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" Capacity Building on Trauma Administrative Management for Trauma Medical Directors and Trauma Nurse Coordinators in Southeast Asia Region "

Policy and Direction of Thailand Emergency Care System

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for Injury Prevention
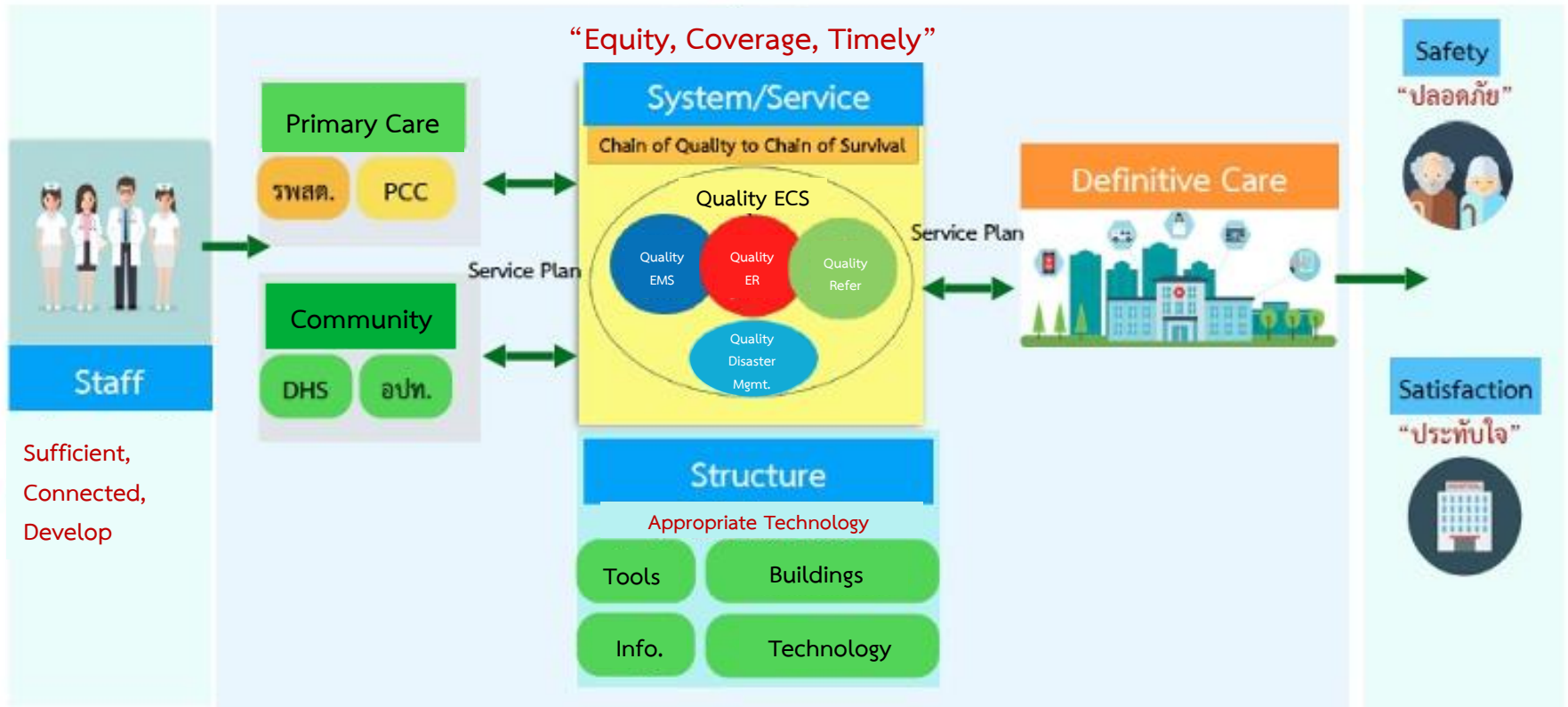and Safety Promotion

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What is Emergency Care System?

