

Medical Students' Palliative Care Education in a Latin American University: A Three-Year Experience at Austral University in Buenos Aires, Argentina

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Abstract

Background: The School of Medicine of Austral University incorporated palliative care as an elective in undergraduate medicine curriculum during 2010.

Objective: We analyzed the experience and results after 3 years of teaching palliative care. We compared students who chose palliative care as an elective subject (PC Group) with students who did not (Non-PC Group). We focused on the experience of contact with palliative care patients and self-perceived attitudes. Additionally, the impact produced by palliative care education in knowledge, self-perceived attitudes, and comfort was evaluated.

Methods: All the students tested completed a questionnaire on their attitude when exposed to dying patients. Students in the PC Group completed an additional questionnaire to assess their level of knowledge and their self-perceived comfort when interacting with patients.

Results: We tested 146 students. All students in the PC Group and 95.2% in the Non-PC Group considered that specific death issues ought to be part of the curriculum. Some students indicated that they could be present in a mandatory course. Before taking their elective, students in the PC Group confirmed a lack of technical training to understand palliative care patients, as did those students in the Non-PC Group. After taking a palliative care elective students expressed an improvement in self-perceived attitudes toward suffering and there was a significant increase ($p < 0.0001$ – 0.0045) in knowledge. They also expressed an improvement in comfort levels in evaluation and treatment of pain. More than 95% of the students in the PC Group rated the experience as valuable and perceived the content as not available elsewhere in their training.

Discussion/Conclusion: Our results show that palliative care education provides opportunities to improve attitudes not specific to this discipline: interprofessional collaboration, holistic care, patient-centered care, self-awareness, and humanism. We conclude that an exposure to palliative care improved student's perception about the complexities of dying patients and their care.

Introduction

DEMOGRAPHIC CHANGES and morbidity in developed and developing societies predict an increase in the number of cancer deaths and patients with chronic and degenerative diseases, and in the number of geriatric patients as well. Consequently an increasing number of people may suffer, as patients or relatives, from a potentially life-threatening disease (PLTD) and may be exposed for a variable time (days, months, years) to suffering with progressive clinical deterioration.

In Argentina, the proper care of PLTD patients must improve as we refer to an essential health action that should be guaranteed in any circumstance or situation. Palliative care (PC) is assistance centered on a PLTD patient and his/her family. The aim is to improve their quality of life by anticipating, preventing, and treating suffering. The basis is the recognition of the physical, intellectual, emotional, social, and spiritual elements of suffering, with promotion of autonomy and access to information.¹

Palliative care (PC) still has low priority in Argentina. Paradoxically, health systems often pay for life-prolonging—

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and occasionally—futile and expensive interventions for PLTD patients.^{2,3} More people need palliative care and require the participation of skilled health personnel being able to deliver effective care with identification, evaluation, diagnosis, and treatment of symptoms with a holistic approach that includes comprehensive presence, compassion, active sharing, and humanity. Because of this it has been emphasized that teaching palliative care to health professionals is a key strategy that could lead to a better care of PLTD patients and families and more comfort of the health personnel during the assistance process.¹⁻⁹ In fact, it has been shown that structured didactic and experiential palliative care during the clinical clerkship year of medical student education produces significant and long-lasting effects in knowledge, skills, and attitudes.^{10,11}

In our country most health care professionals do not receive any method of training during their careers that could have enabled them to provide effective interventions to control suffering in PLTD patients. Teaching formats are often inconsistent in quality and structure.

Many health professionals, without specific skills and not exposed to role models in palliative care, express difficulties in dealing with PLTD patients and report feeling anxious and unprepared to be with them. As a rule during their last years, medical students consider their undergraduate education in pain management poor, and their knowledge about opioids scarce.¹²⁻¹⁵ Similarly to what has been reported¹⁶⁻¹⁸ they also considered their basic education to be incomplete and inadequate on these issues. However, there are a few initiatives to improve the undergraduate palliative care education in Argentina, usually not included in formal university programs. As a consequence they have a considerable variation in nature, scope and approaches of the teaching process.^{3,19}

Teaching palliative care at Austral University, Buenos Aires, Argentina

The fact that in Argentine schools of medicine there is a lack of mandatory palliative care education, deficiency of palliative care academic divisions and faculty, absence of obligatory clinical exposure to PLTD patients, and scarcity of learning opportunities in the clinical years, indicates the need for a study in which the inclusion of a novel palliative care program embedded within the curriculum may allow an opportunity to evaluate the effect of the new program in preparing the undergraduates for practice.

