



Trends and issues in Emergency and Critical care Nursing in Thailand

Assist.Prof. Dr. Niphawan Samartkit





CONCEPT

- The term emergency is used for those patients who require immediate action to prevent further deteriorations or stabilizing the condition till the availability of the services close to the patients.
- The nurse as a team member plays significant role in the early assessment, intervention either in the form of care or transferring the patient safely to the health services.





- Emergency department overcrowding is a growing and severe problem
- Require crisis intervention National wide
- The patient population presenting Emergency Department spans the age continuum from neonates to geriatrics





Emergency Care System Improvement

**Building a 21st-
Century
Emergency Care
System**





Emergency care system framework

All around the world, acutely ill and injured people seek care every day. Frontline providers manage children and adults with injuries and infections, heart attacks and strokes, asthma and acute complications of pregnancy. An integrated approach to early recognition and management saves lives. This visual summary illustrates the essential functions of a responsive emergency care system, and the key human resources, equipment, and information technologies needed to execute them.



EMERGENCY CARE SYSTEM FRAMEWORK

All around the world, acutely ill and injured people seek care every day. Frontline providers manage children and adults with injuries and infections, heart attacks and strokes, asthma and acute complications of pregnancy. An integrated approach to early recognition and management saves lives. This visual summary illustrates the essential functions of a responsive emergency care system, and the key human resources, equipment, and information technologies needed to execute them.