Emergency Care System or ECS is an essential system for emergency patients and health system. It connects community, primary care, and definitive care. The objective of Emergency Care System is to increase the access for emergency patients, decrease mortality, loss of organs, and functions of important organs and limbs.

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Emergency Care System

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Emergency Care System- 4 main systems:
- EMS,
- Hospital-Based Emergency Department,
- Referral System, and
- Public Health Disaster Management

These 4 systems need to be connected to create the chain of survival for emergency patients.

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ECS Framework

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To have standard, lean, and seamless trauma and emergency care, MOPH has set up 2 key performance indicators (KPI):

1. 60% of community hospitals, general hospitals, and regional hospitals have to achieve the standard of trauma and emergency care system evaluation

2. Mortality rate of traumatic patients with probability for survival score >0.75 less than 1%

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To achieve the KPI, MOPH has set 4 strategic measures:

1. Raising Capacity of all personnel working in Emergency department
2. Internal/external assessment, analysis, synthesis, improvement for quality emergency room
3. Setting up and implementing master plan for all health hazard at central, regional, and local levels
4. Setting of the informatics system for monitoring and evaluating the implementation of the plan

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A **"4X4 National Strategic Plan"** for raising the quality of trauma and emergency care, consists of 4 groups of measures:

1. Measure for administration
- Set up EOC in every province
- Set up Trauma and Emergency Administration Unit in every Regional and General Hospital
- Engaging as secretary in directing center for road safety in every sub district
- Correcting hazardous location in District with high incidence of RTI

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2. Measure for information system

- Integrating road traffic mortality from multi data sources
- Developing nationwide Injury surveillance system
- Continuing data collection of black spot for RTI
- Road traffic accident investigation in important crashes

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3. Measure for prevention

- RTI prevention in District level by D-RTI
  mechanism

- Implementing "Organization enforcement
  for RS" in every hospital

- Area-based Road traffic injury prevention
  in high incidence districts

- Promotion of health literacy for RS in
  community

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4. Measure for quality care
- Quality pre hospital care
- Quality ER
- Quality in- hospital
- Quality referral

