

DEVELOPING AN INSTITUTION-SPECIFIC CURRICULUM FOR PALLIATIVE CARE

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Palliative care encompasses the care of patients who are actively dying, those with a diagnosis that carries a poor prognosis, and those with serious and potentially life-threatening illness where pain or suffering needs to be relieved. It also can include the relief of pain and symptoms for patients with potentially curable illness. The goal of palliative care is to manage pain and other symptoms, as opposed to care that seeks to eradicate disease.

The following article is the first in a special series devoted to palliative care education and training. The goal of this series is to provide valuable information to medical educators who are beginning to develop palliative care programs and to inform all readers about recent developments in this new and emerging field of medicine. The first article in the series focuses on the process of developing a palliative care curriculum. Future articles will address other issues relevant to palliative care education and training, including the teaching of essential skills and knowledge needed by those who care for dying patients.

Although 80% of deaths in the United States occur in hospitals or nursing homes, the issue of death and dying has received limited or no emphasis in the training of physicians. Palliative care is absent from most residency training programs and medical school curricula [1,2]. Studies also show that residents are not rewarded for exhibiting concern over psychosocial issues related to the care of dying patients [3]. It should be no surprise that many young physicians lack confidence in their ability to provide palliative care [4].

In response to societal interest and patient need, the medical community has begun to address the obligation to train physicians in the principles and practice of palliative care. In 1993, the American Board of Internal Medicine began a project dedicated to improving palliative care [5], which helped to define care of the dying as an important resident competency. In 1998, the Accreditation Council for Graduate Medical

Education made palliative care education a requirement for internal medicine residency training [6]. Several national organizations have developed palliative care curricula that include content and instructional strategies for residency training and faculty development. One such organization is the End of Life Physician Education Resource Center [(EPERC), available at www.eperc.mcw.edu].

Although standardized curricula offer a general framework to educators, they do not provide the tools and methods needed to implement a new curriculum [7] tailored to the specific clinical and educational needs and resources of each institution. A palliative care curriculum has the greatest potential to impact the hospital environment with regard to the care of the dying patient if it is developed with the specific needs of the institution, patient, and learner in mind.

Convincing hospital and medical school administrators to initiate any new educational program while a host of other constituencies are clamoring for curricular time is difficult [1]. Death remains an unpopular topic in the current culture of American medicine, increasing the challenge to make palliative care issues a curricular priority. Denial of death [8–10], antiquated views of palliative care [3,10–12], and a view of “death as the enemy” [9,13,14] all add to this challenge. Many feel that the goal of medicine should be to cure illness and save lives, that death equals failure, and that teaching about death takes away hope [9,13,14]. Because palliative care is not discussed adequately in the care of patients [3,10,12,13] and is rarely taught in U.S. medical schools [1–4] or residency training programs [1,2], it is a topic about which many faculty have little knowledge, experience, or interest [1]. Thus, negative views of death and dying, combined with the economic pressures that are stifling all of medical education, magnify the potential roadblocks confronting any new educational program.

This paper describes a curriculum development process that is *institution-specific*, meaning the central focus is on developing a curriculum based on core palliative care principles, with particular attention paid to the needs and resources of a specific institution. General principles of curriculum development are described in

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terms of a 4-phase model [7,15]. To provide a concrete example of how this model is applied to a palliative care curriculum, the experience at Saint Vincents Hospital and Medical Center of New York is described.

A Four-Phase Model of Curriculum Development

The development of a new curriculum consists of 4 phases (Table 1): 1) needs assessment, 2) curriculum design, 3) implementation, and 4) program evaluation [7,15–18]. These phases are to some extent iterative [Ury et al, unpublished data]; what is learned from earlier phases determines the methods and content of later phases [7,15,17–19]. A needs assessment identifies institutional need for a curriculum, critical resources, and potential obstacles [15,17,18]. In the curriculum design phase, the findings of the needs assessment are used to develop a curriculum outline, the individual teaching units, and preliminary implementation and evaluation plans [7]. The needs assessment findings and the curriculum design then determine how the program is implemented, evaluated, and revised.

Within each phase, content and process issues must be defined [7,17,18]. *Content issues* involve educational goals and objectives (eg, what skills students will learn and how they will be taught) as well resources (eg, people, money, time) that are needed to fulfill them [17,18]. *Process issues* are the methods by which the content issues will be addressed (eg, surveys, focus groups, meetings with relevant department chairs). A simple way to determine whether content and process issues are concordant and realistic is to ask the following questions:

- 1) What is the rationale for any part of the development process and any components of the curriculum?
- 2) What resources are available and what resources are still needed for the developmental process and the entire curriculum to be successful?
- 3) What are current and potential obstacles or roadblocks and are they being adequately addressed?

