# FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

## FOUR-YEAR STRATEGIC PLAN

## *EMERGENCY CARE, REFERRAL,*

## *AND*

## *CRITICAL CARE DEVELOPEMNT STRATEGY*

## *2016-2020*

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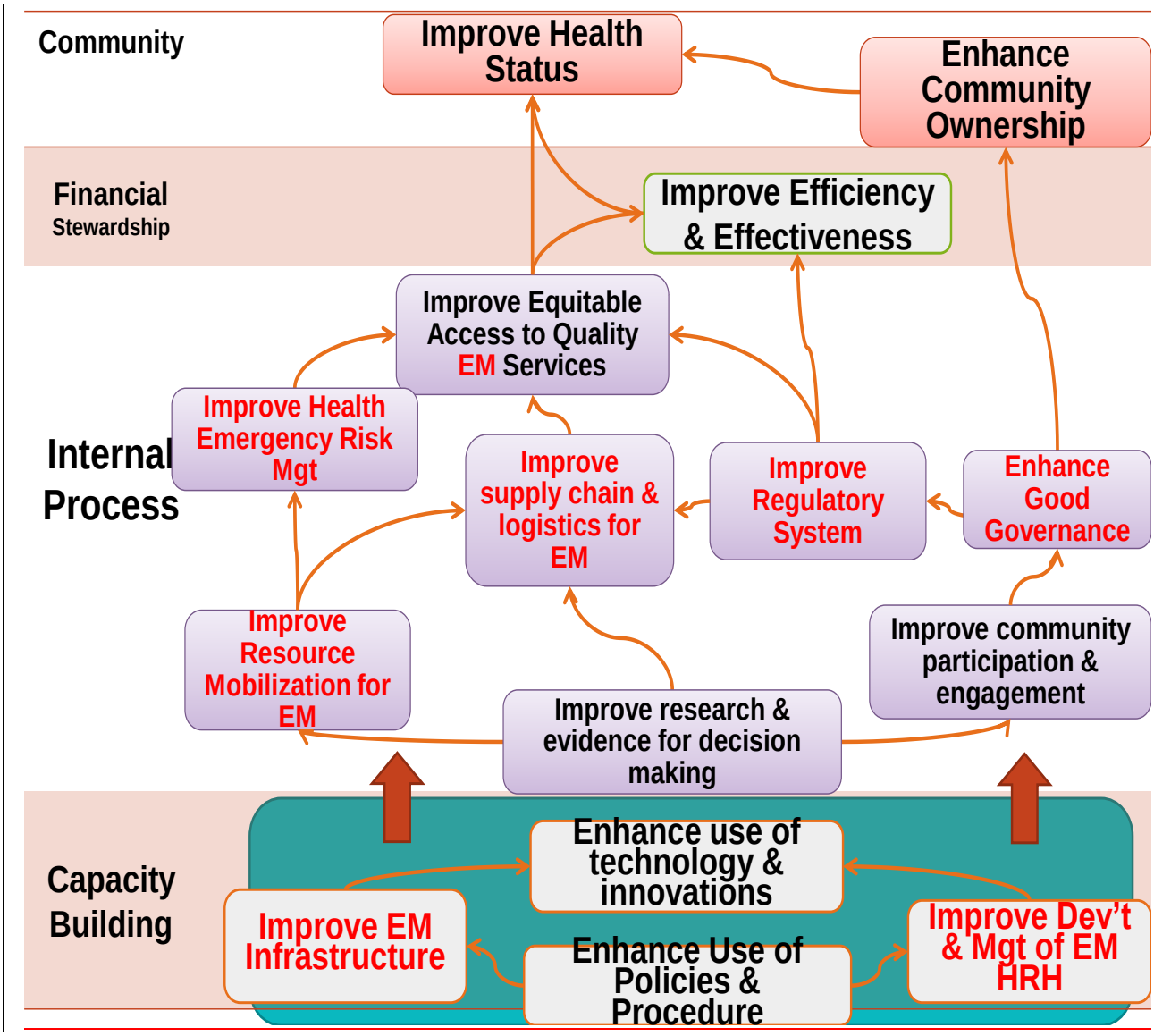
## Strategic map



# 1. Backgrounds and Rationale

## 1.1Back ground

Ethiopia has introduced a wide range of reform initiative aimed at bringing effectiveness and efficiency in execution of various works using the Business Process Reengineering (BPR) as a tool in 1999EFY. In line with this and BPR, the Federal Ministry of Health and its Agencies identified Emergency Care as one of the core processes and there has been reorganization of facilities through establishing separate emergency rooms, and structured them as emergency, outpatient and inpatient services. In addition, Referral system was introduced during the BPR. To implement the BPR and facilitate patient referral system, the Ethiopian Health Reform Implementation Guideline (EHRIG) was developed in 2002EC.In addition to facility emergency care development pre--hospital care development was also a priority and ambulance program was started. In order to organize this huge demand, Emergency Medicine and referral care team has been established under medical service directorate in the Ministry of Health. Recently, starting from November 2015, in newer restructuring the team is transformed and promoted to Emergency and Critical care Directorate.

## 1.2Introduction to Emergency and critical Care

The aim of Emergency Medical Service System is to timely manage critically ill patients and prohibit preventable morbidities and mortalities. Implementation of this system begins from community involvement on accident and acute illness prevention, when emergency condition is happened initiate knowledge based 1$^{st}$ aid and activate the ambulance and emergency services, and facilitate safe transportation and care on the way, at the facility level Emergency care of patients start with re triaging to confirm the acuity and to give priority to the most critical patients in threatening situation. These patients have to be resuscitated and stabilized in resuscitation areas. The care of critical patient, hence, starts at emergency room in health facilities and after stabilization patients are admitted to intensive care units or general wards. Organized emergency medical care is a recent phenomenon in Ethiopia and in the world and has been found to be more efficient and effective way of managing all acutely and critically ill patients. Further more; it is more advantageous both in terms of saving lives and appropriately

utilizing human and material resources. It is also crucial to avoid delays to intervention periods and utilizes the golden period to save patient's life. Hence, critically sick emergency patients get care in one room equipped with the necessary medical supplies and by one emergency team composed of emergency specialist or emergency trained doctors, nurses and other required staffs. In this discipline professionals resuscitate and stabilize emergency cases, provide the required life saving medical and surgical interventions and ensure patients can be safely transferred to regular wards and clinics after certain periods of stay in EM unit/department.

Due to the rapid urbanization, motorization, Industrialization and rapid population growth in big cities, the demand of emergency medical services in different health sector is rising in Ethiopia and worldwide. Globally, injury has been recognized as one of the most life threatening public health problems. Injuries represent 12% of the global burden of diseases and the third most important cause of overall mortality. Now day's low-income countries are facing a triple burden of disease, as non-communicable diseases and injury are contributing to morbidity and mortality in addition to the traditional communicable diseases.

Cognizant of these facts Ethiopia's Federal Ministry of Health (FMOH) has been leading a sector wide reform effort aimed at significantly improving the quality and accessibility of health services at all levels of the country's decentralized health system. As part of this reform, health facilities throughout the country have been streamlining their operational processes and building their capacities with a view to making their services more effective and efficient. Recognizing the importance of strengthening Emergency Services at all level: pre facility and facility level is one of the areas priority given. Obtaining of huge number of ambulances and ongoing initiatives towards training of Emergency Medical Technicians (EMT) to promote pre facility health care and to improve accessibility to health facilities for mothers and acutely ill or injured patients are some of the activities on progress.

At health facility level reorganizing services into emergency and none emergency; staffing by case teams with a well-rounded skill mix, equipping emergency units in hospitals with triage and resuscitation equipment's, supporting hospitals with on job emergency medicine trainings are areas getting focus on the improvement process of intra facility emergency services.

Currently in the FMOH there is a directorate in EMCC producing policy documents, protocols, and guidelines and etc, university's hospitals establishing organized EM departments and at each level of health facility emergency services are under reorganization to form a unit. There is also activities going on to establish pre-hospital services program that includes a establishment of a call and dispatch center and in ambulance care and transportation and ambulance workers training. In conclusion, emergency and critical care is important focus area in the policy, which needs detailed strategic plan.

## 1.3 Rationale of the strategic planning

The rationales for the envisaged strategic plan are:

- There is epidemiologic shift of disease pattern where the country is facing triple burdens, namely, the traditional communicable, non-communicable (NCD) and injury. NCD and injury are overtaking the traditional communicable diseases place in developing countries and Ethiopia, and are becoming public health problems. Injury causes 10% (5 million) of global mortality among the 52 million deaths; RTA is contributing to the one million or 20% of injury deaths. In Ethiopia RTA is highly prevalent and from 2015/16 statistics 62 people die per 10,000vehicles or about 4,200 people die per year. Efforts in the past few years in expanding and developing ambulance service, facility emergency care centers, critical care facilities, and human resource have registered fruits, and it needs intensification. Most of these initiatives are at infancy level and need proper development, in order to design better Prevention strategies and integrate into existing health infrastructure. Emergency problems are prevalent problems and are cause of significant mortality and the initiated establishment process of Emergency Medical Service System and ambulance distribution has played its own positive role on reduction of maternal mortality.
- Natural and Manmade disasters are rising and outbreaks which are disseminating and threatening the world are story of the day. Health care facilities should be in good stature in order to deliver appropriate emergency medical response. Hence, the strategic plan will help to design suitable preparedness scheme, which will be utilized throughout the country.

