

การสาธารณสุขฉุกเฉินและการ
บริการทางการแพทย์ในภาวะฉุกเฉิน

Public Health in Emergency and
MERT

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สำนักงานบรรเทาทุกข์และประชานามัยพิทักษ์
สภากาชาดไทย

Impact of Disasters on Health

- Breakdown of local health systems.
- Lack of access to health facilities.
- Lack of adequate health personnel.
- Lack of sufficient resources.
- Lack of access to safe drinking water and sanitation facilities.
- Lack of sufficient quantity and quality of food due to the destruction of livelihoods and lack of food stocks



- Increased incidence of different types of diseases, in particular injuries and trauma.
- Increased probability of an outbreak of epidemics and communicable diseases.
- Increased nutritional deficiencies.
- Increased need for mental health and psycho-social support following the sudden onset of a disaster.
- Increased need for medication and medical supplies for people who suffer from noncommunicable diseases and require constant care.

การสาธารณสุขฉุกเฉิน

Public Health in Emergency

- โรคติดต่อ (Communicable diseases)
- โรคเรื้อรัง (Noncommunicable diseases)
- อนามัยแม่และเด็ก (Maternal, newborn, child and adolescent health)
- สุขภาพจิต (Mental health)
- การบาดเจ็บ (Trauma and surgical care)
- โภชนาการ (Nutrition)
- ผู้พิการ (Persons with disabilities)
- ผู้อพยพ (Migrant health)
- เพศ (Gender)
- น้ำและสุขาภิบาล (Water Sanitation and Health)

Expected Injury Patterns by Disaster

Type of disaster	Expected injury pattern
Drought	Heat exhaustion, stroke, dehydration, renal failure, malnutrition and starvation
Earthquake	Fractures, blunt trauma, wounds, crush syndrome
Epidemic	Specific to type of infectious disease
Temperature extremes	Hypothermia, hyperthermia, frostbite, heat stroke
Slide	Blunt and penetrating trauma, crush syndrome, fractures, wounds
Volcano	Severe burns, crush injuries, respiratory infections/complications
Wave/surge/flood	Drowning, hypothermia, waterborne communicable diseases
Wildfire	Severe burns, respiratory complications
Windstorm	Blunt/penetrating trauma to head/chest (caused by flying debris), crush syndrome, fractures
Warfare	Penetrating injury, blast injury, chemical burns, illness from biological warfare, amputations

โรคติดต่อ

Communicable diseases

Classification	Diseases possible	Preventive measures
Air-borne diseases	Acute Respiratory Infections Measles Meningitis Pertussis (whooping cough) Tuberculosis Influenza	Site planning Adequate nutrition
Water-related diseases	Amoebae Cholera Diarrhoea Dysentery Poliomyelitis Hepatitis Parasites: round/hook worm Typhoid	Site planning Safe water Good sanitation Personal hygiene Case management

โรคติดต่อ

Communicable diseases

Classification	Diseases possible	Preventive measures
Vector-borne diseases	Malaria Relapsing fever Sleeping sickness Dengue hemorrhagic fever Typhus Yellow fever Chikungunya Leptospirosis Leishmaniasis Marbug Lassa Fever Ebola	Vector control Personal protection Personal hygiene Case management
Sexually Transmitted Infections (STIs)	Syphilis Chancroid Gonorrhoea Chlamydia HIV	Health education Security Case management

โรคติดต่อ

Communicable diseases

Classification	Diseases possible	Preventive measures
Other diseases	Scabies Worms Tetanus	Hygiene

Minimum standards for communicable disease prevention and control

Intervention	Minimum standards	Target Diseases
Shelter and site planning	Security, health, safety and well-being of the affected population.	Diarrhoeal diseases, ARI, meningitis, TB, HIV
Water supply	All people have safe and equitable access to sufficient quantity of water for drinking, cooking and personal and domestic hygiene.	Diarrhoeal diseases, typhoid, scabies
Sanitation and hygiene	Adequate numbers of toilets, safe and acceptable access at all times of the day and night; Access to sufficient soap and other items to ensure personal hygiene, health, dignity and well-being.	Diarrhoeal diseases, polio
Food safety	Adequate and appropriate food and non-food items Moderate and severe malnutrition is addressed	

