

Review of Education in Palliative Care in North America

Dr. Doreen Oneshcuk
Edmonton Regional Palliative Care Program

The incidence of cancer is expected to increase into the twenty-first century [1]. Many of these cancer patients will develop metastatic or advanced cancer with accompanying symptomatology that may include pain, nausea, dyspnea and psychological or existential suffering [2]. Multiple physician specialties including family physicians, general internists, oncologists and surgeons, are expected to be involved in the care of these patients at some point in the trajectory of these patients' illness.

Despite the availability of palliative care literature addressing topics such as pain assessment and management in most developed countries, pain and other previously listed symptoms remain poorly controlled in this patient population. Numerous physician factors have been implicated in inadequate pain and symptom management, including deficits in physician knowledge and physician attitudinal issues [3-12]. Practicing physicians have reported limited or poor exposure to cancer pain management in medical school [6, 9].

This review of education in palliative care will include the status of education at the medical school, postgraduate and practicing physician level. Educational styles and strategies suitable for palliative medicine education are alluded to but are not discussed in depth in this review.

MEDICAL SCHOOL

Both educators and medical students have identified a dearth of palliative medicine education during this period of their training. In 1991, the Canadian Palliative Care Curriculum was published and distributed to the deans of all Canadian medical schools. This curriculum outlines specific goals and objectives for palliative care instruction in undergraduate medical teaching and covers 22 different topics including 13 symptom and 9 psychosocial issues [13]. Despite the creation and distribution of this curriculum and a biannual survey of palliative care teaching in Canadian medical schools, little time is assigned to palliative care and cancer pain control (median time of instruction is 11 hours) [14, 15].

In a survey of 106 medical students completing a third-year clerkship in Arizona, USA, 57 (54%) felt they were poorly equipped to deal with terminally ill patients upon graduation from medical school [16]. A questionnaire addressing general attitudes about the cause and treatment of pain completed by 317 (97%) medical students entering 1st year medical school at Wisconsin's two medical schools, revealed a number of negative attitudes including an exaggerated fear of addiction to opioids in cancer pain patients, belief that maximal drug therapy should be dependent on prognosis, and a lack of appreciation for the fact that cancer pain is often undertreated [3]. Lack of confidence in palliative care knowledge and skills was recently acknowledged by 48 fourth year medical students at six community campuses in Michigan, USA. These students completed an anonymous survey consisting of 4 parts: a self-assessment of attitudes, knowledge, and skills; adequacy of instruction; exposure to specific clinical experiences; and demographic information. The students' assessment of their attitudinal

competencies was quite high, although less than one-half reported having had adequate instruction regarding specific competencies in managing symptoms and implementing care plans [17].

Positive effects on medical students' attitudes fostered by exposure to palliative care education has been confirmed by a study conducted in Kentucky, USA. In this study, pre-seminar attitudes of 1st year medical students toward pain patients were dominated by perceived negative characteristics and the belief that working with such patients is difficult. Attitudes measured 5 months after the course reflected increased complexity, greater emphasis that pain is real, and stronger beliefs that being involved with pain patients is rewarding [18]. A 6-week clerkship for third-year medical students that included contact with pediatric cancer patients and their families revealed a "maturation" of attitudes in physician-patient relationships of third year students compared to second year medical students from another institution. Although the additional medical school year was felt to be the most significant factor responsible for the positive change, the differences included a stronger belief that patients have the right to participate in their own treatment planning, the importance of documentation in medical files of conversations with patients, and a more strongly endorsed emotional involvement of the physician in the patients' problems.

