



## Impact of a 2-hour Multi-Approach-Palliative Care Class on Knowledge, Attitudes and Behavior in Fifth-Year Medical Students in Ramathibodi Hospital.

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### Abstract

**Background:** Medical students have traditionally received no education in palliative care. However, in 2002, as part of a revised medical curriculum, Year 5 undergraduates at Ramathibodi Hospital, Mahidol University, Bangkok, Thailand participated in a 2-hour class in palliative care.

**Purpose:** The aim of this study was to assess the effect of the education programme from the pre and post self-evaluation form in perceived interest, knowledge, attitude and skills.

**Methods:** 35 medical students (100%) completed the pre and post self-evaluation form. Stuart Maxwell Analysis was performed to test statistic significance of the improvement.

**Results:** After the 2-hour class, all students (100%) rate that the highest scale for their interest in palliative care, compared to 62.5% prior to the class. For knowledge, it showed that approximately 80% rated themselves up to average level prior to the class, while 97% rated themselves to be improved to high and highest level after the class. Attitudes toward palliative care tended to be improved by increasing the number of people who rated 'highest' for attitude domain from 5.71% to 74.29%. As for the confidence to practice in their real life, there was a shift from 92% who rated their confidence up to average to be 92% who had high and highest confidence after the class.

**Conclusion:** This 2-hour lecture has significantly raised 5<sup>th</sup> year medical students' understanding of palliative medicine in many domains including interest, knowledge, attitude and skills.

**Keywords:** Palliative care, undergraduate, education, assessment, effectiveness

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## Background

In Thailand, palliative medicine is not fully recognized as a discipline due to a lack of resources, expertise and knowledge<sup>(1)</sup>. In almost all hospitals in Thailand, specialist care ceases when a patient is diagnosed with end-staged cancer or any other terminal illness<sup>(1)</sup>. Even though physicians realize that patients may be suffering from aggressive treatments at the end of life, they do not know how to begin helping patients<sup>(2)</sup>. In the past, medical schools in Thailand have not included palliative care in the undergraduate curriculum, making this an unknown area for most graduating doctors<sup>(2)</sup>.

In the Department of Family Medicine at Ramathibodi Hospital, a palliative care class, so called, working with the dying and the family was introduced in 2004 for 5<sup>th</sup> year undergraduate medical students as an introduction to palliative medicine. This is a part of the new curriculum development in undergraduate medical education in Thailand<sup>(3)</sup>. Medical education for undergraduates in Thailand is comprised of 6 years in total with the last 3 years in clinical rotation<sup>(4)</sup>. The aims of this class are not only to improve medical students' communication skills, but also to provide right attitude and a sound grounding in pain management in palliative care<sup>(2)</sup>. The class has been revisited every year in order to effectively introduce medical students the concept of palliative care. Although there is evidence that the longer comprehensive palliative care education can improved self-efficacy in learners which in turn will result in behavioral change that leads to better patients' care<sup>(5)</sup>. This research is hoping to prove that even the short course palliative care education might also result in something significant and can be the example of the early stage of palliative care education development and basic data for palliative care education in Thailand. The 5<sup>th</sup> year medical students in this project have already passed surgery, medicine and emergency rotation prior to this palliative care class.

Currently the 2-hour class composed of a mixture of didactic and interactive teachings using one example case of patient for the following sections (Appendix 1):

- Introduction: what where when why who and how for palliative care (Interactive lecture and story telling approach)
- Communication and ethical issues: breaking bad news to patient and family and prognosis telling (Role plays with standardized patient)
- Pain management: how to get start with opioids prescription (Experiential learning by trying to write a real prescription of morphine using equianalgesic chart)
- Last-hour symptoms management (Interactive lecture and role play)

These four topics meet aspect of medical students' curriculum requirements and are key subjects which graduated doctors need to understand when caring for palliative care patients. The course was designed by using different interactive techniques as we believe that it will help change students attitudes and behavior<sup>(6)</sup>. Each rotation of medical students is comprised of a small group of 10-12 medical students which in turn encourage them to ask questions in a safe and friendly environment. On commencing course, medical students are given a pack containing handouts of formal session and the pre and post-course self-evaluation form and general evaluation form.

## Materials and Methods

The effectiveness of the program was assessed using the pre and post-course self-evaluation form and general evaluation form to be appropriate to the course design. The pre and post-course self-evaluation form is designed by using Kirkpatrick's model of curriculum design<sup>(7)</sup> and adjusting from the self-efficacy in Palliative Care Scale (SEPC) including the aspects of communication and patient management, but not



multidisciplinary teamwork<sup>(8)</sup>. Thanatophobia scale was also applied to this scale to assess medical students' attitudes towards palliative care<sup>(8)</sup>. Finally, the form is comprised of the topic of interest, knowledge, attitude and confidence to apply what they have learned to the real practice. Medical students rated the scale from 1-5 as a Likert-scale for their self-efficacy. We also asked them to reflect verbally and in writing at the end of the session.