Minimum standards for communicable disease prevention and control

Intervention	Minimum standards	Target Diseases
Health education	Access to information and services.	Diarrhoeal, malaria, STIs, TB, HIV
Health services	Access to health services, access to clinical services. Children aged 6 months to 15 years have immunity against measles.	All diseases
Vector control	Knowledge and means to protect themselves from disease and nuisance vectors Number of disease vectors that pose a risk to people's health and nuisance vectors that pose a risk to people's wellbeing are kept to an acceptable level; Note: this includes intermediate hosts like foxes, sheep, rats and others that promote spread of many diseases including viral hemorrhagic fevers, plague, etc.	Malaria, trypanosomiasis, leishmaniasis, dengue, yellow fever, typhus, chikungunya, Japanese encephalitis

Minimum standards for communicable disease prevention and control

Intervention	Minimum standards	Target Diseases
Environmental control	People have an environment that is acceptable, uncontaminated by solid waste, including medical waste, and have the means to dispose their domestic waste conveniently and effectively; People have an environment in which health and other risks posed by water erosion and standing water including storm water, floodwater, domestic wastewater and wastewater from medical facilities are minimised.	Malaria, dengue, yellow fever

Minimum standards for communicable disease prevention and control

Intervention	Minimum standards	Target Diseases
Environmental control	People have an environment that is acceptable, uncontaminated by solid waste, including medical waste, and have the means to dispose their domestic waste conveniently and effectively; People have an environment in which health and other risks posed by water erosion and standing water including storm water, floodwater, domestic wastewater and wastewater from medical facilities are minimised.	Malaria, dengue, yellow fever
Epidemic preparedness and response	Measures are taken to prepare for and respond to outbreaks of infectious diseases; Outbreaks of communicable diseases are detected, investigated and controlled in a timely and effective manner.	All diseases

โรคเรื้อรัง

Noncommunicable diseases

เป็นสาเหตุของการเสียชีวิตมากที่สุดในประเทศกำลังพัฒนา

- Hypertension พบมากที่สุด
- Cardiovascular diseases
- Diabetes Type 2
- Chronic Obstructive Respiratory Diseases
- Kidney disorders
- Bone and Joint Diseases
- Cancers

Actions by Phase of Humanitarian Response

Mitigation and preparedness

- 1 Collect data on country's pre-crisis NCD profile
- 2 Review health facilities' preparedness plans and NCD service-delivery readiness
- 3 Review national essential-medicines list, drug supply, and stockpiles
- 4 Support patient-tailored disaster preparedness plans

Emergency response

- 1 Include NCDs in rapid assessments
- 2 Map NCD service provision (4W)
- 3 Organise NCD services delivery with a focus on primary health care
- 4 Provide information about NCD services
- 5 Promote self-care and adherence