- Organizationally the ministry has promoted emergency and critical care team to a directorate, acknowledging the importance of the domain. As it is a new development strategic plan helps to boost this directorate to higher level in order to accomplish the task in developing emergencies and critical care services in the country. In so doing, there will be better development of services as the much-needed resource and coordination will be positioned in.

- Learning from the previous health Development Plans (HSDPs), aligning with the second growth and transformation plan of the country (GTP II) and considering the global aspirations set in the sustainable development goals (SDG), FMOH has performed visioning exercise and designed the health sector transformation plan. The HSTP has set goals to improve equity, coverage and utilization of essential health services, improve quality of health care, and enhance the implementation capacity of the health sector at all levels of the system. There is definite focus in quality and equity requires a shift in the status quo to drive improvements at national scale over the next five years. In order to achieve these goals four transformation agendas are designed. The transformation agendas are transformation of quality and equity of health care; woreda transformation; have compassionate, Respectful, and caring health professionals; and information revolution. Hence Emergency and critical directorate should have strategic plan in line with this policy and develop its own ambitious goals, which will be fulfilled by 2020.

## 1.4. Steps of the strategic plan development

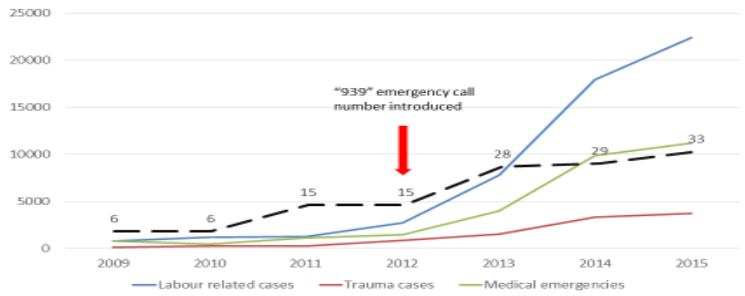
After FMOH decision to develop the strategic plan a Draft was developed by assigned team and was distributed to each case team of EMCC directorate and was complimented. The Draft was discussed at Emergency Medicine, Critical care and Referral directorate meeting September 6, 2016.Then the Strategic plan draft was presented to Ethiopian Society of Emergency Professionals annual conference and feedback was taken on September 30, 2016.This was followed by discussion at General directorate level on November, 2016.Finally it was enriched in by stakeholders meeting held at Bishofitu in December, 2016. Besides, the document is enriched by rigorous analysis of the Strengths, Weaknesses, Opportunities, and Threats (SWOT) related with current care delivery.

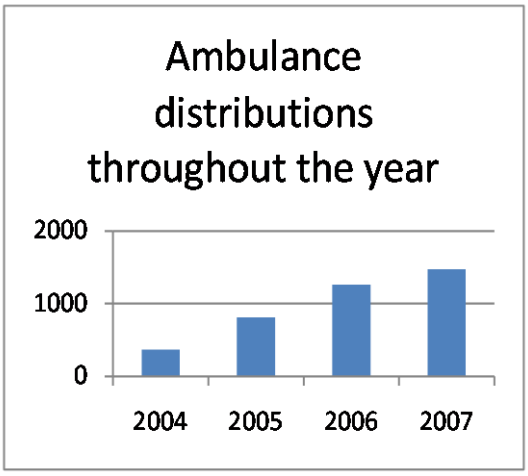
# 2. SITUATION ANALYSIS

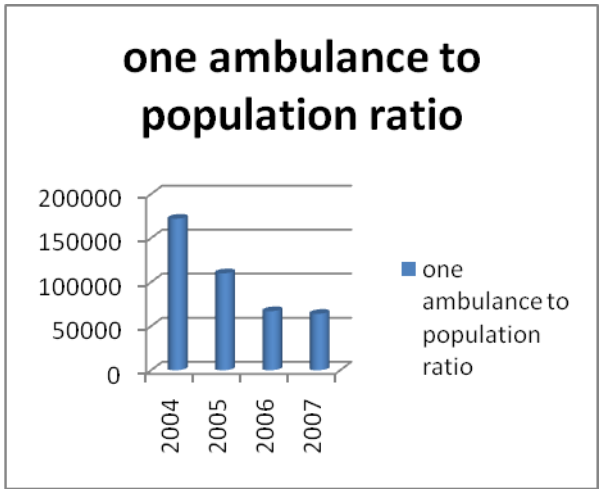
## 2.1 Pre-hospital care/Ambulance service

Federal Ministry of Health had procured over 1,250 ambulances between 2011 and 2013 and distributed them, to full fill one ambulance to each woreda. There is an average ambulance to population ratio of 1:66,140 in bigger regions and 1:91,000 in AA city, while it is about 1:30,100 in emerging regions. To strengthen and to standardize the ambulance and pre hospital emergency services: EMT training centers established in 10 vocational colleges, new carrier development for EMT introduced, EMT patient management guidelines, ambulance management and pre hospital establishment regulations and 1st aid training facilitator manual and trainee text book were developed and supportive supervision and biannual activity review is ongoing. Accordingly 112 EMTs, and 181 nurses are working in the ambulances and ambulance call outs increased significantly, and according the 2008EFY national ambulance services report a total of 1,031,893 clients got the service. Out of this 64.6% was maternity related, 13% medical emergencies and under 13 age children, 11.4% injury related and 11% other emergencies. It is true also in Addis Ababa, delivery-related causes outnumbering medical emergencies, which in turn were greater than trauma cases, and the major ambulance service is given for transportation of mothers and patients from health facility to health facility which is compromising the community based medical care at the scene. In addition to the public ambulance service there are the Red Cross ambulance service, having 358 ambulances, and private ambulance service (Tebita ambulances), which has 11 ambulances. In Addis Ababa, Fire and emergency authority, Red cross and Tebiat ambulance have been working 24hours/7days a week with their own dispatch centre. In addition, some regional health bureaus have also started to organize their own dispatch centre, and the rest are on process.

**Emergency responses (call-outs) report by the Addis Ababa Fire and Emergency Services, 2009 -2014. Categorised into labour/delivery, medical and trauma cases. (The dotted black line denotes the number of ambulances)**




## 2.2 Addis Ababa Emergency & Referral coordination team

In order to address the gaps on communication, cooperation and collaboration within AA hospitals and pre hospital service "Addis Ababa Emergency & Referral Coordination Team" was established in 2014. The team was organized and lead by the Ministry of Health, and team members were selected from11 major public hospitals in the city. The main objectives of the team are: to strengthen the referral system in more focus to emergency referrals, to strengthen hospitals capacity on emergency unit organization, triage and over all emergency response quality, to monitor bed availability throughout the capital and to coordinate inter-hospital referrals when the admitting hospitals ran out of beds or other necessary resources to mange emergency cases.

The team is generating reports on activities and challenges on daily bases, therefore every hospital; region and FMOH management groups are able to know the emergency services status and when necessary to take actions on identified problems. Accordingly the data generated by the Coordination Team has shown a steady rise over 2014 and 2015 in the number of emergency admissions to public hospitals. The proportion of referrals into hospitals that arrive with prior communication significantly increased from about 10% to over 35%; the number of cases brought on death on arrival fell; and the proportion of inter-hospital emergency referrals that arrived with prior communication soon increased to 98% in Addis Ababa.

## 2.3 Facility Emergency Care Development

As part of a programme to improve hospital performance post Millennium (EC), the FMOH undertook an extensive Business Process Re-Engineering exercise for the health system starting in 2008. One of the results of this process was that in 2010 the FMOH categorized hospital responsibilities into three areas: ambulatory care, inpatient services and emergency services, and the FMOH itself became actively engaged in supporting the development of emergency services. Locally, one result was that emergency services were pushed up as one of the agendas in hospitals – heads of emergency departments were now on the management team – and human and financial resources followed. At the same time, greater freedom was given to hospital boards to allocate their financial resources. These two developments produced an increase in funding for emergency departments. A 20-bedded Emergency Services Unit, which was opened in 2009 at TASH, as part of the 2006 agreement between the FMOH and the AAUSOM to set up an Emergency Medical Services Centre of Excellence in Addis Ababa, is the first organized Emergency Services Unit in the Country. This unit was just for adult emergencies, but in 2012, the (physically separate) TASH paediatric casualty unit was also upgraded with support from PEPFAR, the CDC, and Johns Hopkins University.

Hospitals are now developing their emergency areas to provide more space and proper equipment for triage, resuscitation, stabilization and care of patients, as well as sufficient, qualified staffing. Once triaged, patients still requiring care within the emergency units are more likely to be moved to a dedicated area within the unit. The biggest emergency units are the departments at St. Paul's, TASH, Mekele , Jima and Hawassa Hospitals. As well as development of dedicated buildings and infrastructure, hospitals have developed standard lists for the equipment and drugs needed in emergency departments. In addition to setup

development and trainings the FMOH is also engaged in monitoring and supportive supervision. In addition, the Emergency and Critical Care directorate is engaged with development of policy and implementation documents related with emergency care development. The following are finalized documents so far: EM guideline in EHRIG document, National integrated Emergency Medicine Manual (NIEM), EM medicine clinical management guideline, and national integrated emergency medicine training manual. So far 1261number of professionals have took on job training. The directorate has also prepared clinical management guideline.

Human resource: There is a development from none to 21 EM physicians, 100 MSc in EMCC nurses, 700 GPs through a curriculum where EM is a 7weeks course. Development of additional Emergency postgraduate service and EM residency at AaBET, that is a branch of Saint Paul Hospital in Addis Ababa.

