

Towards Integrating Health Economics into Medical Education in Thailand

Win Techakehakij, MD, PhD¹

¹ Lampang Hospital, Lampang, Thailand

Objective: To describe the attempts to integrate health economics (HE) into medical education in Thailand.

Materials and Methods: A national survey was launched to all medical education centers in Thailand to discern the situation and gaps in HE teaching. Discussions about improving HE education were held among experienced educators. As a result, the HE working group, comprising experienced medical teachers in HE, was initiated with the aim of recommending the essential contents for HE education. The HE working group also helped preparing a HE curriculum and instructional media assisted general medical educators in HE teaching. Distribution of learning materials developed was planned.

Results: Results from the survey revealed gaps in HE teaching, including the lack of HE teaching in clinical curricula, inconsistency in teaching standards, and scarcity of teaching materials and resource persons. The HE working group developed a spiral-based HE curriculum for medical training from undergraduate to graduate levels. Moreover, HE study guides were proposed as teaching aids. Additionally, an example to integrate HE into other medical discipline was demonstrated in the undergraduate curriculum of Family Medicine. Workshops "training for the trainers" were successfully arranged twice. All produced materials, including HE essential contents, curriculum, and study guides, as well as teaching experience were shared to the medical teachers in this regard.

Conclusion: While a number of efforts had been established to integrate HE into medical education, further attempts are still required to continuously improve HE teaching.

Keywords: Health economics; Study guide; Curriculum; Situation

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Owing to the rising healthcare expenditure in recent decades, interests in health economics (HE) teaching in medical education have increased to promote cost consciousness and efficiency in clinical practice^(1,2). Even though the abilities to apply the principle of HE are listed among the core competencies of medical graduates by the Medical Council of Thailand, little is known about HE teaching in medical education in Thailand.

Situations of health economics teaching in Thailand

In 2017, the collaborative project to increase

production of rural doctors (CPIRD), Ministry of Public Health, launched a survey to all 37 medical education centers (MECs) in Thailand to explore the characteristics of HE teaching during clinical years in MECs⁽³⁾. A list of questions was distributed, as follows: 1) Is there HE teaching?; 2) How many hours of teaching?; 3) Are materials and references provided?; 4) Are instructors employed in the institutions?; and 5) What support is needed to facilitate HE teaching?

Results from the survey showed that only 16 MECs (43.7%) reported that HE teaching was provided during clinical years. Duration of teaching varied from 1 to 9 hours, whereas only 9 of the 16 institutions had their own HE instructors. Nine MECs indicated that reference materials were provided in the HE curriculum. Furthermore, all MECs indicated the need for support in teaching HE, such as reference material and resource persons.

Despite being a requirement, more than half of MECs did not offer HE teaching in their clinical curricula. Findings also revealed inconsistent standards among those MECs with HE teaching,

Correspondence to:

Techakehakij W.

Lampang Hospital, Amphur Muang, Lampang 52000, Thailand.

Phone: +66-54-237400

Email: drwin123@gmail.com

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reflected in a variety of the HE teaching hours, and the lack of materials and resource persons provided. These results emphasize the needs for standardized HE teaching in medical education, which involves the questions about not only “what to teach?”, but also “how to teach?”.

Hosted by CPIRD in February 2017, a meeting was arranged to gather medical teachers involved in HE teaching from both university-based and university-affiliated medical schools in Thailand. Issues about the current situation of HE teaching, difficulty, and needs to assist HE teaching, were discussed. Conclusions from the meeting suggested the establishment of the HE working group that would comprised medical teachers keen on HE teaching. The roles of the working group were to develop a HE curriculum, indicate essential information in HE teaching, and learning materials that help general medical educators be able to teach HE.

Initiation to standardize health economics teaching

Due to the unavailability of the agreed-upon subjects for HE teaching, a brainstorm among the HE working committees was arranged to produce a HE curriculum for medical graduates. With the agreement of the HE experts, the first HE medical curriculum was launched in 2017, consisting of HE objectives and learning outcomes. The spiral curriculum was designed⁽⁴⁾ for medical training from undergraduate to graduate levels.

Furthermore, the contents to support the core subjects indicated in the HE curriculum were provided⁽⁵⁻⁷⁾. Topics with detailed information, including the basics of economics, characteristics of healthcare goods, concepts of efficiency, economic evaluation, and health insurance and financing, were outlined for educators as primary resources for use and further development.

Developing health economics study guides

In addition to the subject matters, teaching materials were the other element that could substantially facilitate HE learning. As different levels of learning objectives required their own specific materials, the development of learning materials was proposed to serve three levels of learning⁽⁸⁾, 1) informative learning, focusing on knowledge and skills, 2) formative learning, encouraging students to socialize around the content values, and 3) transformative learning, aiming to develop leadership attributes to produce change agents in

that subject area. In response to these objectives, study guide (SG), as a format of learning materials, was considered. This is because it could serve more than one purpose, including provision of content information, management of learning, and emphasis on student activity⁽⁹⁾.

Study guide: Information and case studies

The first HE SG was issued to assist basic HE teaching. The SG consisted of four sections focusing on theoretical content, with introduction to HE, health services and efficiency, economic evaluation, and health finance, and three case studies showing the application of HE in clinical practice.

