

**Medication Management at the End of Life for Supportive Care Hospice Practitioners**

**Submitted by The McPherson Consulting Group, Inc.**

**To Cielo Hospice & Palliative Care, Inc.**

“Until he extends the circle of his compassion to all living things,

man will not himself find peace.”

(Albert Schweitzer)

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### **Introduction**

Hospice is a patient and family-centric model of care for individuals with a life-limiting illness likely to result in patient death within six months or less. While a family member generally serves as the patient's primary caregiver, an entire team of hospice professionals provide the care necessary to achieve these goals. This includes clinical providers such as physicians, nurses, and pharmacists, and supportive care practitioners such as spiritual counselors, social workers, bereavement specialists, home health aides, and therapists. Approximately 70% of the care provided to a terminally ill patient and family is given by supportive care practitioners. Given this significant presence, it is very likely that the patient and/or family will ask one of practitioners for advice on medication management. Unfortunately, the selection, dosing, monitoring and management of medications in advanced illness is not part of the professional training of supportive care practitioners and they often feel ill-prepared for these conversations with patients and families.

The purpose of this proposal is to describe a multimedia online training course for supportive care hospice practitioners to better prepare them for the medication management role. This proposal is provided at the request of the national office of Cielo Hospice & Palliative Care, for roll-out to their supportive care practitioners nationwide.

### **Instructional Design Model**

For purposes of instructional systems development, the team will use the ADDIE model. ADDIE represents the five core elements of instructional design: analysis, design, development, implementation, and evaluation (Hodell, 2011, pp. 24-26). During the analysis phase, the team

will interview the Director of Human Resources to determine the number and types of supportive professionals employed by Cielo. Second, the team will interview two key thought leaders employed by Cielo, and conduct two focus group meetings with representation from all supportive care service disciplines. Last, the team will launch an online survey of potential learners concerning knowledge, skills, ability and attitudes about medication management at the end of life, and learners' perceived educational deficits. This analysis will be supplemented by an exhaustive literature search on this topic.

Based on the educational needs analysis, the team will design and develop the proposed course, and will evaluate all phases of the process throughout, including during and subsequent to implementation.

### **Rationale for the Multimedia Learning Environment**

Due to the busy and irregular schedule of supportive care hospice practitioners, this course must be provided as an asynchronous distance education online experience. A multimedia approach, defined as “coordinated verbal and pictorial messages” (Mayer, 2009a, p. 273) will be used to a significant extent in this course. Using a multimedia approach has been shown to enhance student learning when words and pictures are used together, as opposed to words alone (Mayer, 2009, p. 274).

### **Key Characteristics of the Target Group**

Cielo Hospice employs 1,535 individuals; 48.5% of these are supportive care practitioners (n=745). The breakdown is as follows:

- Bereavement and Volunteer Coordinator (35)

- Chaplains (85)
- Director of Education and Quality (17)
- Hospice Aides (402)
- Therapists (91)
- Social Workers (135)

Approximately 80% of these individuals are female, and they range in age from mid-twenties to over 60 years. All potential enrollees possess a Baccalaureate degree or greater except for the hospice aides, who minimally have a high school diploma. However, most aides have several years of experience in hospice and have a fair degree of medication management exposure.

A representative cohort was surveyed to assess interest and readiness in the proposed course. All respondents (n=95) agreed or strongly agreed that medication management is an important skill for their specific discipline, and the majority of those surveyed felt only “somewhat confident” in participating in medication management. The vast majority of respondents were supportive of an online multimedia training opportunity on this topic, agreeing it would increase their confidence and competence in this topic.

All employees of Cielo Hospice have satisfactory computer skills as the company maintains electronic medical records. The company has a very strong commitment to technologic support for all employees. A “Director of Education and Quality” is available at each site to provide employee assistance with technical difficulties.

### **Advantages and Disadvantages of Multimedia Learning Environments**

There are advantages and disadvantages to all educational interventions, including this proposal. Generally speaking, advantages of multimedia includes the human ability to appeal to “two information processing systems – one for verbal material and one for visual material” (Mayer, 2009b, p. 6). Mayer (2009b, p. 17) further contends that multimedia learning is a “sense-making activity” which supports the theory of constructivist learning.