These questions can be simply remembered as the “3 Rs” of curriculum development: rationale, resources, and roadblocks. Answering each of these questions relies upon an honest appraisal of what would lead to a successful curriculum within an individual institution.

The Role of Institutional Context

The nature of the curriculum development process at each institution is a function of that institution’s culture, needs, and resources [7]. To illustrate this point, the experience at Saint Vincents Hospital and Medical Center of New York is used as an example.

Saint Vincents is an 800-bed tertiary care facility located in Greenwich Village. A review of patient deaths between 1995 and 1996 revealed that 90% of deaths occurred on the medical service. In January 1996, a significant number of patients cared for on the inpatient medical service were in need of palliative care services (8% had AIDS and 21% had cancer).

The hospital is an academic medical center with a large internal medicine residency program (n = 100). Therefore, the training of internal medicine residents is considered essential to the improvement of palliative care services. However, at the time when the needs assessment was performed (July 1995 through March 1996), no palliative care educational program was outlined in the residency curriculum. There were no required or elective clinical palliative care rotations for residents, and (it was hypothesized that) clinical exposure to good palliative care practices was quite variable. The only clinical palliative care services available were provided by the Supportive Care Program, a grant-funded program staffed by nurses and social workers that has offered home care to patients with serious and end-stage illness (mainly cancer and AIDS) since 1978.

The curriculum development process at Saint Vincents was labor- and time-intensive and evolved over a 2-year period. The effort was led and coordinated by the author, with advice and input from a variety of other interested faculty. The needs assessment alone involved approximately 230 hours of work by the author and a part-time research assistant. Because support for the needs assessment was limited (approximately \$5000 in salary support for the research assistant came from the hospital and outside funding sources; the author had no dedicated time or funding for this work), the scope of the needs assessment process (eg, number of interviews) was more limited than what would have been considered as ideal. The needs assessment findings were then used to gain grant support that provided dedicated time for the curriculum director (also the author) and one part-time administrative/research coordinator.

Phase I: Needs Assessment

A needs assessment provides a foundation for subsequent phases of the curriculum development process by gathering and analyzing data about: 1) the clinical and educational needs of learners, 2) the clinical needs of patients and families, 3) available and needed educational and clinical resources, and 4) current and potential barriers [16–18]. Two distinct steps are involved: a literature review and an assessment of institution-specific needs [7,17,18,20]. In the literature review, experts’

Table 1. Four-Phase Model for Developing an Institution-Specific Palliative Care Curriculum

Content Issues	Process Issues	
PHASE 1: NEEDS ASSESSMENT		
Assess institutional needs	Identify roadblocks	Do literature review
Patient/family needs	Denial of death	Conduct patient and family interviews
Learner needs	Lack of resources	Conduct focus groups with faculty, nurses, learners, and patients/families
Assess available and needed resources	Administrative obstacles	Survey clinicians and other staff
Educational	Bureaucracy	Interview clinicians, administrators, and educators
Clinical		
Financial		
PHASE 2: CURRICULUM DESIGN		
Develop curriculum outline		Developing resources
Define goals of curriculum		Review data from needs assessment
Define core content areas		Do further literature review as needed
Outline individual units and overall schedule		Consult with educational experts
Determine time needed for individual units/total amount of time available		Review core curricula from national/international organizations
Plan individual units		Developing institutional support
Goals/objectives		Identify institutional champion
Essential content (facts, principles, skills)		Convene palliative care curriculum/steering committee
Instructional strategies		Hold follow-up meetings to review needs assessment and curriculum outline
Evaluation		Conduct internal review to assess potential logistical problems
Secure necessary resources		Undergo external review by curriculum design and content experts
Faculty with expertise		
Funding		
PHASE 3: IMPLEMENTAION		
Draft implementation plan		Meet with residency director, dean, administrators, and departmental chairs
Phase in curriculum		Utilize institutional champion
Pilot unit		Recruit administrative/secretarial support
Gradual implementation of other units		
PHASE 4: EVALUATION		
Formative evaluations		Conduct internal and external review of curriculum
Summative evaluations		Conduct individual interviews with learners and faculty
		Assess knowledge, skills, and attitudes of learners (pretest and post-test)
		Conduct focus groups
		Survey learners
		Employ patient feedback forms
		Employ instructor feedback forms

views regarding core competencies, critical resources, and potential barriers are gathered [7]. In the assessment of institution-specific needs, patient- and learner-centered data are collected [7]. Patient-centered data are gathered from chart reviews, interviews, or focus groups with patients or families. Learner-centered data are collected through surveys, knowledge assessments, individual interviews, or focus groups.