■ HUMAN RESOURCES
 ■ FUNCTIONS
 ■ EQUIPMENT, SUPPLIES, INFORMATION TECHNOLOGIES



H



- Early critical care
- Early operative care

EMERGENCY UNIT



- Assessment
- Resuscitation
- Intervention
- Monitoring



Reception of Patients



SCENE

- BYSTANDER RESPONSE
- DISPATCH
- PROVIDER RESPONSE

TRANSPORT

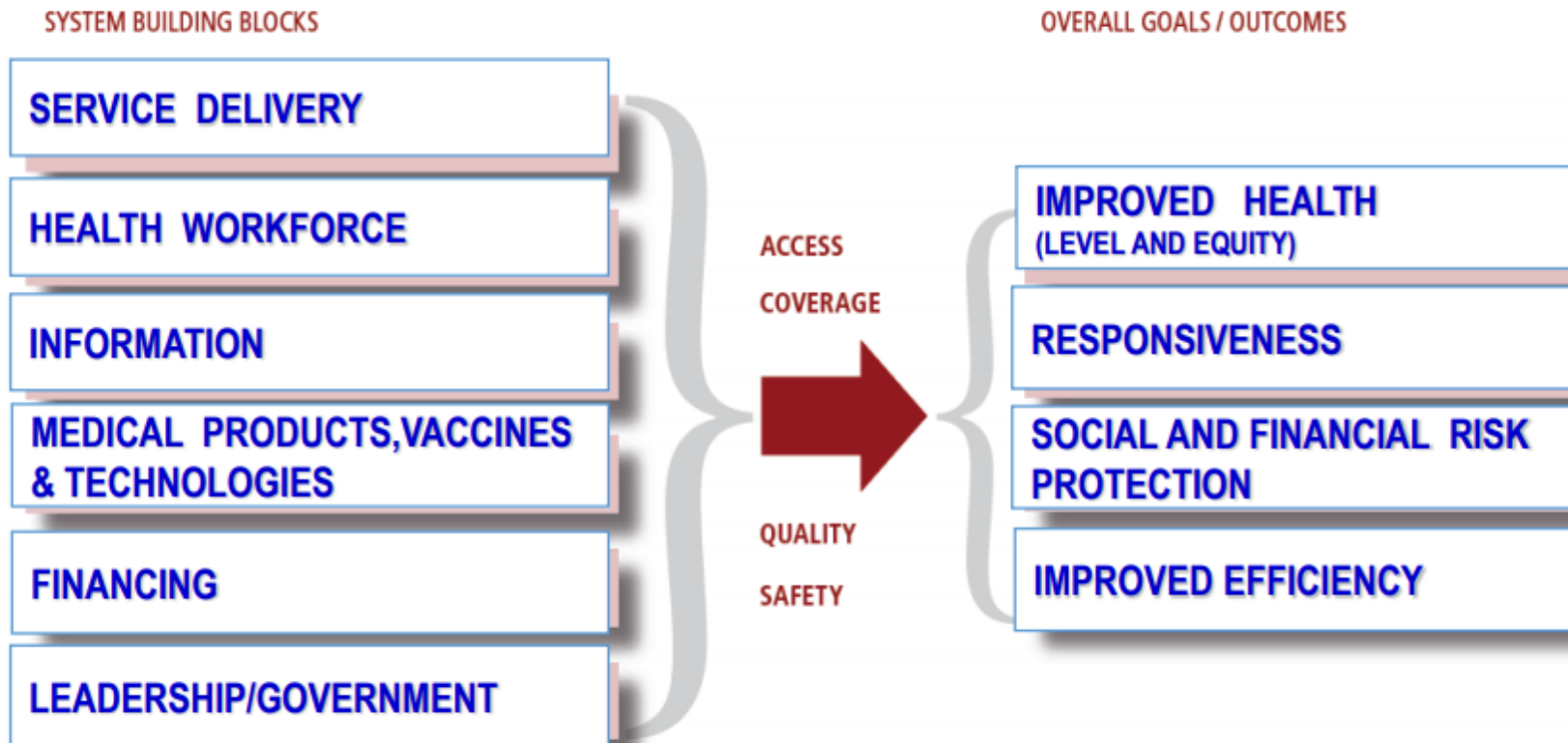
- PATIENT TRANSPORT
- TRANSPORT CARE

FACILITY

- RECEPTION
- EMERGENCY UNIT CARE
- DISPOSITION
- EARLY INPATIENT CARE

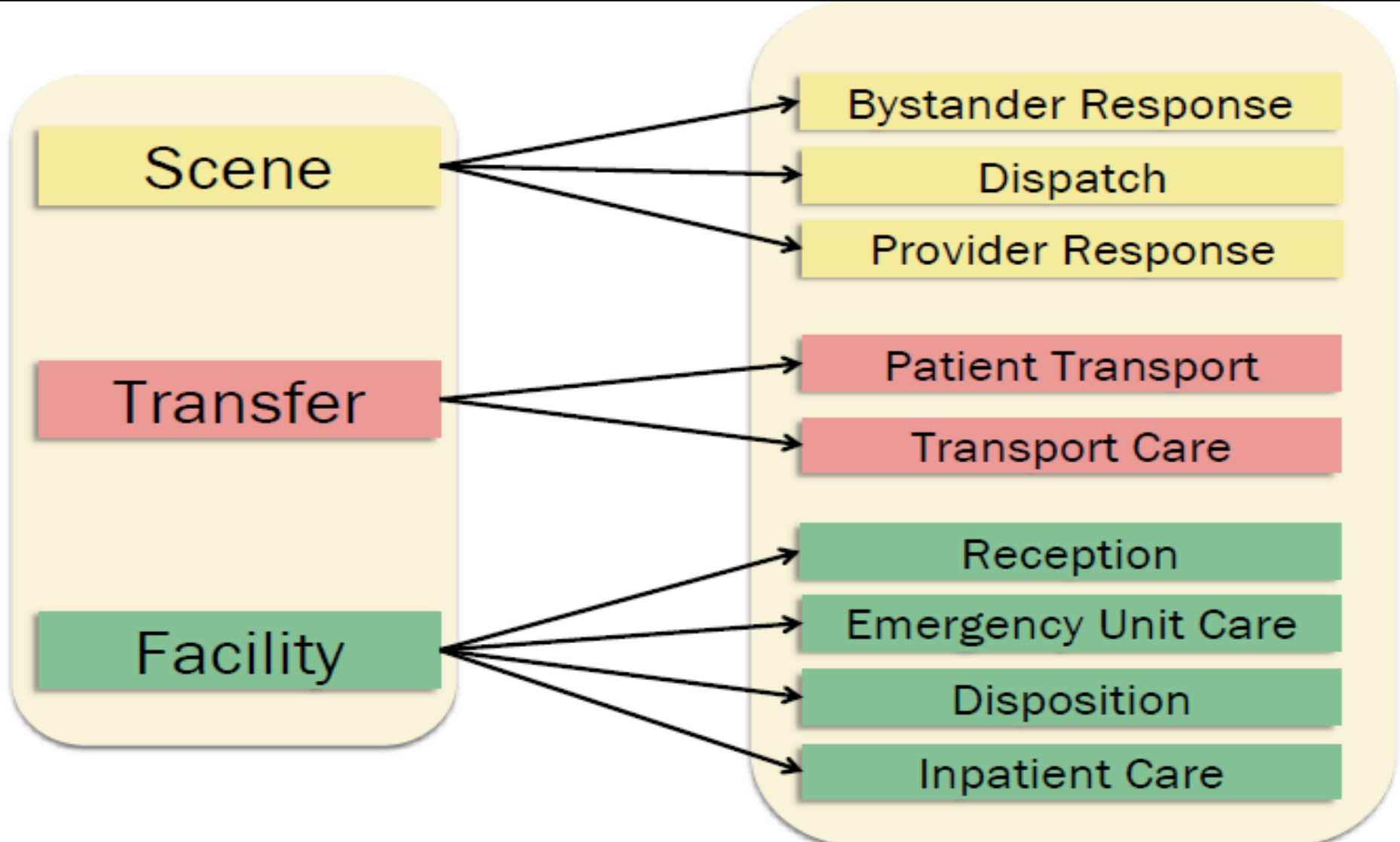


WHO Health System Framework





WHO EMERGENCY CARE SYSTEM FRAMEWORK



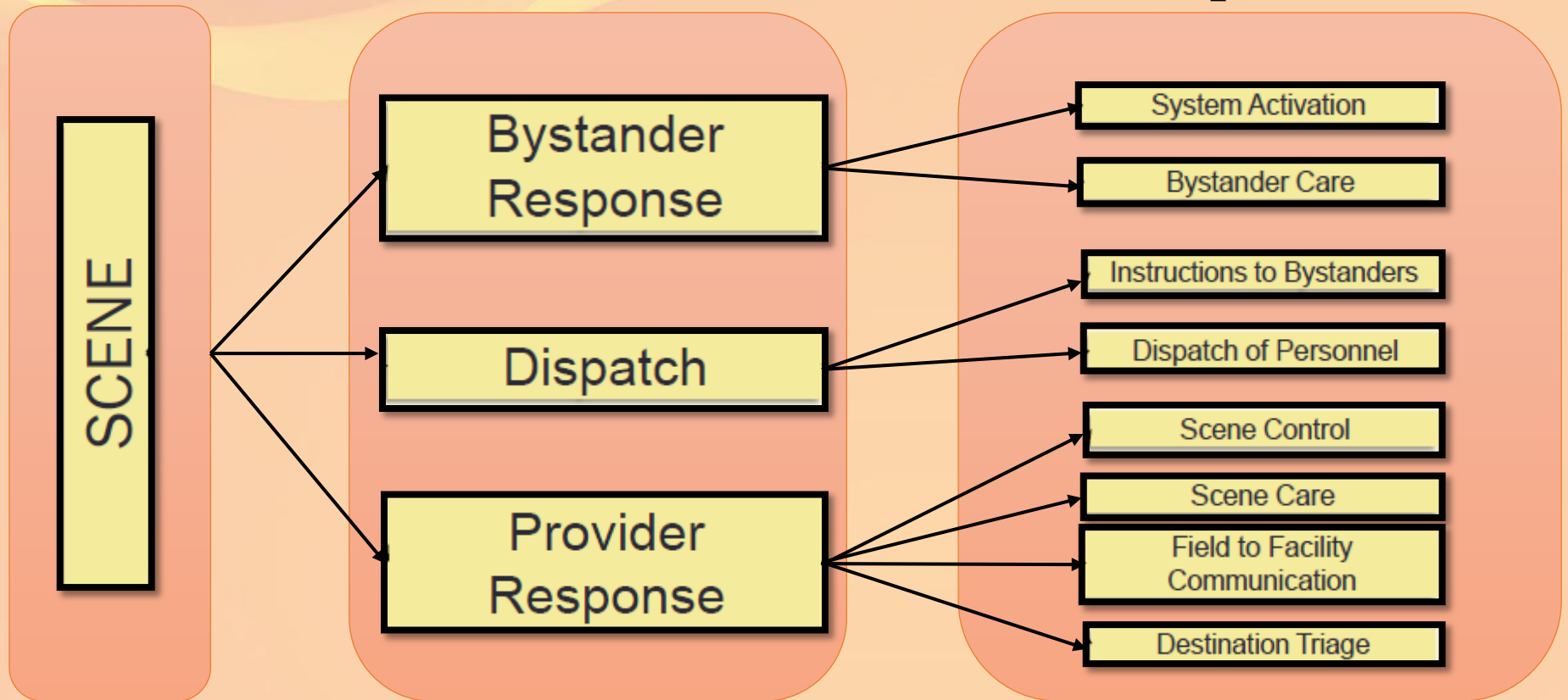


WHO EMERGENCY CARE SYSTEM FRAMEWORK

Site

Primary functions

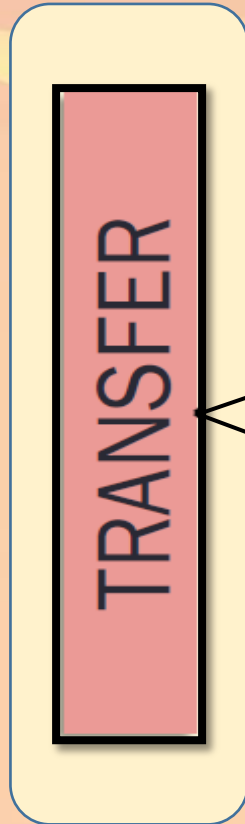
Components



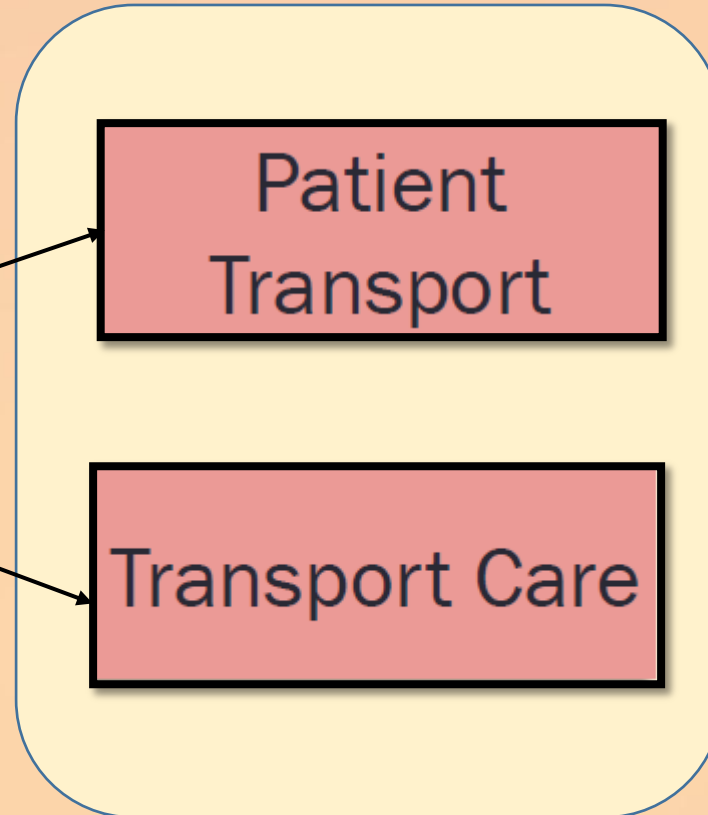


WHO EMERGENCY CARE SYSTEM FRAMEWORK

Site

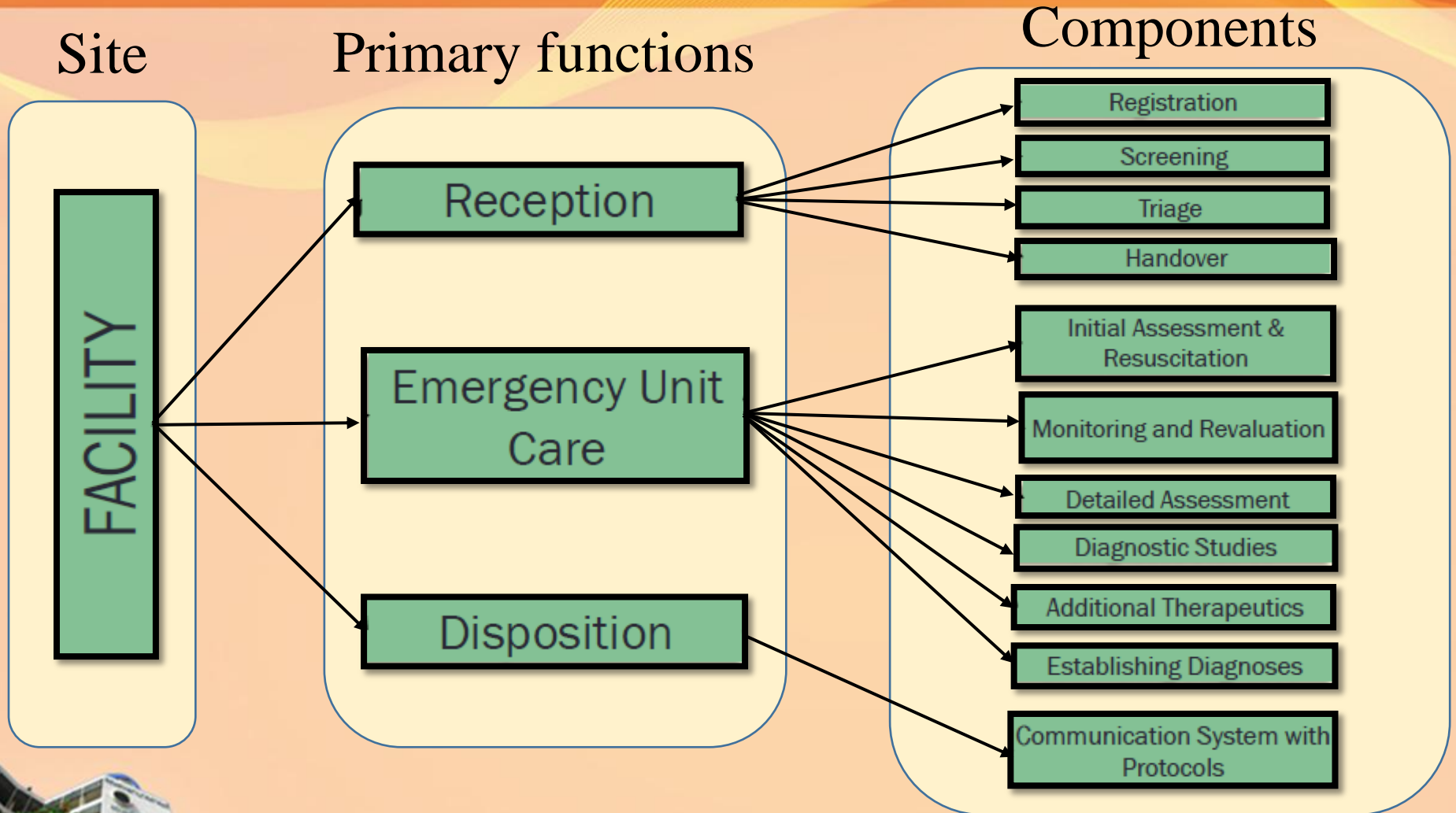


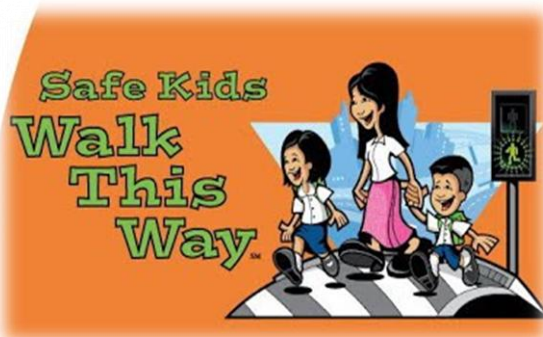
Primary functions





WHO EMERGENCY CARE SYSTEM FRAMEWORK





PREVENTION

PREHOSPITAL
& TRANSPORT

TRAUMA

FACILITY-BASED
CRITICAL CARE

EMERGENCY CARE SYSTEMS

SYSTEMS

REHABILITATION





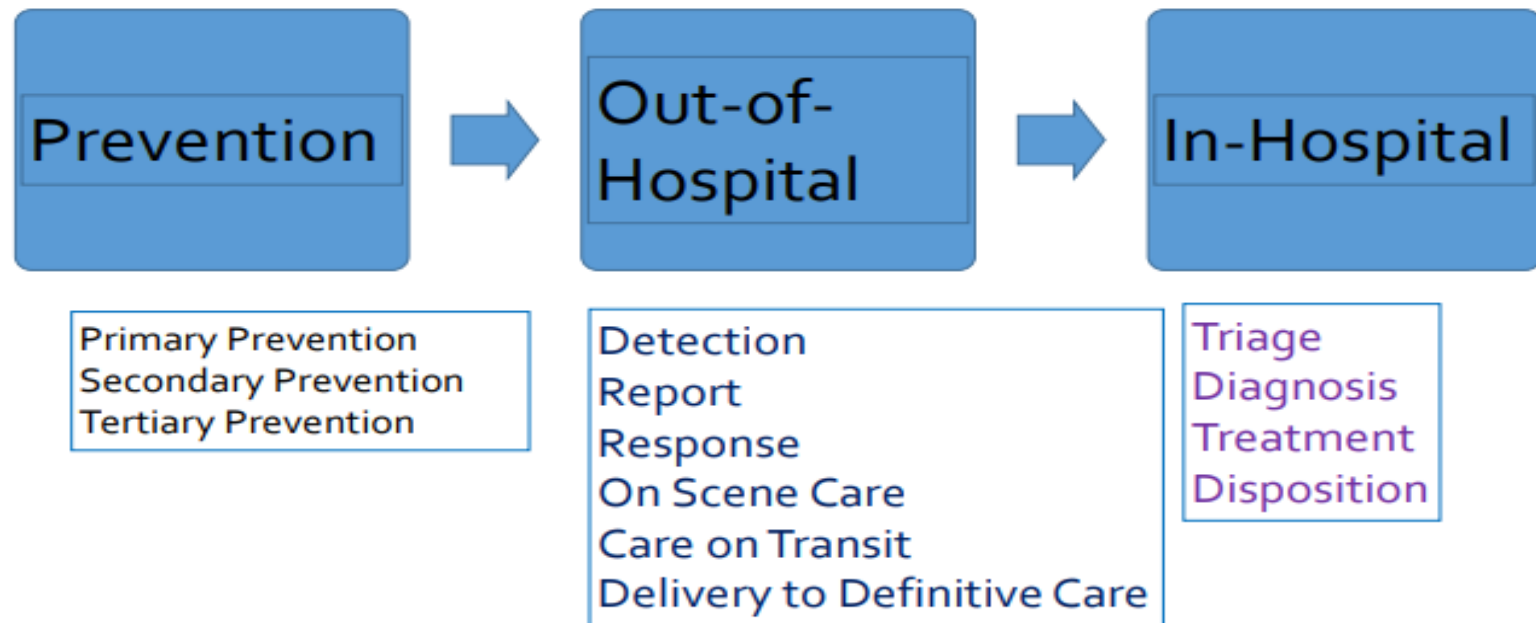
ECS (Emergency Care System)

1. Prevention
2. Pre hospital care to ER
3. In hospital care / Definitive care), Inter hospital care/ Referral System)