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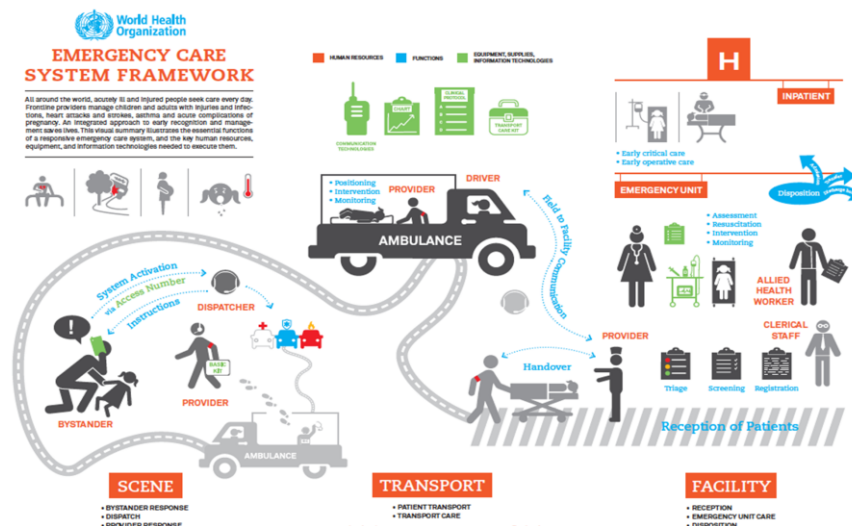for Injury Prevention
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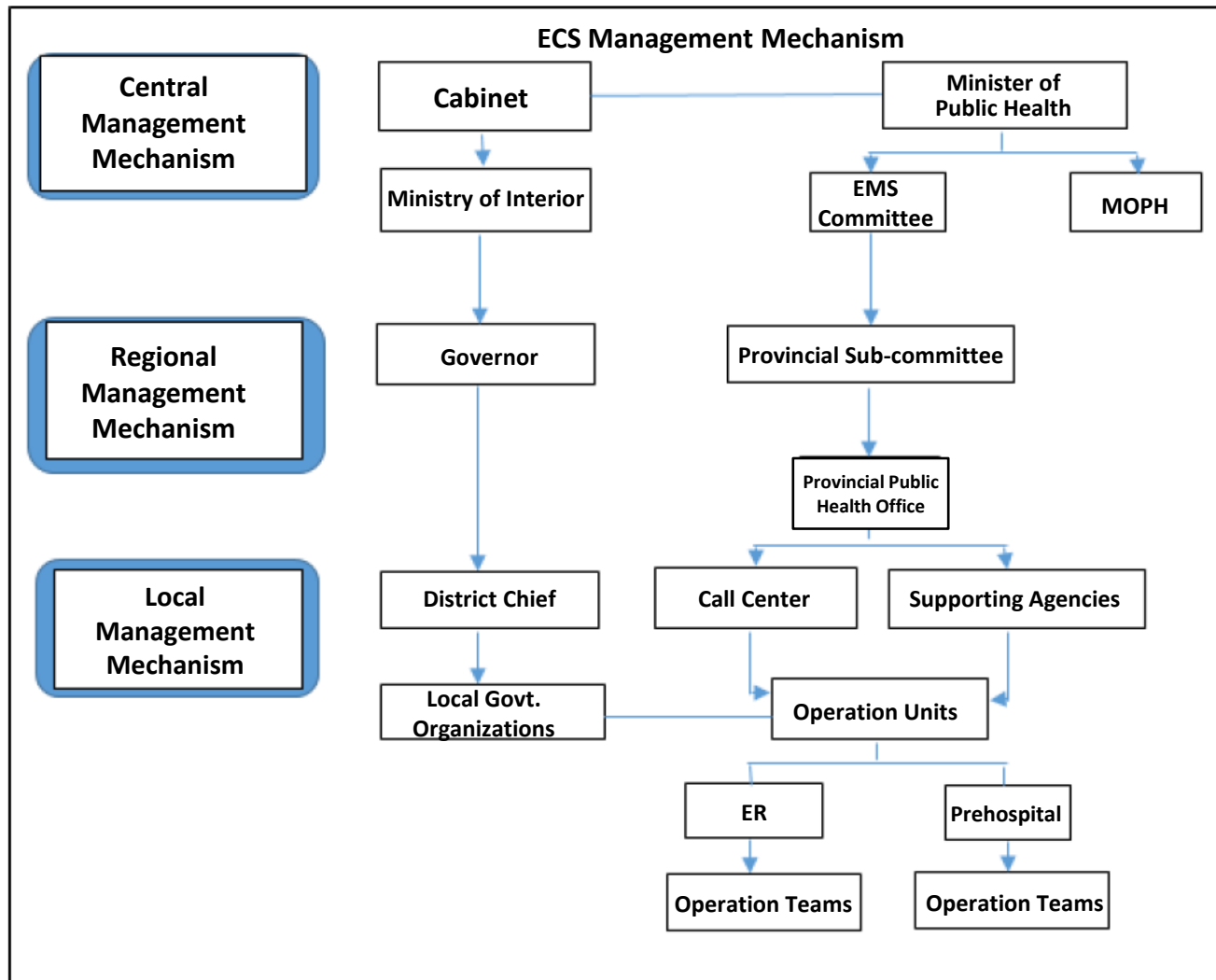KHON KAEN HOSPITAL

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Thailand ECS Structure

Vision

"Thailand has a standardized emergency medical system that people have access thoroughly and equally in both normal and emergency with participatory management."

