

เจตคติของแพทย์เพิ่มพูนทักษะต่อความปวดจากมะเร็งและการระงับปวด

Interns' Attitudes on Cancer Pain and Its Management

ศศิกานต์ นิมมานรัตน์, พ.บ.*, ชัชชัย ปรีชาไว, พ.บ., มลิวัลย์ ออฟูวงศ์, พ.บ., ปร.ด.

Sasikaan Nimmaanrat, M.D.*, Chatchai Prechawai, M.D., Maliwan Oofuvong, M.D., Ph.D.

ภาควิชาวิสัญญีวิทยา คณะแพทยศาสตร์ มหาวิทยาลัยสงขลานครินทร์ อ.หาดใหญ่ จ.สงขลา 90110 ประเทศไทย

Department of Anesthesiology, Faculty of Medicine, Prince of Songkla University, Hat Yai, Songkhla 90110, Thailand.

*E-mail: snimmaanrat@yahoo.com.au

Songkla Med J 2017;35(3):255-262

บทคัดย่อ:

วัตถุประสงค์: การศึกษานี้เพื่อประเมินทัศนคติของแพทย์เพิ่มพูนทักษะต่อความปวดจากมะเร็ง และการระงับปวดซึ่งรวมถึง การสั่งใช้ยากลุ่มอนุพันธ์ของฝิ่นด้วย

วัสดุและวิธีการ: แพทย์เพิ่มพูนทักษะ 125 จาก 165 คน (ร้อยละ 75.8) ตอบแบบสอบถามซึ่งมี 2 ส่วน ส่วนแรกเกี่ยวกับทัศนคติ ต่อความปวดจากมะเร็งและการระงับปวด ส่วนที่ 2 เกี่ยวกับทัศนคติต่อการสั่งใช้ยากลุ่มอนุพันธ์ของฝิ่น

ผลการศึกษา: แพทย์เพิ่มพูนทักษะร้อยละ 76.0 เห็นว่าควรให้การระงับปวดจากมะเร็งอย่างสูงสุดเมื่อผู้ป่วยมีชีวิตอยู่ได้ไม่เกิน 1 ปี ร้อยละ 73.6 คิดว่าความต้องการการระงับปวดของผู้ป่วยอยู่ในระดับปานกลาง ร้อยละ 60.8 เห็นว่าผู้ป่วยต้องการการระงับปวดเพิ่มขึ้น เพราะปวดมากขึ้น เกือบร้อยละ 70.0 จะควบคุมทั้งขนาดและความถี่ของการให้ยากลุ่มอนุพันธ์ของฝิ่นเพื่อป้องกันการติดยาและการติดยา ประมาณ 2 ใน 3 ไม่เห็นด้วยที่จะใช้ยากลุ่มอนุพันธ์ของฝิ่นขนาดต่ำเกินไปเพื่อป้องกันการติดยา มากกว่าร้อยละ 80.0 ไม่เห็นด้วยที่จะแนะนำผู้ป่วยและญาติว่ายากลุ่มอนุพันธ์ของฝิ่นเป็นยาที่ไม่ดีและสนับสนุนให้ผู้ป่วยทนความปวด มากกว่าครึ่งหนึ่ง จะกีดกันไม่ให้ผู้ป่วยเต็มใจทนความปวดและปฏิเสธการใช้ยาชนิดมอร์ฟีน ไม่มีแพทย์เพิ่มพูนทักษะคนใดที่จะไม่สั่งใช้ยากลุ่มอนุพันธ์ของฝิ่นเพราะกลัวการกดการหายใจ

สรุป: แม้ว่าแพทย์เพิ่มพูนทักษะส่วนน้อยมีทัศนคติที่เป็นลบต่อความปวดจากมะเร็งและการระงับปวด แต่ทัศนคติที่เป็นลบเหล่านี้ อาจมีอิทธิพลต่อการตัดสินใจและการดูแลรักษาผู้ป่วย ซึ่งอาจนำไปสู่การระงับปวดจากมะเร็งที่ไม่เพียงพอได้

คำสำคัญ: การระงับปวดจากมะเร็ง, ความปวดจากมะเร็ง, ทัศนคติ, แพทย์เพิ่มพูนทักษะ

Abstract:

Objective: This study was designed to evaluate interns' attitudes in terms of cancer pain and its management, including opioid prescription.