The information obtained in a needs assessment can be organized into: 1) what is lacking, 2) what is available, and 3) what is needed to improve the clinical services or educational climate [7,17,18]. A careful review of the answers to these questions is the key to developing a clinically relevant curriculum [21–23]. Most importantly, the needs assessment must address what the learners already know, what they need to know, what they perceive they need to know, and how a mismatch can be successfully remedied [7]. For example, in assessing pain management skills, a combination of subjective data (from surveys or focus groups) and objective data (from chart reviews, pain scale scores, or standardized patients) provides a framework for understanding how pain is actually managed and the pain management educational needs of house staff [7,12,24,25].

Institutional, patient-centered, and learner-centered data can help to provide a rationale for a new educational program to the residency program director and the hospital administration [7,17,18]. Interviews with relevant hospital administrators, departmental chairs, and other important hospital personnel are opportunities to inform these individuals about plans for a new curriculum and to gain insight into how to obtain resources, what obstacles lie ahead, and how to overcome them [7].

Needs Assessment at Saint Vincents

Literature review. A systematic literature review was conducted first and consisted of MEDLINE searches, Web searches, and a review of resources recommended by palliative care experts in the field and of documents published by national [5,26–28] and international [26–28] health and advocacy organizations. The literature review was central to evaluating research into the need for improved palliative care education and clinical services. Past curriculum development efforts and potential instructional strategies, core content material, and outcome data were also identified during the literature review. These findings led to the identification of 7 essential palliative care topics.

Assessment of institutional needs. The goals of the institutional needs assessment were to: 1) assess the clinical and educational needs of the learners (interns

and residents), 2) review the current state of palliative care education and clinical services, and 3) review the institutional context with an emphasis on institutional resources and potential administrative obstacles. This assessment involved several components.

A survey that was anonymous and consisted of 71 items was given to incoming interns ($n = 48$, response rate = 94%) during the July 1996 intern orientation program [7]. Separate focus groups were developed for interns, residents, and chief residents (3 were performed, each with 4 to 10 participants) and for nurses (4 were performed, each with 4 to 7 participants) in order to gather experiences and recommendations from these different groups. A standard focus group format (intended to be 30 to 40 minutes in length) and question guide for the group leader were developed to help direct and motivate the groups [7]. Interviews with nurses ($n = 5$), house staff ($n = 17$), attending physicians ($n = 11$), leaders of the department of medicine ($n = 5$), and patients and their families ($n = 10$) were conducted over a 3-month period. These were designed to be 15 to 30 minutes in length and followed an interview guide to gather necessary information and to avoid being a time burden for those who participated. Finally, various nurses, interns, and residents were asked to rank the importance of the 7 identified palliative care topics.

Findings. The survey revealed that the interns had very little clinical exposure or formal classroom teaching about important palliative care topics during medical school (**Table 2**). Interns also reported low levels of comfort and skill in caring for dying patients (**Table 3**, **Table 4**) [6,7]. The focus groups with interns and residents confirmed these findings and revealed that the house staff were clearly enthusiastic about the topics generated by the literature review [7].

The focus groups also revealed that the residency program had no formalized system for teaching or evaluating knowledge and skills in palliative care [7]. Educational exposure in the clinical setting was inconsistent and dependent on the attending physician on a unit. Palliative care topics were rarely discussed in morning report or attending rounds. “Giving bad news” and advanced care planning, which were taught as part of a psychosocial ambulatory medicine curriculum, were the only relevant topics included in the formal medical residency curriculum.

Clinical exposure to appropriate palliative care was quite rare and dependent on faculty members with whom residents worked [7]. Yet residents, interns, and nurses all felt that a large number of patients would benefit from improved clinical palliative care. The

Table 2. Interns' Self-Reported Educational Experiences (n = 48; response rate = 94%)

Formal Teaching		Percent Response				
Topic	Preclinical	Clinical	Both	None	No response	
Giving bad news	16.7	16.7	12.5	54.2	—	
Pain management	4.2	35.4	20.8	39.6	—	
Advance directives	8.3	27.2	60.4	4.2	—	
Discussion of prognosis	25.0	12.5	25.0	35.4	—	

Clinical Experience		Number of Occurrences				
Experience	0	1–3	4–6	7–10	> 10	
Observed a case where artificial nutrition/hydration posed an ethical dilemma	39.6	47.9	4.2	6.3	2.1	
Observed withdrawal of ventilator support	52.1	35.4	6.3	4.2	2.1	
Utilization of morphine drip	35.4	43.8	12.5	6.3	2.1	
Observed advance directive discussion	18.8	31.3	20.8	2.1	27.1	
Observed giving bad news	2.1	37.5	22.9	16.7	20.8	
Helped take care of dying patient	2.1	43.8	20.8	14.6	18.8	
Observed discussion of prognosis	4.2	29.2	14.6	12.5	39.6	
Managed chronic non-cancer pain	20.8	54.2	12.5	8.3	4.2	

Adapted with permission from Ury WA, Reznich CB, Weber CM. A needs assessment for a palliative care curriculum. *J Pain Symptom Manage* 2000;20:411.

house staff felt inpatient rotations in geriatrics, AIDS, intensive care, and oncology provided significant exposure to patients with palliative care needs and, therefore, were excellent sites for teaching. They also identified certain physicians and nurses they felt would be good role models.