Thus, in 2010 Austral University incorporated palliative care as an elective subject in undergraduate medical curriculum. The goal was to provide every medical student with a basic package of knowledge, skills, and appropriate attitudes¹ for caring for PLTD patients and relating to their families and others involved in the patients' care. This would lead to a twofold objective: the provision of future health care professionals with a new caring philosophy and the promotion of palliative care in both the medical school activity and the currently existing curriculum.

In this study we analyzed the experience and results after 3 years of teaching palliative care. Specifically the aim was to compare students who chose palliative care as an elective subject with students who chose other electives as well. We focused on the experience of contact with PLTD patients and

self-perceived attitudes of students toward those patients' suffering and death. An additional goal was to evaluate the impact produced by palliative care education in knowledge, self-perceived attitudes, and comfort once the training was completed.

Methods

There was no formal academic palliative care service within the University Hospital, and the teaching was presented and performed with the assistance of palliative care specialists and nurses affiliated with the Argentine Programme in Palliative Medicine from FEMEBA Foundation.

To develop the new curriculum, specialists in palliative care teaching were consulted. Also, we analyzed palliative care teaching in the School of Medicine of the University of Navarra. Using this information, we structured a longitudinal curriculum of 27 hours for a palliative care elective subject inserted during the fifth year of the medical career targeted toward students who already had clinical experience. This palliative care curriculum aimed at three structure themes in its content: evidence-based symptom assessment and management, ethical principles and basic communication skills for appropriate interactions with patients and families, and with health care professionals. The total length of the planned activity was 27 hours developed in 7 weeks. The delivery of the content was done through classroom-based learning and small-group problem-based learning, and 2 obligatory clinical rotations hours at a palliative care unit. The mandatory hours allocated for classroom time and clinical rotations were 3 hours; online surveys and educational material were also available.

During 2010, 2011, and 2012, 146 fifth-year medicine students belonging to the School of Medicine at Austral University were tested. They comprised two groups: PC Group (81 students) corresponding to students who chose palliative care as an elective subject and the Non-PC Group (65 students) including students who chose either molecular medicine or public health as elective subjects.

Two surveys were conducted.

First survey

All the students ($n = 146$) completed a 24-item anonymous questionnaire designed to explore and obtain information about: their self-perceived attitude when exposed to PLTD patients, the kind of relationship they would prefer, their wishes and interest regarding their future involvement in palliative care, their judgment whether or not topics related to a dignified death should be taught, and in the case of positive answers, their preference to have these topics covered throughout their whole career or as an elective or mandatory subject. The questionnaire details and its use have already been published.^{12,14} We understand attitude as an expression of favor or disfavor toward a person, place, thing, or event (the attitude object). It can be formed from a person's past and present and is also measurable and changeable as well as influencing the person's emotion and behavior.²⁰

Categorical data were summarized using percentages, whereas for continuous data, the mean and the standard deviation were used. For central tendency and Likert scale the median and mode were calculated. Significance was assessed using the χ^2 test and p values < 0.05 were considered

significant. SPSS software package (version 17; SPSS Inc, Chicago, IL) was used for analysis.

In order to establish a relation between groups and the experience of contact with PLTD patients, contingency tables were used. The χ^2 value was 0.000 with $p=0.996$.

The questionnaire used was validated as previously described.¹³

Second survey

Students who took palliative care as an elective ($n=81$) completed an online questionnaire to assess their level of knowledge on symptoms, drugs, etc., with a multiple choice questionnaire and their self-perceived comfort when interacting with PLTD patients (Table 1). The survey had to be completed at the beginning of the course and once again at the end.

Descriptive data were summarized using mean, whereas comparative data was analyzed using the Wilcoxon signed rank test with $p < 0.05$.

Results

One hundred forty-six students were tested. They comprised 81 students (55.5%) in the PC Group and 65 students (44.5%) in the Non-PC Group. The ratio of students in PC and Non-PC Groups changed during the study period: 11:27, 37:21, and 33:17 in 2010, 2011, and 2012, respectively.