POSTGRADUATE/ RESIDENCY

While postgraduate education in palliative care appears superior to that of undergraduate palliative care training [19], there appears to be plenty of room for improvement. The author recently conducted a nine-item mail questionnaire of the 16 Canadian family medicine teaching program directors to update the accessibility and operation of palliative care education for their respective family medicine residents. All universities were found to offer elective time in palliative care. Only five of the 16 (31%) have a mandatory rotation. The median length of mandatory and elective rotations was two and three-and-a-half weeks respectively. The median number of residents participating in an elective rotation was only 10% [20]. In the United States, a national survey was carried out of 1168 accredited residency programs in family medicine, internal medicine, pediatrics, and geriatric fellowship programs. This survey discovered that in a majority of programs, residents and/or fellows coordinate the care of 10 or fewer dying patients annually and that approximately 15% of the programs offer no formal training in palliative care [21]. A survey of 258 family practice program directors in the USA revealed that while the majority of the directors reported their residents were receiving training in many of the common pain syndromes and the use of analgesic medications, many felt the training to be inadequate. Moreover, more than 35% of the training directors did not believe their residents were receiving adequate training in cancer pain or the use of opioid analgesics [22].

The author was also involved in the analysis of pre and post multiple choice examinations written by 2nd year family medicine residents attending a mandatory 2 week rotation on the tertiary palliative care unit in Edmonton, Alberta, Canada between September 1991 and February 1996. The residents were randomly assigned on the first day (Time 1) to complete either Exam A or B and were subsequently crossed over on their final rotation day to complete the alternate exam (Time 2). Six domains were represented in the examinations : pain assessment, opioid use ,adjuvant medications, delirium, urinary catheterization and hydration. There were improvements in the mean percentage results in Time 2 compared with Time 1 for Exams A,B and A and B

combined. In addition, there were significant improvements for domains in Time 2 compared to Time 1 for combined A and B Exam except for urinary catheterization. Despite the improvement in post versus pre examination results, serious deficiencies were identified in the areas of pain assessment and opioid use including opioid side effects and issues involving dependence, addiction and tolerance [23]. An American survey of 81 internal medicine housestaff, radiation oncology residents, and hematology-oncology fellows was conducted to assess these physicians' knowledge of opioid analgesic pharmacology and the benefits of palliative radiation therapy in the management of cancer pain. The particular questions focused around a hypothetical patient with metastatic non-small cell lung cancer. The questions addressed opioid selection, conversion of parenteral to oral morphine, management of opioid toxicities, opioid addiction, and efficacy of radiation therapy. The results revealed that few physicians in training were familiar with the stepwise progression of the analgesic ladder as outlined in the World Health Organization (WHO) guidelines, only 4 (5%) calculated the correct equianalgesic dose for conversion from parenteral to oral morphine, and, in general, were unfamiliar with the palliative benefits of radiation therapy [24]. Weissman et al, surveyed 31 medical students, interns, and residents from the Department of Internal Medicine in August 1996, to determine self-assessed competencies and concerns surrounding end-of-life care. The results indicated improvement in self-reported competence with progression of training and experience. Both interns and residents indicated concern about potential illegality, breach of ethics or potential malpractice when analyzing eight legal and ethical end-of-life scenarios involving pain management or treatment withdrawal. The residents expressed an interest in learning more about pain management, ethical issues, and delirium [25]. Potential drawbacks to self assessment of competence and knowledge is lack of accuracy [26] and possible negative correlation with performance.

PHYSICIANS IN PRACTICE

Unfortunately, the problem of inadequate pain and symptom assessment and management repeats itself in the practicing physician population. This is not all too surprising given the already reviewed status of medical and postgraduate palliative medicine training and most practicing physicians reporting that they base their pain management on previous experience with few reporting specific training and many indicating a lack of satisfaction with that training [6, 7]. In a Canadian based survey of 2,686 participating physicians, including 39% of medical or radiation oncologist, and 18.19% of family physicians, 67% of these physicians rated their past teaching experience as only "fair" or "poor". This same study found 50% of the surveyed physicians not choosing to prescribe a strong opioid in the initial management of a hypothetical cancer patient with severe pain despite the absence of other contraindications to opioid use [27]. Elliott and Elliott's study identified commonly held misconceptions by practicing physicians with regards to morphine use in cancer pain management including misunderstanding of drug tolerance and adverse effects in one-half of the 150 physicians surveyed, and concern by more than 20% of the potential for addiction in prescribing opioids in this setting [10]. The skills of 24 primary care physicians in assessing and managing severe pain of a cancer patient were evaluated by performance-based testing, namely the objective structured clinical examination (OSCE). The advantage to performance-based testing is the opportunity to observe physicians in simulated structured environments providing objective evidence for how physicians actually practice, as opposed to knowledge information obtained from survey data. The study results again identified deficits in physician clinical assessment and management of cancer pain [28]. Levin et al, have also documented deficits in primary care physician knowledge, especially in the areas of

analgesic dosing, equivalences, the use of breakthrough medication, and vital points of pain assessment. In this particular study, the surveyed oncologists displayed good to excellent knowledge [29].