Disadvantages of multimedia include the time and expense required to develop these learning objects. When the technology doesn’t work as expected, or the learner cannot utilize the technology, the requisite intervention may require significant effort. Topping the list of disadvantages of multimedia technology is the debate that has not been settled after years of heated discussion – does multimedia influence learning? Richard E. Clark famously argued that “Media Will Never Influence Learning” (1994) while Robert B. Kozma vigorously argued back that media does positively influence learning (1994).

While the design and development of a multimedia project such as the one proposed is more expensive in the short run, it offers many benefits. For example, video-recorded simulated exercises contained in the proposed course will give learners the opportunity to observe and react to clinical situations they may not have encountered to date, and to observe “experts” address these often difficult scenarios. Learners will have opportunities throughout to receive formative and summative feedback through the selected learning management system (LMS). This course will provide high-quality video and audio presentations that learners can access when it is convenient in their schedule, using any device.

While there will be development and support costs associated with this proposal, this course will likely be cost-effective in the long-run. Enhanced learning will improve patient care,



Adaptation									
Motivation									
Presentation Design									
Interaction Usability									
Accessibility									
Reusability									
Standards Compliance									
<b>TOTAL</b>									

### **Presentation/Delivery Media**

The course “Medication Management at the End of Life for Supportive Hospice Practitioners” will be delivered via a LMS, using a modular approach. Before beginning any of the modules, the learner will complete a survey assessing their knowledge, attitudes, and self-perceived competency in four domains. Each domain will be covered in one module. Each module will begin with a self-assessment quiz that will provide formative feedback after quiz completion. The quiz may be completed as many times as the learner would like. The learning materials will consist of 2 or 3 short narrated powerpoint presentations (not to exceed 15 minutes each). Within each powerpoint presentation there will be one or more video presentation illustrating a supportive care hospice professional interacting with a simulated patient; learners will be asked to stop and reflect on each video, and then apply that learning to another videotaped scenario. One or more suggested readings to support the content in that module will

also be posted in the LMS. After completing the readings and presentations, the learner will take the module quiz, which is a summative assessment. Two attempts will be allowed, with a minimum pass rate of 75%. Double the required number of questions will be entered into the LMS and the computer will randomly select the required number of assessment items. After completing all four modules the learner will repeat the initial survey of knowledge, attitudes and self-perceived competency to allow for data collection in the future.

### Content Outline

This course will be organized into four modules, as follows. Multimedia learning objects are shown as well in the following table:

Module #	Module Content	Use of multimedia learning objects	
Pre	Pre-course survey of knowledge, attitudes and self-perceived competence.	Survey.	
1	Principles of Palliative Care Medication Management	Formative assessment (quiz). Narrated powerpoint presentations. Suggested readings.	<ul style="list-style-type: none"> <li>• Infographic comparing hospice and palliative care.</li> <li>• Infographic showing five areas of medication management concern to patients and families.</li> <li>• Video demonstration of interaction between a hospice social worker and concerned family member. Learner asked to reflect prior to seeing resolution video.</li> <li>• Second video demonstration of a different encounter between a hospice chaplain and a patient. Reflect; view part 2.</li> </ul>
2	Assessment of Pain Pathogenesis of Pain	Summative assessment.	<ul style="list-style-type: none"> <li>• Infographic showing 8 elements of symptom analysis.</li> <li>• Video demonstrating physiology of nociception and pathogenesis of neuropathic pain.</li> <li>• Infographic comparing and contrasting history and physical findings between nociceptive and neuropathic pain.</li> <li>• Video demonstration of hospice nurse interviewing patient about a pain complaint.</li> <li>• Second video of a hospice aide talking to a patient about his pain. Patient gives partial response (e.g., less than 8 elements of symptom analysis). Learner asked to reflect on which elements are missing; view second part.</li> <li>• Third video of hospice nurse assessing nonverbal pain for potential physical discomfort. RN in video clip speaks</li> </ul>