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Thailand ECS Structure

ECS Management Mechanism

Central Management Mechanism
- Cabinet
- Minister of Public Health
- Ministry of Interior
- EMS Committee
- MOPH

Regional Management Mechanism
- Governor
- Provincial Sub-committee
- Provincial Public Health Office

Local Management Mechanism
- District Chief
- Call Center
- Supporting Agencies
- Local Govt. Organizations
- Operation Units
- ER
- Prehospital
- Operation Teams
- Operation Teams

Source: Prakaitip Promasoot, 2021, *The Perception and Expectation by Patient and Relatives to Emergency Medical Services Sakhrai District, Nongkhai Province*

MOPH's Strategic Plan on Emergency Care System 2017 - 2037

Vision	To become a valuable comprehensive emergency medical system that combines network power to create a chain of survival
Objectives	1. Increase access to services among emergency patients 2. Decrease mortality rate from critical emergency illness 3. Quality EMS system that meets standards
Goals	1. The mortality rate of critical emergency patients within 24 hours < 6% 2. Quality ECS in F2 and higher level hospitals > 80% 3. Sufficient personnel per 100000 population (EP 2.4 RN 18 EN/ENP 4.1 , Paramedic 4.1, EMT-I 3.1, EMT-B 3.1)

PP Excellence	Service Excellence	People Excellence	Governance Excellence
1. People have health literacy on emergency illness 2. Reduced mortality from road traffic	1. Combine the power of the network to develop an integrated emergency medical system 2. Enhance quality and safety 3. Develop the management to reduce risks from diseases/health threats	1. Workforce and production planning/Capacity building 2. Engagement	1. Develop payment system (Essential Package, Value-based Payment) 2. Develop Emergency Care Data Set and Innovation 3. Invest in building construction 4. Develop research and exchange of knowledge and innovation

Quick Win

PP Excellence	Service Excellence	People Excellence	Governance Excellence
Public AED, RTI prevention	Quality ER, EOC	- Workforce plan (EP, EN/ENP, Paramedic) - Personnel Safety (Ambulance, Workforce Violence)	UCEP, Telemedicine System + Ambulance Operation Center, Develop ECS information standard

ECS 20-Year Strategic Plan

5 strategies:

1. Promoting, preventing, and providing proactive operations to create a society of intelligence in emergency care across the country
2. Strengthening emergency care and emergency operation systems for people to have access to services universally, equitably, with confidence and trust
3. Strengthening the infrastructure of emergency care system with quality, meets standards, becomes internationalized and modern
4. Enhancing the national emergency care to meet the international level, connecting ASEAN with international to support the development and increase the country's competitiveness
5. Developing organizational management and personnel to become a highly competent and modern organization