Although there is magnificent development of emergency care in the country, national data in service delivery and outcomes is limited. According to KPI Emergency rooms mortality is 0.6% and from different surveys the ER patient satisfaction range is in the range of 50-60%. In addition there is no Emergency services standard and levels to categorize different centres.

**Performance of selected indicators from 2004-2007EFY**

| **Selected Indicators** | **2004** | **2005** | **2006** |
|---|---|---|---|
| Proportion of patient triaged within 5 minutes of arrival at ER | 51% | 64% | 93% |
| ER mortality rate | 0.60% | 0.61% | 0.2% |
| Emergency referrals as a proportion of all referrals | 26% | 44.00% | 29% |

*Compiled data of 2007/2008 is not available

## 2.4 Intensive Care Unit/ICU/

Considering the need of an ICU development in Ethiopia, many hospitals in the country have been engaged in the process of establishing the unit, and FMOH has supported the initiative. To realize this goal the FMOH is working with respective stakeholders such as hospitals, RHB, partners. In 2007EFY ICU equipments are procured and installed to 32 hospitals and multidisciplinary level ICUs were established in addition to support of existing ICUs, of TASH and Saint Paul Hospital making the number of public hospitals delivering ICU service to 22. Furthermore, six rounds of training were provided to 168 personnel working in ICU composed of doctors, anaesthetists (nurses) and anaesthesiologists (doctors) for 19 Addis Ababa and regional hospitals. Selected hospitals are visited on site for their readiness and for 32 professionals from 7 hospitals equipment operation/handling training was given. In addition to setting ICUs and trainings ICU implementation, and admission/discharge guideline is prepared (transfer policy, ICU indicators, ICU training curriculum and activities not yet done like ICU data base, treatment protocol, end of life care, training manual, preparation of observation sheet).

In the ICU implementation guideline there are three levels of ICU but that is not yet applied in the country. Different published literatures show that ICU mortality in Ethiopia is ranging from 30% to 50%. But recently in 2016 EMCC directorate has done survey, which included all public hospitals with ICU service, and the range of mortality is from 21-30%.

## 2.5 Trauma care

Data compiled by the ministry of health in 2005 EFY showed that injuries ranked fourth and fifth as a leading cause of admission and death respectively accounting for 4.2% and 3.7%. Recent evidences from road safety agency indicate that Ethiopia has an annual road traffic fatality of 64 deaths per 10,000 vehicles.

Therefore in 2006EFY areas that are prone to accidents are identified and mapped to strengthen their pre-hospital and hospital emergency service. Trainings on trauma care were given for 90 participants based on the emergency training manual. Based on the action plan developed, follow up was made by supportive supervision to improve their service. In 2007EFY, since there was high referral flow to Addis Ababa hospitals, hot spot areas were mapped geographically and based on source of referrals, Menilik hospital, TASH, alert hospital, St Paul Hospital and

Tirunesh Beijing Hospital were selected to be upgraded to trauma care center, and to this effect concept note was developed, equipment procurement was facilitated, infrastructures were built and MOU was signed between AAU and the selected hospital so that manpower will be shared efficiently.

In addition to the specialized trauma service at TASH, two trauma centres, which will deal with multi-system trauma and specialise in orthopaedic and neurological injuries have been established at ALERT and the Addis Ababa Burns and Emergency Trauma Hospital (AABET). Besides, a new, dedicated Emergency medicine Department, which will be both a national and African centre of excellence, is under construction at Tikur Anbessa Specialised Hospital in Addis Ababa. In addition, trauma system guideline is finalized which will categorize trauma according to the severity and after pre-hospital triaging patients will be transferred to appropriate trauma centres for care.

## 2.6 Poison control center (PCC)

The rapidly growing burden of chemicals-availability and its use in the economies of many countries in Africa, coupled with weak regulatory infrastructure, is increasing the likelihood of adverse health impacts-acutely or chronically.

According to 2012 WHO estimation there was 16,500 deaths from unintentional poisoning in the 16 sub-Saharan African countries. In addition, unintentional poisoning accounted the loss of 1,128,500 disability adjusted life years (DALYs) in these 16 countries. It has been estimated that 7800 deaths due to deliberate ingestion of pesticides per year in Africa and between 1,400 and 10,000 deaths from snake bite in eastern sub-Saharan Africa. An assessment, which was conducted at 12 Addis Ababa regional and Federal hospitals over a period of one year from February 2015 to February 2016, shows total poisoning cases of 714; it also shows that there is a growing trend in poisoning cases or reporting.

International Chemical Management project for improving the availability of poisons center in Eastern Africa, 2015 has recommended Ethiopia to establish a poison center in the country. However, a guiding mechanism for poison control center is not yet developed. Therefore, the Federal Ministry of Health (FMOH) has decided to establish this poisoning control center at selected federal hospital.

St. Peter Specialized hospital has been engaged in the process of establishing the center, and FMOH has supported the initiative. To realize this goal the FMOH is working with relevant stakeholders and has created an equipments list that is under procurement process. The FMOH has also prepared a poison control center guideline, treatment protocol, and telephone handling protocol, while database is under development. Awareness creation process about poisoning is ongoing using the FMOH media program

## 2.7 Burn care

In Ethiopia, Yekatit 12 is the only hospital that has a burn unit and delivering burn service for the past 15 years. The rise in the need for health service care and rapid population growth and change in mode of living, there is a high burn patient flow where only one center could not handle it anymore. Therefore federal ministry of health has taken the initiatives with stakeholders to expand the field and try to improve the outcome of burn injury by emphasizing on restoring post burn function appearance and confidence by enabling a considered multidisciplinary approach at all stages of managements.

To do so MOH has identified the existing problem of equipment and manpower shortage to expand the management at each level of health care. Immediately List of burn management equipment package was developed and sends to PFSA for procurement. In the mean time basic training to different health care professionals including health centers were given that would help to manage minor burns at primary health care level but still there are material unavailability to provide the service efficiently. This shows that there must be a big movement to change the system, and hence national emergency technical working group was established in 2006EC. In addition to in country experts in the FMOH has also invited high level experts from abroad who have long time experience on burn care management like Intern Burns for experience sharing and to establish decentralized way of burn care in Ethiopia.

Once the national and international experts come up with the mechanism and way forward of decentralization, national burn management guideline & training manual draft documents were developed.

## 2.8 Referral service

National health care system in Ethiopia is structured around the concept of a "health network model" that uses a three tiered health care delivery levels namely primary, secondary and tertiary levels with defined populations to be served at each level. To improve the quality of care through an effective referral networked health care system that strives to deliver quality and efficient health services each tier system has to be interconnected.

The MOH has spearheaded and has effectively established several health reforms that promote the delivery of comprehensive, accessible and affordable particularly primary health care services to all citizens. Besides, it has established as one of its main objectives the improvement of the quality of care through an effectively networked health care system that strives to deliver quality and efficient health services

At the start of BPR in 2000EFY referral system was established and liaison officers enrolled to manage admission & discharge activities incorporating with referral system. During that time Liaison office was established in each hospital and their structure was developed in every health facility. Guideline for implementation of a patient referral system was developed based on Ethiopian hospital reform implementation guideline/EHRIG/ referral networking system in 2002EFY. Based on this guideline liaison officers and Regional Health Bureau officers are oriented on its operation and supported to cascade the training to their respective health sector. In 2005EFY Reference Manual on Patient Referral System Network Development and Management for Referral System Managers and Admission discharge protocol was developed .For the implementation of the system supportive supervisions was done in different time and regions were encouraged to establish their catchment referral network as well as update their service directory regularly. In 2006-liaison officers reference manual and training material was developed and around 88 liaison officers were trained nationally. In 2007 National service directory was updated and it is on the process of interring all data in soft copy so that everyone can access it electronically. Throughout all the years in order to increase public awareness different media were used and people are encouraged to use nearby health facility in order of interlinked health tier system.In Addis Ababa in addition to the established emergency medical service coordinating team, each hospital have catchment health centers and the respective hospitals has responsibilities of capacity building and coaching its health centers.

# 3. STRATEGIC DIRECTION

## 3.1 Vision, Mission and Goal of the Strategic Plan:

**Vision:** To see healthy, productive and prosperous Ethiopians.

**Mission**

To promote health well-being of Ethiopians through providing a comprehensive Emergency and critical care package of promotive, preventive, curative and rehabilitative health services of highest possible quality in an equitable manner.