Interviews with the residency program director, associate chief of general internal medicine, and other selected faculty confirmed that no formalized system existed for teaching or evaluating palliative care knowledge and skills. Those who were interviewed also felt that teaching in the clinical setting and direct patient care experiences were inconsistent and infrequent and needed to be improved. The interviews also revealed several obstacles to developing and implementing a palliative care curriculum, including:

- 1) Limited and decreasing funds for graduate medical education
- 2) Decreased patient care revenues
- 3) Intern and resident time pressures, clinical responsibilities, and stress
- 4) The potential for a “turf battle” to make room in the already full curriculum

- 5) The “red tape” of education and administrative committees
- 6) Greater economic and time pressures on faculty
- 7) Resistance to change and the issue of death
- 8) The image of palliative care as a social service that lacks a scientific basis

In individual interviews, attending physicians, nurses, and patients/families all felt residents needed to learn more about the topics generated by the literature review [7]. The interviews also resulted in the recommendation for 3 additional topics: team communication and multidisciplinary care approaches, communication skills, and care of the family (including spiritual care and social service resources) [7]. Individual interviews with house staff confirmed these recommendations, and as a result a unit was devoted to each of these 3 topics [7]. Thus, the data acquired from non-physician sources proved critical in identifying and incorporating topics into the initial curriculum.

The focus groups with nurses and families also provided evidence of inadequate or poor quality services received by dying patients and their families. Some aspects of deficient care were specific to the dying (eg, poor

Table 3. Interns' Self-Reported Comfort Level in Palliative Care Topics (n = 48; response rate = 94%)

Topic	Percent Response				
	Very Low	Low	Fair	Good	Excellent
Caring for a patient with a history of substance abuse	6.3	37.5	31.3	22.9	2.1
Advance directives	6.3	29.2	43.8	14.6	6.3
Giving bad news	2.1	29.2	50.0	18.8	0
Managing pain	8.3	37.5	37.5	16.7	0
Using narcotics to manage acute pain	14.6	29.2	25.0	18.8	12.5
Using narcotics in a patient with a history of substance abuse	22.9	47.9	18.8	10.4	0

Adapted with permission from Ury WA, Reznich CB, Weber CM. A needs assessment for a palliative care curriculum. *J Pain Symptom Manage* 2000;20:412.

Table 4. Interns' Self-Reported Skill Level in Palliative Care Topics (n = 48; response rate = 94%)

Topic	Percent Response				
	Very Low	Low	Fair	Good	Excellent
Caring for a dying patient	12.5	35.4	31.3	18.8	2.1
Managing acute pain	18.8	56.3	16.7	8.3	0
Managing nausea in a cancer patient	37.5	41.7	18.8	2.1	0

Adapted with permission from Ury WA, Reznich CB, Weber CM. A needs assessment for a palliative care curriculum. *J Pain Symptom Manage* 2000;20:412.

knowledge of hospice and home care services by house staff, poor skills in reporting the death of a loved one to a family member, inadequate pain relief for terminally ill patients in severe pain), while others were not (eg, poor skills in giving bad news, poor general communication skills) [29]. The nurse focus groups emphasized the lack of appropriate role modeling by those nurses and physicians who are able to model the best practices [29], as have other investigators [25].

Phase II: Curriculum Design

The design phase involves the development of a curriculum outline and individual teaching units [17,18,26]. The outline defines educational goals and objectives and how they will be met. Each unit includes specific teaching objectives, relevant content, instructional strategies, and teaching materials (eg, case-based lesson plans, opioid conversion charts, reading syllabi). During the curriculum design phase it is also important to address who will teach and when and where the teaching will occur.

A curriculum can be designed through formal administrative processes or informal routes involving individual course directors or divisional colleagues. The

route chosen is primarily determined by the institutional protocol for developing new educational programs, and by the type and complexity of the curriculum [7]. Regardless of the route taken, involving others in the curriculum design phase helps in developing the actual curriculum outline and units and in overcoming bureaucratic and logistical obstacles [7]. Finally, it is important to have the necessary resources (eg, a foundation grant) and administrative support in place.