4. Disaster preparedness & Hospital preparedness for Emergency





The Process





- Emergency nurses must be ready to treat a wide variety of illnesses or injury situations, ranging from a sore throat to a heart attack
- Is a specialty area of the nursing profession like no other. To provide quality patient care for people of all ages, emergency nurses must possess both general and specific knowledge about health care to provide quality patient care for people of all ages





Quality & Efficiency

- Staff
- System
- Structure





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ECS Quality and Efficiency in Thailand

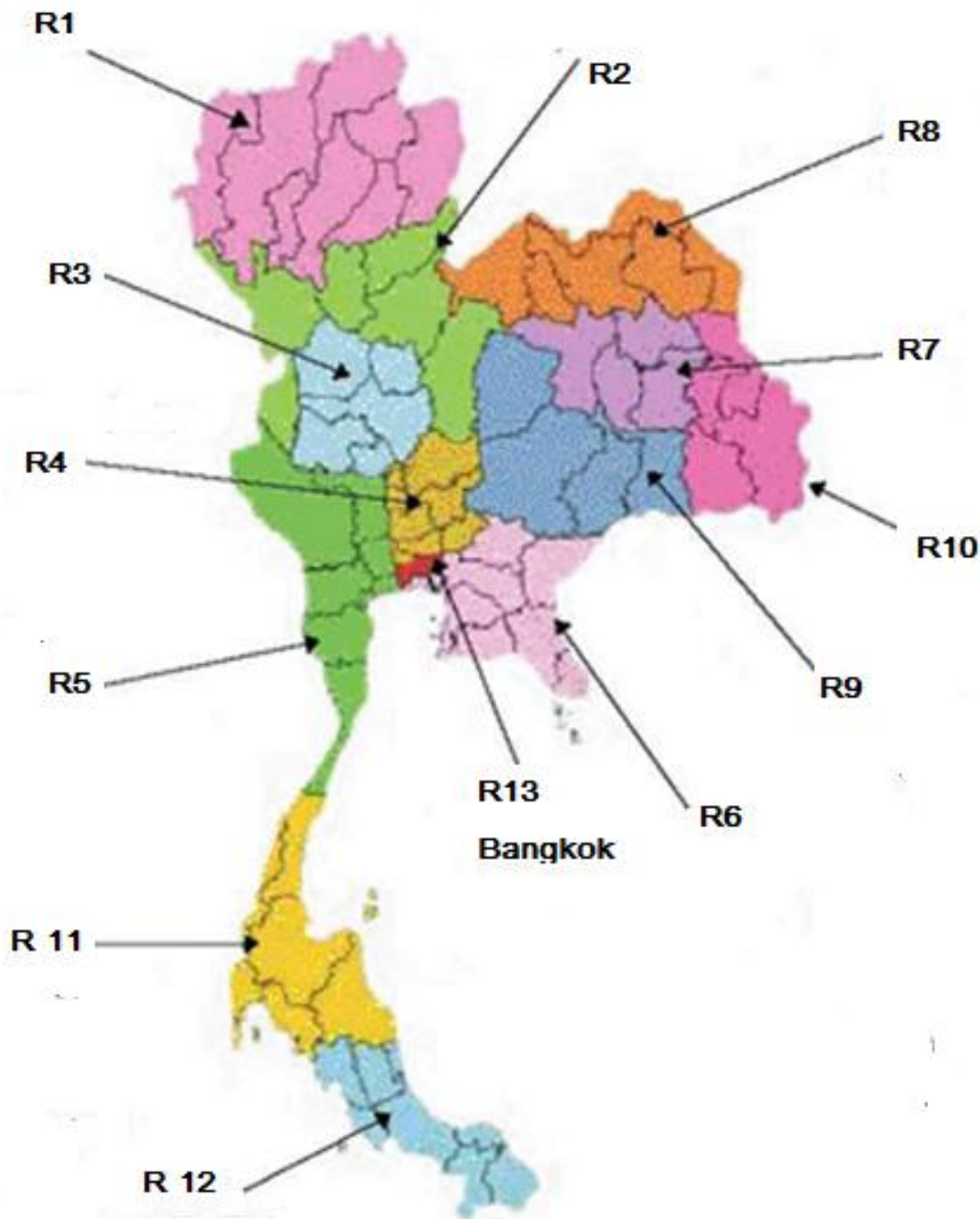


<https://www.facebook.com/nurseburapha>



Thailand
Area 13,120 sq.Km.
Population 67million





**13 Regions
of
Health Care**

**Each region
Cover 4.5 – 5
million population**





ECS Quality

EMS
Quality

ER
Quality

Refer
Quality

Disaster
Quality





Patient safety

Three techniques used to understand patient risk are:

1. Analyzing report of adverse events.

2. Root cause analyses and

3. Failure mode and effect analysis.





Safety culture

- Safety culture has been defined as ‘the product of individual and group values, attitudes, perception, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization’s health and safety management.’