Material and Method: Questionnaires consisting of 2 parts (attitudes toward cancer pain and its management as well as attitudes toward opioid prescription), were completed by 125 out of 165 interns (75.8%).

Result: The majority of them thought that maximum analgesic treatment should be commenced when patients' life expectancy was not more than 1 year (76.0%). They rated the patients' requirement for pain medications as average (73.6%) and supposed that the demand for higher analgesic doses indicating increased pain level (60.8%). Almost seventy percent would cautiously regulate the dosage and frequency of opioids to avoid tolerance and addiction. Two thirds did not agree to provide too low dose of opioid to prevent tolerance. Over 80.0% did not agree that they should inform patients, as well as their relatives, that opioids were bad, nor did they reassure them that trying to bear pain may be a better alternative. Over half would discourage patients who were willing to stand the pain and refused to receive a morphine injection. None strongly agreed not to prescribe opioids due to a fear of respiratory depression.

Conclusion: Although the minority of the participated interns had negative attitudes towards cancer pain and its management, these negative attitudes may influence their clinical judgment and practice, which lead to inadequate pain management being provided to cancer pain patients, who are in need for optimal pain relief.

Keywords: attitudes, cancer pain, cancer pain management, interns

Introduction

It has been well known that pain is common in patients with cancer^{1,2} and markedly affects their daily living and quality of life.³ It has also been acknowledged that cancer pain is undertreated worldwide.⁴⁻⁶ There are multiple barriers affecting adequate cancer pain management including; health care providers, patients, patient care givers and health care systems.^{3,7-11} Barriers from health care providers are lack of knowledge,^{7,8} inadequate pain assessment,^{3,7-9} non-facilitative attitudes toward pain management,¹⁰ concerns on safety,⁷ side effects,^{7,9} tolerance⁹ and addiction,⁷ shortage of staffs' time,⁷ physicians' reluctance to prescribe opioids,^{3,9} and inadequate guidance from pain specialists.⁸ Barriers, which occur from the patients are their reluctance to report pain and take

analgesics^{3,9} coupled with unrealistic expectations.⁷ Barriers from patient care givers include their unrealistic expectations and inhibitions against the use of analgesics on patients.⁷ Tight controls of opioid usage is counted as a barrier created by health care systems.⁷

Among all these barriers, the most important obstacles come from physicians.⁸ We did studies to assess the attitudes and knowledge of undergraduates (externs) and postgraduates (interns) in terms of cancer pain and its management, and found mixed results of correct and incorrect knowledge as well as positive and negative attitudes.¹¹⁻¹⁴ As a part of continual improvement in education and health care services, we performed this study to evaluate the interns' attitudes in regards to cancer pain and management, which included the prescription of opioids.

At our medical school, we formally teach cancer pain management by conducting a 2-hour lecture to the fifth year medical students. For externs, we give a 1-hour lecture as well as discussing cancer cases for 3 hours with them. Apart from this, the medical students and the externs review cancer pain patients by themselves and do ward rounds with their staffs in charge.

Material and Method

The questionnaire consisted of 2 parts (attitudes toward cancer pain and its management as well as opioid prescription) and was completed by 125 interns. These interns had graduated from our medical school about 8 months on the date of answering the questionnaire. The questionnaire was filled in when they came for a rehearsal on the day prior to their commencement ceremony. (Whereas they were to receive a degree from Her Royal Highness princess).

The first part of the questionnaire comprised of 3 questions, regarding attitudes in terms of cancer pain and its management; (1) At which stage would you feel it is appropriate for cancer pain patients to receive the maximal doses of analgesics for severe pain? (2) How would you rate the level of patient demand for pain medications? and (3) When a cancer patient requests higher doses of analgesics to control pain, what does it usually indicate?.

The second part of the questionnaire comprised of 5 statements in terms of attitudes toward opioid prescription; (1) When prescribing opioids, I would be very careful in the control of dosage and frequency for the prevention of drug tolerance and addiction (2) The opioid dosage which patients receive should be much lower than the required dosage for the prevention of drug tolerance (3) When I prescribe opioids, I would insinuate to patients or their relatives that opioids are not good drugs and they should better tolerate the pain as much as possible

(4) When I find patients who bear severe pain and refuse to receive morphine injection, I would encourage their behaviors and (5) I do not like to prescribe opioids because respiratory depression is a very severe side effect.