Comparison of students who took palliative care as an elective (PC Group) with students who chose other electives (Non-PC Group)

In both groups 93.8% of the students had direct contact with PLTD patients and 6.2% did not have any contact. Among those who had direct contact with PLTD patients, 96% of students in the PC Group had this interaction during their clerkship years and 3.9% only with relatives; 93.5% of the Non-PC Group had contact during their clerkship years and 6.6% only with relatives.

All students in the PC Group and 95.2% in the Non-PC Group considered that specific death issues ought to be part of

the curriculum. Many suggested that these topics should be considered in several current subjects. Some students indicated also that they could be included in a mandatory course or as an extracurricular subject.

Before taking their elective in palliative care, students in the PC Group confirmed a lack of technical training to understand and care for PLTD patients, as did those students in the Non-PC Group. In both groups students referred to have discussed the meaning of suffering and death. This took place, in most cases, in courses with humanistic orientation, i.e., bioethics, ethics, anthropology, theology, philosophy, and psychology. Ninety-five percent of students in the PC Group and 84% in the Non-PC Group expressed their interest in the topics of PLTD patient caregiving, death, and the process of dying.

No students withdrew from any of the electives chosen.

Self-perceived attitude

Students' self-perceived attitudes toward the suffering patients, illustrated in Table 2 by the values of the median and the mode, were positive. When students were asked about acceptance of death, 90.1% in the PC Group and 87.5% in the Non-PC Group thought, with values above 5, that a dying patient could accept death with serenity. Most students in the PC Group (97.5%) and 86.2% in the Non-PC Group suggested that the process caused by a PLTD patient and the time devoted to preparation to die may have a positive impact on a person's life. In fact, 98% and 88% of PC and Non-PC Groups, respectively, considered that these issues may help patients to value their life, health, family, friends, and change the priority of their values that rule their lives or tighten affective ties with their loved ones.

When students were asked if they would prefer in the future to have either a transient or extended relationship with the patients, 65.4% of the PC Group students opted for extended, whereas 25.92% preferred a transient one. Forty percent of the Non-PC Group students opted for transient and 50.76% for extended. No answer was given by 8.6% of PC Group students and 9.2% of the Non-PC Group students.

When they were asked about wishes and reasons for having an extended relationship with PLTD patients, 65.21% of the PC Group and 58.33% of the Non-PC Group expressed their wish to help with the patient's needs (i.e., to devote the time that the patients requested, to provide company, to listen, to understand, and prepare them for a dignified death). Those who opted for a transient relationship argued that they wanted to avoid overcommitment, emotional compromise, and not feeling capable of handling the situation.

For many students these encounters, after adequate training, would be professionally challenging and personally rewarding. PC and Non-PC Group students described in similar, short and expressive phrases the emotional impact of meeting and speaking with PLTD patients; they expressed feelings of sadness, vulnerability, and helplessness as well as sympathy for the patients (Table 3).

Impact of palliative care education on medical students

There was a significant increase in knowledge between the precourse and postcourse assessments as

TABLE 1. STRUCTURE OF THE SURVEY FOR KNOWLEDGE AND COMFORT EVALUATION

Knowledge
Multiple choice simple questions about:
Alternative routes of drug administration
Definition of palliative care
Definition of treatment unit
Objectives of pharmacologic pain treatment
Side effects of potent opioids
Strategy of diagnostic information
Comfort in different common situations in palliative care
Likert scale (0 = cannot imagine/don't know the situation, 1 = not comfortable, 2 = moderately uncomfortable, 3 = neutral, 4 = moderately comfortable, and 5 = very comfortable)
Attending a family of a patient who died
Conveying bad news (inform diagnosis, prognosis, etc.)
Explaining to the patient what is palliative care
Suggesting the withhold of futile treatments
Treating anorexia, constipation, delirium, pain, vomiting.
Using the World Health Organization analgesic ladder

TABLE 2. COMPARISON OF PALLIATIVE CARE GROUP AND NON-PALLIATIVE CARE GROUP STUDENTS' AGREEMENT WITH KEY STATEMENTS REGARDING PALLIATIVE CARE