Evaluation of this SG was done in a study⁽¹⁰⁾ where this SG was made available to the medical students approximately one week prior to the HE session and served as the basis for discussion during class. Students were asked to assess the usefulness and relevance of the SG after the session. Results of the study showed that most participants agreed that SG helped clarify the objectives and contents of HE. The majority also indicated that case discussion demonstrated how HE could be used in real clinical practice and highlighted their remaining questions regarding HE⁽¹⁰⁾.

In addition to the basic SG, committees of the HE working group had issued other SGs covering essential topics, such as basic economics, health insurance, and health finance⁽¹¹⁾. With the provision of the SGs, this was expected to be the first step that helped standardize the contents of HE education across medical schools.

Study guide: Group assignment

Apart from the in-class activities, it was deemed beneficial to allow students to learn the application of HE from the clinical setting. Concerning this, an SG that would guide students about HE group assignment (GA) was developed. The GA provided step-by-step instructions about assigning groups of 4 to 5 students to interview medical specialists about their experiences in making clinical decisions related to efficiency or financial issues. Students used a list of eight questions during the interview as a guide to extract relevant information concerning the influence of economic-related issues on decision making. These questions explored 1) problems and context, 2) patients and choices of interest, 3) stakeholders, 4) information used in making clinical decisions, 5) other relevant information, 6) unknown information, 7) decision analysis relating to perspectives and

insurances, and 8) students' own decisions. Results from the interviews were presented in class for discussion with classmates and the facilitator.

Outcomes of the GA were reflected in a study that explored students' perceptions of the GA activity after classes⁽¹²⁾. Results of the study demonstrated that most students stated that the GA helped them understand how to utilize the principles of HE in clinical practice. More than 80% of the participants also reported that the GA not only emphasized what they still did not understand about the topics, but also stimulated their interest in the effect of economic issues on clinical decision making⁽¹²⁾.

From the evidence, it appeared that using the GA could enhance students' understanding in HE and encourage them to apply the principles of HE in making clinical decisions. This tool, thus, seems promising to promote transformative learning in HE.

Integration of HE into the Family Medicine curriculum

While using SG effectively facilitates teaching in the HE classroom, doubts remain whether the principles of HE could really contribute to clinical decision making in the real-world settings. This issue well aligned with one of the purposes of undergraduate curriculum in family medicine that aimed to promote cost consciousness and efficiency in clinical practice. However, there were still no structured questions to assist students in obtaining information relating to costs and efficiency, which could assist in making clinical decisions.

To tackle this challenge, a health economist and a family physician collaborated to develop a set of questions to gather economic-related information of patients, which were 1) all drugs and laboratory investigations the patients were prescribed at the out-patient visit and their respective costs, and 2) direct non-medical costs (DNMc) for the patients and informal caregivers such as transportation and productivity loss. The questions were integrated into a standardized list for medical students in the family medicine rotation, together with room for discussion about the impact of economic information on the patients' care plan.

Attitudes of the students towards this intervention were reported in the research, which asked the medical students to reveal their attitudes towards this intervention at the end of the rotation⁽¹²⁾. Results unveiled that the majority stated that knowing the drug costs made them interested in choosing the most efficient way of treatment. More than 90%

of the participants also reported that knowing laboratory costs encouraged them to order only investigations that were necessary. Additionally, most students agreed that knowing the costs of drugs and investigations motivated them to inquire about patients' health insurances. Besides, the study indicated that knowing DNMc encouraged students to establish patients' follow-up plans to minimize their economic burden⁽¹³⁾.

Findings from the research suggested that integrating the inquiry about the costs of drugs and investigations appeared to encourage students to find the most efficient way of treatment. Additionally, information about DNMc promoted students' critical thinking to reduce the financial barrier of patients to healthcare access, which could potentially improve treatment effectiveness.

Workshop: Training for the trainers in health economics

After a number of efforts to come up with standardized content of HE, together with learning materials, academic conferences were scheduled, as planned by CPRID, to distribute all materials, including HE curriculum, contents, and SGs, produced to the medical educators. Workshops "Training for the trainers in health economics" were successfully delivered twice in February 2018 and March 2019. A number of medical teachers from both university-based and university-affiliated medical schools were gathered, with interactive discussion to share experience in HE teaching.

Conclusion

Even though the Medical Council of Thailand clearly stipulates that medical students should be able to apply principles of HE to make clinical decisions, there was a dearth within medical curricula of the knowledge and teaching resources needed to accomplish this goal. During the past years, attempts have been undertaken, with the purpose of establishing the first step of integrating HE into medical education in Thailand. Despite a number of measures being introduced, more efforts are required for improvement of HE teaching.

What is already known on this topic?

It is known that the ability to apply the principle of HE has been listed among the core competencies of medical graduates by the Medical Council of Thailand. However, little was known about HE teaching in medical education in Thailand.

What this study adds?

This study reviewed the situation of HE teaching and a number of efforts to establish the standardized teaching in Thailand. This includes the HE working group, study guides, and workshops to help medical teachers to be able to teach HE.

Conflicts of interest

The author declares no conflict of interest.

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