Results

One hundred and twenty-five out of 165 interns (75.8%) completed the questionnaire. According to the first part of the questionnaire (interns' attitudes toward cancer pain and its management), the majority (76.0%) felt that the maximum analgesic doses should be commenced when patients' life expectancy was less than 12 months. Three fourths of them rated the level of patient demand for analgesics as "about right" while 17.6% as "too much" and 8.8% as "too little". Three fifths thought that increased pain was responsible for patients' higher requirement for analgesics, while one fifth considered tolerance as a cause of higher analgesic consumption. The minority supposed that the reasons for more analgesic requests were related to increased anxiety (9.6%), increased depression (8.0%) and addiction (1.6%). None of them regarded patients' seeking more attention as the source of needing higher doses of analgesics. (Table 1)

In regards to the second part of the questionnaire (interns' attitudes toward opioid prescription) (Table 2), the majority of the interns agreed (69.6%) and strongly agreed (17.6%) that they would be very careful in controlling dosage and frequency of opioids to prevent tolerance and addiction. Approximately half (55.2%) disagreed that patients should receive much lower dosage of opioids than what they required, to prevent drug tolerance. Almost all of them disagreed (63.2%) and strongly disagreed (21.6%) in informing patients and their families that opioids were not good and they were better off standing the pain as much as they could. While 43.2% disagreed in supporting the patients' behaviors, if they preferred to tolerate severe

pain, and declined to have an injection of morphine, 21.6% had no idea whether or not to encourage or discourage, while 20.8% agreed to encourage these actions. None of them strongly agreed not to prescribe opioids because of respiratory depression, while 62.6% disagreed to omit opioid prescription due to depression of respiration.

Table 1 Interns' attitudes toward cancer pain and its management

Questions	Percent
1. At which stage would you feel it is appropriate for cancer pain patients to receive maximal doses of analgesics for severe pain?	
A. Prognosis <1 month	9.6
B. Prognosis 1-3 months	18.4
C. Prognosis 4-6 months	31.2
D. Prognosis 7-12 months	16.8
E. Prognosis 13-24 months	24.0
2. How would you rate the level of patient demand for pain medications?	
A. Too much	17.6
B. About right	73.6
C. Too little	8.8
3. When a cancer patient requests higher doses of analgesics to control pain, this usually indicates	
A. Patient is psychologically addicted	1.6
B. Patient has developed tolerance to drug	20.0
C. Increased pain	60.8
D. Increased anxiety	9.6
E. Increased depression	8.0
F. Patient needs more attention	0.0

Table 2 Interns' attitudes toward opioid prescription

	Strongly disagree (%)	Disagree (%)	No comment (%)	Agree (%)	Strongly agree (%)
1. When prescribing opioids, I would be very careful in the control of dosage and frequency for the prevention of drug tolerance and addiction.	0.8	5.6	6.4	69.6	17.6
2. The opioid dosage which patients receive should be much lower than the required dosage for the prevention of drug tolerance.	12.8	55.2	12.0	18.4	1.6
3. When I prescribe opioids, I would insinuate to patients or their relatives that opioids are not good drugs and they should better tolerate the pain as much as possible.	21.6	63.2	9.6	4.8	0.8

Table 2 (Continued)

	Strongly disagree (%)	Disagree (%)	No comment (%)	Agree (%)	Strongly agree (%)
4. When I find patients who bear severe pain and refuse to receive morphine injection, I would encourage their behaviors.	12.8	43.2	21.6	20.8	1.6
5. I do not like to prescribe opioids because respiratory depression is a very severe side effect.	9.8	62.6	15.4	12.2	0.0

Discussion

The majority of the participating interns showed positive attitudes on cancer pain and its management, except when they felt it was suitable for patients, with severe cancer pain, to obtain maximal doses of analgesics when their prognosis was less than that of 6 months. Additionally, they revealed positive attitudes on ordering opioids, with the exception of when they would be very cautious in the control of dosage and frequency of prescription, so as to prevent tolerance and addiction.

