

Cost Analysis and Narrative for a Proposed Distance Education Course
in Hospice and Palliative Care

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The Palliators:

The Palliators, a project team for the cost analysis of a distance education (DE) course proposal are comprised of: Mary Lynn McPherson and Sharlene Johnson (Narrative/Overview), James Reinhardt (Spreadsheet Financial Analysis), Dana Leschock (PowerPoint presentation), and Stephanie Oliver (Editing and Review, Powerpoint presentation). Each team member contributed primarily to his/her respective assignment; all team members also provided input into all project components.

Introduction

Scenario and Project need:

Palliative care is defined by the World Health Organization as

“an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual (WHO).”

The growth of palliative care programs in the United States (U.S.) is unprecedented.

Unfortunately, the United States Education system does not currently offer robust undergraduate, graduate, or postgraduate interdisciplinary training programs in palliative care.

This proposal and cost analysis concerns a feasibility study performed by the project team for the University of Maryland Graduate School in Baltimore, Maryland. The team analyzed costs related to the development and delivery of a three credit, fully online 12 week course, titled “Principles of Hospice and Palliative Care.” The purpose of this course is to

provide inter-professional education and training for professionals who wish to gain experience in caring for patients with advanced and terminal illnesses and their families, emphasizing and integrating the unique contributions made by all health disciplines who provide palliative care.

Course Overview

Target Population

The target audience includes healthcare providers who are currently working in palliative care and wish to advance their knowledge and skills, and students who wish to begin working in this field. Healthcare disciplines include physicians, pharmacists, nurses, nurse practitioners, physician assistants, social workers, chaplains, and grief and bereavement specialists.

Candidates for the course are required to have, at a minimum, a baccalaureate degree; most prospective students will have already attained an advanced health care degree (e.g., MD/DO, PharmD, RN, etc.).

Course Content

Course content outline is as follows:

- Interdisciplinary team & inter-professional education
- Patient-centric model
- Care models in hospice & palliative care
- Clinical & regulatory rules of hospice care (Medicare hospice benefit)
- Self-care
- Education
- Strategic planning & quality improvement
- Evidence-based practice & guidelines
- Operations

- Community outreach

Course Materials

The course will include the following materials and assessments:

- One 30-minute interactive tutorial orientation
- One 30-minute interactive video lesson on information literacy (provided by the University library)
- Two learning modules leased from the Center to Advance Palliative Care (CAPC), with associated textbook:
 - Supporting the Family Caregiver: The Burden of Serious Illness
 - Care Coordination
- A collection of high-quality supplemental readings accessible through the University library
- Instructor-led synchronous case-management sessions (one per unit; six units total) via Blackboard Collaborate, an inclusive function of the LMS
- 30-minute video interviews with hospice and palliative care leaders (one per unit; six units total)
- 30-minute online quizzes (one per unit; six units total)
- One 120-minute online final exam
- Written case resolution assignments (3 total)
- Tutoring services provided by graduate student(s)

Development

The plan includes course development throughout year one, with course delivery beginning in year two, and continuing through year five. The course will be offered in both the

Fall and Spring semesters, with an anticipated participation of 30 students per semester. Total enrollment over the 8 semesters will be 240 students. It is anticipated that 30% of these will be in-state (Maryland) students; the remaining 70% of students will be out-of-state (or international) students. Tuition for this course is \$550 per credit hour/per semester for in-state students (\$1,650 total), and \$650 per credit hour/per semester for out-of-state students (\$1,950 total).

The course will be taught utilizing the University's learning management system (LMS), Blackboard, the cost of which is absorbed by the school; the School of Pharmacy will assess a "course fee" of \$2,000 per semester for this course to help offset associated costs to the University. All learning objectives will be posted on-line through Blackboard, and all objective assessments and course surveys will be conducted via the LMS.

The development team will consist of two content expert faculty members (one from the School of Pharmacy, one from the School of Nursing). The lead faculty member, who is from the School of Pharmacy, will be responsible for marketing the course and for all administrative tasks. It is anticipated that this will require 15% of the lead faculty member's time in year one (annual salary of \$150K, plus 30% fringe) and 10% per year thereafter to teach the course. The adjunct faculty member from the School of Nursing will receive \$5K during the development year, and \$3,5K per semester thereafter to teach the course. Twenty percent of an administrative support staff will be devoted to the development and implementation of the course (annual salary \$70K, plus 30% fringe). Faculty members and support staff will be responsible for initial and ongoing development (i.e., maintenance) of the course content to include course orientation, development of assignments, online discussions, establishing links to the library (e.g. information literacy training), and other tasks as deemed necessary.