Curriculum Design at Saint Vincents

Based on the needs assessment findings, a curriculum plan was developed jointly by the curriculum director and the residency program director. It outlined 10 units and their corresponding instructional strategies. The plan took into consideration the current residency curriculum structure, clinical teaching opportunities, residents' schedules, potential logistical problems, and the 8 obstacles culled from faculty interviews. All teaching was to occur in inpatient sites where appropriate patients were present and in the ambulatory medicine rotation. This rotation provided an excellent block of "protected" teaching time when residents were not on-call and thus were rested and attentive [7].

The curriculum plan was then presented to the medical education committee of the department of medicine and to a hospital-wide palliative care steering committee that was formed just prior to the time of the needs assessment. (Obtaining approval to make palliative care a part of the standard curriculum was seen as central to its long-term sustainability.) Both committees agreed with the plan.

A group of 17 faculty identified during the needs assessment phase were invited to be involved in developing and teaching the curriculum, of which 14 agreed. The faculty attended 3 workshops to guide them through the curriculum development process. During the first workshop, a simplified curriculum design model was used as a template upon which the faculty superimposed a set of goals, objectives, and content for each unit. At the second workshop, selected instructional strategies were presented along with examples of the type of curricular objectives and content for which each would be effective. These strategies were then applied to the material developed at the first workshop. During the third workshop, the faculty learned about how to effectively use the instructional strategies in the classroom, methods of providing feedback, and appropriate means of learner evaluation.

The faculty for each unit worked in teams of 2. Each team had a senior faculty mentor who had experience in curriculum development or evaluation and access to an educational consultant at the medical school. Once developed, the units underwent internal review, revision, and external review. During the workshops, faculty also received instruction about how to lead a discussion, provide feedback, and effectively use case-based and problem-based learning techniques.

The faculty were surveyed before and after the workshop process. Among educational resources they felt they needed were opioid equivalent conversion cards for teaching about opioid (pharmacology, health care proxy). Logistical problems were also identified by faculty (eg, the intensive care unit was a site fraught with scheduling and patient care obstacles, the first few days of any month on a new inpatient unit were too hectic for teaching). The use of faculty feedback forms during the curriculum evaluation phase has ensured that resource and logistical needs were met.

The resulting curriculum (Table 5) consists of 10 units and follows a small group, case-based and problem-based format. Focus groups and interviews with residents and attending physicians provided important information about how much time and what site were most appropriate for teaching individual units. Because pain management was ranked as the most im-

Table 5. Palliative Care Curriculum at Saint Vincents

Unit/Skill	Site
What is palliative care?	Inpatient (Onc)
Giving bad news effectively	Outpatient
Management of pain	Outpatient Inpatient (Onc)
Communication with and care of the family (including spiritual care and social service issues)	Outpatient
Nutritional issues/artificial nutrition and hydration	Inpatient (Geri)
Withdrawal of care/ethical issues at the end of life	Inpatient (Onc)
Advanced directives and do-not-resuscitate orders	Outpatient
Communication skills (other than giving bad news)	Outpatient
Symptom management (other than pain)/psychological care	Inpatient (AIDS)
Participation as part of a team (how to work as part of a team in decision making and providing care)	Inpatient (Onc)

Geri = geriatrics unit; Onc = oncology unit. (Adapted with permission from Ury WA, Reznich CB, Weber CM. A needs assessment for a palliative care curriculum. *J Pain Symptom Manage* 2000;20:413.)

portant topic by interns, residents, and nurses, this unit received the greatest amount of teaching time (ie, 50% more time than any other topic) and was assigned to both outpatient and inpatient teaching sites. Because the house staff felt that the outpatient care setting provided an excellent teaching venue, 5 of the units were incorporated into the ambulatory clinical rotation. Three inpatient units (geriatrics, AIDS, and oncology) were identified as having significant numbers of patients in need of palliative care services, excellent nursing and ancillary staff members (for support in providing palliative care), and attending physicians who were seen as role models. The house staff and chief residents felt the workload and schedule of rounds on these units were conducive to teaching. Therefore, the inpatient teaching modules were developed to be taught on these 3 inpatient medical units, using a case-based approach that matched the needs of the patient population.

Phase III: Implementation

During the implementation phase, final preparations are made so the curriculum can be effectively taught and integrated within the hospital culture.

Timing is probably the most important issue in implementing a curriculum [7,15]. Because a number of logistical problems cannot be anticipated—even with a detailed needs assessment—gradual implementation is probably best. By pilot testing 1 unit, current and potential problems that could occur in any of the other units can be identified and corrected before they can have an adverse effect [7,15]. These include logistical problems (ie, time of teaching, location), bureaucratic obstacles, content that is irrelevant to clinical care or inappropriate for the level of trainee, and ineffective or unpopular instructional strategies [14,26,30]. Initial impressions of the house staff and faculty are critical to the success or failure of the curriculum, and negative ones can be quite difficult to overcome [7,14].