Attitudes toward cancer pain and its management

In regards to the appropriate timing to provide maximal analgesia to severe cancer pain patients, over half of the participated interns (59.2%) believed that patients with severe cancer pain should receive maximal analgesia when their prognosis was shorter than that of 6 months. The previous studies of Nimmaanrat et al found similar results that at least 50.0% of surveyed participants would wait until the patients' survival was less than 6 months before starting maximal analgesia.¹¹⁻¹⁴ This survey's finding is in conjunction with what was found in Korea (86.0%) [which considerably led to their hesitancy to prescribe opioids]⁸ which differs from what was found in western countries.^{3,9} Cleeland et al. revealed that 70.0% of

radiation therapy oncology group doctors would initiate maximum tolerated analgesia when the prognosis was less than that of 24 months (from less than 1 week to 24 months).³ Von Roenn et al.⁹ demonstrated that 69.0% of oncologists would start maximal tolerated analgesia when the prognosis was longer than 6 months. Furthermore, they identified characteristics of those who would manage cancer pain earlier and aggressively: A. medical oncologists, rather than radiotherapists or surgeons, B. who aimed total pain control as the treatment outcome, C. who were generous in pain therapy in compared to their colleagues, D. who unlikely to rotate from oral to parenteral route, E. who inclined to think that increased pain was the main reason for patients who requested higher analgesic doses and F. those who stated that their patients had better pain control. Somehow, Malhotra et al.¹⁵ used a vinaigrette-based questionnaire and found that only 51.0% of surveyed physicians thought that strong opioids were to be given for severe pain as soon as it was identified. Shinjo et al.¹⁶ performed a survey of bereaved families of cancer patients and revealed that 63.0% of family members with a positive preference and 56.0% of those with a negative preference stated that medical professionals informed them that cancer pain should be managed earlier. All cancer pain patients should get adequate pain relief

as soon as possible. Utilization of WHO guideline may help to reduce the delay of cancer pain management.¹⁷

Almost all of the participated interns in this study (73.6%) valued the level of patient requirement for analgesics as “about right”. This finding demonstrated a similar percentage of participants with a positive attitude in comparison to previous studies of Nimmaanrat et al.¹¹⁻¹⁴ (with a variation of 41.3–77.6%). Jeon et al.⁷ exhibited that 40.8% of medical physicians and 41.5% of surgeons rated the patient demand for analgesics as ‘about right’. Interestingly, Ger et al.⁸ discovered that 66.0% of their clinicians thought that most patients in pain were under-medicated. On the other hand, if health care providers have an attitude that cancer pain patients’ level of analgesic requirement is too high, they are likely not to offer higher doses and frequency of administration to the patients, who are in need of more analgesics due to inadequate pain control.

Even though the majority of the interns showed a positive attitude by considering that increased pain or the development of tolerance were the causes of higher analgesic demand, but some of them showed a negative attitude by regarding the causes as increased anxiety or depression. These findings are in accordance to the results of the other surveys by Nimmaanrat et al.¹¹⁻¹³ Jeon et al.⁷ reported similar results with minority thought that increased anxiety, increased depression, and the need for more attention or addiction were reasons for more analgesic requirement in terminal cancer patients. However, Ger et al.⁸ displayed considerably higher negative attitudes. Negative attitudes on causes of greater analgesic consumption are a concern as they may prohibit physicians from providing adequate pain relief to patients in need. These need to be addressed and strategies need to be developed to eliminate such negative attitudes by taking the above into account.

Attitudes toward opioid prescription

The great majority of our participants would be very cautious in regulating dosage and frequency of opioid prescription in order to inhibit tolerance and addiction. This findings do not differ from previous studies of Nimmaanrat et al.¹¹⁻¹⁴ and are considered as negative attitudes. Opioid tolerance is a phenomenon that exposure to opioids results in attenuation of their effects,¹⁸ or a need for higher doses (or increased plasma concentration) to accomplish the same pharmacological outcome.^{18,19} In medical management, analgesic tolerance is rarely a limitation during opioid treatment, concerns regarding tolerance should not lead to a delay in initiating opioid therapy, nor limit dose escalation in cancer pain patients. Patients and their care givers should be informed that tolerance is not considered as a clinical problem, and that morphine will continue to provide pain relief for many months or years.¹⁸ Addiction is defined as behavior including at least one of the following: impaired control over drug use, compulsive use, continued use despite harm, and cravings.²⁰ Its prevalence in cancer pain patients is 0–7.7%.²¹ As the prevalence is low, there should therefore be no hesitation to initiate and provide adequate maintenance of opioid therapy to eliminate pain in cancer patients.

Although the majority showed a positive attitude on adequate opioid prescription but a significant number of them thought that opioid dosage which patients received should be much lower than the required dosage to prevent opioid tolerance. This finding is similar to the previous findings of Nimmaanrat et al.^{12,13} Since sufficient opioid dosage is essential in providing effective cancer pain relief and as previously mentioned, the prevalence of opioid tolerance is low in this group of patients, therefore the opioid dosage should not be kept low to avoid the development of opioid tolerance.