## Results

A total of 35 pre and post-evaluations (100%) were completed. 18 medical students were female and 17 were male. Analysis identified significant improvements in perceived efficacy in interest, knowledge, attitude and skill using Stuart Maxwell Analysis.

After the 2-hour class, all students (100%) rate the highest scale for their interest in palliative care, compared to 62.5% prior to the class. There was no medical student who had low interest in palliative care for both before and after the class. For knowledge, it showed that approximately 80% rated themselves up to average level prior to the class, while 97% rated themselves to be improved to high and highest level after the class. Attitudes toward palliative care

tended to be improved by increasing the number of people who rated 'highest' for attitude domain from 5.71% to 74.29%. As for the confidence to practice in their real life, there was a shift from 92% who rated their confidence up to average to be 92% who had high and highest confidence after the class.

For knowledge, it was divided into different aspects including communication for patients and families: breaking bad news, pain management and management of last-hour symptoms. All categories showed the same trend of improvements from 85-90% of lowest, low and average rating to 95-97% of high and highest rating.

For confidence, it was divided into palliative care for patients and palliative care for families. In addition it was comprised of all same domains to those of knowledge including communication for patients and families: breaking bad news, pain management and management of last-hour symptoms. All categories also showed the same trend of improvements that approximately 85-92% rated themselves up to average level prior to the class, while 85-95% rated their confidence to be improved to high and highest level after the class.

It should be taken into account that all domains had statistic significances in differences.

**Table 1** Self efficacy rating in 5<sup>th</sup> year medical students in perceived efficacy in palliative care

Topic	Rating	Lowest	Low	Average	High	Highest	P-value
Interest	Pre (N=16)	0	0	1(6.25)	5(31.25)	10(62.50)	P<0.05
	Post (N=15)	0	0	0	0	15(100)	
Knowledge	Pre (N=35)	2(5.71)	11(31.43)	15(42.86)	7(20.00)	0	P<0.001
	Post (N=35)	0	0	1(2.86)	23(65.71)	11(31.43)	
Attitude	Pre (N=35)	1(2.86)	2(5.71)	13(37.14)	17(48.57)	2(5.71)	P<0.001
	Post (N=35)	0	0	1(2.86)	8(22.86)	26(74.29)	
Confidence in practice	Pre (N=35)	2(5.71)	11(31.43)	10(54.29)	3(8.57)	0	P<0.001
	Post (N=35)	0	0	3(8.57)	21(60.00)	11(31.43)	

## Discussion

It should be noted that most medical students had high interest and good attitudes towards palliative care although they seemed to rate themselves lower in knowledge and confidence in practice. Most medical students had good attitudes towards palliative care (90%) prior to the class, but this class seemed effective by improving the attitudes of 10% of students who rated poor attitude prior to the class.

This study also demonstrates that considered and appropriately structured short-course palliative care education can significantly improve students' belief in their ability to practice palliative medicine and to improve their attitude towards care which is supported by the evidence from Germany and UK<sup>(9,10)</sup>. Despite the short-time we have for offering medical students the glimpse of palliative care, we seemed to be successful that we at least can improve the attitudes and some skills toward palliative care.

Using multiple approaches and interactive techniques might be another explanation for the significant improvements in multiple domains in palliative care education in this study. There was supportive evidence that interactive teaching tech-

niques were better than didactic lecture<sup>(6)</sup>. This implied that short course palliative is better than nothing and we can increase the effectiveness of the course by using different teaching techniques.

The continuous quality improvement approach will be used to improve the course continuously. If there is more time allocating to palliative care teaching, the future session can include "setting goal of care" and nausea and vomiting management as requested from medical students.

Limitation of this study was that all self-evaluations were subjective. In addition, the confidence of practice in this study was assessed based on what medical students rated, not on how they really practice. In order to assess a longer term effectiveness of the course, the future study should follow up the group of medical students and assess how they practice palliative care after this class.

## Conclusion

It is clear from medical students' feedback that this 2-hour lecture has significantly raised their understanding of Palliative Medicine in many domains including interest, knowledge, attitude and skills.

### Appendix 1 Detailed activity in the 2-hour palliative care class

Activities	Teaching Techniques	Schedule	Duration
Introduction:			
• Death and dying	Interactive lecture and	14.00-14.10	10 minutes
• What, where, when, why, whom and how for palliative care	story telling approach	14.10-14.35	25 minutes
Communication and ethical issues:			
• Breaking bad news to families	Role plays with standardized	14.35-14.55	20 minutes
• Breaking bad news to family	patient	14.55-15.15	20 minutes
• Prognosis telling		15.15-15.25	10 minutes
Pain management: how to get start with opioids prescription	Experiential learning by trying to write a real prescription of morphine using equianalgesic chart	15.25-15.45	20 minutes
Last-hour symptoms management	Interactive lecture and role play	15.45-16.00	15 minutes