Post-emergency phase

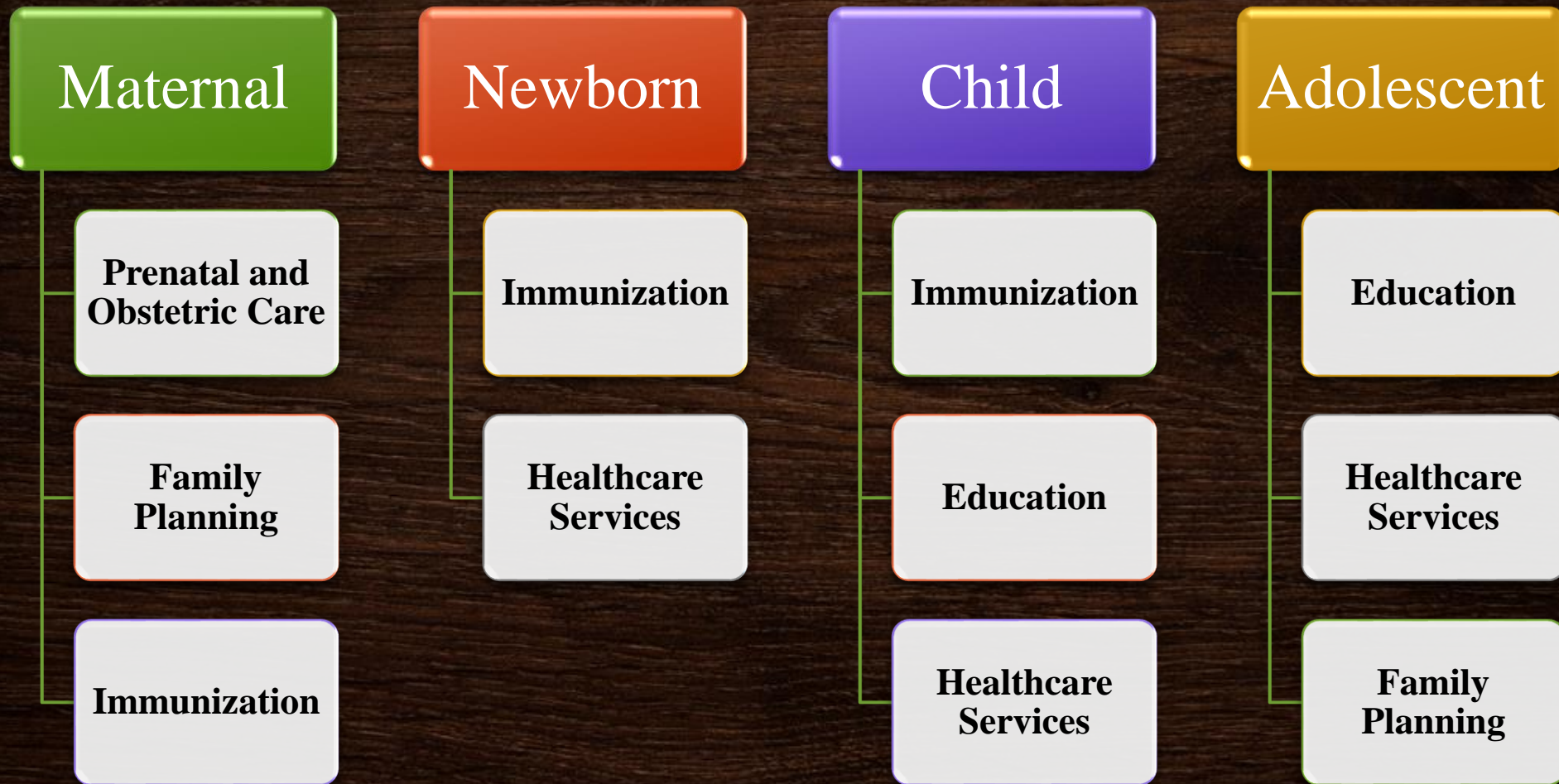
- 1 Debrief and share lessons learned
- 2 Strengthen health-system response, scaling up NCD integration into primary health care
- 3 Strengthen public health response, including control of risk factors at both individual and population-based level

Ranking Health Problem

		Frequency of disease diagnosis	
		High	Low
Risk of excess mortality or morbidity	High	<ul style="list-style-type: none">• Malaria• Diarrhoea	<ul style="list-style-type: none">• TB• Epilepsy
	Low	<ul style="list-style-type: none">• Intestinal worms• URTI	<ul style="list-style-type: none">• Ringworm• Arthritis

อนามัยแม่และเด็ก

Maternal, newborn, child and adolescent health



Reproductive Healthcare

Key facts

- 75% of most refugee populations are women and children including about 30% who are adolescents.
- 25% are in the reproductive stage of their lives, at 15-45 years old.
- 20% of women of reproductive age (15-45), including refugees and internally displaced, are pregnant.
- More than 200 million women who want to limit or space their pregnancies lack the means to do so effectively.
- In developing countries, women's risk of dying from pregnancy and childbirth is 1 in 48. Additionally, it is estimated that every year more than 50 million women experience pregnancy-related complications, many of which result in long-term illness or