RECENT IMPROVEMENTS IN PALLIATIVE CARE EDUCATION

Multiple medical schools in the United States, are establishing initiatives for medical students including a collaborative project coordinated by the consumer group Choice in Dying in New York City.

Curricular requirements are to be incorporated into the reviews of the Residency Review Committees and board examination questions on end-of-life care are to be established [30]. New programs in Palliative Medicine started this year for Internal Medicine residents at the Medical College of Wisconsin. The American Board of Internal Medicine has produced an educational resource on care of the dying [31], and new recommendations of the Federated Council for Internal Medicine stipulate requirements for classroom and hands-on clinical experiences [32].

In Canada, some universities have established third- year residency positions for family medicine residents and one-year fellowships in palliative medicine are available at the Universities of Alberta and Ottawa [33]. Fellowships in Palliative Medicine in the United States are available in the following cities and states: Chicago, IL, New York City, NY, Cleveland, Ohio, and Houston, Texas [34].

Continuing Medical Education opportunities in Palliative Medicine in the United States include The Cancer Pain Role Model Program in Wisconsin [5,35], and "The Network Project" at Memorial Sloan -Kettering Cancer Center in New York [36].

REFERENCES:

1. Mount BM, Scott J, Cohen SR. Canada: Status of Cancer Pain and Palliative Care. *JPSM* 1993; 9: 395-398.
2. Foley KM. The Treatment of Cancer Pain. *New Engl J Med* 1985; 313: 84-95.
3. Weissman DE, Dahl JL. Attitudes About Cancer Pain: A Survey of Wisconsin's First-Year Medical Students. *JPSM* 1990; 5: 345-349.
4. Weissman DE, Gutmann M, Dahl JL. Physician Cancer Pain Education: A Report for the Wisconsin Cancer Pain Initiative. *JPSM* 1991;6: 445-448.
5. Weissman DE, Dahl JL, Beasley JW. The Cancer Pain Role Model Program of the Wisconsin Cancer Pain Initiative. *JPSM* 1993; 8:29-35.
6. Von Roenn J, Cleeland CS, Gonin R, et al. Physician Attitudes and Practice in Cancer Pain Management. *Ann Intern Med* 1993; 119: 121-126.
7. Cleeland CS, Cleeland LM, Das R, et al. Factors Influencing Physician Management of Cancer Pain. *Cancer* 1986; 58: 796-800.
8. Max MB. Improving Outcomes of Analgesic Treatment: Is Education Enough? *Ann Intern Med* 1990; 113: 885-889.
9. Elliott TE, Elliott BS. Physician Acquisition of Cancer Pain Management Knowledge. *JPSM* 1991; 6: 224-229.