Marketing this course is a critical element to its success; therefore, \$3K will be budgeted for marketing during the development year, and all subsequent years during which the course is taught. This will be spent on exhibit displays at two palliative care conferences conducted during the year and for associated faculty travel. Advertisements will be placed in trade journals, and an email distribution list will be purchased for direct consumer advertising.

Cost Analysis Summary

The total cost will be \$56,480 annually, for a grand total of \$282,400 over the life of the course (course life is five years). This total is determined by combining the ongoing recurrent management costs, and 1/5th of the development costs.

Revenue Analysis Summary

As previously noted, the course will be offered each Fall and Spring semester, with an anticipated 30 students per semester; total enrollment over the eight semesters will be 240 students. It is anticipated that 30% of these will be in-state (Maryland) students, and the remaining 70% of students will be out-of-state (or international) students. Tuition for this course is \$550 per credit hour/per semester for in-state students (\$1,650 total), and \$650 per credit hour/per semester for out-of-state students (\$1,950 total). Based on these estimates, revenue generation will be \$29,700 per annum from in-state students, and \$81,900 per annum from out-of-state students, for an annual total of \$111,600. Given the relatively high development costs, the break-even point will not be achieved until year four, which represents an enrollment of 151.8 students.

Media Justification

The media content for this course was selected because of its proven effectiveness in other online courses offered at various colleges and universities. According to Moore and

Kearsley (1996), “Provided the medium is well-chosen and functioning effectively, it plays a minor role in affecting learning outcomes” (p.65). The following paragraphs detail the media choices and the benefits gained by their use; table 1 provides additional details regarding the media selected for the palliative and hospice care course.

Blackboard

The Palliators chose Blackboard to host the course because it has been vetted and is currently in use at the University of Maryland for online course delivery. To maximize the success of Blackboard, educational institutions must ensure their educational objectives are aligned, instructors and faculty are trained, and their developmental and administrative resources are properly allocated (Telia, 2011). Blackboard can be supplemented with tutorials, videos, and with both synchronous and asynchronous communication. Course tutors will use Blackboard for collaboration during tutoring sessions and for various administrative functions, such as posting of grades. Blackboard is a user-friendly LMS, but we will also provide an orientation lesson for the students, developed via StoryboardThat software. While the expense of faculty development time is already included in the cost analysis, there is still an annual fee associated with the use of StoryboardThat software of \$75 per annum.

Center to Advance Palliative Care (CAPC) Central

Another form of media we chose to expose the students to is CAPC Central (an alternate organizations learning management system), to be used as a type of one-way traffic for the students (i.e., students do not interact with an instructor). One-way traffic is defined as “simulated communication between students and a supporting organization” (Holmberg, 1995). The online learning modules developed by CAPC are designed to be used in an asynchronous fashion, with feedback and grading built into the program. By leasing these asynchronous

interactive learning modules from CAPC, students will gain additional skills through learning content created by leading industry experts. CAPC will forward computer-generated reports on the students' progress; it also grants the University of Maryland instructor administrative rights to view the grade book records.

StoryboardThat Software

An orientation on the use of Blackboard, its features, collaboration tool, and assessments, will be created in software developed by Clever Prototypes, LLC, called StoryboardThat. StoryboardThat is one of many applications available to identify scenes and screenshots, but we chose it for its affordable license fee and ease of use. This instructional tool features a user-friendly, intuitive way to organize photos or screenshots along with customized instructions that can be accessed on any computer or tablet (storyboardthat.com, 2016). Its versatility will allow the Palliators to create a "how-to" page, a demonstration of Blackboard through one mouse click to view a presentation, which will appear seamless to the students. While the expense of faculty development time is already included in the cost analysis, as noted previously there is an annual fee associated with the use of StoryboardThat software (\$75/annum).

Video Interviews with Hospice and Palliative Care Leaders

The Palliators will also use video interviews as a learning medium for students. This will be achieved through the service "gotomeetings" which the University of Maryland already subscribes to (no additional cost for the use of this program). The faculty allocated to this project will provide the labor.