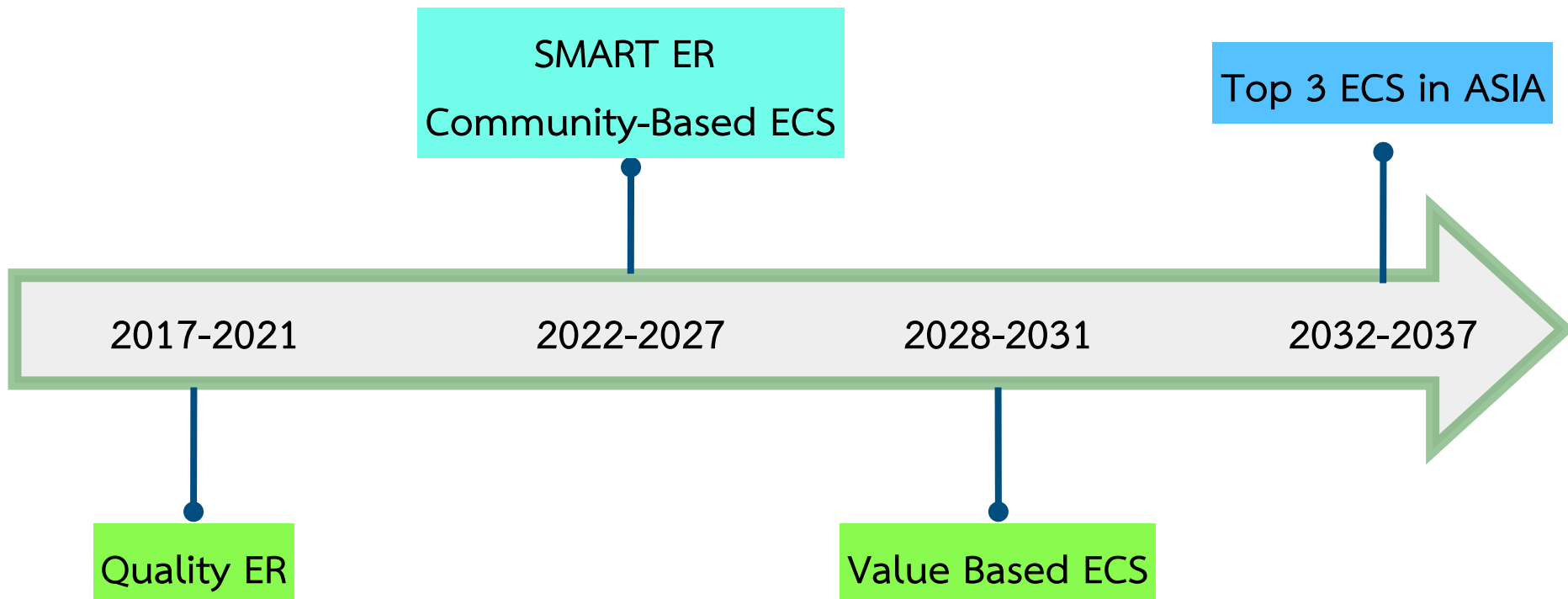# Action Plan : ECS 20 year

Goals:

1. The mortality rate of critical emergency patients within 24 hours < 6%

2. Quality ECS in F2 and higher level hospitals > 80%

3. Sufficient personnel per 100000 population (EP 2.4 RN 18 EN/ENP 4.1 , Paramedic 4.1,
EMT-I 3.1, EMT-B 3.1)

SMART ER
Community-Based ECS

Top 3 ECS in ASIA

| 2017-2021 | 2022-2027 | 2028-2031 | 2032-2037 |

Quality ER

Value Based ECS

ECS Model: One ECS

- **The development of Chain of Survival by connecting Prehospital Care, Emergency Room, and Definitive Care**