Reproductive Healthcare

Objective

- To prevent and manage the consequences of sexual violence.
- To prevent and treatment of STIs and HIV.
- To prevent excess maternal and neonatal mortality and morbidity.
- To plan for comprehensive reproductive health services in the early days and weeks of an emergency such as
 - Antenatal care, delivery and postnatal services
 - Family planning

Reproductive Healthcare

Minimum standards of reproductive healthcare:

- Provide access to oral and inject contraceptive.
- Provide access to free condom.
- Providing clean delivery kits.
- Providing midwife delivery kits.
- Initiating the establishment of a referral system to manage obstetric emergencies.

Maternal health and safe motherhood

key facts

- Over 585,000 women die every year (an average of 1,600 per day) as a result of causes related to pregnancy or childbirth--almost all in developing countries.
- Another 15 million women in developing countries suffer acute complications that can lead to lifelong pain, illness, and infertility.
- For the refugee population within the post-emergency phase, pregnancy and child-delivery complications are the leading cause of mortality and morbidity among women.

Maternal health and safe motherhood

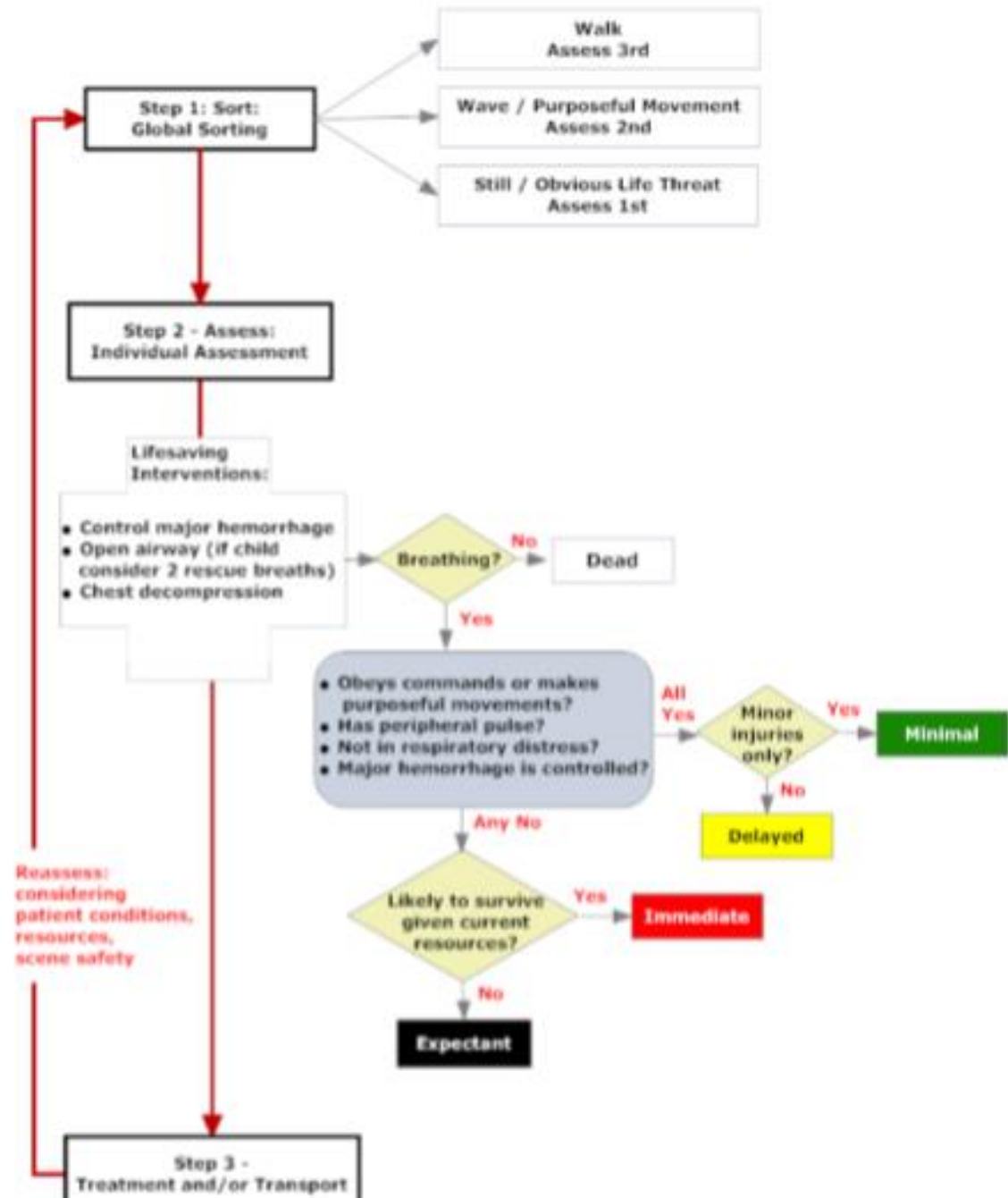
(Key facts)