Although the first 2 phases are critical for developing support for the curriculum, identifying resources, and identifying logistical problems and potential obstacles, the implementation phase is where the actual effectiveness of the prior 2 phases is tested. A review of the needs assessment findings is helpful in reassessing the institutional context. The “institutional champion,” a respected senior faculty member who understands how to negotiate the internal politics of a medical center, is an important resource during this and other phases of the curriculum development process. The institutional champion can help deal with resistant administrators or faculty members, offering advice about how to handle administrative and logistical problems.

A final and important component of implementation is an early qualitative assessment of the pilot unit. Focus groups and individual interviews with faculty, nurses, administrators, and, most importantly, the learners can identify problems and their potential solutions, which can then be later applied to the other units. Anonymous feedback forms allow learners and faculty to comment when they otherwise might feel uncomfortable speaking up in conversation.

Implementation at Saint Vincents

The unit on “giving bad news” (Table 6) was chosen to be the pilot unit because it was ranked highly in importance by nurses, interns, and residents and could be easily integrated into the existing ambulatory care curriculum. The unit was 3 hours in length and included group discussion, syllabus readings with guide questions, simulated patients (used before and after the unit), and role playing. Evaluation of the unit involved 2 focus groups of interns who were taught the unit, interviews with the unit’s teachers for debriefing, and student feedback forms.

The general response was overwhelmingly positive.

Through the teaching and evaluation of the unit came important insight into timing issues, effective and ineffective instructional strategies, and the interns’ views about how to improve the unit. Timing was found to be the most critical issue; interns felt a need to break the unit into 2 shorter sessions from the 1 longer unit that was first implemented. Reported reasons included the intensity of the emotional issues involved, attention span, and wanting time to process the material while learning it. As a result, all subsequent units were 60 to 90 minutes in length, and eventually clinical correlation sessions were implemented, which occurred 1 week after most units.

The findings from the pilot unit were essential to finalizing an agreement to implement the entire curriculum. The findings of the evaluation were reviewed with the residency director and chief of general internal medicine (where ambulatory medicine is taught). This process of review brought other potential logistical problems and potential solutions to light. Involving these individuals in the implementation and evaluation processes allowed them to develop a sense of ownership and commitment. This sense of connection was very important in addressing problems that arose later.

Phase IV: Evaluation

In its most basic form, curriculum evaluation assesses: 1) changes in the learner (ie, knowledge, attitudes, self-perceived ability, practices) that occur as a result of teaching, 2) problems with curriculum content (eg, instructional strategies the learners find unhelpful, ineffective teachers, important content the learners feel is missing), and 3) problems with logistical issues (eg, scheduling, distribution of teaching materials) [31–33]. The goals and components of an evaluation are determined by the curriculum’s overall goals, the rationale for the curriculum as seen by the house staff and faculty, the amount and type of resources available for evaluation, and the institutional culture [30,31,34]. Most central to all of these issues is how the results of the evaluation will be used [30,35]. The evaluation of a curriculum where the goals are clinical exposure to palliative care and improving house staff attitudes about caring for dying patients will be quite different from the evaluation of a curriculum that has research, for example, as a core goal [7].

No matter what other goals exist, the evaluation must assess whether the learners are gaining knowledge and skill and are happy with the teaching. This data should be carefully collected using means that are realistic given the limited time available to house staff and faculty. Simplicity, brevity, and usefulness are the

Table 6. Sample Unit: "Giving Bad News"