Chain of Survival

Integration

2P Safety

Information

Innovation
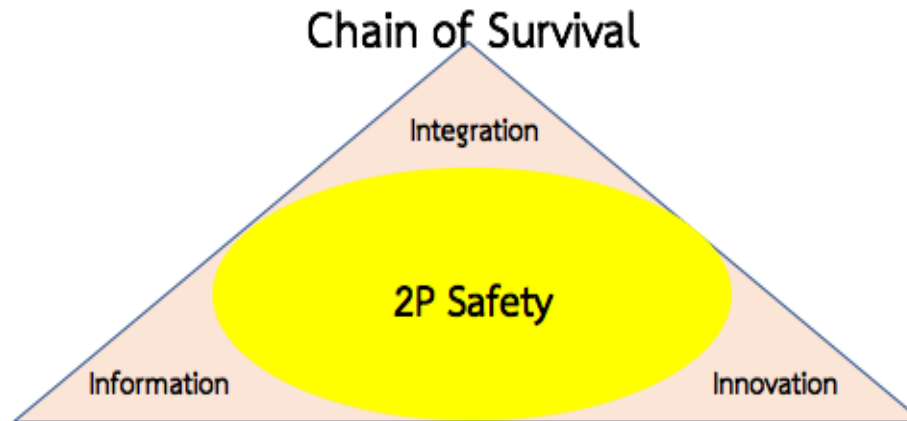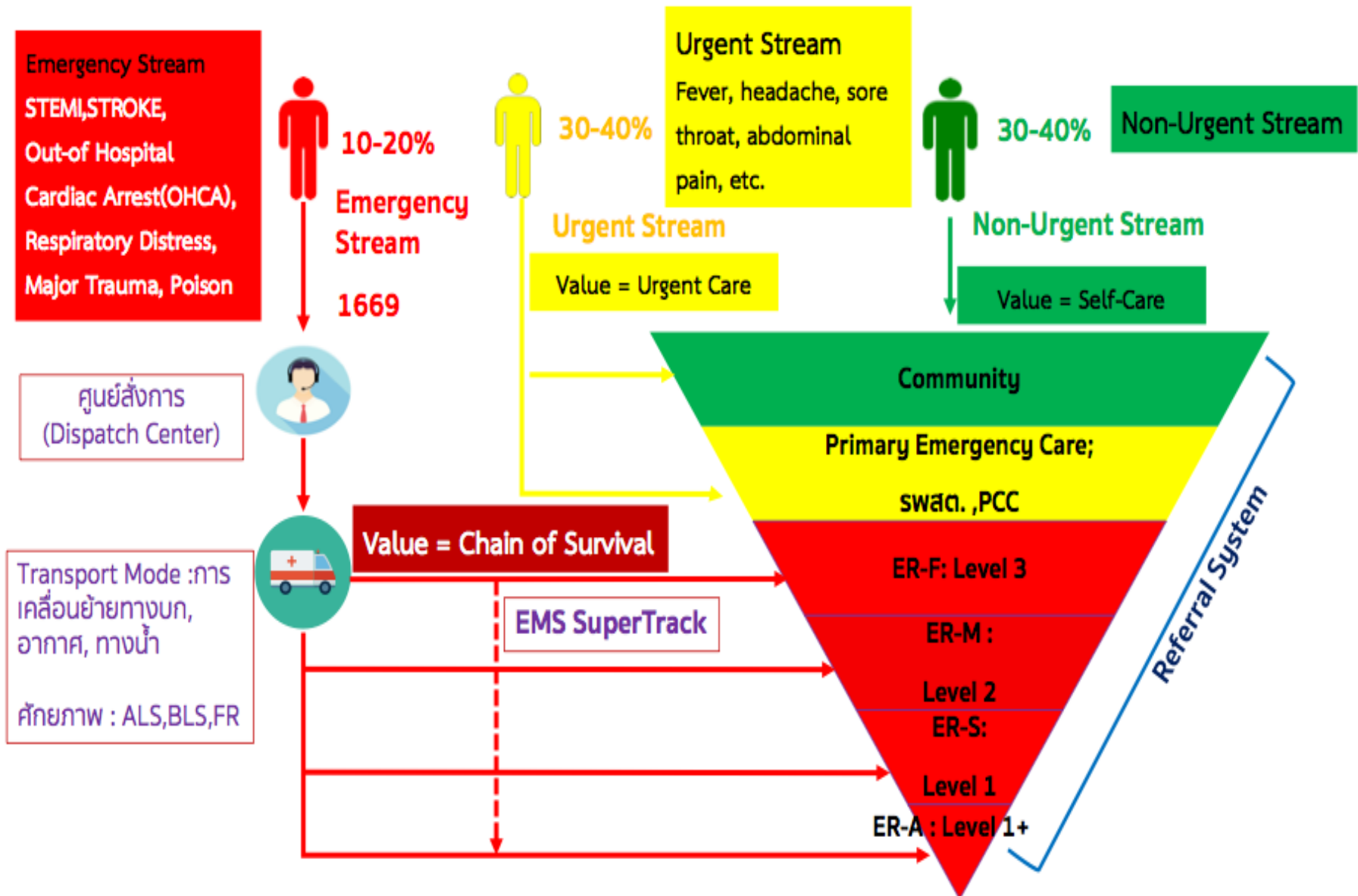
ER Standard of Care

- **Set Standard of Care for emergency room at each level of hospitals**
- **Set standard on Emergency Care Referral Network**