### Core values

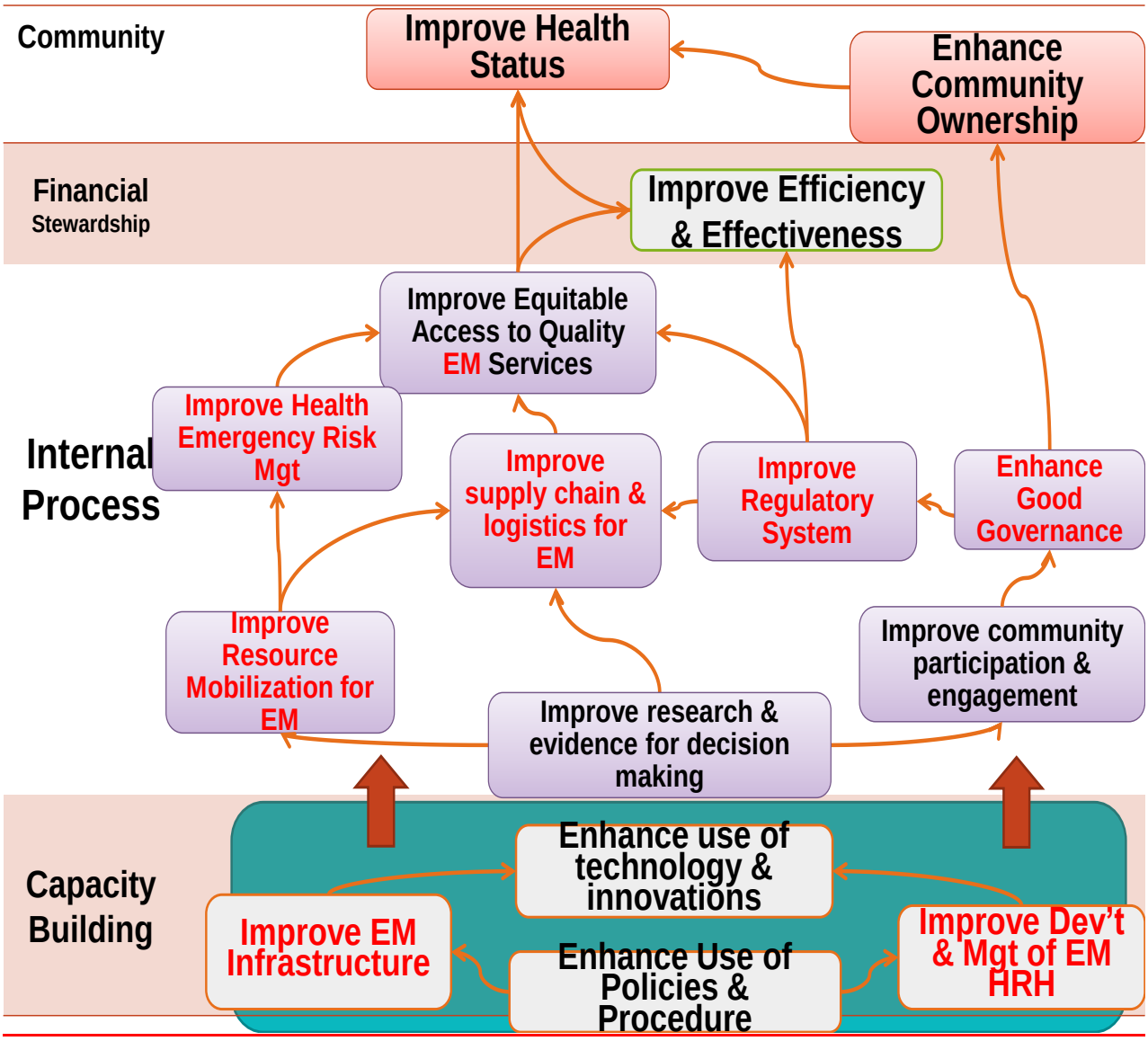
1. Community first
2. Timeliness
3. Integrity, loyalty, honesty
4. Transparency, accountability and confidentiality
5. Impartiality
6. Respecting the law
7. Be a role model
8. Collaboration
9. Professionalism and team work
10. Change /innovation
11. Compassion

### Guiding principles

1. Self reliance
2. Community ownership
3. Universal health coverage
4. Focus on primary health care
5. Patient/client centered quality health services
6. Equity, pro-poor and affordability
7. Good governance

8. Participatory partner ship
9. Learning institution
10. Professional ethics
11. Continuous professional development

## 4. Strategic Map



## 5. SWOT Analysis

| Strength | Weakness |
|---|---|
| • Strong leadership and governance<br>• Access is improving, particularly to PHC<br>• Program management is improving with its own directorate<br>• Institutionalization of Public Health Emergency (PHEM)<br>• Inclusion of First aid course for Extension health workers<br>• Addis Ababa Emergency and referral coordination team achievements and scale-up efforts<br>• Development and Rapid increase of the availability of human resources for health in emergency and critical care areas<br>• Evidence generation, dissemination and guidelines development improving.<br>• Integrated supportive supervision<br>• Improvement in Emergency and critical care medical equipment and supplies<br>• Increasing availability and capacity utilization of ambulance services<br>• Launching of third party insurance and | • Sub-optimal emergency and critical service availability at health facilities<br>• Disparity of emergency care in urban /rural areas<br>• Suboptimal Quality Management in EMCC: Quality Planning, initiatives, and quality assurance actions<br>• Crowded tertiary care facility while the lower centers are underutilized<br>•Suboptimal standardization, Lack of enforcement and poor implementation of guidelines and protocols<br>. Sub-optimal emergency and nonemergency referral system in the regions and poor feedback system<br>• Sub-optimal monitoring and supportive supervision activities<br>•Poor national emergency care data base and data management system<br>•Suboptimal enforcement on public/private ambulance service and Misuse of ambulances<br>•Suboptimal adherence to the national ambulance management regulation<br>•Suboptimal National ambulance profile/standard |

| | |
|---|---|
| other health care financing reform<br><br>-Community owner ship and responsibility towards ambulance service<br><br>Initiation and start up ALS and motor ambulance<br><br>Initiation of CPD training<br><br>Annual National ambulance review meeting<br><br>Establishment of Emergency directorate at FMOH<br><br>Active TWGs<br><br>Developing implementation guidelines and documents<br><br>Mapping trauma burden area<br><br>Dedicated hospitals to start specific services (ICU, burn, poison and trauma) | •Absence of ambulance service report from Red cross and private ambulances<br><br>• Inadequate intersectoral collaboration<br><br>• Inadequate effort in injury prevention<br><br>•Suboptimal occupational health promotion efforts<br><br>• Inadequate EM health information management system<br><br>• Inadequate motivation and High attrition rate of emergency and critical care health workers<br><br>• Inadequate documentation and dissemination of research<br><br>• Supply chain gaps in emergency and critical care services, with poor forecasting, planning and distribution<br><br>• Poor EM and Critical Care setup<br>• Misunderstanding of emergency profession by other Health professionals<br>Inadequate ambulance service and equipment maintenance capacity<br><br>• Suboptimal public-private partnership<br><br>• Disparity in implementation capacity among regions<br><br>• Inadequate resource mapping capacity.<br>• There is no national referral network<br>• Poor communication system b/n facilities |

| | |
|---|---|
| | during referral<br>• Poor awareness creation and practice on emergency referral system proclamation.<br>• Lack of standard for essential antidote lists<br>• Un availability of trauma advisory and technical working group<br>• Inequity of ICU service distribution<br>• Quantity and Quality of applied and relevant researches in health universities is low. |

| **Opportunity** | **Threat** |
|---|---|
| • Political/Leadership commitment and improved in health investment<br>• Active community engagement in ambulance purchase and replacement<br>• Improved health care seeking behavior<br>• Sustained national socio economic growth<br>• Improved road infrastructure, and means of communication<br>• Interest from International development partners/attention to Non Communicable Diseases and Injury<br>• Growing Interest of stakeholders<br>• Collaboration of International and National universities and programs on EMCC area developing<br>• Implementation of third party insurance and other health care financing reform | •High turnover of professionals in emergency and critical care service<br>• Urbanization, Motorization, Globalization<br>• Inadequate counterfeit control<br>• Inaccessibility of many communities to ambulances service due to absence of road network<br>•Absence of emergency lane for ambulances<br>•Lack of equipment maintenance<br>• Delays and lesser quality equipment purchase with centralized procurement system<br>• Multiple brands of medical equipment and fast obsolescence of technology<br>• Inadequate partners engagement on the program |

| | |
|---|---|
| • Better advocacy on Emergency and critical Care development<br>• Better emphasis given to quality care in health care facility development.<br>• Growing involvement of professional associations.<br>• Improving Critical Care service in private hospitals.<br>• Professional needs for carrier development<br>• Quality directorate incorporated ICU indicators for quality improvement<br>• Hospitals commitment to expand and strength ICU unit<br>• FMOH commitment for the establishment of poisoning center | |

# 6. Strategic Objectives commentary and targets

### Objective 1: To reduce the incidence and impact of trauma/injuries :

This objective will focus on prevention of various types of injuries, and notably road traffic accident through community sensitization and creating educational forums. As injury prevention is a broad activity, and hence strong intersectoral collaboration will be developed and there will be a trauma system which will create networking of pre-facility and facility trauma care.

***Target*s**

- Reduce RTA related mortality from the current 62/10,000 by one third.

### Objective 2: To improve quality of pre-hospital care service in Ethiopia

This objective is geared towards improving the access and quality of ambulance care in the country and eventually brings community satisfaction to the service. This will be achieved through increases the quantity of ambulances and improving ambulance setup and human resource operating in it.

**Targets**

1. Ambulances operating with the set basic standards will be increased from 3.2% to 35%.
2. Increase ambulance coverage to 100% from the current 70% (in average 1:50,000)
3. Introduce 15 ALS ambulance for selected big cities in the country
4. Conduct base line Community satisfaction assessment and improve from the base line by 10% every year

### Objective 3: To strengthen EMS network in Ethiopia

This objective addresses the development of system of communication and coordination in the emergency care system all over the country. In addition there will be public emergency access system using appropriate and available resource and making them users friendly.

**Target**

- All regions /Zones will have call & dispatch center which will work with the set standards

### Objective 4: To reduce the health impact of natural and manmade disasters

This objective intends development of disaster medical response plan, which will be aligned with strategic plan of public health Emergency. In this part the main focus will be the medical response aspect, and it will be implemented through setting comprehensive response plan, developing appropriate human resource and coordinating different facilities.