Although Huelsmann asserts that "text is the most important medium for instruction" (Huelsmann, 2016) video interviews provide a social presence as well. This multi-media form of communication adds to the student's learning experience by verbally inserting motivational

social cues (Kizilcec, et al, 2015). Students may also participate in asynchronous discussions, where they can contribute to the questions that will prompt the interviewees who are subject matter experts in palliative and hospice care.

Table 1. Summary and Justification of the Media Choices Selected by the Palliators

Media Type	Purpose	Justification	Cost/Production
Blackboard Learning Management System (LMS)	<ul style="list-style-type: none"> • Communication <ul style="list-style-type: none"> ○ Computer marked assignments ○ Tutorials ○ Surveys ○ Group activities ○ Computer mediated communication - Asynchronous discussions ○ Blackboard Collaborate for synchronous discussions ○ Computer based resource - UMB library database content • Administrative functions for faculty <ul style="list-style-type: none"> ○ Tracking student performance ○ Submitting and posting grades in the Gradebook 	<ul style="list-style-type: none"> • Contracted and established as the University of Maryland's LMS • Accommodates distance learners - 70% of the students enrolled in the Palliative Care course are distance learners • Includes a 30-minute video lesson on information literacy, made available to all students by the university's library • Provides access to previously recorded video interviews with hospice and palliative care leaders 	\$2,000 per semester No charge for Collaborate (included in the Blackboard contract license)
StoryboardThat software	30 minute orientation to course using Storyboard	To orient students to navigation and utilization of Blackboard for this course specifically	\$75 per year
Tutoring Services (Graduate Student), includes marking assignments	<ul style="list-style-type: none"> • Three written case resolution assignments, submitted by groups of two students <ul style="list-style-type: none"> ○ Graded by graduate students ○ Grades will be posted to the Gradebook 	<ul style="list-style-type: none"> • Presents an objective evaluation or opinion by a graduate student who is aware of the established criteria and grading rubric for the assignment(s). • Teaches the graduate 	2 hours per session x 2 sessions/week x 12 weeks x 2 semesters x \$15

	<ul style="list-style-type: none"> • Online presence for 2 hours, two evenings a week to serve as a tutor 	<p>student to use the administrative functions in Blackboard.</p> <ul style="list-style-type: none"> • Expedites the grading process for students who are anxious to see their progress reported in a timely manner. • To provide guidance to learners and answer questions 	<p>15 submissions x 3 assignments, graded at 30 minutes for each group = 22.5 hours per semester</p>
<p>CAPC Central – member resource Learning Management System</p>	<ul style="list-style-type: none"> • Lease interactive learning modules from the Center to Advance Palliative Care’s (CAPC) LMS • Access to a high quality textbook • Administrative functions for faculty (reported by CAPC) <ul style="list-style-type: none"> ○ Tracking student performance ○ Submitting and posting grades 	<ul style="list-style-type: none"> • Grants access to quality learning materials written by leading experts in the field of palliative care • Costs savings - Incorporates two existing, asynchronous learning modules into the course for one flat fee 	<p>\$1,000 per year flat fee (includes Fall & Spring semesters)</p>
<p>Video interviews with hospice and palliative care leaders</p>	<ul style="list-style-type: none"> • Allows students the opportunity to develop questions prepared for the interviewees who are subject matter experts • Will be accessible via Blackboard and does not require additional software downloads for viewing 	<ul style="list-style-type: none"> • Adds a face-to-face or social element to the class • Produces a valid resource from a credible expert who will respond to and present pertinent information customized by the students • Cost savings 	<p>No additional charge for software “gotomeetings”</p>

Conclusion

The proposed course, Principles of Hospice and Palliative Care, will be the first of its kind in this field of study at the University of Maryland Graduate School, Baltimore, MD. This training offers a valuable tool for healthcare providers, to utilize as a resource for furthering palliative care skills and knowledge. The distance education environment of this course is ideal

in that the targeted population is established health care professionals currently working in their respective fields, which need flexibility in their current schedules to attend additional training. As distance educators, the Palliators know first-hand the benefits and conveniences this on-line course affords to healthcare providers and healthcare students who are otherwise not able to participate in a traditional education course.

Both the requirements and affordability of offering this course on-line have been reviewed and outlined in this paper. The break-even point (or analysis) is illustrated as well in the attached spreadsheet. We have determined that the university will gain profit from this course utilizing a diverse, streamlined approach and costs saving measures. By maximizing the use of readily available University resources, students of this course will not only have enhanced flexibility but also a quality education.

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