Objectives	Content	Instructional Strategies	Learner Evaluation Methods
<p>Given a patient scenario, the learner will be able to discuss:</p> <ul style="list-style-type: none"> • Whether or not this is a clinical situation involving giving bad news and why • What clinical information needs to be communicated to the patient in physician's and layperson's language 	<p>Definition of bad news Differences between giving bad news and other forms of physician-patient communication Differences between layperson's and physician's language</p>	<p>Didactic teaching Core content syllabus Case-/problem-based learning</p>	<p>Written pretest and post-test Performance checklists</p>
<p>Given a patient scenario, the learner will be able to discuss:</p> <ul style="list-style-type: none"> • Appropriate location and setting for giving bad news (privacy issue) • Appropriate people to involve (patient, family, friends, translator) • Appropriate timing of meeting and amount of time needed to ensure a good discussion 	<p>Differences between giving bad news and other forms of physician-patient communication Patient confidentiality and privacy Empathy and "the golden rule" Pragmatic aspects of giving bad news (schedule discussion based on patient/family needs, have tissues handy)</p>	<p>Didactic teaching Paradigm for giving bad news Core content syllabus Discussion of personal experiences Case-/problem-based learning</p>	<p>Performance checklists Oral examination with simulated patients</p>
<p>Given a patient scenario, the learner will be able to provide in written or oral form a follow-up plan that:</p> <ul style="list-style-type: none"> • Is clear and concise and uses layperson's language • Provides a follow-up office appointment with the primary care physician and any appropriate specialists • Assesses social and psychological support and provides appropriate support • Provides reassurance and ensures physician availability • Provides follow-up in a reasonable amount of time 	<p>Content and phrasing of a bad news statement Importance of family and other social support in coping with a serious medical diagnosis How support can be provided by the physician Reassurance and nonabandonment</p>	<p>Didactic teaching Paradigm for giving bad news Case-based learning Role play Simulated patients Feedback</p>	<p>Performance checklists Feedback from other learners in role plays</p>
<p>The learner will demonstrate the ability to give bad news by:</p> <ul style="list-style-type: none"> • Conducting an accurate patient interview that communicates the important medical and personal information in a concise statement that uses layperson's language and that acknowledges the news is "bad" • Providing human contact • Providing reassurance • Asking the patient for her reactions/questions and responding appropriately • Providing a reasonable follow-up plan for medical issues and social and psychological support 	<p>Definition of bad news Content and phrasing of a bad news statement Importance of human contact Importance of eliciting patient reactions Stages of accepting illness</p>	<p>Paradigm for giving bad news Core content syllabus Discussion of personal experiences Role play Simulated patients</p>	<p>Performance checklists Oral examination with simulated patients</p>

guiding principles of curriculum evaluation. Therefore, unless research is a goal of the curriculum, qualitative methods (eg, interviews, focus groups, feedback forms) are probably best. These methods provide direct information about the learners' impressions of the teaching, which is an important determinant of whether they will learn from it or not, and they help to identify logistical problems [36,37]. Qualitative methods also involve the learners and teachers in the evaluation process and show them that their views are meaningful [36,37].

The collective data need to be carefully analyzed and then presented to the teachers of each unit, other important faculty, hospital administrators, and most importantly, the house staff. Presenting the findings in a clear and concise way to administrators and departmental chairs will allow them to see how resources are used and where continued teaching is needed.

Program evaluation is generally divided into 2 types: formative and summative [35]. A formative evaluation assesses the learners or the curriculum while the curriculum is still in evolution or being taught [35]. Examples include a midterm evaluation, student feedback forms that will impact on future teaching of a particular unit, and focus groups that try to assess logistical problems so they can be remedied. Summative evaluation provides a final assessment of the curriculum, students, or both. Summative evaluation methods include teacher evaluation forms that are given to students at the end of a course [38], objective tests of knowledge or skill [33,39], and chart reviews that assess whether practice patterns changed after the residents completed the curriculum [40].

Evaluation Phase at Saint Vincents

Qualitative methods (ie, individual interviews, focus groups, feedback forms) were used to study how the learners and teachers viewed the curriculum and its components. Quantitative methods (ie, surveys, tests, chart reviews) were used to provide objective and quantifiable data [9,36,37]. The surveys provided a baseline assessment of the learners' self-perceived knowledge and skills and their attitudes about palliative care issues. The pre- and post-tests and simulated patient assessments were used to assess objective changes in knowledge and skill, respectively.

Focus groups, feedback forms, and individual interviews revealed that the inpatient pain management unit, taught during attending rounds, was seen by staff and trainees as interfering with patient care. In addition, trainees saw attending rounds as a suboptimal time for teaching, because of the large number of clin-

ical obligations during the morning hours. They also suggested a solution (ie, that teaching be shifted to the afternoon). This suggestion was implemented. No significant logistical problems with the outpatient-based units were noted. The house staff felt that the overall quality of teaching was excellent. Feedback that included selected quotes from the feedback forms and focus groups were given to each teacher. Based on this feedback, the length of the giving bad news and advance directives units was increased, certain syllabus readings were replaced, and inpatient pain management clinical correlation rounds were introduced.

Surveys given 1 day after teaching and again at the end of internship showed that in more than 92% of the domains measured, learners' self-perceived knowledge, confidence, and skill improved significantly [41]. Focus group participants felt that the simulated patient assessments were a good learning experience that helped them see how much their own abilities in giving bad news and assessing pain improved as a result of teaching. However, they were not found to be an objective assessment tool, because they lacked the sensitivity to detect the subtle changes in ability that probably took place. Given the limited resources available for evaluation, the simulated patient assessment was eliminated from the evaluation and replaced with role plays that were intended solely as an instructional strategy.

Discussion

In the real world, the process of curriculum development is never as straightforward as outlined here. Although the phases are to some extent iterative, important components of each phase are carried out before and after its sequence in the four-phase process. For example, data on the self-perceived level of knowledge and skill of interns, collected during the needs assessment, served as the pre-intervention data for the evaluation phase. Likewise, the evaluation of the unit on giving bad news was conducted with the same methodologies used to assess all subsequent units, results were included in the final evaluation data, and the findings of the pilot phase were a critical part of the curriculum's implementation.