Practice tip

- A positive safety culture is associated with better patient outcome





Emergency Care System

Prehospital care

In-hospital emergency care

Interhospital care

MCI

Disaster





ECS Quality

EMS
Quality

ER
Quality

Refer
Quality

Disaster
Quality





Pre-hospital Care

EMS





EMS: Definition

- EMS system is the full spectrum of response from
 - Recognition of the emergency to initial bystander interventions
 - Access to the health care system
 - Dispatch of an appropriate response
 - Pre-arrival instructions
 - Direct patient care by trained personnel
 - Appropriate transport or disposition





“Emergency Medical Services (EMS) is a medical subspecialty that involves pre-hospital emergency patient care, including initial patient stabilization, treatment, and transport in specially equipped ambulances or helicopters to hospitals.”

“The purpose of EMS subspecialty certification is to standardize physician training and qualifications for EMS practice, improve patient safety and enhance the quality of emergency medical care provided to patients in the pre-hospital environment, and facilitate further integration of pre-hospital patient treatment into the continuum of patient care”





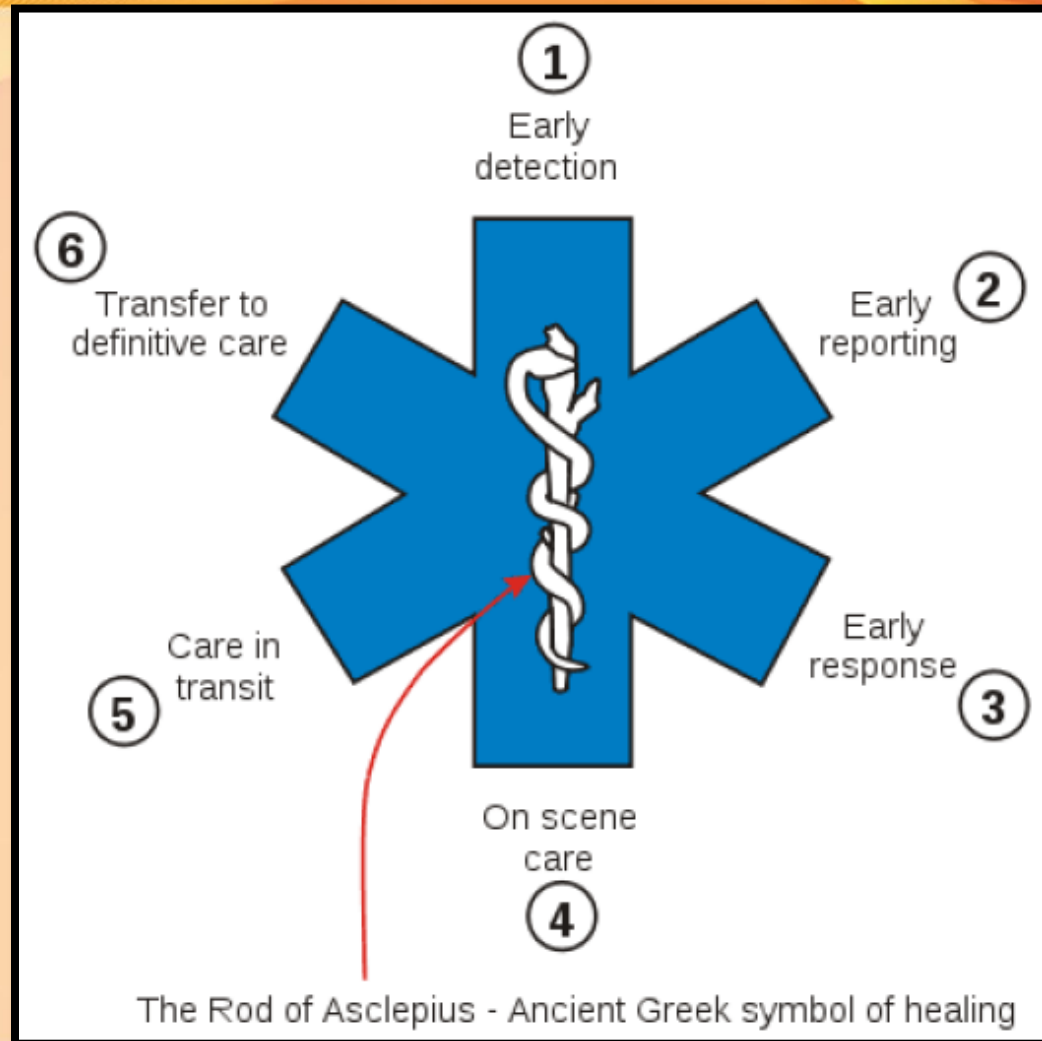
EMS System: Services

- ▶ Prevention and public education
- ▶ Triage
- ▶ Medical first response
- ▶ Ambulance response and transport
- ▶ Pre-arrival instructions
- ▶ Assessment and treatment
- ▶ Medical transportation
- ▶ Major Event coverage (logistic and planning)
- ▶ Disaster services
- ▶ **Critical care transport**
- ▶ Air medical transport
- ▶ Hazardous materials response medical support
- ▶ **Tactical response medical support**
- ▶ **Community paramedicine**





Star of Life



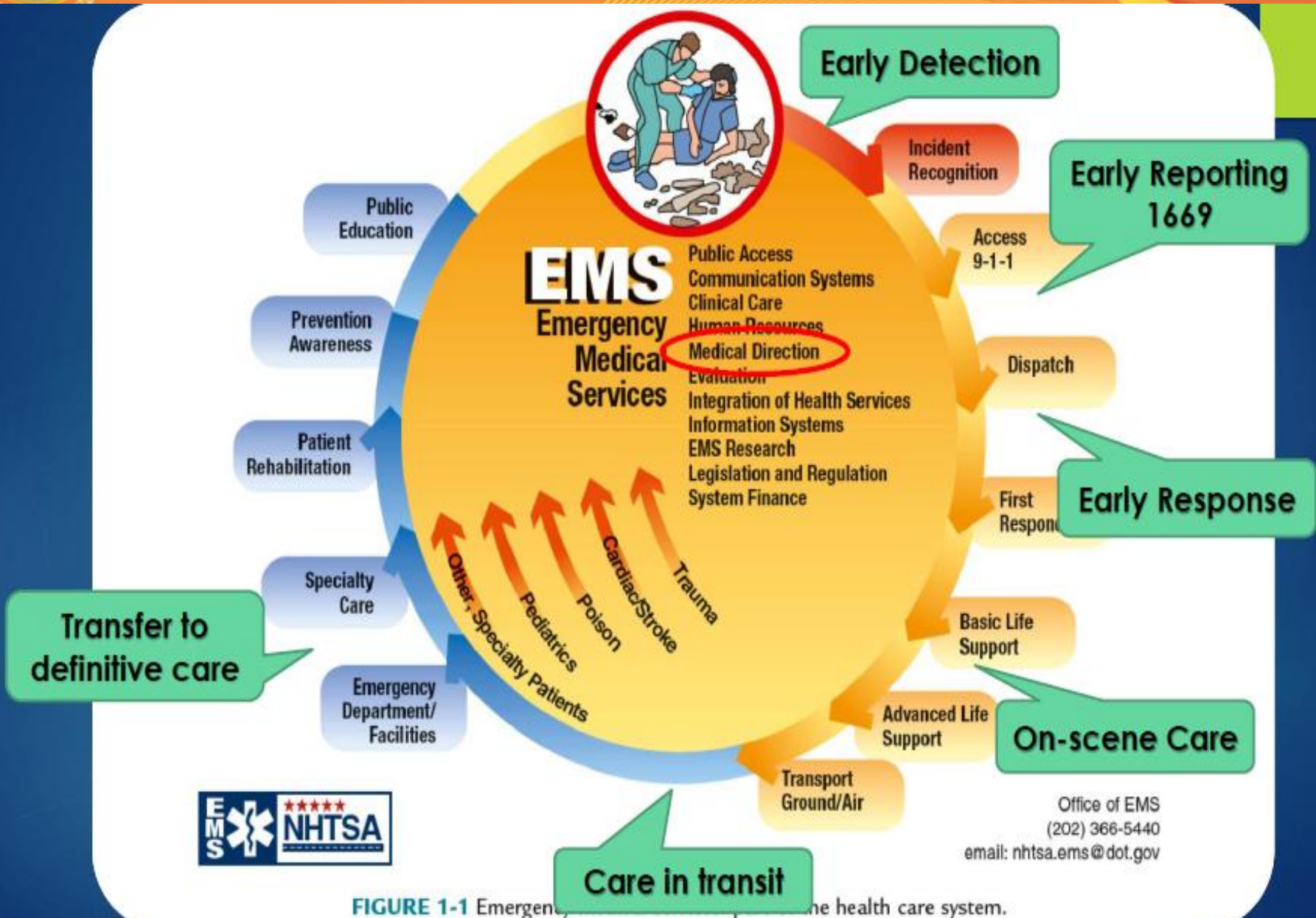


FIGURE 1-1 Emergency Medical Services in the health care system.



