

Executive Summary

Research Project: Recommendations for Emergency Medical Service for the elderly in Thailand

This study aims to provide recommendations for setting up a suitable emergency medical system (EMS) for the elderly in Thailand. The research consisted of analysing the following: 1) the current state of emergency medical services for the elderly in Thailand by using primary data from the National Institute for Emergency Medicine's Information Technology for Emergency Medical System (ITEMS) from 2013-2016; 2) various emergency medical services management methods and techniques from local and international perspectives via literature review; and 3) the implementation of an EMS for the elderly in four study provinces in Thailand. The results were used to propose recommendations on how to implement an EMS for the elderly in Thailand for cases such as falls and strokes. Subsequently, in-depth interviews were conducted with stakeholders involved with the elderly and those providing or receiving medical services, while experts provided opinions. Results and policy recommendations are summarised as follows:

1. Current State for Emergency Medical Services

Data obtained from the NIEM's ITEMS system between 2013-2016 showed the following:

1.1 The provision of emergency medical services for the elderly between 2013-2016 increased annually. In 2013, services were rendered 349,600 times, while the numbers increased to 377,703 times, 416,225 times, and 457,984 times for 2014, 2015, and 2016, respectively.

1.2 The top five groups which had the highest number of non-trauma emergency cases were Group 17 (illness/fatigue/chronic paralysis/unknown/not specified/others), Group 1 (stomach/back/pelvic/groin pain), Group 5 (difficulty breathing/dyspnea), Group 9 (diabetes), and Group 19 (loss of consciousness/unresponsive/blackout). Meanwhile, the top five groups which reported the highest number of trauma emergency cases were Group 24 (falls/accidents/pain), Group 25 (automotive accidents), Group 4 (bleeding without any cause of injury), Group 3 (animal bites), and Group 21 (battery or assault).

1.3 Most emergency cases involving the elderly were reported through the 1669 hotline (90%) while the other channels such as via radio or other telephone numbers or hotlines comprised the remaining 10%.

1.4 Based on the Emergency Severity Index (ESI) guideline – which describes how to classify patients into different groups of emergencies based on severity – emergency distress notifications received at the dispatch point showed that emergencies involving the elderly were mostly classified as urgent (yellow) at 66-73% of emergency cases, followed by emergent (red) cases and non-urgent (green) cases at 10-18% and 8-14%, respectively. When assessing severity at the scene of the incident, it was shown that most elderly emergencies were still urgent (yellow) at 57-71%, followed by emergent (red) and non-urgent (green) cases at 12-19% and 9-15%, respectively.

1.5 The trend for the number of elderly deaths outside of hospitals is increasing annually. In 2013, there were 1,436 people who died before paramedics were able to reach them. This number increased to 1,472 people in 2014, 1,523 people in 2015, and 1,786 people in 2016. Regardless of whether response time for emergency medical services was within 8 minutes, the number of deaths continued to increase; however, the rate of deaths in elderly patients was higher if response times were over 8 minutes. In addition, the top 10 groups of elderly patients who died while receiving emergency medical services in transit from the point of incident to the hospital comprised Groups 19, 5, 17, 25, 9, 6, 24, 16, 4, and 1. For cases where medical services were provided on-site, more than 90% of those cases were for elderly patients with urgent situations that required further treatment at hospitals. Moreover, emergency operations at hospitals showed that 65-77% of elderly patients had clear diagnoses while 10-22% were not categorised.

2. Emergency Medical Services in Other Countries

A literature review of emergency medical services both locally and internationally, i.e. Australia, Malaysia, Japan, and the US, showed that all these countries utilised the Anglo-American Emergency Medical Services System. This system focuses particularly on swift transportation to the hospital and a decentralised decision-making structure involving state/provincial governments – including jurisdictions where the emergency medical services are provided. In this scenario, the central agency has the mandate of defining monitoring and supervision standards, and budget subsidies. For Thailand, the National Institute for Emergency Medicine (NIEM) is the agency responsible for setting standards and guidelines for the implementation of various emergency services for hospitals and hospital staff at the local levels, monitoring operations and processes, and subsidising local budgets required for these services.