**Targets**

- Develop National medical disaster response system

### Objective 5: Strengthen community based Emergency prevention and response

This objective will empower the community to handle emergencies in their home, workplace and neighborhoods through development of appropriate first responder skills. This will modify the community attitude on injuries and emergencies and boosts the community knowledge on injury prevention and care.

**Targets**

- First aid training delivered to 100,000 people
- Develop Community based Injury and acute illness prevention awareness
- Improve Job safety standards implementation

### Obj. 6: Improvement of Facility based Emergency Care

This objective addresses issues that will enable the ministry to deliver high quality and demand-based facility emergency services to the satisfaction of customers and stakeholders. This will be achieved through development of standards of services, and besides staff training and development with networking and mentorship is fundamental Methodology. Physical capacity and internal operation of facilities will also be developed.

**Targets**

- 2 ED will be developed, nationally, to center of excellence in teaching, service and research, 20 EDs to advanced EDs, 50EDs to intermediate level ED and all other EDs to basic level.
- The current ED patients' satisfaction of 60% will be improved to 85%.
- 24 hrs ED mortality will be reduced to 0.2%.

### Obj.7: To establish and strengthen Emergency and Critical Care structure, and EM Coordination and Referral System

This objective gives special attention to development and strengthening of organization system of emergency, critical care and referral at all levels of health sector .It also gives emphasis to setting better communication and coordination of emergency and critical patients.

**Targets/Output**

- Establish EMCC structure in 100% of regions/zones
- All zones/regions will have emergency coordination and referral system
- National referral networking will be established
- Proportion of referrals through networking and communication will be 40%

### Objective 8: To strengthen and scale up critical care service (ICU) in health facilities

This objective addresses issues that will enable the ministry to deliver high quality and demand-based critical care services to the satisfaction of customers. This will be achieved through development of standards critical care services, and producing appropriate mix of skilled human resource to each levels of critical care units.

**Targets**

- 10 ICUs will be developed to level I, 20 ICUs to level II and 20 ICUs to level III
- Initiate new ICUs in 40 additional hospitals
- Reduce ICU mortality to 25%

### Objective 9: To Develop and Strengthen Trauma care System

This objective focuses on trauma units and trauma system development in the country. There will be sensitization and training of all ladders of professionals who are handling trauma and system will be established for communication and coordination from scene to the higher level of facility care as needed. Trauma team will be established in the trauma care facilities; it will be sensitized and developed so that the care will satisfy citizens who need the emergency care.

**Targets**

- 8 trauma unit established
- Trauma care system-will be established in 10 major cities

### Objective 10: To strength and Expand burn care service in health facilities

So far Burn care has been a neglected issue with only one unit in the whole country where patients were being refereed. Hence, this objective gives special attention to expansion of burn service to different parts of the country and integrates the service to existing surgical facility. It will also give special attention to the development and strengthening of human resource involving in this task through training preparation of standards.

**Targets**

- 8 burn units and 1 burn center will be established

### Objective 11: To Initiate and strengthen poisoning center service at selected facilities

This objective focuses on introduction of organized care for poisoning in the country. For the first time such facilities will be established in the country and the ministry will be engaged in assisting the establishment, human resource capacity building and ensuring sustainability.

**Target**

-1 national toxicology center and 4 satellite poising information centers

### Obj.12. To give special emphasis to the development of emergency and critical care in emerging regions and special population groups

Equity and access in emergency and critical care in emerging regions will be addressed through this objective. These regions will get special attention for developing capacity in terms of human

resource, setup and appropriate information technology capacity. Furthermore, prevention of emergencies in special population, like nutritional emergencies in prisons, and other similar activities will be undertaken.

**Targets:**

- Linkage of 10 institutions from emerging regions with better setups
-Enhance emergency care access for special population for 40% of selected institutions

### Objective 13. Enhance collaboration, networking and engagement with national, regional and international partners

Emergency and critical care development and tasks of prevention and promotion needs engagement and coordination of different stakeholders and partners. Hence, in this objective there will be special focus to undertake this activity in coordinated manner.

**Targe**t: To train 320 emergency unit staffs on National Integrated Emergency Medicine (NIEM) course.

## 7.Strategic Objectives and Performance Measures

This section deals on performance measures, and if objectives are being met and the strategy is on the right direction as per to the standard. Measurement is quantifiable like in absolute numbers, percentages, ratings, and ratios.

**Abbreviations used in the responsible agent** :*Emergency and critical care service directorate(ECCSD) , Pre-hospital care (PHC),Human resource directorate(HRD),Public relation directorate(PRD),Ministry of Defense (MOD), Regional health bureau(RHB),policy plan directorate(PPD)*

### Objective 1: To reduce the incidence and impact of trauma/injuries

| Major Activities | Indicators | Data source | Frequency of data collection | Y1 | Y2 | Y3 | Y4 |
|---|---|---|---|---|---|---|---|
| Conduct national advocacy workshop for relevant policy makers on health impact of RTI, Burn, Work related injuries | No. Of conferences organized nationally | EMCCD | Annually | x | x | x | x |
| Conduct regional advocacy workshop for relevant regional administrative and health bureau officials on health impact of RTI, Burn, Work related injuries | Minutes of workshop | EMCCD | Annually | | x | x | X |
| Community Sensitization on RTI, burn and work place injury prevention | #Messages through media, brochures, mass gathering events | EMCCD | Annually | x | x | x | X |
| Collaborate with relevant stakeholders on enhancing children's road safety training | No. of schools with trained traffic students | EMCCD-PHC team | Annually | | x | x | X |
| Participate on awareness creation on the implementation of law enforcement | Number of community awareness session and number of meetings with selected related members of organizations | EMCCD-PHC team | Annually | | x | x | X |
| Introduce and conduct "Let the cars not kill us campaign" and work along with stakeholders | No of campaigns | EMCCD-PHC team | Annually | | x | x | x |
| Introduce two RTI prevention ambassadors annually | No of champions | EMCCD-PHC team | Annually | | | | |
| Working collaboratively with relevant sectors and stakeholders on injury prevention activities | MOUs signed between MOLSA, ERCS, | EMCCD-PHC team | Annually | x | x | x | x |
| Conduct community based injury survey to | No of surveys or | EMCCD- | Annually | | x | x | x |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| assess the burden of all injuries. | research's | PHC team | | | | | |
| Collect, analyze and report injury data from relevant stakeholders like traffic. | No of quarterly reports collected and analyzed | EMCCD-PHC team | Annually | x | x | x | x |
| Collaborate research initiatives in injury from various universities or research institutes | No of researches done with collaboration | EMCCD-PHC team | Annually | x | x | x | x |

## Objective 2: To Improve quality of pre-hospital care service in Ethiopia

| Activity | Indicator | Data source | Frequency of data collection | Y1 | Y2 | Y 3 | Y 4 |
|---|---|---|---|---|---|---|---|
| Support EMT training centers to conduct their training uninterruptedly | Number of graduates every year | HRD | Annually | x | x | x | x |
| Establish additional 3 EMT training centers | NO of EMT centers | HRD | Annually | x | x | | |
| Conduct refresher on job trainings for EMTs | Number of refresher courses given | ECCSD | Bi-annually | x | x | x | x |
| Develop key performance indicators in ambulance usage | KPI developed and commented by group of professionals | ECCSD | During KPI revision | x | | | |
| Support regions on community mobilization for additional new ambulance procurement | Number of ambulances purchased yearly | RHB report | Bi-annually | | | | |
| Conduct close follow up of the ALS ambulance and equipment purchase and its appropriate human resource development | Number of Advanced life support system ambulances staffed and equipped according the standard | HRD | Annually | | x | | |
| Print and distribute additional National Ambulance guideline | No of guideline printed and distributed | ECCSD | Annually | x | x | | |
| Increase awareness on proper ambulance utilization | No of sensitization sessions (Radio, TV, broachers) | PRD | Quarterly | | x | x | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Supportive supervision and on site capacity building on ambulance services and Setup of ambulances according to the guideline | No of supportive supervision | ECCSD | Bi-annually | x | x | x | x |
| Install GPS technology for ambulance tracking | Number ambulance installed with GPS | EMCCD | Annually | | x | x | |
| Evaluate on ambulance service satisfaction, average ambulance response time in urban and rural areas) and % ambulances equipped and staffed according the minimum standard | % of ambulance response meeting 8min in urban and 15min in rural areas<br>% of client satisfaction and Proportion (%)of ambulances operating with at least 3EMTs/Nurses /ambulance and equipped with BLS equipment | HR&EMCCD | Bi-annually | | x | x | |
| Develop Ambulance coordination manual and follow the implementation | Developed manual and no of follow ups | EMCCD | Once | x | X | | |
| Develop air ambulance standards and implementation guideline | Documents developed commented on workshop | MOD&EMCCD | Once | | X | | |

### Objective 3: To strengthen EMS network in Ethiopia

| Activity | Indicators | Source of data | Frequency of data collection | Y1 | Y2 | Y3 | Y4 |
|---|---|---|---|---|---|---|---|
| Establish national/regional/zonal public call center to report emergencies &access the EMS | Number of established call center | EMCCD &RHB | Once | x | x | | |
| Establish / strengthen Dispatch centers in all regions/zones with uniform access number | No or % of zones/regions with improved or standard Dispatch centers | EMCCD | Annually | x | x | x | x |
| Set Standard and SOP for dispatch center operation | No of dispatch centers implementing the standard | EMCCD | Once | x | x | | |
| Key performance indicator development for EMS system operation | Developed key performance indicator, and implemented | EMCCD PPD | Once | x | x | | |
| Develop pre hospital and ambulance services documentation and report scheme based on the KPI | % Of regions reporting according the developed scheme | EMCCD | Quarterly | x | x | x | x |
| Public sensitization and awareness creation on the call center and dispatch service utilization | Number of media release<br>Number of public forums<br>Number of broachers | Call centers | Quarterly | x | x | x | x |

