolytes 	<ol style="list-style-type: none"> General Surgeon Ortho Surgeon Neurosurgeon
16	Vomiting and Diarrhoea	<ol style="list-style-type: none"> AGE Food Poisoning 	<ol style="list-style-type: none"> Food Intake Headache 	<ol style="list-style-type: none"> Dehydration Electrolyte Imbalance Intra Cranial Pressure 	<ol style="list-style-type: none"> iv Fluids iv Antibiotics 	<ol style="list-style-type: none"> USG CT Abdomen CT Brain 	
17	Acute Abdomen	<ol style="list-style-type: none"> APD Acute Pancreatitis Renal Colic Acute Retention of Urine Ectopic Pregnancy 	<ol style="list-style-type: none"> LMP (in case of females) 	<ol style="list-style-type: none"> Anemia (Ectopic) jaundice (Pancreatitis due to Obstruction) Tenderness PR PV 	<ol style="list-style-type: none"> eFAST ECG - All Leads including Limb Leads, ECG to Rule out Inferior Wall Ischemia 	<ol style="list-style-type: none"> USG CT Abdomen USG Plain X Ray Abdomen CT Abdomen 	
18	Labour and Obstetric	<ol style="list-style-type: none"> Trauma in Pregnancy 		<ol style="list-style-type: none"> Fundus Examination 	<ol style="list-style-type: none"> Lower BP in Case of PIH Transfusion in case of Bleeding PV 	<ol style="list-style-type: none"> USG 	<ol style="list-style-type: none"> Obstetricians

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	Emergencies	<ol style="list-style-type: none"> 2. Bleeding PV 3. Pain Abdomen 4. 		<ol style="list-style-type: none"> 2. BP 3. 			
19	Burns	<ol style="list-style-type: none"> 1. Thermal Burns 2. Chemical Burns 3. Electrical Burns 4. 		<ol style="list-style-type: none"> 1. Lung Damage due to Inhalation Entry and Exit Wound for Electrical Burns 3. Rule of Nine 4. 	<ol style="list-style-type: none"> 1. Burns Protocol 2. 		
20	Fever and Temperature Disturbances	<ol style="list-style-type: none"> 1. Fever 2. Heat Stroke 3. Hyperthermia 4. Hypothermia 5. Dengue 			<ol style="list-style-type: none"> 1. Dengue Protocol 		
21	Anaphylaxis / Allergic Reactions	<ol style="list-style-type: none"> 1. Bee Sting 2. Food Poisoning 					
22	Bites and Sting	<ol style="list-style-type: none"> 1. Snake Bite 2. Scorpion Sting 3. Dog Bite 4. Animal Bites 5. Centipede / Millipede 			<ol style="list-style-type: none"> 1. Snake Bite Protocols 2. Scorpion Sting Protocol 3. Dog Bite Protocols 		
23	Poison / Drug Overdose	<ol style="list-style-type: none"> 1. Accidental and Intentional Poisoning 2. Drug Over dosages 	<ol style="list-style-type: none"> 1. Drug History 	<ol style="list-style-type: none"> 1. Smell 2. Finger Discoloration 3. Pupils 	<ol style="list-style-type: none"> 1. Stomach Wash 2. Universal Antidote 3. Specific Antidote 4. Skin Decontamination 5. Dialysis 	<ol style="list-style-type: none"> 1. Drug Levels 2. Electrolyte 3. Renal Functions 4. Liver Functions 	<ol style="list-style-type: none"> 1. Nephrologist Opinion
24	Breathlessness	<ol style="list-style-type: none"> 1. Asthma 			<ol style="list-style-type: none"> 1. Rule out Cardiac Causes 2. Deriphylline 3. Aminophylline 		
25	Chest Pain	<ol style="list-style-type: none"> 1. STEMI 2. NSTEMI 			<ol style="list-style-type: none"> 1. STEMI and NSTEMI Protocols 		
26	Head ache		<ol style="list-style-type: none"> 1. Duration 2. Side 3. Precipitation Factor 	<ol style="list-style-type: none"> 1. Bradycardia 2. Hypertension 3. 	<ol style="list-style-type: none"> 4. Fundus Examination 5. 	<ol style="list-style-type: none"> 1. CT Brain Plain 2. 	<ol style="list-style-type: none"> 1. Neurosurgeon 2. Neurologist
27	Stroke				<ol style="list-style-type: none"> 1. SCSRIPT Protocols 		
28	Fits	<ol style="list-style-type: none"> 1. Status 	<ol style="list-style-type: none"> 1. Drug Intake 	<ol style="list-style-type: none"> 1. Signs of ICP 	<ol style="list-style-type: none"> 1. Infection Phenytoin 600 mg iv in 500 	<ol style="list-style-type: none"> 1. CT Brain 	<ol style="list-style-type: none"> 1. Neurosurgeon

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		2. Epilepticus 1. Alcohol Intoxication 2. Psychiatric Conditions	2. Failure to Intake Drugs 1. Signs of Drug Intake 2.	2. ABCDE 1. Mental Status 2. Speech 3. Pupils 4. 5.	1. Normal Saline at 12 drops per minute 2. Injection Phenytoin 100 mg tds 1. Physical Restrain 2. Inj Haloperidol	2. 3. CT Brain 4. MRI Brain	2. Neurologist 1. Neurosurgeon Opinion 2. Neurology Opinion 3. Psychiatrist Opinion
29	Agitated Patients	1. Alcohol Intoxication 2. Psychiatric Conditions	1. Signs of Drug Intake 2.	1. Mental Status 2. Speech 3. Pupils 4. 5.	1. Physical Restrain 2. Inj Haloperidol	3. CT Brain 4. MRI Brain	1. Neurosurgeon Opinion 2. Neurology Opinion 3. Psychiatrist Opinion
30	Unconscious Patient	1. Altered or Loss of Consciousness disproportionate to alteration in ABCDE 2.	1. Jaundice 2. Munchausen Syndrome	1. Pupils 2. EOM / DEM 3. Focal Neurological Deficit 4. Reflexes 5. Breathing Abnormalities	1. Intubation 2. CMV Mode Ventilation with Midazolam 2mg/hour and Vecuronium 2mg/hour 3. Check for RBS 4.	1. FBS, 2. Urea, 3. Creatinine, 4. Electrolytes 5. Ketone Bodies 6. Liver Function Tests 7. CT 8. USG	1. Neurosurgeon Opinion 2. Neurology Opinion

BEELA RAJESH
SECRETARY TO GOVERNMENT

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(Signature)
17/1/19

SECTION OFFICER