Australia, Japan, Malaysia, and the US all have one emergency telephone number that integrates ambulance, disaster, and fire services, while some also include police services. Thailand is an exception in this case as there are unique hotlines for different emergency services such as police services (one number each for emergency, national, and tourist police hotlines), public emergencies, social assistance, etc. Financial resources for emergency medical services in Thailand come from various sources such as the national government, provincial government, and local government.

Countries which have a universal health coverage scheme where emergency medical services are fully subsidised include Thailand and Japan. Although Australia has a universal health coverage scheme, its emergency medical services are not covered and must be paid by patients at a rate defined by the government. On the other hand, the health system in the US subsidises only patient relocation services; services rendered while in transit must be fully borne by the service receivers.

None of the countries in the literature review had developed an EMS specifically for the elderly as the current services provided encompass all age groups. However, most countries had developed technologies, innovations, or had various programmes that favoured emergency medical services access for the elderly, particularly for important cases such as falls and strokes. Such examples include diagrams for recommendations to elderly who have fallen in their homes before requesting for help, tools for assessing the risks of falls occurring in homes of the elderly, medical devices to be attached to the wrist or waist, sensors and elderly security cameras, tools for assessing stroke patients, and Mobile Stroke Units. Mobile Stroke Units were equipped with additional medical equipment such as CT scan devices and blood test kits, resulting in faster treatment and quicker results.

3. Recommendations for Developing a Framework for Emergency Medical Services for the Elderly in Thailand

The development of the EMS framework for the elderly was conceived via literature reviews on the national and international levels, and holding group discussions and in-depth interviews with staff involved in this field. As such, this framework was consistent with policies, implementation standards, local context, and the problems, needs, and requirements of the elderly. Moreover, it focused on collaboration between various sectors such as communities, local administrations, hospitals, and public and private agencies to allow the elderly to access high-quality EMS and health services in a quick and prompt manner, e.g. health promotion, disease prevention, health treatment, and rehabilitation. However, this framework was developed to provide options to policy-makers, and thus some recommendations may not yet be suitable for the elderly in the Thai context unless they are trialled in pilot studies. These studies would require a lot of time due to resource limitations such as financial constraints and human resources, as well as cooperation and collaboration from various involved agencies as highlighted below:

Policy Recommendations

National Level

1. The NIEM and other involved agencies in the health network should develop an emergency medical services training programme at all operational levels to provide the appropriate knowledge and skills about emergency medicine for the elderly. It should focus on emphasising the importance of providing emergency medical services to the elderly during all stages, i.e. preventative care, care prior to going to the hospital, care within the hospital, and care during transit to the hospital.
2. The NIEM, together with the Ministry of Public Health, should subsidise the budget for developing an EMS, for instance, financing for human resources development in terms of training and increasing the number of staff, and the allocation of necessary equipment and technology. This should increase the efficiency of the programme's implementation and operations.
3. The NIEM and the Ministry of Interior should jointly develop a plan to allocate resources towards the EMS to respond to the needs for services in hospitals and in the local administrations.
4. The Ministry of Interior, the Ministry of Public Health, and the Ministry of Social Development and Human Security should set policies that give local administrations the mandate of developing an EMS for the elderly.
5. Local administrations should have laws and regulations that provide them with powers to decide and implement an EMS to serve the needs and requirements of the elderly in the community.
6. The Ministry of Public Health and the NIEM should jointly draft a guideline for developing an accurate and connected patient information database. This should be used for transferring patient information between hospitals and will should solve the problem of sending outdated information.

Local Level

1. District health promotion hospitals, together with local administrations and provincial offices of the Ministry of Social Development and Human Security, should disseminate knowledge to both the elderly and/or their caretakers about health promotion and disease prevention, assessing risks of contracting diseases, home improvement in terms of safety and health, and methods for accessing various emergency hotlines. This should be conducted via public relations coupled with training in communities.
2. The provincial offices of the Ministry of Public Health, together with hospital networks, should subsidise the design and implementation of training programmes that are consistent with services provided to the community. In addition, there should be a monitoring system that continuously evaluates results, as well as training programmes for EMS volunteers at least 1-2 times a year to refresh their knowledge and skills.

For more information: <http://www.hitap.net/documents/171376>