Statements	PC Group (n=48)		None PC Group (n=48)		χ^2	p value
	Median ^a	Mode ^a	Median ^a	Mode ^a		
Treating end-of-life patients may be gratifying for a doctor.	9	10	8	10	17.468	0,065
I would feel at ease listening to end-of-life patients.	7	8	8	10	19.482	0.021
Doctors should be available to listen to his/her patients.	10	10	10	10	11.842	0.016
Patients should be told the truth when they ask whether or not they will die.	10	10	10	10	1.385	0.967
Doctors should discuss death in detail with end-of-life patients.	10	10	10	10	6.609	0.579
Doctors should discuss death in detail with the family of the dying patient.	10	10	10	10	12.073	0.060
The time devoted to be prepared to die may have a positive sense in a person's life.	9	10	8	10	11.956	0.153
I consider that a dying patient could accept death with serenity.	8	10	8	10	7.217	0.705
I am interested in end-of-life patients' care, death and the dying process.	9	10	8	10	12.269	0.267

^aLikert scale range: 0=strongly disagree to 10=strongly agree.

PC Group, students who chose palliative medicine as elective subject; Non-PC Group, students who did not choose palliative medicine as elective subject.

shown in the questionnaires completed. Also, students expressed an improvement in their comfort levels in evaluation and treatment of pain, psychosocial support to patients and their families and communication issues (Table 4).

More than 95% of the students who experienced palliative care during their fifth year rated the experience as valuable,

and most of them perceived the content as not available elsewhere in their training.

At the end of the course students in the PC Group expressed and emphasized that the experience they went through was intense and, that for most of them, it meant they had found a different way to connect with the patients and their families. Furthermore, some students mentioned that

TABLE 3. WISHES AND REASONS EXPRESSED BY THE STUDENTS REGARDING THEIR RELATIONSHIP WITH PLTD PATIENTS: MAIN STATEMENTS

Main statements expressed by students	Medical students (PC group: 69–Non-PC group: 48)		p value
	PCG n (%)	Non-PCG n (%)	
Wish to prepare to offer a better care for the benefit of PLTD patients, i.e., “to offer them a better care,” “to accompany the patient in those moments,” “get to know them,” “listen to them,” “to understand him/her,” “to offer moral and psychological support to the patient,” “prepare them to die”	45 (65.2)	28 (58.3)	NS
Wish to avoid affective involvement and a painful personal experience, i.e., “to avoid affective involvement,” “it is very hard for the nurse,” “it scares me,” “I feel so sad,” “I feel uneasy,” “the more you interact, the more affection you feel,” “it would affect me greatly,” “it should not affect my personal life,” “it creates anxiety,” “it is depressing,” “I feel there is nothing I can do,” “I am not up to it”	17 (24.6)	14 (29.16)	NS
Wish for personal enrichment and the opportunity for personal growth, i.e., “it is an enriching experience for the doctor,” “it is inspirational for the doctor,” “I want to learn from the patient”	5 (7.24)	6 (12.5)	NS

p value: asymptotic significance level, according to Pearson χ^2 .

PLTD, potentially life-threatening disease; PC Group, students who chose palliative medicine as elective subject. Non-PC Group, students who chose molecular medicine or public health as elective subject; NS, nonsignificant.

TABLE 4. SELF-PERCEIVED COMFORT LEVEL BEFORE AND AFTER TAKING PALLIATIVE CARE AS AN ELECTIVE SUBJECT

	2010			2011			2012		
	<i>Pre</i> (n=12) <i>Media</i>	<i>Post</i> (n=9) <i>Media</i>	<i>p value</i>	<i>Pre</i> (n=35) <i>Media</i>	<i>Post</i> (n=37) <i>Media</i>	<i>p value</i>	<i>Pre</i> (n=32) <i>Media</i>	<i>Post</i> (n=29) <i>Media</i>	<i>p value</i>
Giving bad news (informing about diagnosis, prognosis, etc.)	2.58	4.11	0.142	1.60	2.68	0,0001	1.75	2.96	0,0027
Explaining what is palliative care to the patient	4.25	6.11	0.064	2.94	4.62	0,0001	2.71	4.51	0,0001
Suggesting not doing or suspending specifics treatments when they are not effective in controlling the illness	3.58	5.22	0.128	2.49	3.24	0,01	2.03	3.72	0,0002
Controlling the followings symptoms: anorexia, constipation, delirium, pain and vomits	3.16	4.61	0,0001	3.26	4.57	0,0001	3.06	4.65	0,0001
Using the WHO analgesic ladder	2.08	6.22	0.035	2.20	4.70	0,0001	2.00	4.51	0,0001
Assisting the family of a dead patient	2.67	4.78	0.027	2.37	3.57	0,0001	2.31	3.68	0,0045