10. Elliott TE, Elliott BA. Physician Attitudes and Beliefs About Use of Morphine for Cancer Pain. *JPSM* 1992; 7: 141-148.
11. Janjan NA, Martin CG, Payne R, et al. Teaching Cancer Pain Management: Durability of Educational Effects of a Role Model Program. *Cancer* 1996; 77: 996- 1001.
12. Cherny NI, Catane R. Professional Negligence in the Management of Cancer Pain. *Cancer* 1995; 76: 2181-2185.
13. MacDonald N, Mount B, Boston W, Scott JF. The Canadian Palliative Care Undergraduate Curriculum. *J Cancer Education* 1993; 8: 197-201.
14. MacDonald N, Findlay HP, Bruera E, et al. A Canadian Survey of Issues in Cancer Pain Management. *JPSM* 1997; 14: 332-342.
15. Time for education in palliative care. *The Lancet* 1197; 349(9067): 1709 (editorial).
16. Rappaport W, Witzke D. Education about Death and Dying during the Clinical Years of Medical School. *Surgery* 1993; 113: 163-165.
17. Ogle KS, Mavis B, Rohrer J. Graduating Medical Students' Competencies and Educational Experiences in Palliative Care. *JPSM* 1997; 14: 280-285.
18. Wilson JF, Brockopp G, Kryst S, et al. Medical Students: Attitudes Toward Pain Before and After a Brief Course on Pain. *Pain* 1992; 50: 251-256.
19. Seely JF, Scott JK, Mount BM. The need for specialized training programs in palliative medicine. *Can Med Assoc J.* 1197;157(10): 1395-1397.
20. Oneschuk D, Bruera E. Access to palliative medicine training for Canadian family medicine residents. *Palliative Medicine* 1998; 12: 23-27.
21. Hill TP. Treating the dying patient- the challenge for medical education. *Arch Inter Med* 1995; 155: 1265-1269.
22. Sengstaken EA, King SA. Primary Care Physicians and Pain: Education During Residency. *Clin J Pain* 1994; 10: 303-308.
23. Oneschuk D, Fainsinger R, Hanson J, Bruera E. Assessment and Knowledge in Palliative Care in Second Year Family Medicine Residents. *JPSM* 1997; 14(5): 265-273.
24. Mortimer JE, Bartlett NL. Assessment of Knowledge About Cancer Pain Management by Physicians in Training. *JPSM* 1997; 14(1): 21-28.
25. Weissman DE, Ambuel B, Norton AJ, et al. A Survey of Competencies and Concerns in End-of-Life Care for Physician Trainees. *JPSM* 1998; 15(2): 82-90.
26. Tracey JM, Arroll B, Richmond DE, Barham PM. The validity of general practitioners' self assessment of knowledge: cross sectional study. *BMJ* 1997; 315: 1426-1428.
27. MacDonald N, Findlay HP, Bruera E, et al. A Canadian Survey of Issues in Cancer Pain Management. *JPSM* 1997; 14(6): 332-342.
28. Sloan PA, Donnelly MB, Vanderveer B, et al.. Cancer Pain Education Among Family Physicians. *JPSM* 1997; 14(2): 74-81.
29. Levin ML, Berry JI, Leiter J. Management of Pain in Terminally Ill Patients: Physician Reports of Knowledge, Attitudes, and Behavior. *JPSM* 1998; 15(1): 27-40.
30. Conference: Education of Physicians About Dying, Hackensack University Medical Center; April 19,1996; Hackensack, NJ. Sponsored by the Open Society Institute Project on Death in America.
31. The American Board of Internal Medicine End-of-Life Care Project Committee. *Caring for the Dying: Identification and Promotion of Physician Competency.* Philadelphia, Pa: American College of Physician: 1997.

32. Ende J, Kelley M, Ramsey P, Sox H, eds. Graduate Education in Internal Medicine: A Resource Guide: Report of the FICM Task Force on the Internal Medicine Curriculum. Philadelphia, Pa: American College of Physicians: 1197.
33. Scott JF, MacDonald N. Education in Palliative Medicine. In: Doyle D, Hanks G, MacDonald N eds. Oxford Textbook of Palliative Medicine. Oxford: Oxford University Press, 1993: 761-781.
34. Cancer Pain Release. Publication of the World Health Organization Collaborating Center for Policy and Communications in Cancer Care. Madison, Wisconsin, USA 1996; 9(3): 3-4.
35. Weissman DE, Griffie J, Gordon DB, Dahl JL. A Role Model Program to Promote Institutional Changes for Management of Acute and Cancer Pain. JPSM 1197; 14(5): 274-279.
36. Breitbart W, Rosenfeld B, Passik SD. The Network Project: A Multidisciplinary Cancer Education and Training Program in Pain Management, Rehabilitation, and Psychosocial Issues. JPSM 1998; 15(1): 18-26.