It is not possible to report on the change in practices and attitudes with regard to the care of the dying, or in the "hidden curriculum" [14,16] and in the house staff and attending physician culture [11,12] as it pertains to the care of the dying, as even the best qualitative or quantitative data are not sensitive enough to assess sociological change when an intervention is ongoing and in its first few years of implementation. In addition, the methods for assessing and understanding change in a

societal matter as complex as how individuals and groups approach the dying are still in the formative stage; the most appropriate measures of improvement are still being defined [5,11,12].

Others have argued that the hidden curriculum is perhaps the greatest obstacle needing to be addressed in any palliative care educational program [16]. The focus groups and individual interviews helped us to understand how caring for dying patients affects house staff as well as the nurses and attending physicians at our hospital. It also helped us to understand clinical practices and physician beliefs that could undermine the advances made in the classroom [16]. These included hospital policies and guidelines on pain management that stated that only anesthesiologists could write orders for patient controlled anesthesia (PCA), as well as restrictions on other physicians ordering any additional opioid or benzodiazepines for patients as required in all standard anesthesiology order sheets for patients receiving PCA. These 2 policies alone presented major obstacles to the availability of good pain management and the modeling of its practice by attending physicians, who could appropriately order PCA and teach about it. The perception of palliative care physicians as “death doctors” is an ongoing area of concern and intervention, because attitudes and emotional responses (ie, fear of death, avoidance of death) are deeply rooted in our society. These attitudes may not recede or change in the near future or as the result of a curricular intervention [29].

By involving the house staff and faculty in each of the 4 phases of the curriculum development process, we learned what would be most effective from an educational perspective, and we produced a program that was user-friendly. Their involvement also helped to ensure that the house staff’s educational, clinical and day-to-day needs were met, thus avoiding a negative perception of the curriculum by house staff [29]. Faculty and nurses could see that the clinical needs of patients were being met and that scheduling and logistical issues were being addressed. By seeing their impact on the curriculum and its evolution, all 3 groups (house staff, faculty, nurses) gained a sense of ownership that we feel is partially responsible for its success. The importance of the house staff’s evaluation and feedback cannot be overemphasized; it led to changes in the curriculum’s structure and content that we feel were central to its stability and success in producing changes in physician practice [Ury et al, unpublished data].

Since the implementation of this curriculum in March 1998, the number of articles on palliative care education in internal medicine and the amount of available peer-reviewed educational materials have grown substantially. However, these developments do not pre-

clude the need for a curriculum that addresses—within the context of the institutional culture and resources—the core palliative care facts, principles, and clinical skills that all house staff should gain before they complete their residency [5,6]. Long-term outcome data on the effectiveness of these educational programs are needed, so that we can learn which curricular approaches are effective and which are not [1]. In general, a great deal of interest has been expressed, but more information about gaps—rather than improvements—in education has been reported [1].

Although the palliative care curriculum at Saint Vincents has been fully implemented since March 1998, it is still undergoing evaluation to assess its impact and to ensure its success. The ongoing evaluation process continues to uncover important logistical and bureaucratic obstacles that might not be otherwise known. These include changes in the scheduling of other inpatient teaching rounds, changes in the organization and staffing of units and divisions, and the need to include content that was overlooked or considered too advanced for house staff.

Over the past 2 years, faculty interviews revealed that attending physicians and nurses observed the house staff to be interested in and more sensitive to palliative care issues in patient care. They found the residents to be more attentive to family and spiritual needs, better able to manage pain, and more likely to involve nursing and other staff in coordinating a treatment plan. Residents also seemed to be more aware of the complexities of the decision-making process when care is deemed to be potentially futile or when the issue of withdrawing or withholding care arises [29]. Residents also felt there was a need for continued improvement in these and other aspects of care.

Many of the techniques described can be performed at other institutions in a less intensive and costly fashion, while still providing critical information [7]. Others are either too costly (eg, simulated patients) or not applicable to the educational or clinical culture of some institutions. A realistic assessment of need that ranks the goals of the curriculum in terms of educational and clinical relevancy and the needs of a particular institution is a good way to determine the general approach and methodologies that will be used.

Conclusion

This paper is intended to provide a framework, based upon the educational psychology and instructional design literature, for those interested in developing a palliative care educational program. However, it can only provide a general structure and methods that need to

be considered in the context of the unique culture and goals of each institution. By assessing the needs of learners, the clinical needs of the patient population at an institution, and current and potential logistical and bureaucratic obstacles, the likelihood of a curriculum's short and long-term success should be increased.

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