### Objective 4: To reduce the health impact of natural and manmade disasters

| Activity | Indicator | Data source | Frequency of data collection | Y1 | Y2 | Y3 | Y4 |
|---|---|---|---|---|---|---|---|
| Conduct national advocacy workshop for relevant policy makers on disaster health impact and importance of preparedness and response plan | No of workshops conducted | EMCCD | Bi-annually | x | x | | |
| Organize disaster readiness unit nationally in the FMOH and in the regional health bureaus | No of regional health bureaus with dedicated unit and focal person | EMCCD,PHEM, RHB | Bi-annually | x | x | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Distribution of medical disaster preparedness and response manual | Manuals distributed | EMCCD | Annually | x | | | |
| Training on disaster medical response manual | Number of trainings | EMCCD | Bi-annually | x | x | | |
| Ensure development of medical response plan for Disaster at regional level | No of regional health bureaus developed medical response plan. | RHB | Annually | x | x | x | X |
| Yearly simulation exercise in each region on medical response. | No of drills | RHB | Annually | | x | x | x |
| Establish and support national, regional, zonal and woreda level Disaster Medical Response (DMRP) task force | Number of region/zones/woreda established Emergency task force | R/Z/WHB | Annually | x | x | | |
| Conduct Supportive supervision, Annual meeting | No of supervisions and annual meetings | EMCCD | Bi-annually | x | x | x | x |
| Conduct Training of trainers on disaster medical preparedness and Disaster Medical Assistant Team (DMAT). | No of TOT trainees | EMCCD | Annually | x | | | |
| Provide technical support and supervision on disaster medical preparedness. | No of supportive supervision | EMCCD | Quarterly | | x | x | x |
| TOT Training on health related disaster preparedness plan for national and regional task force | No of trainees | EMCCD | Quarterly | x | x | x | x |
| Organize health related disaster preparedness TOT training for regions (extension health workers, EMTS, etc) | No of EMTS and health extension worker and community leaders trained | EMCCD | Bi-annually | | x | x | |

## Objective 5: Strengthen community based Emergency prevention and response

| Activity | Indicators | Data source | Frequency of data collection | Y1 | Y2 | Y3 | Y4 |
|---|---|---|---|---|---|---|---|
| Adapt first aid training manuals developed by the FMOH For extension health workers and use for national training | No of 1st aid manuals printed and distributed for trainees | EMCCD | Once | X | x | x | X |
| Conduct TOT training for 500-1000 professionals including health extension workers | No of professionals trained first d TOT | EM CCD | Quarterly | x | x | | |
| Conduct, support and follow up first aid training of 100,000 beneficiaries /caregivers | No of trainees reported by regions | EMCCD | Quarterly | x | x | x | x |
| Identify institutions with a need of first aid clubs development | Institutions /Areas identified | EMCCD | Annually | x | x | | |
| Establish and assist 50 first aid clubs in different institutes including health development armies | No of fist aid clubs | EMCCD/HDA | Bi-annually | | x | x | x |
| Develop standards for first aid clubs in various institutions and training units | Standard manual developed and distributed to regions | EMCCD | Once | x | x | x | x |
| Conduct/assist First aid training for drivers, assistant driver and traffic police, TVET, industrial, construction workers and fire fighters | Number of trainees | EMCCD | Quarterly | x | x | x | x |
| Collaborate on Formulation and incorporation of essential legislations:(the good Samaritans, drink drive prohibition law, obligatory possession of first aid kit with drivers | Number of collaborative work shop | Legal/ethics directorate, ECCSD | Once | x | x | x | |

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| and police, laws related with commercial drivers working hours. | | | | | | | |
| Collaborate on the development and incorporation of first aid in high school, drivers training school and police college curriculum | Number of curriculum incorporated | EMCD/MOE | Annually | | x | x | |
| Provide First aid kit to each club | No of 1st aid kit distributed | EMCCD | Annually | | x | x | x |
| Collaborate with relevant organizations to improve job safety standard implementation | Number of MOUs<br>Number of visits | EMMCD | Annually | | | | |
| Improve community health awareness on emergency preventions | Number of media sessions, group discussions, number of people involved on 1st aiders pear discussion, number of broachers disseminated and number of health educations in health facilities | EMCCD | Quarterly | | | | |
| Support health facilities to organize health education sessions supported with audio visual, reading materials | Number of audiovisual equipment and reading materials distributed | RHB/EMCCD | quarterly | | | | |

**Obj. 6: Improvement of Facility based Emergency Care**

| Major Activities | Indicators | Data source | Frequency of data collection | **Y1** | **Y2** | **Y3** | **Y4** |
|---|---|---|---|---|---|---|---|
| Develop and implement ED standards and implementation/operational guideline(Develop, sensitize it, implement, M/E ) | Document developed, sensitization forums | EMCCD report | Annually | x | | | |
| Revise Emergency facility related key performance indicators | KPIs finalized and included in the EHRIG document | EHRIG document | Every five years | x | | | |
| Disseminate EM treatment guideline and follow its utilization(sensitize, implement) | No of hospitals getting and using the guideline | EMCCD supportive supervision report | Annually | x | | | |
| Conduct EM facilities supportive supervisions and support depending on the findings | No of supportive supervisions, No and type of supports | EMCCD-report | Annually | x | x | x | x |
| Enhance Quality improvement initiatives in the EM care area | Proportion of hospitals with selected QI initiatives | Quality health service directorate | Annually | x | x | x | X |
| Assist hospitals setting/equipping their ED/ER according to the standards. | No of ED/ERs getting assistance | EMCCD-report | Annually | x | x | x | X |
| Conduct TOTs and in service training on NIEM | No of TOTs and trainee | EMCCD- report | Annually | x | x | x | X |
| Develop Curriculum and training manuals for EM care leader physicians and nurses. | Curriculum developed No of trainee | EMCCD- report Human resource development directorate | Annually | x | x | | |
| Conduct training to 300 physicians and 300 | No of professionals trained | EMCCD- report | Annually | x | x | x | X |

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|---|---|---|---|---|---|---|---|
| nurses(assumption is 1 professional from each hospital) | | | | | | | |
| Establish EM facility networking system so that institutions will have collaboration and mentorships | No of networked EDs | EMCCD- report | Annually | x | x | x | X |
| Develop partnership with advanced Emergency Departments from other countries | No of external partnerships | EMCCD- report | Annually | x | x | x | x |
| Improve ED information management system (baseline assessment, develop standard registry formats, reporting, analyze, Use | | | | x | x | x | X |
| Conduct research/survey / or impact analysis in EM care and disseminate results | No. of research done | EMCCD- report | | x | x | x | X |
| Conduct baseline and ongoing patients satisfaction surveys | No. of surveys conducted | EMCCD- report | | x | x | x | x |
| Conduct baseline and ongoing EM HRH satisfaction and retention surveys and use for policy implications | No. of surveys conducted | EMCCD- report | | x | x | x | X |
| Develop self assessment tools for the case team and facilities | Tool developed and utilized | EMCCD- report | | x | | | |
| Ensure Emergency case management by qualified providers | sensitization<br>No of In-service NIEM trainings | EMCCD- report | | x | x | x | x |
| Develop Award and recognition scheme and implement it to identify best performing facility/model | Check-list , site visit, annual , number of annual awards | EMCCD- report | | x | x | x | X |
| Scale up of essential care services/Diagnostic, Imaging, Surgical/ | Baseline, arrangement | EMCCD- report | | | | | |

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|---|---|---|---|---|---|---|---|
| Establish the relevant registry formats: Trauma, medical EM, Mortality registry and Ensure that formats are properly entered and reported. | Formats developed | EMCCD- report | | x | x | x | x |
| Conduct Advocacy work to improve Motivation of EM health care workers | No of sensitization forums | Reports | | x | x | x | X |
| | | | | | | | |

**Obj.7: To establish and strengthen Emergency and Critical Care structure, and EM Coordination and Referral System**

| Activities | Indicators | Data source | Frequency of collection | Y1 | Y 2 | Y 3 | Y 4 |
|---|---|---|---|---|---|---|---|
| Replicate EMCC structure in to 100% of regions/ zones | No of regions and zones with EMCC structure in their respective office | Regions | Yearly | X | x | x | x |
| Training and orientation on Emergency care structure | Number of training given | EMCCD | Annually | x | x | x | x |
| Institutionalize Addis Ababa Emergency and Referral Team | Administrative process finalized | EMCCD | Annually | | x | | |
| Replicate EM and referral coordination team | No of regional coordinating team | EMCCD, RHB | Anually | x | x | x | x |
| Create public awareness about the emergency coordinating team | -No of media message transmitted, no of health education forums | EMCCD, RHB | Anually | x | x | x | x |
| Develop and implement a data base to analyze all EM referrals | Established data base | EMCCD | Annually | x | x | x | x |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Establish 24 hrs liaison service in all hospitals | No hospitals with 24 hrs liaison service | Hospitals report | Anually | x | x | x | X |
| Facilitate inter-liaison communication | % of referral with communication | Hospitals report | Anually | x | x | x | X |
| Establish National referral networking | National referral networking launched | EMCCD | Anually | | x | x | x |
| Ensure referral is based on national referral network. | No of hospitals using national referral network | EMCCD | Biannually | x | x | x | x |
| Establish National web-base data management system for bed management and national service directory | No of hospital implementing National web-base bed management system | Hospitals report | Anually | x | x | x | x |
| Conduct awareness creation regarding emergency and referral proclamation | No of message transmitted | EMCCD | Bianually | x | x | x | x |
| Conduct baseline survey to study referrals according the standard and feed back | Survey conducted and base line data known | EMCCD | | x | | | |
| Ensure all hospitals use national Admission and Discharge (A&D) protocol | No of hospitals using A&D protocol | RHBs, Hospitals report | Anually | x | x | x | x |
| Develop guidelines to facilitate abroad referrals | Have developed guideline | EMCCD | Anually | x | | | |
| Analyze the data and describe the burden of abroad referrals | Description of burden of external referrals | EMCCD | Anually | | x | | |