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Medical Emergency all over the
country



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เจ็บป่วยฉุกเฉิน โทร. **1669** บริการ 24 ชั่วโมง



คู่มือแนวทางการปฏิบัติการ
ฉุกเฉินทางน้ำและทะเล

Maritime and Aquatic Life Support Guidelines Manual



M.A.L.S.
Maritime and Aquatic Life Support

การป้องกัน
Prevention

การช่วยเหลือ
Rescue

การดูแลรักษา
Care

การเคลื่อนย้าย
ผู้ป่วย
Transportation
and Rehabilitation

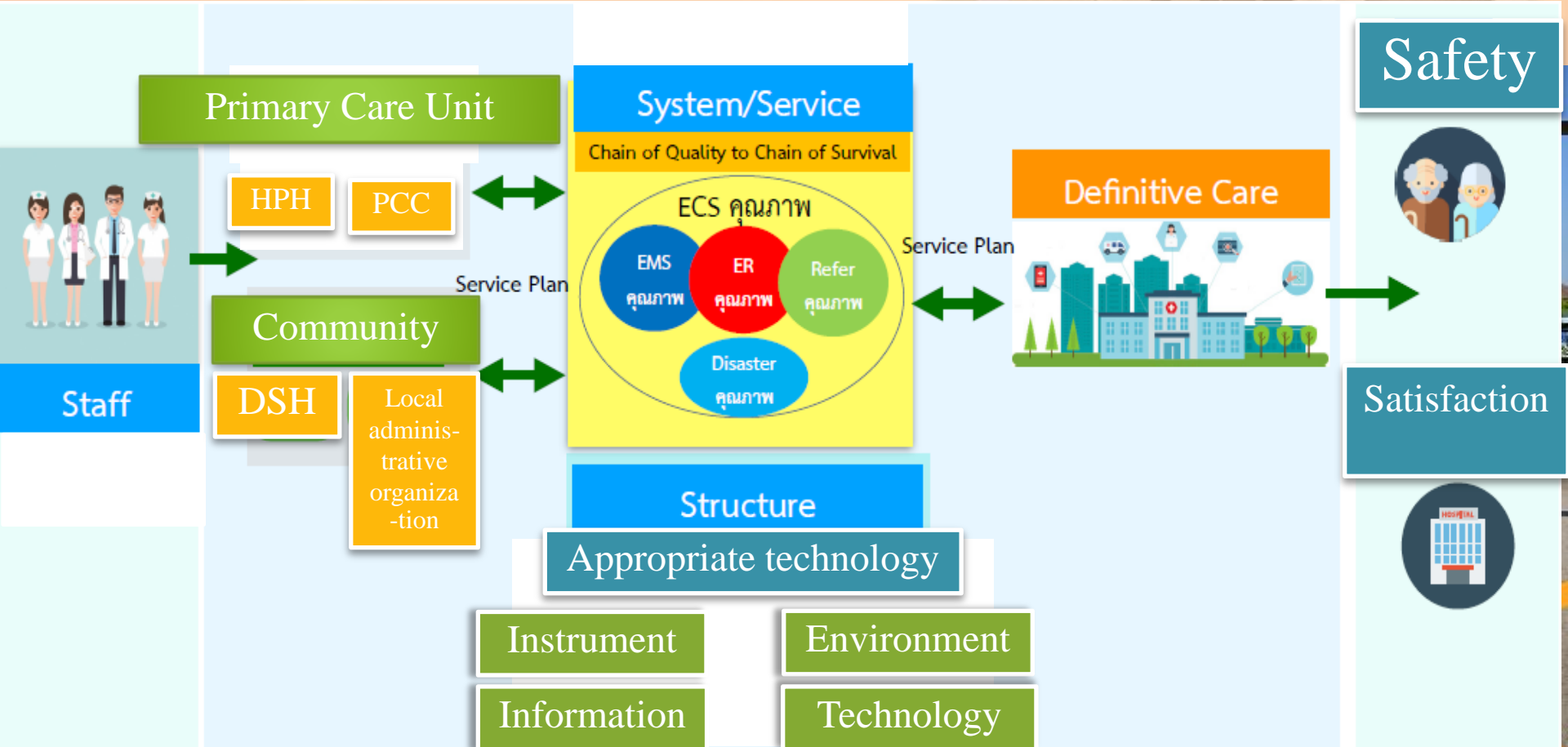


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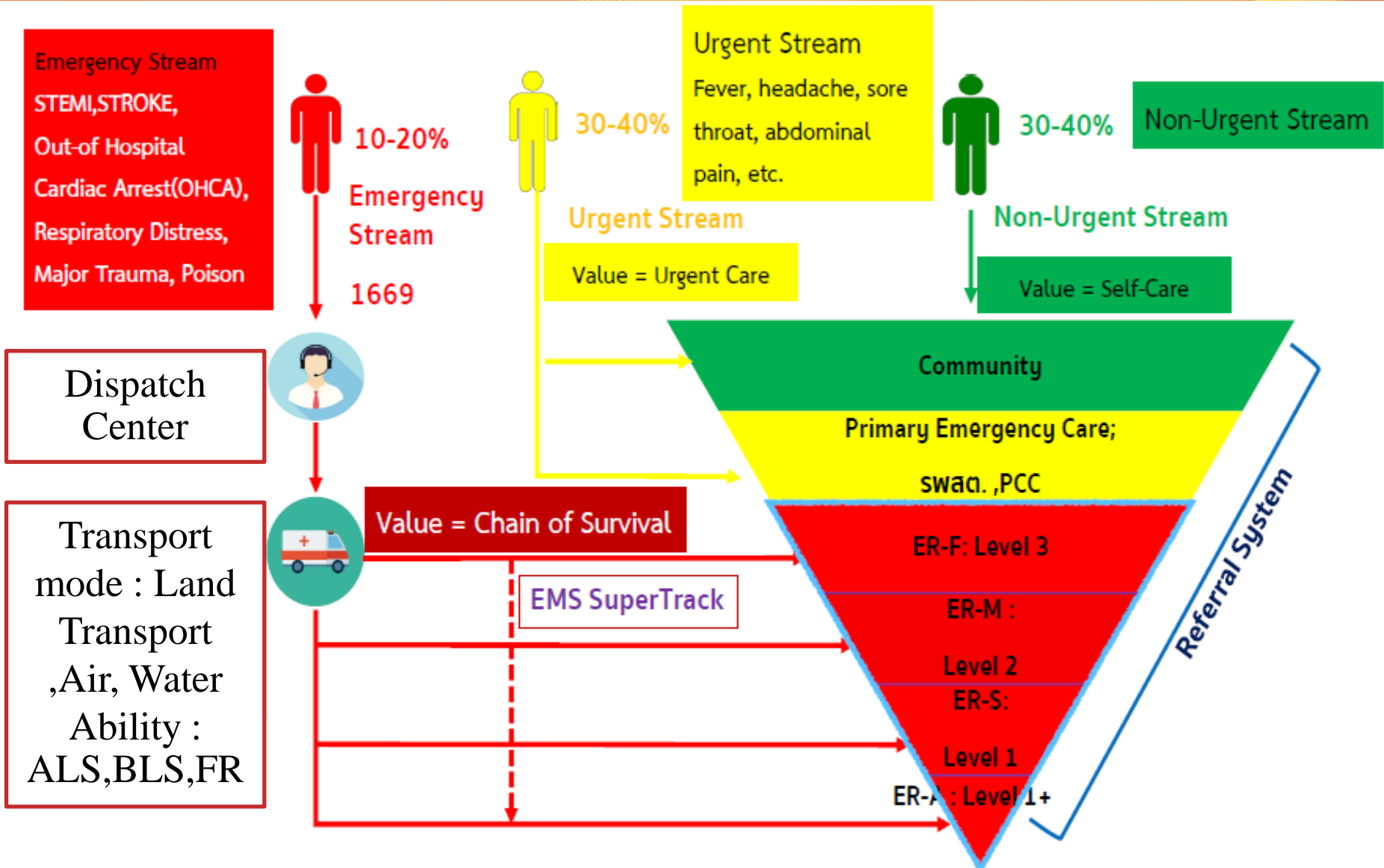
Out of hospital Emergency Care







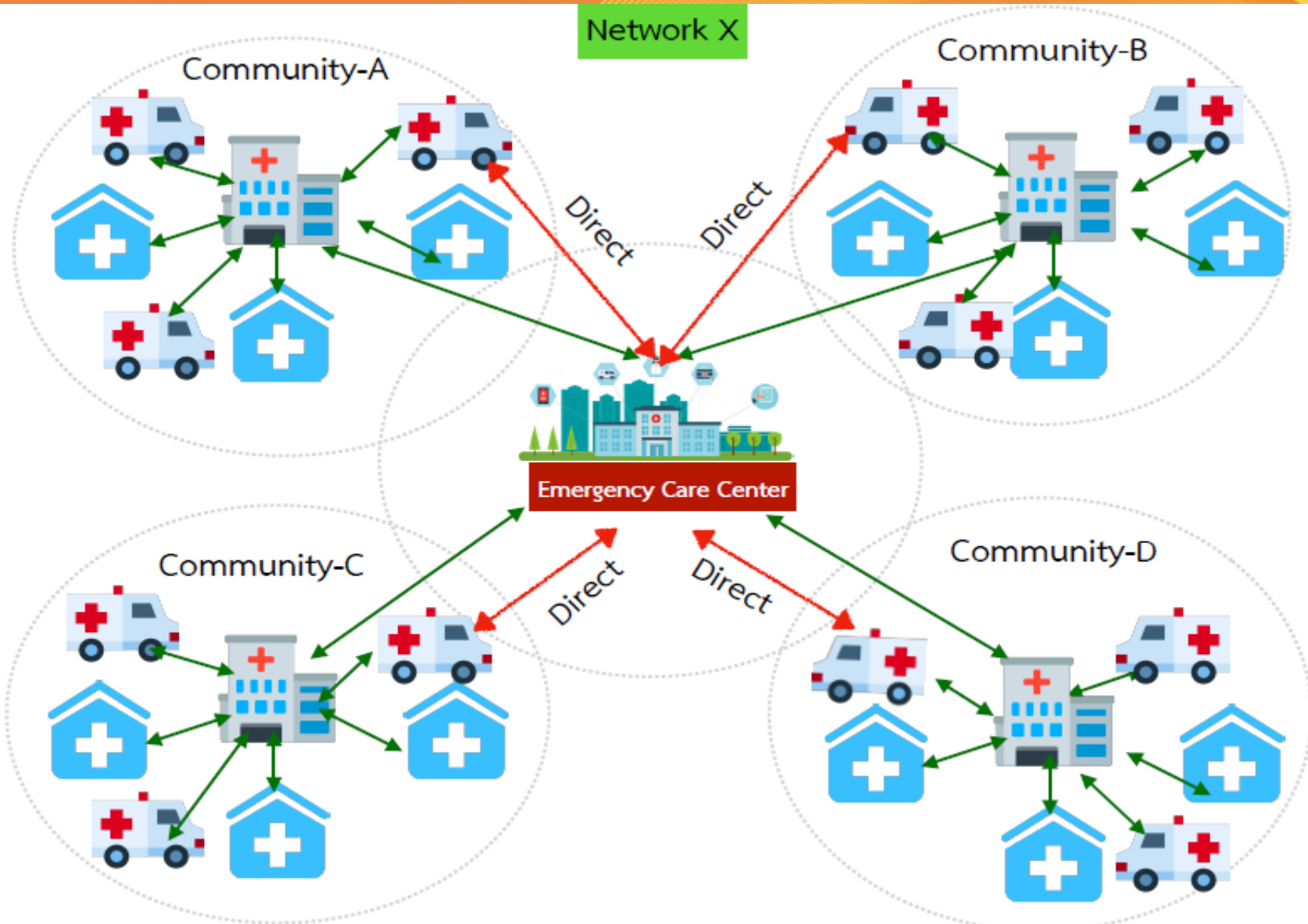
Redesign ECS for Thai Healthcare System : Chain of Survival