- Between 25-33% of all deaths of women of reproductive age in the developing world, is the result of pregnancy or childbirth⁶³. It is the leading cause of death and disability for women between the ages of 15 and 49 in the developing world.
- Skilled attendants are present at only 53% of deliveries worldwide and only 40% of deliveries take place at a hospital or health centre.
- Unsafe abortion is a leading cause of maternal mortality world-wide, accounting for 70,000 deaths every year. Millions more suffer long-term health problems such as chronic infection, pain, and infertility.
- 50% of all prenatal deaths are due primarily to inadequate maternal care during pregnancy and delivery.

การบาดเจ็บ

Trauma and surgical care

- Triage
 - แดง
 - เหลือง
 - เขียว
 - ดำ
- Field Hospital



โภชนาการ Nutrition

โรคติดเชื้อ (Infection)

- Measles
- Diarrhea
- Dysentery
- ARI
- Malaria

ภาวะทุพโภชนาการ (Malnutrition)

ผู้พิการ

Persons with disabilities

ผู้อพยพ

Migrant health

การบริการทางการแพทย์ในภาวะฉุกเฉิน Medical Emergency Response Team(MERT)







การบริการทางการแพทย์ในภาวะฉุกเฉิน

Medical Emergency Response Team (MERT)



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ทางการแพทย์ระดับตติยภูมิ เพื่อเตรียมความพร้อม
รองรับภาวะภัยพิบัติ (ภาคทฤษฎี)



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แพทย์หญิงณกุล สวรรค์ปัญญาเลิศ
นางนิตรา อัมรินทร์

ISBN : 978-974-422-682-2

คู่มือฉุกเฉินทางการแพทย์ สำหรับวิชาการแพทย์ กรมการแพทย์ ร่วมกับ สมาคมเวชศาสตร์ฉุกเฉินแห่งประเทศไทย



TYPE 1 MOBILE

Provide outpatient initial emergency care of injuries and other significant health care needs



TYPE 1 FIXED

Same as Type 1 Mobile but work put of a fixed structure and provide up to 12 hours per day of care, 7 days a week.



TYPE 2

Provide emergency care including surgery, 24 hours a day.
Deploy field hospitals with atleast 20 beds and can replace and support small district hospitals.