## Objective 8: To strengthen and scale up critical care service (ICU) in health facilities

| **Activity** | **Indicators** | Data source | Frequency of data collection | **Y1** | **Y 2** | **Y 3** | **Y 4** |
|---|---|---|---|---|---|---|---|
| Facilitate the distribution of ICU medical equipments to selected hospitals | No of hospitals got ICU equipment | Hospitals | Annually | X | x | x | X |
| Initiation of critical care service in 40 additional hospitals | No of hospitals started the service | ECCSD | Annually | X | x | x | X |
| Establish relevant registry formats and ensure that formats are properly entered and reported. | Formats developed<br>No of sensitization forums | ECCSD | Quarterly | X | x | x | X |
| Establish the relevant data base for Critical Care | Data base established | ECCSD | Quarterly | x | | | |
| Conduct quarterly meetings of ICU technical working group | No of meetings | ECCSD | Quarterly | X | x | x | X |
| Give short course ICU training to 1000 health professionals | No of trainee obtained the training | ECCSD | Quarterly | X | x | x | X |
| Conduct baseline and ongoing ICU HRH satisfaction and retention surveys and use for policy implications | Number of motivation study conducted<br>Attrition rate | ECCSD | Annually | X | x | x | X |
| Support and follow Implementation of ICU implementation guideline in hospitals | No of sensitization meetings, hospitals using the guideline | ECCSD | Quarterly | x | x | x | X |
| Preparing training manuals, treatment protocols, and conduct operational research | Documents<br>Research conducted | ECCSD | Quarterly | x | x | x | X |

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|---|---|---|---|---|---|---|---|
| Revise ICU KPI | Updated indicators | ECCSD | Annually | x | | x | |
| Create ICU networking | Number of ICU networks | ECCSD | Annually | x | x | x | X |

## Objective 9: To Develop and Strengthen Trauma care System

| Activity | Indicators | Data source | Frequency of data collection | **Y 1** | **Y 2** | **Y 3** | **Y 4** |
|---|---|---|---|---|---|---|---|
| Establish 8 trauma units in the country | No of trauma units established | Hospitals &ECCSD | Annually | x | x | x | X |
| Develop and equip existing trauma units towards the standard | No of trauma units fulfilled the standard care | Hospitals &ECCSD | Annually | x | x | x | X |
| Implement trauma system guideline | No of Sensitization forums, utilization rate of the guideline | Hospitals &ECCSD | Quarterly | x | x | x | x |
| Improve awareness and utilization of third party insurance | No of hospitals utilizing third part insurance | Hospitals ,regional health offices &ECCSD | Quarterly | x | x | x | x |
| Prepare national trauma data base and mapping trauma prone areas | Prepared trauma data base and number of selected areas | Hospitals &ECCSD | Annually | x | | x | |
| Provide short term Advanced Trauma Life Support (ATLS) oriented training to 500 health professionals | No of health professionals obtained training | ECCSD | Annually | x | x | x | x |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Strengthen TWGs | Number of meetings | ECCSD | Quarterly | X | X | X | X |
| prepare national equipment, drugs and supplies list | List of standard trauma medical equipment and supplies list | ECCSD | Quarterly | X | X | | |
| Conduct national operational research regarding trauma | Number of operational research conducted | ECCSD | Annually | X | X | X | X |

**Objective 10: To strength and Expand burn care service in health facilities**

| Activity | Indicators | Data source | Frequency of data collection | Y1 | Y2 | Y 3 | Y 4 |
|---|---|---|---|---|---|---|---|
| Establish 1 burn center and 8 burn unit at selected referral hospitals | No of burn centers/units established | Hospitals &ECCSD | Annually | X | x | x | x |
| Give training for 240 health professionals | Number of trainee | ECCSD | Annually | X | x | x | x |
| Supply the necessary medical equipments | No of centers provided with equipment | ECCSD | Annually | X | x | x | x |
| Update equipment and drug list and communicateto procurement agency. | Updated drug list | ECCSD | Annually | | X | | X |
| Finalize burn data base | Have national data base | ECCSD | Annually | X | | | |
| Facilitate the long term training of respective department working with burn unit | Number of trainees and round of training | ECCSD | Annually | X | X | X | X |
| Conduct assessments before | Number of assessment | ECCSD | Quarterly | X | X | X | X |

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|---|---|---|---|---|---|---|---|
| selecting burn unit | conducted | | | | | | |
| Follow burn implementation guideline and treatment protocol | Number of hospitals implemented guideline/protocol | Hospitals &ECCSD | Quarterly | X | X | X | X |
| Establish one isolated ICU bed for burn unit, in established general ICUs | Established isolated ICU bed | Hospitals &ECCSD | Quarterly | X | X | X | X |
| Facilitate to incorporate burn care in first aid module | Prepared first aid module | ECCSD | Quarterly | | X | | |
| Establish technical working group on burn care and conduct quarterly meeting | TWG established<br>No of meetings per year | ECCSD | Quarterly | X | x | x | x |
| Conduct community awareness about prevention of burn | No of media show, brochures, banners, | ECCSD&community | Quarterly | X | X | x | x |

## Objective 11: To Initiate and strengthen poisoning center service at selected facilities

| **Activity** | **Indicators** | **Data Source** | **Frequency of collection** | | | | |
|---|---|---|---|---|---|---|---|
| Establish one national toxicology center | Established center | ECCSD | Annually | X | X | x | x |
| Establish 4 satellite Poisoning information center | Number of information centers established | ECCSD | Annually | X | X | x | x |
| Stockpile antidotes | Availability | ECCSD | Annually | X | X | x | x |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | antidotes | | | | | | |
| Implement poisoning treatment protocol | No of Sensitization forums, utilization | ECCSD | Annually | X | X | x | x |
| Implement Poison control information center manual in hospitals | Sensitization, distributed area Utilization (through assessment) | ECCSD | Quarterly | X | X | x | x |
| Prepare electronic data base | Prepared data base | ECCSD | Annually | X | | | |
| Revise national antidote | Revised antidote | ECCSD | Annually | X | | X | |

**Obj.12. To give special emphasis to the development of emergency and critical care in emerging regions and special population groups**

| **Activity** | **Indicators** | | | | **Y4** |
|---|---|---|---|---|---|
| Assess and Identify gaps in n emergency, critical care and referral systems in emerging regions | Identified gaps | X | x | x | x |
| Prioritize gaps in emerging regions and draw action plan for improvement | Formulated action plans | X | X | X | X |
| Select hospitals in emerging regions to provide special assistance in emergency and critical care development | Number of selected hospital | X | X | X | X |
| Create networking with those of relatively better facilities | Number of links developed | X | X | X | X |

| | | | | | |
|---|---|---|---|---|---|
| Conduct frequent supportive supervision | Number of supportive supervision | X | X | X | X |
| Assign clinical mentor and follow its implementation | Number of clinical mentor assigned and duration of mentorship | X | X | X | X |
| Create at least 3 linkages per year between emerging regions and those with better facility. | Number of linkage made | | X | X | X |
| Identify institutions for special population group and assess their emergency care delivery capacity (like Elderly, prisoners, crowed, refugee homes, nursing homes) | Number of institutions identified | x | x | x | x |
| Provide NI EM/first aid trainings for professionals from selected centers | Number of trained professionals | | X | X | X |
| Provide Emergency care guideline for these institutions | Number of guidelines distributed | | X | X | |
| Provide supportive supervisions | Number of supportive supervision done | | X | X | X |

**Objective 13. Enhance collaboration, networking and engagement with with national, regional and international partners**

Target: **To train 320 emergency unit staffs on National Integrated Emergency Medicine (NIEM) course.**

| Activity | Indicators | **Y1** | **Y2** | **Y3** | **Y4** |
|---|---|---|---|---|---|
| Build the capacitate of EM unit at all level | % of human resource increased<br># of trainings provided to the staff<br>#EM units equipped as per the standard | x | x | x | x |
| Coordinate/collaborate with HR so that specialized emergency care workers will be available according to the ED/ER standards. | No of hospitals with adequate number of specialized team | | x | x | x |
| Coordinate/collaborate with HR so that BSC emergency/critical care Nurses will be available according to the standards. | No of workshop/ meeting with HR department, M/E sessions, No of hospitals with adequate number of specialized team | | x | x | x |
| Coordinate/collaborate with HR so that EMT will be available according to ambulance standards. | No of ambulances with adequate number of EMTs | | x | x | x |
| Coordinate/collaborate development and implementation of paramedic (BSC) curriculum | Paramedic curriculum will be developed<br>Paramedic training will be started | | x | x | x |

| | | | | | |
|---|---|---|---|---|---|
| Integrate driver license system with EMT | Driving license included in EMT curriculum and implemented | | | x | x |
| Institutionalize AA team activity | Administrative process finalized | Y1 | Y2 | Y3 | Y4 |
| Map relevant core group and supporting stakeholders | Number of Stakeholders mapping performed | x | x | x | x |
| Develop TORs document to work with different stakeholders | # of Meeting conducted and TOR developed | x | | | |
| Conduct quarterly meetings with major stakeholders and once yearly with all in the annual review meeting | No of meetings conducted | x | x | x | x |
| Identify relevant international partners | No of partners identified | x | x | x | x |
| Set focal person and ensure collaborations and partnerships are well coordinate | Focal person assigned | x | x | x | x |
| Document partners/ stakeholder's stories and prepare annual report of the findings. | Summaries of performances prepared | x | x | x | x |

## 8. Costing Assumptions

The costing in this strategic plan is mostly for program management,taraining,sensitization and monitoring evaluation works.There is no outstanding purchase issues ,and assumingly the directorate also have the minimum required staff in place, and as a result experience from past years expenditure and assumption of inflation of markets is made.