they had rediscovered the reason that they had chosen a medical career.

Discussion

PLTD patients are encountered in all medical specialties. Education of health care workers is considered one of the crucial aspects suggested by the World Health Organization, in addition to adequate policies, adequate drug availability, and implementation of palliative care care services for the integration and establishment of palliative care in a country.^{21,22} Additionally, leaders in the field in many developed countries emphasize the significance of incorporating its teaching in undergraduate curriculum.⁹ Medical schools must implement a curriculum reform to ensure that their students graduate with the required basic palliative care competencies, including humanistic attitudes. Moreover, the absence of palliative care content in the curriculum may undervalue its relevance for students.

The implementation of the new palliative care elective subject was limited to 27 hours so as not to increase further an overloaded medical curriculum. It is worth mentioning that the electives used for comparison, molecular medicine and public health had the same duration in time. The absence of a palliative care unit within the University Hospital was considered a weakness that was partially compensated for with rotations in two palliative care units with good teaching experience outside of the university.

This study has the limitation that it does not provide information on the quality of the instruction provided. It does, however, offer information that may be useful to educators in medical schools and clinical settings to provide a framework in order to include palliative care in undergraduate medical education. At this stage we did not measure the impact of the palliative care curriculum in terms of clinical practice audits

or students skills acquisition. However, we expect to pursue this analysis in the near future.

With the conviction and certainty that incorporating palliative care education in the medical curriculum will promote the better care of PLTD patients, as previously suggested,¹⁰ we considered a short study of palliative care essentials much better than its complete absence. Also, this undergraduate educational program can result in changes in self-assessment of knowledge and comfort. We expect that upon graduation, students at the School of Medicine at Austral University will be competent and confident to contribute effectively to discussions on the interdisciplinary management of PLTD patients. Interestingly, a previous report has shown that a 4-day, 32-hour curriculum in end-of-life care, similar in length to the one designed for the present article, leads to significant improvements in knowledge, skills, and attitudes that are sustained.¹¹

Medical students often discuss the meaning of suffering and death in courses with humanistic orientation but this is not enough. A definite curriculum must be taught both in preclerkship and clerkship parts of the medical school curriculum. Medical students are exposed to role models in all specialties in which palliative care is practiced: the clinical exposure to real patients, guided by experienced palliative care mentors, has unmatched positive impact. Our results show that palliative care education provides opportunities to address self-perceived attitudes not specific to this discipline: inter-professional collaboration, holistic care, patient-centered care, self-awareness, and humanism. These attitudes are not innate, nor can one assume that they can be achieved naturally. They need to be taught and learned in well-defined programs.

Another aspect that should be taken into account for the analysis of our results, and that will be the goal of a future article, is the influence of unintended messages conveyed from hospital culture when medical students learn about end-

of-life care. In fact, it has been stated that the hidden curriculum, the implicit learning relayed through faculty and residents' behaviors and institutional constructs, is absorbed as students undergo socialization into physicianship. These unintended lessons often conflict with the formal teaching of palliative care that affirms the values of humanism, communication, compassion, and self-reflection.²³ It is possible that the limited interest in palliative care also reflects a lack of information to understand PLTD patients and their care. The progressive increase of students who selected palliative care as an optional subject could sustain this last explanation. If this is true it could become the rationale for a strategy to integrate palliative care longitudinally along the medical curriculum: this would support the position that palliative care is relevant to many areas of health care and would make observable the advantages of this caring model.

Our results lead us to conclude that an exposure to palliative care, even though brief and insufficient to produce great and enduring changes, improved the student's perception about the complexities of PLTD patients and their adequate care.

Author Disclosure Statement

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