The minority of the participated interns would suggest to patients and their care givers that opioids were not good medications, and they should better endure pain as much as possible, which is in conjunction to the former findings of Nimmaanrat et al.^{12,13} and that of Ger et al.⁸ Even though, not many of them thought like this, but this negative attitude is likely to lead to inadequate supply of opioids to cancer pain patients in need.

Surprisingly, a substantial portion of the participants showed a negative attitude in that they would support patients who put up with severe pain and rejected morphine injections. This result is in accordance to the prior outcomes of Nimmaanrat et al.¹²⁻¹⁴ as well as Ger et al.⁸ Again, this unhelpful attitude can contribute to insufficient amount of morphine provided to patients, who are in need of receiving it. Instead of encouraging this kind of patient, clinicians should firmly advise them that their pain can be treated effectively and safely with morphine or other opioids. Patients should suffer the least amount of pain as possible. Trying to tolerate cancer pain without using morphine is not advisable.

Last but not least, a significant percentage of the participating interns did not like to prescribe opioids due to respiratory depression. Nimmaanrat et al.¹²⁻¹⁴ and Ger et al.⁸ have found the similar results. This negative attitude is widespread and causes reluctance of opioid prescription among a lot of physicians. Concerning about respiratory depression should be addressed and this misconception should be corrected.

Ger et al.⁸ mentioned that insufficient knowledge and negative attitudes regarding optimal use of analgesics (including opioids) to relieve cancer pain were associated with inadequate education and limited experience with this kind of pain. Education is generally recommended to improve cancer pain management.^{11-13,15,22-25} Nimmaanrat et al.¹⁴ has revealed that giving a lecture on cancer pain

management can improve medical students' attitudes. From this study, we have utilized these useful data to improve the content that we teach to our medical students and have put emphasize on correcting misconceptions regarding prognosis of cancer patients when starting optimal pain therapy.

Apart from providing education to health care personnel, patients themselves²⁶ as well as their families¹⁶ and policies^{27,28} are the other factors involved in the adequacy of cancer pain management.

Conclusion

Although the minority of the participating interns had negative attitudes towards cancer pain and its management, these negative attitudes may influence their clinical judgment and practice, which in turn lead to inadequate pain management provided to cancer pain patients, who are in need of optimal pain relief. These data are very useful to improve our education on cancer pain management.

References

1. van den Beuken-van Everdingen MH, de Rijke JM, Kessels AG, Schouten HC, van Kleef M, Patijn J. High prevalence of pain in patients with cancer in a large population-based study in The Netherlands. *Pain* 2007; 132: 312 – 20.
2. Caraceni A, Portenoy RK. An international survey of cancer pain characteristics and syndromes. IASP Task Force on Cancer Pain. *International Association for the Study of Pain. Pain* 1999; 82: 263 – 74.
3. Cleeland CS, Janjan NA, Scott CB, Seiferheld WF, Curran WJ. Cancer pain management by radiotherapists: a survey of radiation therapy oncology group physicians. *Int J Radiation Oncology Biol Phys* 2000; 47: 203 – 8.
4. Gunnarsdottir S, Donovan HS, Serlin RC, Voge C, Ward S. Patient-related barriers to pain management: the barriers questionnaire II (BQ-II). *Pain* 2002; 99: 385 – 96.
5. Sun VC, Borneman T, Ferrell B, Piper B, Koczywas M, Choi K. Overcoming barriers to cancer pain management: an institu-