### 8.1 . Costing Summary

The total cost of implementing the strategic plan will be ETB 984,154,664.

Costs are spread over the duration of the strategic plan summarized by major activities is presented in the tables below.

***Cost and Budget in Birr***

| Program Activity | 2016/17 | 2017/18 | 2018/19 | 2019/20 |
|---|---|---|---|---|
| Training | 41,766,666 | 43,866,666 | 43,766,666 | 44,876,666 |
| M&E :Supervision and Review /Coordination and Research | 15,750,000 | 18,250,000 | 18,250,000 | 18,250,000 |
| Infrastructure and Equipment | 117,543,000 | 132,543,000 | 133,293,000 | 138,343,000 |
| Communication, Media & Outreach | 20,985,000 | 21,485,000 | 22,145,000 | 22,785,000 |
| General Program Management | 32,000,000 | 32,000,000 | 35,000,000 | 36,000,000 |
| Other activities | 5,000,0000 | 6,000,000 | 6,000,000 | 6,000,0000 |
| Totals | 217,294,666 | 253,144,666 | 258,454,666 | 260,260,666 |
| Grand Total | 984,154,664 | | | |

# 9. IMPLIMENTATION OF THE STRATEGIC PLAN

## Implementation Strategy

The implementation of the strategic plan needs effective leadership of the directorate and support of various stakeholders, which are found at different levels in the system. The directorate should develop all essential documents, like implementation guidelines and others, to make implementation easy and properly sensitize them. In addition thorough mapping of stakeholders establishing coordination scheme is very important. Emergency and critical care development is new in our country, and hence, Scaling up the system and build competencies at all levels in health facilities and ambulance service needs the support of established institutes. The directorate will underscore behavioral change of health workers on development of CRC in the care areas. Therefore, national and international partnership, clustering mentorship schemes will be established and institutes will have collaborations and support one another. In doing so there will be diffusion and absorption of best practices from one facility to the other.

Furthermore, based on the time line described above in the matrix detailed annual work plan and monitoring and evaluation will be undertaken. The directorate will give due emphasis on data generation, analysis and use by institutes to improve their quality internally and motivate established quality improvement projects. This needs initiative requires well-organized communication among all partners, and delivery of timely reporting system and feedback. The directorate will use appropriate technologies to make communications and other activities efficient.

In the implementation of the strategic plan FMOH and the following stakeholders will have major responsibilities which are listed down.

## FMOH and other Stakeholders' Responsibilities

### FMOH:EMCC / HR Directorate

- Provide comprehensive leadership for the implementation of the strategic plan
- Deliver support for the fulfillment of various strategic objectives and activities
- Spearhead the M/E of the strategic plan

- Develop and distribute implementation guidelines and sensitize on its utilization
- Ensure the Production of appropriate number and mix of health professionals serving at various levels in the health care system
- Ensure that health professionals are getting appropriate refreshment courses
- Identify major national and international partners for the development of EMSS in the country
- Support and conduct researches in the field
- Identify and support specialty and sub specialty fields for the development of emergency and critical medicine both for pre hospital and health facility level

## Health Professional Associations

- Participate in the development and implementation of guidelines, and relevant policies
- Participate in the implementation and M/E effort in accordance to their capacity
- Conduct CPDs to health professionals in Emergency and critical care areas

## University Hospitals/Emergency Medicine Departments

- Serve as consultant or advisory body for the development of EMSS in their respective regions and for the national program
- Participate in the provisions of CPDs
- Produce the necessary human resources for EM and CC service in accordance with human resource directorate strategic plan
- Will develop their ED to advanced level in order that it will be a role model
- Participate in the implementation and M/E effort in accordance to their capacity
- Identify and conduct specialty and sub specialty fields for the development of emergency and critical medicine both for pre hospital and health facility level
- Develop emergency/disaster plans for their respective hospitals and regions
- Conduct researches on the field
- Plan and guide emergency preparedness plan and simulations in their respective hospitals and regions

## Regional Health Bureaus/Ambulance Institutes-Red Cross/Fire and Emergency/Private

- Develop the pre hospital service according the national standard
- Develop coordinated ambulance services in their respective regions
- Develop their ambulance services up to the standard
- Conduct community awareness raising programs on the proper use of call centers and ambulance services by the community
- Promote and increase the access for the community
- Conduct and participate on different emergency conditions prevention
- Participate in the provisions of first aid and other trainings which are in their scope
- Establish partnership with different national and international pre hospital providers and scale up their services according the gained experience and support
- In collaboration with the regional, city governments engage the community on securing additional ambulances and on their management
- Conduct M&E of the pre hospital services
- Up grade their pre hospital services using modern technologies

## Support group members

- Give expertise idea and information in developments related with their fields
- Participate in the annual work plans and M/E meetings
- Solicit resources in common activities in the work plan
- Play role in sensitization and advocacy effort

# 10.MONITORING AND EVALUATION

## Monitoring and Evaluation Approaches:

- **Annual Work Plan:**

  The directorate prepares detailed annual work plan after evaluating the previous year's performance and based on successes and gaps identified. Each case team in the directorate will prepare its own performance report to be input for the work plan and will look if the annual plans and performances are with alignment with strategic plan.
- **Documentation, registry and Periodic reports /data bases analysis:** as information revolution is one of the transformation agendas in this strategic plan proper generation of information and data generation emphasized. Facilities will analyze and will be encouraged to use for their own improvement and, furthermore will report to appropriate levels quarterly. For simplification of these process data bases of different levels will be developed by the directorate and used by facilities.
- **Supportive supervision**

  To assess the performance of Emergency, Referral and critical care at different level of service integrated supportive supervision is mandatory. It will be performed twice a year at various level of the care. Besides, it will be more frequent in areas where there is emergency coordination team working actively.
- **Conduct baseline and end of strategic plan years surveys**

  There is baseline survey performed by all case teams and it shows the existing situation before implementation of the plan but if there are missed or unclear issues focused survey will be done. In the end of strategic plan years there will be comprehensive assessment to see overall progress and to be prepared for another strategic plan preparation.
- **Annual review**

  Trauma and issues related like burn and poisoning will get priority by the ministry and regional health departments and there will be annual review on selected KPIs like Injury severities, Injury prevention work, mortality and length of hospitalization. The second and fourth annual review years will be special as there will be interim and final strategic year presentation and discussions and the trend will be seen if it is normal.

- **Emergency Care Facilities' Quality improvement units**

  In Emergency and critical care facilities will establish interdisciplinary quality team. It is under hospitals' Quality Management Office and will follow the QI process of in emergency and critical domains, which include emergency, trauma, burn, referrals and critical care. Furthermore Morbidity and Mortality peer review will take place periodically. Depending on the strength of the hospital team detailed quality improvement indicators will be developed and used.

**The Monitoring Indicators-**

See in the Objectives and activities matrix above. The indicators are derived

Appendix I

## List of stakeholders

### List of core and support members of Emergency, referral and Critical Care working group

1. FMOH/EMCC and Referral directorate and Regional Health Bureaus
2. University Hospitals -AAU/TASH/Emergency Medicine Department, Addis Ababa Burn, Emergency and trauma Hospital (AaBET)
3. Relevant Health Professional Associations (Ethiopian Society of Emergency Medicine Professionals (ESEP), Anesthesiology, Thoracic Society, etc)
4. Ethiopian Red Cross Society (ERCS)/Addis Ababa Red Cross Society
5. Addis Ababa City Council Health Bureau
6. Addis Ababa Fire and Emergency Prevention, Response and Rescue Authority
7. Private health service institutes
8. NGOs-WHO and others
9. Federal Police commission-crime prevention unit
10. AACC Police commission-traffic police unit and crime prevention unit
11. Ministry of Education
12. Ministry of Labor and Social Affairs
13. Federal Transport Authority (FTA)
14. Addis Ababa City Council Transport Authority
15. Addis Ababa City Council Roads Authority
    1. Association of Insurers
    2. Ethiopian Federation of People with Disabilities (EFPD)
    3. International Labor Organization (ILO)
    4. World Bank
    5. UNICEF
    6. Disaster Prevention Preparedness Authority (DPPA)