			aloud her findings. Learner asked to rate patient's status using "Checklist for Nonverbal Pain Indicators" with resolution shown in second part of videotape.
3	Pain Management		<ul style="list-style-type: none"> <li>• Infographic summarizing pharmacologic class, mechanism of action, dosing, side effects and monitoring of commonly used analgesics.</li> <li>• Video presentation of hospice music therapist asking patient about their pain and response to recent analgesic regimen.</li> <li>• Second video presentation of hospice nurse assessing patients response to analgesic regimen.</li> </ul>
4	Management of Non-Pain Symptoms		<ul style="list-style-type: none"> <li>• Infographic summarizing pharmacologic class, mechanism of action, dosing, side effects and monitoring of medications commonly used to treat non-pain symptoms.</li> <li>• Video tape of patient discussing nausea with hospice aide. Learner asked to reflect on appropriate drug therapy before resuming video presentation.</li> <li>• Video tape of hospice aide trying to give a bed bath to a hospice patient with dementia, and combative behavior. Learner asked to reflect on appropriate drug therapy; view part 2.</li> </ul>
Post	Post-course survey of knowledge, attitudes and self-perceived competence.	Survey	

### Project team and their roles and responsibilities

Producing a multimedia course is a fairly complex process that requires collaboration from a team of multiprofessional individuals (Moonen, 2002, p. 160). The following is the proposed project development team for this course:

Role	Function
Project Manager	Provide oversight of entire project; establish time line for roll-out, assure quality throughout project, assign responsibilities, hold team members accountable, assure a quality project and bring the project to closure.
Instructional designer	Oversee analysis, design, development, implementation and evaluation
Instructional technologist	Oversee instructional delivery systems (e.g., LMS, insertion of all multimedia learning objects)
Producer	Produce development of video segments; interact with standardized patients
Scriptwriters	Write script
Video engineers	Record and produce video segments; work with instructional technologist for uploading into LMS
Subject matter experts	Pharmacotherapy expert in medication management, and pain and symptom

	management in advanced illness
Representative learners	To evaluate learning materials prior to launch
Representative training and development personnel from client	To evaluate learning materials prior to launch

### Roll-Out Plan (Time Schedule)

The time table for developing and implementing this course once approved is as follows

(Hodell, 2011, pp. 25-26):

Task	Dates
<b>Analysis</b> <ul style="list-style-type: none"> <li>• Conduct needs assessment interviews/survey</li> <li>• Frame challenge/problem and need into tangible action items for instructional issues</li> <li>• Determine needed resources, budget, time line</li> <li>• Evaluate/select multimedia learning objects</li> </ul>	September 1 – October 30, 2015
<b>Design</b> <ul style="list-style-type: none"> <li>• Draft design, terminal and enabling performance objectives</li> <li>• Course description</li> <li>• Evaluation strategies</li> <li>• Multimedia learning object design (e.g., scripting video segments)</li> <li>• Train standardized patients hired for video segments</li> <li>• Plan infographics content</li> <li>• Select suggested readings</li> </ul>	November 1, - December 31, 2015
<b>Development</b> <ul style="list-style-type: none"> <li>• Develop powerpoint presentation, review by panel, record slides</li> <li>• Record video vignettes with standardized patient actors (patients and staff)</li> <li>• Develop infographics</li> <li>• Post all multimedia learning objects and other learning objects to LMS</li> <li>• Pilot-test all materials and LMS</li> <li>• Modify as needed</li> </ul>	January 1 – March 31, 2016
<b>Implementation</b> <ul style="list-style-type: none"> <li>• Launch course</li> <li>• Evaluation, Kirkpatrick Levels 1-2 (reaction, learning); modify</li> </ul>	April 1 – June 30, 2016
<b>Evaluation</b> <ul style="list-style-type: none"> <li>• Review all five ADDIE elements continuously and revise as necessary</li> <li>• Compare pre- and post-course survey results to assess changes in knowledge, attitudes and self-perceived competence in all four domains</li> </ul>	July 1 – August 1, 2016

### Conclusion

Cielo Hospice & Palliative Care has requested a proposal for a multimedia online learning experience for their supportive care hospice professionals. This proposal has detailed an instructional design/roll-out plan for a four-module online course using a LMS, and incorporating a variety of active learning techniques. If this plan is found to be acceptable, the McPherson Consulting group looks forward to discussions regarding budget for this project. Thank you for your willingness to invest in your staff, which will enhance not only staff satisfaction, but enhance patient outcomes.

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