TYPE 3

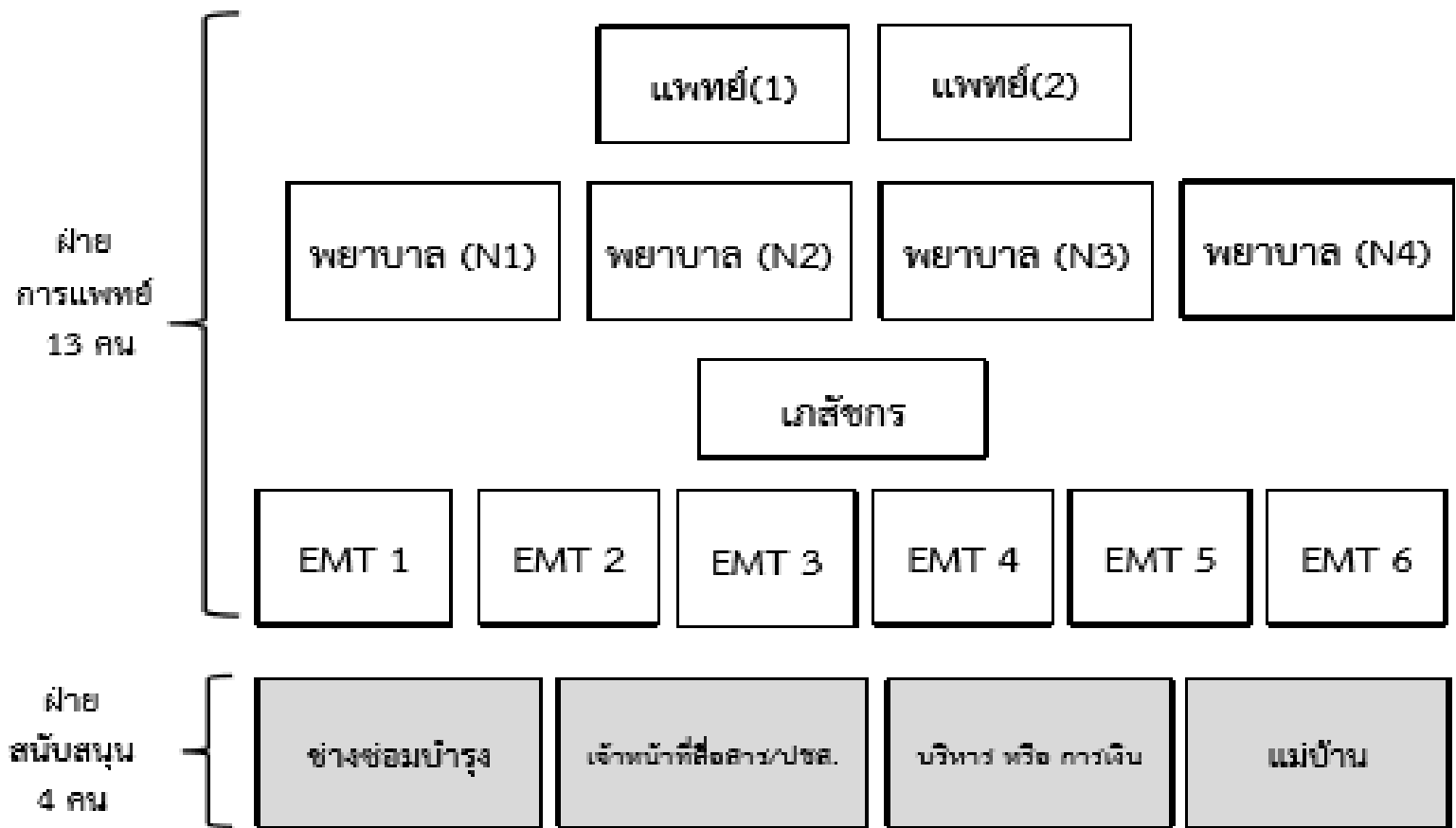
Provide inpatient referral care and complex surgery. Provide large 40-100 bed facilities and can support and replace tertiary hospitals.



SPECIALIZED TEAMS

Specialize in specific medical area. May be as small as two three senior specialists, or a specialist facility eg. Ebola or Rehabilitation.
Must bring appropriate equipment and supplies with them.

องค์ประกอบของทีม MERT



ภาพที่ 1 แผนภูมิแสดงองค์ประกอบของทีม MERT 1 ทีม (จำนวนบุคลากรอาจเปลี่ยนแปลงได้ระหว่าง 16 - 20 คน)