Integrated Network of Emergency Care System :

ระบบการแพทย์ฉุกเฉินที่บูรณาการเครือข่าย

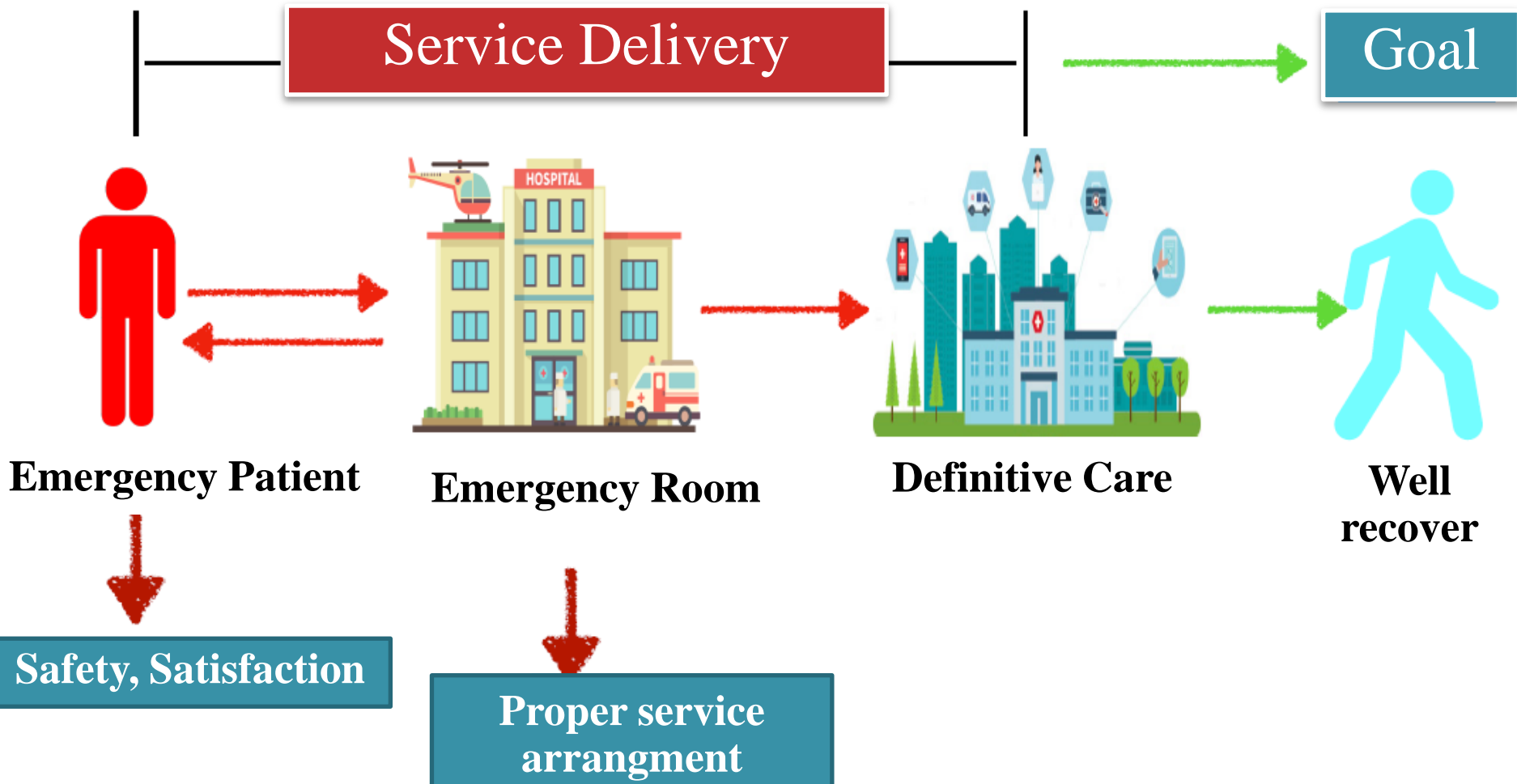




ER Service Delivery

ER Service Delivery หมายถึง การจัดการบริการในห้องฉุกเฉินที่เหมาะสม(Minimal Requirement)กับระดับ
ศักยภาพหรือ

ขีดความสามารถของสถานพยาบาลที่ตอบสนองความจำเป็นผู้ป่วยฉุกเฉิน(Need of Emergent Patient) เพื่อป้องกัน





Description of ER Service Delivery



Guideline for ER
Service Delivery

1. **Patient-Center** (Match Need of Emergency Patient and Service)
2. **Hospital-Based** Emergency Department
3. **Desired-Scenario** based on Current Situation
4. เป็น **Minimal Requirement**
5. Key Point of Service
6. เป็น **Resource Mix** (Service, Staff, Equipment)





3 Process of preparation of ER Service Delivery



1. ER Service Delivery

**2. กำหนดศักยภาพห้องฉุกเฉินตามระดับ
ศักยภาพโรงพยาบาล**

**3. Resource Matrix (Procedure,
Equipment, Staff, Patient
Preparation, Legal Issue)**





กำหนดการจัดบริการห้องฉุกเฉิน


ER Service Delivery

Essential Service

- E1- Triage
- E2- Resuscitation
- E3- FastTrack
- E4- Mass Casualty Incident
- E5- Observational Unit

Special Service

- S1- Pediatric Emergency
- S2- Ob-Gyn Emergency
- S3- Mental Health
Emergency
- S4- Toxicologic Emergency
- S5- Geriatric Emergency
- S6- OPD/Urgent Clinic



ระดับ A,S,M1,M2,F1,F2,F3,PCC,รพสต.

Coordinate Service

- C1- ศูนย์สั่งการระบบการแพทย์ฉุกเฉิน
- C2- ศูนย์ประสานการส่งต่อ
- C-3 TEA unit



Service Plan : Trauma & Emergency

- **Trauma Emergency**
- **Non Trauma Emergency**
- **Disaster Management**

ECS Systems





Trauma Emergency

- **Information**
- **S.Delivery** **ECS quality ER quality**
- **Fast tract Surgical Emergency**
- **5 ส DHS injury prevention model**
- **Law Enforcement**
- **Leadership & Governance**
 - นโยบาย และการขับเคลื่อน
 - T& E Admin Unit**
 - Network**
- **H.Workforce** **EP Neuro surgeon CVT Nurse Prehosp/Co**
 - Paramedic EMT-I**
- **Essential D & Med Eq.**
- **Financial Plan**