- tional change model. *J Pain Symptom Manage* 2007; 34: 359 – 69.
6. Maltoni M, Scarpi E, Modonesi C, Passardi A, Calpona S, Turriziani A, et al. A validation study of the WHO analgesic ladder: a two-step vs three-step strategy. *Support Care Cancer* 2005; 13: 888 – 94.
 7. Jeon YS, Kim HK, Cleeland CS, Wang XS. Clinicians' practice and attitudes toward cancer pain management in Korea. *Support Care Cancer* 2007; 15: 463 – 9.
 8. Ger LP, Ho ST, Wang JJ. Physicians' knowledge and attitudes toward the use of analgesics for cancer pain management: a survey of two medical centers in Taiwan. *J Pain Symptom Manage* 2000; 20: 335 – 44.
 9. Von Roenn JH, Cleeland CS, Gonin R, Hatfield AK, Pandya KJ. Physician attitudes and practice in cancer pain management: a survey from the Eastern Cooperative Oncology Group. *Ann Intern Med* 1993; 119: 121 – 6.
 10. Brockopp DY, Brockopp G, Warden S, Wilson J, Carpenter JS, Vandever B. Barrier to change: a pain management project. *Int J Nurs Stud* 1998; 35: 226 – 32.
 11. Nimmaanrat S, Phunggrassami T, Prechawai C. Medical students' knowledge and attitudes toward cancer pain and its management. *Songkla Med J* 2008; 26: 423 – 9.
 12. Nimmaanrat S, Prechawai C. Interns' knowledge and attitudes regarding cancer pain and cancer pain management. *Songkla Med J* 2009; 27: 491 – 501.
 13. Nimmaanrat S, Prechawai C, Phunggrassami T. Cancer pain and its management: a survey on interns' knowledge, attitudes and barriers. *Palliat Care Res Treat* 2010; 4: 11 – 7.
 14. Nimmaanrat S, Oofuvong M. Attitudes of medical students regarding cancer pain management: comparison between pre- and post-lecture test findings. *Asian Pac J Cancer Prev* 2015; 16: 7453 – 6.
 15. Malhotra C, Chan N, Zhou J, Dalager HB, Finkelstein E. Variation in physician recommendations, knowledge and perceived roles regarding provision of end-of-life care. *BMC Palliate Care* 2015; 14: 52.
 16. Shinjo T, Morita T, Hirai K, Miyashita M, Shimizu M, Tsuneto S, et al. Why people accept opioids: role of general attitudes toward drugs, experience as a bereaved family, information from medical professionals, and personal beliefs regarding a good death. *J Pain Symptom Manage* 2015; 49: 45 – 54.
 17. World Health Organization. *Cancer pain relief*. Geneva: WHO; 1986.
 18. Collett BJ. Opioid tolerance: the clinical perspective. *Br J Anaesth* 1998; 81: 58 – 68.
 19. McQuay H. Opioids in pain management. *Lancet* 1999; 26: 2229 – 32.
 20. Smith SM, Dart RC, Katz NP, Paillard F, Adams EH, Comer SD, et al. Classification and definition of misuse, abuse, and related events in clinical trials: ACTION systematic review and recommendations. *Pain* 2013; 154: 2287 – 96.
 21. Koyyalagunta D, Burton AW, Toro MP, Driver L, Novy DM. Opioid abuse in cancer pain: report of two cases and presentation of an algorithm of multidisciplinary Care. *Pain Physician* 2011; 14: E361 – 71.
 22. Hashemi M, Akbari ME, Razavi SS, Saadat-Niaki A, Hoseini Khameneh SM. Evaluating resident physicians' knowledge, attitude, and practice regarding the pain control in cancer patients. *Iran J Cancer Prev* 2015; 8: 1 – 10.
 23. Jho HJ, Kim Y, Kong KA, Kim DH, Choi JY, Nam EJ, et al. Knowledge, practices, and perceived barriers regarding cancer pain management among physicians and nurses in Korea: a nationwide multicenter survey. *PLoS One* 2014; 9: e105900. doi: 10.1371/journal.pone.0105900.
 24. Srisawang P, Harun-Or-Rashid M, Hirotsawa T, Sakamoto J. Knowledge, attitudes and barriers of physicians, policy makers/regulators regarding use of opioids for cancer pain management in Thailand. *Nagoya J Med Sci* 2013; 75: 201 – 12.
 25. Budkaew J, Chumworathayi B. Knowledge and attitudes toward palliative terminal cancer care among Thai generalists. *Asian Pac J Cancer Prev* 2013; 14: 6173 – 80.
 26. Kwon JH, Hui D, Chisholm G, Hong WT, Nguyen L, Bruera E. Experience of barriers to pain management in patients receiving outpatient palliative care. *J Palliat Med* 2013; 16: 908 – 14.
 27. Duthey B, Scholten W. Adequacy of opioid analgesic consumption at country, global, and regional levels in 2010, its relationship with development level, and changes compared with 2006. *J Pain Symptom Manage* 2014; 47: 283 – 97.
 28. Berterame S, Erthal J, Thomas J, Fellner S, Vosse B, Clare P, et al. Use of and barriers to access to opioid analgesics: a worldwide, regional, and national study. *Lancet* 2016; 387: 1644 – 56.