## References

1. Nagaviroj K, Jaturapatporn D. Cancer pain-progress and ongoing issues in Thailand. *Pain Res Manage* 2009;14:361-2
2. Jaturapatporn D, Kirshen AJ. Attitudes towards truth-telling about cancer : a survey from Thailand. *Palliat Med* 2008;22:97-8.
3. Globalization and Medical Education from 11<sup>th</sup> Thai Medical Education Meeting from <http://161.200.98.10/unit/meded11/meded11/index.php?option=comcontent&task=blogcategory&id=18&Itemid=26>, Access May 20, 2010
4. Shapiro MC, Shapiro RA, Ubolcholket S. Medical education in Thailand. *Medical Education* 1992;26:251-8.
5. Mason SR, Ellershaw JE. Undergraduate training in palliative medicine: is more necessarily better? *Palliat Med* 2010;24:306-9.
6. Thomson O'Brien MA, et al. Continuing education meetings and workshops: effects on professional practice and health care outcomes. *Cochrane Database Syst Rev* 2001;(2):CD003078
7. Kirkpatrick, DL. Evaluation training programs: The four levels. San Francisco, CA: Berrett-Koehler Publishers, 1998.
8. Mason SR, Ellershaw JE. Assessing undergraduate palliative care education: validity and reliability of two scales examining perceived efficacy and outcome expectancies in palliative care. *Medical Education* 2004;38:1103-10.
9. Ostgathe C, Voltz R, Nauck F, Klaschik E. Undergraduate training in palliative medicine in Germany: what effect does a curriculum without compulsory palliative care have on medical students' knowledge, skills and attitudes? *Palliat Med* 2007;21:155-6.
10. Mason SR, Ellershaw JE. Preparing for palliative medicine; evaluation of an education programme for fourth year medical undergraduates. *Palliat Med* 2008;22:687-92.

## การประเมินผลการเรียนการสอนด้านความรู้ ทักษะและความมั่นใจในการดูแลผู้ป่วยระยะสุดท้ายในนักศึกษาแพทย์ชั้นปีที่ 5

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### บทคัดย่อ

**วัตถุประสงค์:** เพื่อประเมินผลของการเรียนการสอนเรื่องการดูแลผู้ป่วยระยะสุดท้ายในด้านความสนใจ ความรู้ ทักษะ และ ความมั่นใจ ในการดูแลผู้ป่วยระยะสุดท้ายของนักศึกษาแพทย์

**วัสดุและวิธีการ:** การวิจัยแบบกึ่งทดลอง (quasi-experimental study) โดยวัดผลก่อนและหลังการเรียนการสอนเรื่องการดูแลผู้ป่วยระยะสุดท้ายในนักศึกษาแพทย์ชั้นปีที่ 5 รวม 35 คน ใช้การวิเคราะห์ทางสถิติวิธี Stuart Maxwell Analysis

**ผลการศึกษา:** หลังจากจัดการเรียนการสอนเรื่องการดูแลผู้ป่วยระยะสุดท้าย 2 ชั่วโมง นักศึกษาแพทย์ทั้งหมด (ร้อยละ 100) ให้ความสนใจในระดับมากที่สุด เทียบกับก่อนจัดการเรียนการสอน (ร้อยละ 62.5) นักศึกษาแพทย์ให้คะแนน ระดับความรู้เรื่องการดูแลผู้ป่วยระยะสุดท้ายเพิ่มขึ้นจากเดิมโดยร้อยละ 80 ให้คะแนนระดับความรู้ระดับต่ำที่สุด ต่ำ และปานกลาง ก่อนการเรียนการสอน แต่ให้คะแนนระดับความรู้เพิ่มเป็นระดับมาก และมากที่สุดถึงร้อยละ 97 หลังการเรียนการสอน นักศึกษาแพทย์มีทัศนคติในการดูแลผู้ป่วยระยะสุดท้ายดีขึ้นจากเดิมโดยเพิ่มจากร้อยละ 5.71 ซึ่งให้คะแนนทัศนคติดีมากที่สุดต่อการเรียนการสอนวิชานี้ เป็นร้อยละ 74.29 สำหรับเรื่องความมั่นใจในการดูแลผู้ป่วยระยะสุดท้าย เดิมนักศึกษาแพทย์ให้ความมั่นใจในระดับน้อยถึงปานกลางร้อยละ 92 และเพิ่มเป็นมั่นใจระดับมาก ถึง มากที่สุด ร้อยละ 92 หลังการจัดการเรียนการสอนเรื่องการดูแลผู้ป่วยระยะสุดท้าย

**สรุป:** การจัดการเรียนการสอน เรื่อง การดูแลผู้ป่วยระยะสุดท้าย 2 ชั่วโมง ให้กับนักศึกษาแพทย์ชั้นปีที่ 5 สามารถเพิ่มความสนใจ ความรู้ความเข้าใจ ทักษะ และความมั่นใจในการดูแลผู้ป่วยระยะสุดท้ายอย่างมีนัยสำคัญทางสถิติ

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