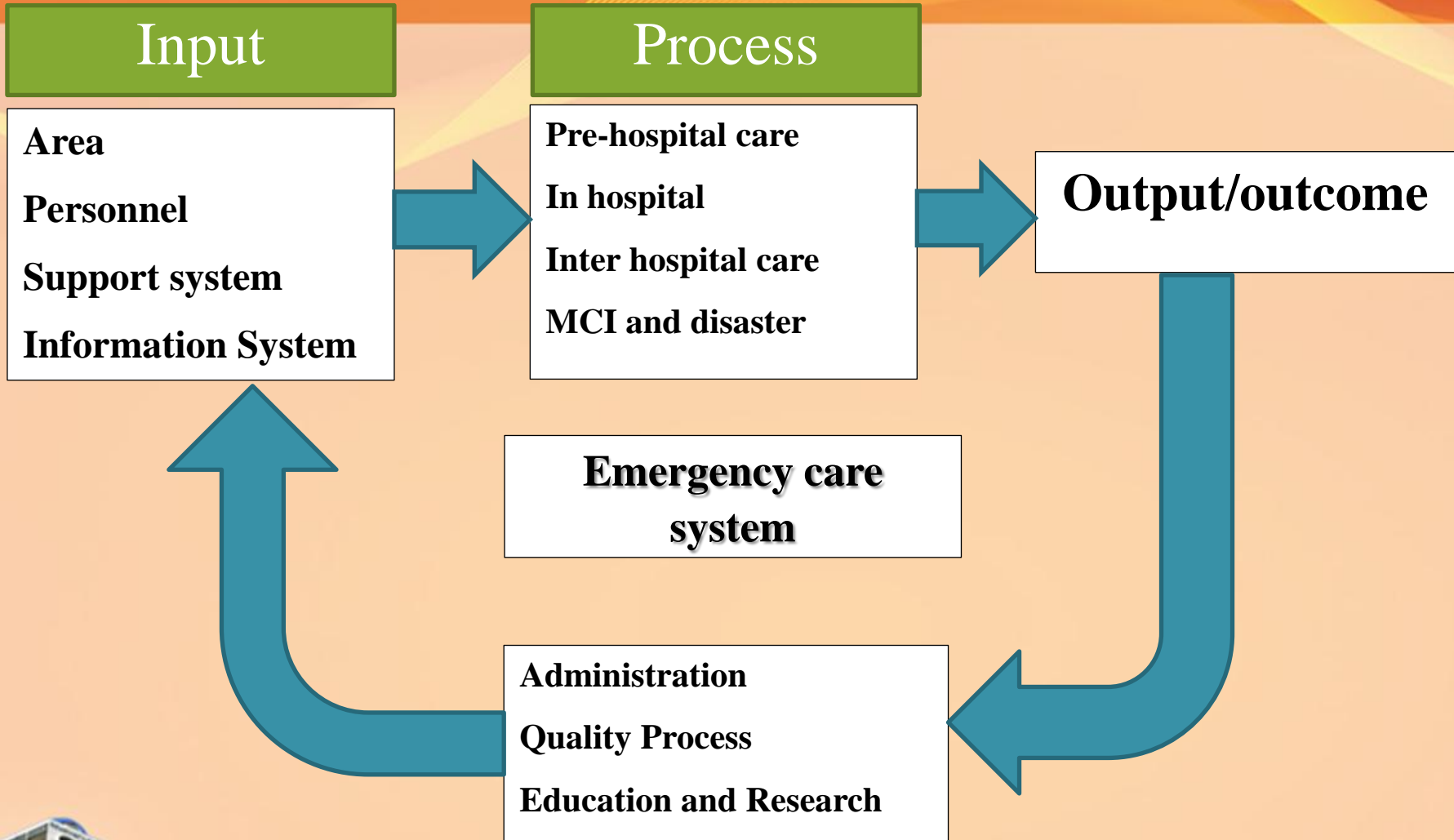


Non Trauma Emergency

Fast tract Integration (All Tracts , STEMI,Stroke)
Onset to Door, Door to Definitive care
Public Awareness

OHCA: Out of Hospital Cardiac Arrest





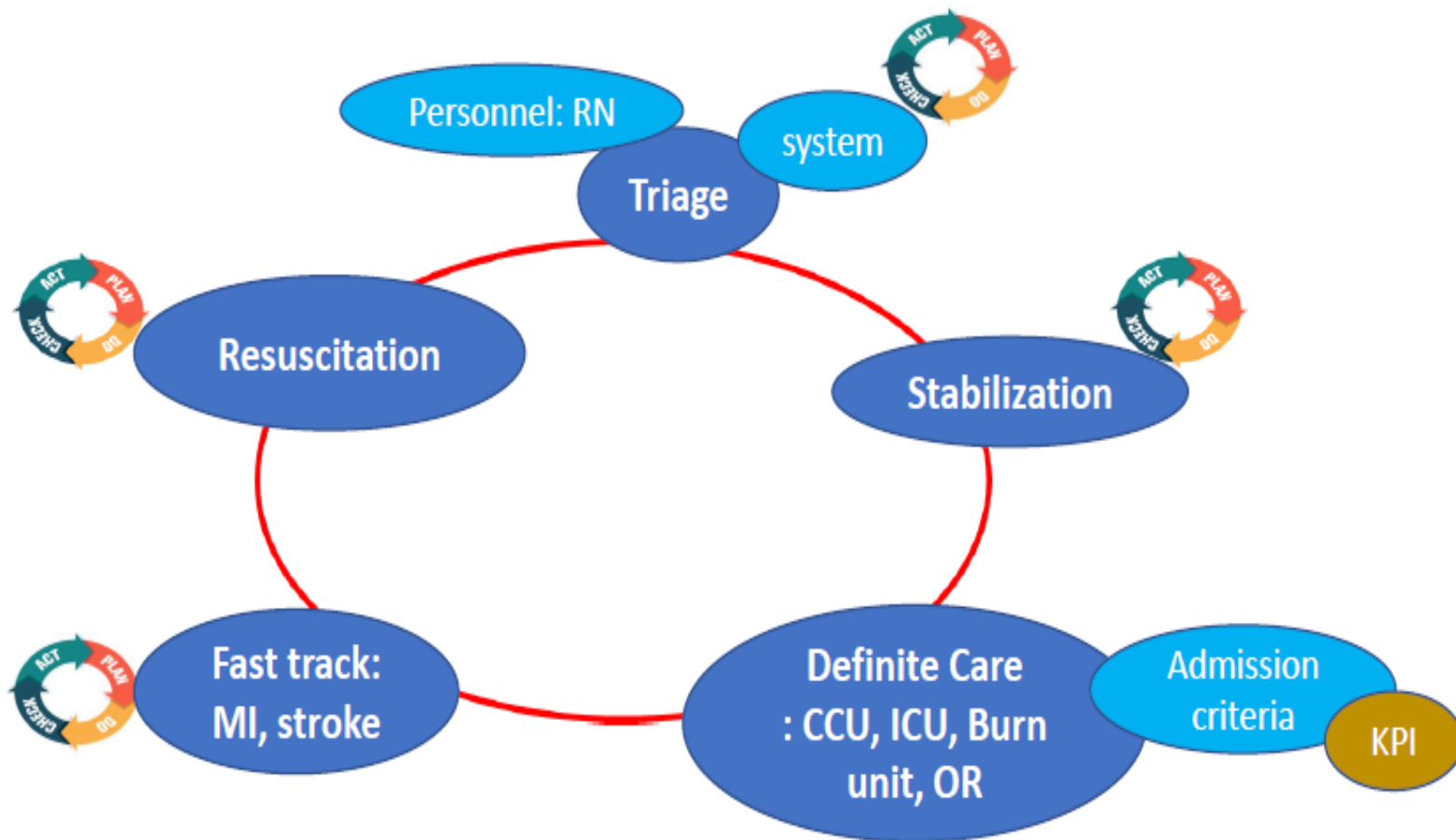


Pre-hospital Care (องค์ประกอบที่ 8, หน้า 45-48)



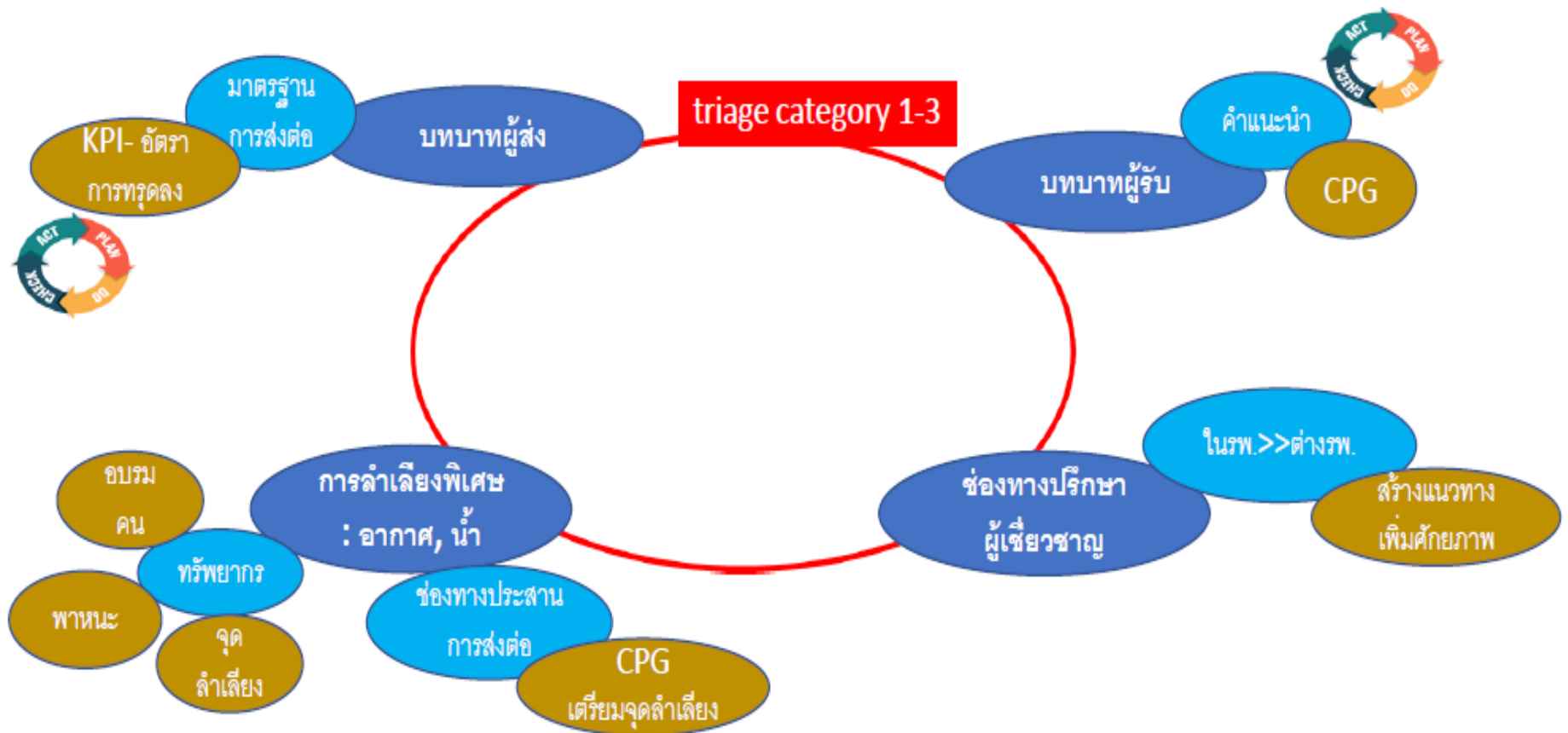


INTRA-HOSPITAL CARE (องค์ประกอบที่ 3, P.22-25)