Value-Based ECS

- **Treatment of emergency patients based on value. Focusing on quality and standards**
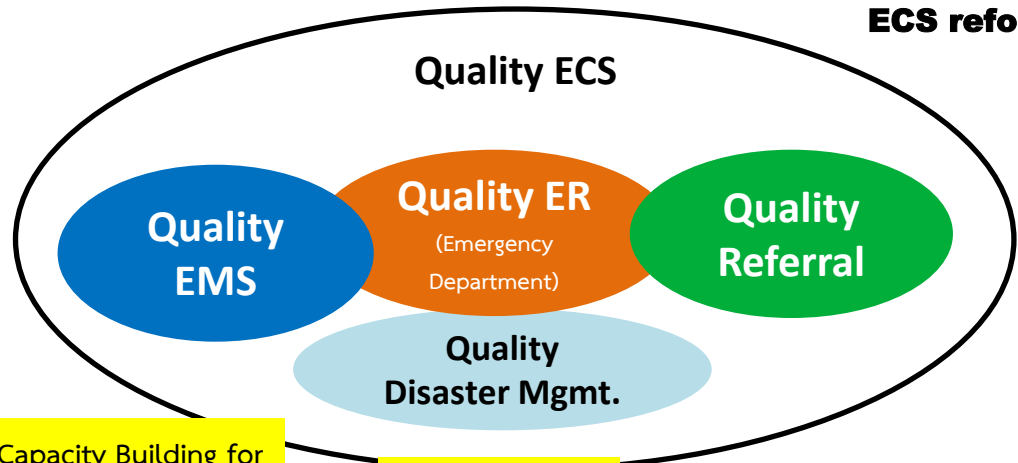- **Prioritize the safety of emergency patients and service providers**

Redesign ECS for Thai Healthcare System :
Chain of Survival

Emergency Stream
STEMI, STROKE,
Out-of Hospital
Cardiac Arrest(OHCA),
Respiratory Distress,
Major Trauma, Poison

10-20% **Emergency Stream** 1669

30-40% **Urgent Stream**

Urgent Stream
Fever, headache, sore throat, abdominal pain, etc.

30-40% **Non-Urgent Stream**

Non-Urgent Stream

Value = Urgent Care

Value = Self-Care

ศูนย์สั่งการ (Dispatch Center)

Transport Mode :การเคลื่อนย้ายทางบก, อากาศ, ทางน้ำ

ศักยภาพ : ALS,BLS,FR

Value = Chain of Survival

EMS SuperTrack

Community

Primary Emergency Care; รพสต. ,PCC

ER-F: Level 3

ER-M :

Level 2

ER-S:

Level 1

ER-A : Level 1+

Referral System

The Development of Comprehensive Emergency Care and Referral Systems

ECS reform

Quality ECS

Quality EMS

Quality ER (Emergency Department)

Quality Referral

Quality Disaster Mgmt.

KPI 2021

The mortality rate of critical emergency patients (triage level 1) within 24 hours in level A, S, M1 hospitals must be less than 12% (Trauma<12%, Non-trauma<12%)

Objectives
1. Increase access to services among emergency patients
2. Decrease mortality rate from critical emergency illness
3. Quality EMS system that meets standard

Healthy People, Happy Personnel, Sustainable Health System

The people equally receive quality medical services that meet professional standard by the year 2021

Capacity Building for personnel/hospitals e.g. MERT, HOPE, CLS, EMT, TEA Unit,BCP

Policy advocacy

Build Knowledge Handbook/Curriculum/Model

Monitoring

Idea for development to ensure the stability and sustainability

Research and Development: Study the system/ preparedness/persistence

Projects for Capacity Building on Emergency Care System

- Medical Personnel and Network of Trauma Emergency Administration Unit (TEA unit)

- Medical Personnel on Comprehensive Life Support

- Medical Emergency Response Team (MERT) on Preparedness for Medical Emergency

- Hospital Preparedness for Emergency/Disaster (HOPE)

- Emergency Medical Team (EMT) to Meet WHO Standard

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Projects for Capacity Building on Emergency Care System

- *Objectives:*
    1. To equip medical personnel with knowledge, understanding, and skills to provide appropriate emergency care services.
    2. To enhance Thailand emergency care system to be ready for medical operations in both normal situation and disaster situation, and develop Thailand emergency care system to meet international standards

- *Expected outcome:*
    1. Increase access medical services among emergency patients.
    2. People receive quality emergency care that is safe, fast, convenient, appropriate, and meet standards.
    3. Reduce mortality and increase possibility to survive in emergency patients.

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"The pessimist sees difficulty in every opportunity. The optimist sees the opportunity in every difficulty."

Winston Churchill

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