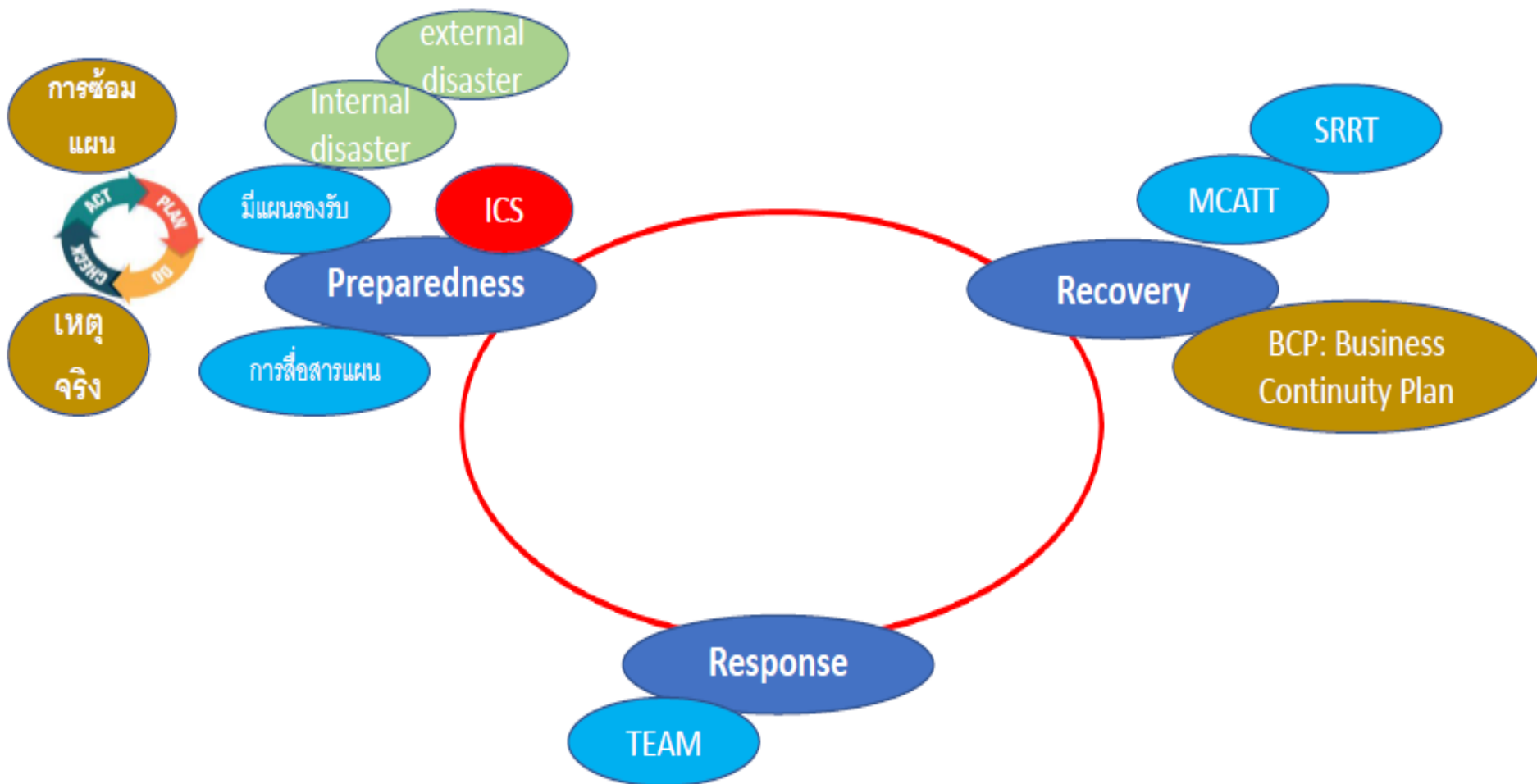


Inter-hospital care (องค์ประกอบที่ 5, 6: หน้า 33-37)





MCI and Disaster management





Preparation

In-hospital

- **Preplanning essential**
- **Equipment, personnel, services**
- **Standard precautions**
- **Transfer agreements**





REQUIRED CERTIFICATIONS FOR NURSES IN ED

1. Emergency Nurses Association (ENA)
2. Certified Emergency Nurse (CEN, USA)
3. Emergency Nurse Practitioner (ENP) (UK)
4. Emergency Nurse Practitioner (ENP) (USA)
5. Emergency Care Practitioner (UK)





ADDITIONAL EMERGENCY NURSING TRAINING AND QUALIFICATIONS

- ATNC - Advanced Trauma Nursing Course
- ACLS - Advanced Cardiac Life Support
- ATLS - Advanced Trauma Life Support
- ENPC - Emergency Nursing Pediatric Course
- MICN - Mobile Intensive Care Nurse
- PALS - Pediatric Advanced Life Support
- PHEC - Pre-Hospital Emergency Care
- TNCC - Trauma Nursing Core Course



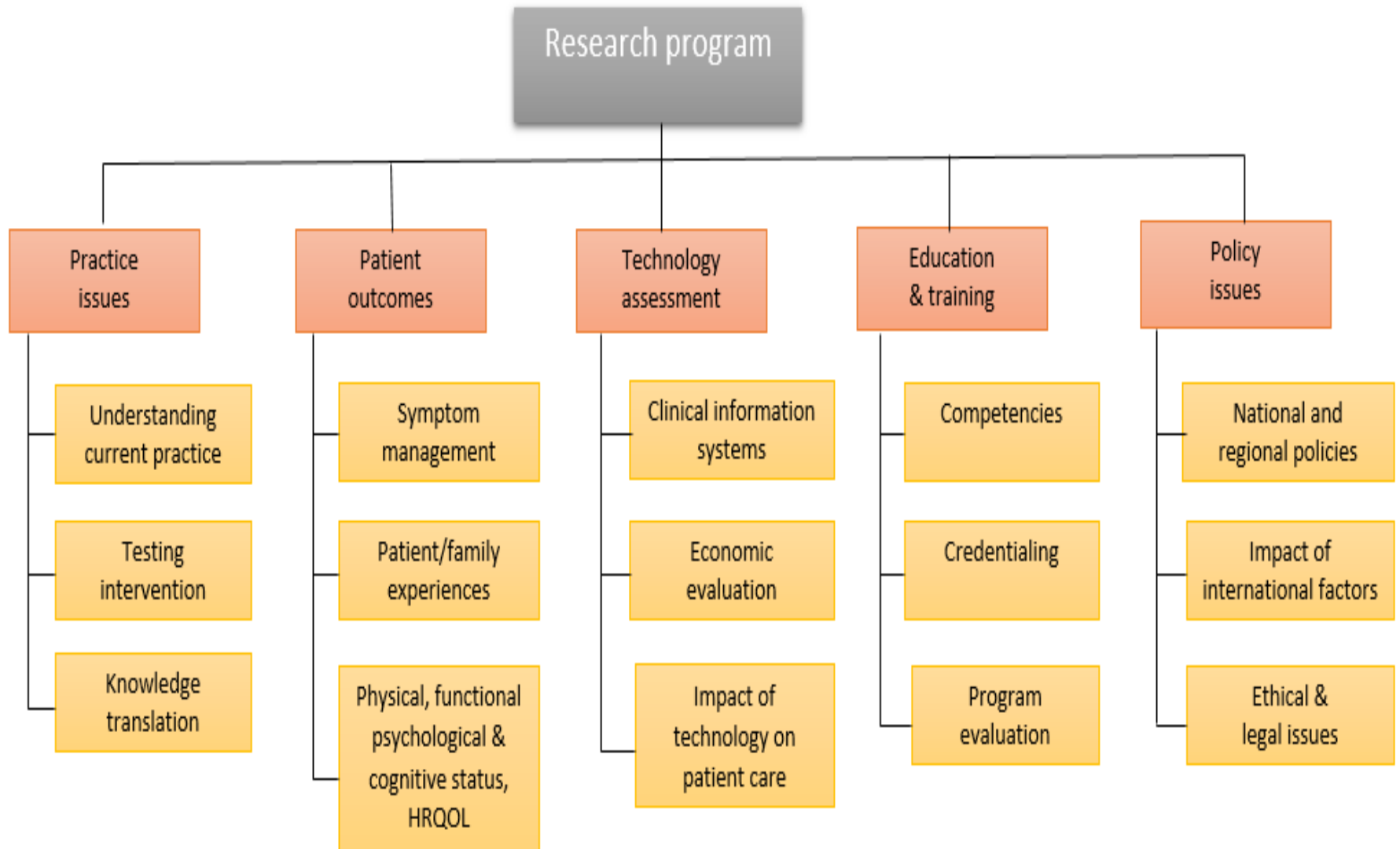


Trauma Nurse Coordinator: TNCs

- 1. Clinical activity**
- 2. Quality assurance (Trauma audit)**
- 3. Trauma registry**
- 4. Education and Research**

(Janice Hiu-Hung Yeung., et al., 2006)





Example of a critical care nursing research program

