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**Technology Selection: Use of a learning management system to teach interdisciplinary health care providers about hospice care**

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Palliative care, as defined by the World Health Organization, is defined as the “active total care of a patient whose disease is not responding to curative therapy” (World Health Organization, 1990). Hospice is a specific form of palliative care provided to individuals with a prognosis of six months or less. Hospice and palliative care interventions are provided by an array of health care providers (nurses, nursing assistants, physicians, pharmacists, chaplains, social workers, therapists, volunteers and others), and collaboration is a key element of this philosophy of care.

Seasons Hospice & Palliative Care is a national organization that provides end of life care in 18 states in the US. Their mission is “Honoring Life – Offering Hope” (Seasons Hospice - Mission and Vision, 2014). They have an extensive vision statement, but one important element is to “support our staff so they can put our patients and families first” (Seasons Hospice – Mission and Vision, 2014). A critical element in supporting their multiprofessional staff is continuing professional development (education). In all states, Seasons has a Director of Education and Quality (DEQ), as well as a National DEQ. Seasons initially provided staff

education in a face-to-face fashion but as they have grown it has become increasingly difficult to maintain consistency, reaching all staff at the national level. They have reached the point where they would like to take advantage of eLearning, specifically, the “capacity for powerful yet very low-cost communications” via the internet (Anderson, 2010).

Part of the educational plan for Seasons is to develop a training program targeting all new hires who contact patients. This will include nurses, nursing assistants, social workers, chaplains, and therapists. The purpose of this training is to assure baseline knowledge about the principles of hospice and palliative care, and the basics of pain and symptom management in advanced illness. The course will consist of four modules: 1. Principles of Palliative Care; 2. Pain Assessment and Pathogenesis; 3. Pain Management; and 4. Non-Pain Symptom Management.

This course will be taught through distance education only, using asynchronous communication. There is an advantage to online education beyond the inability to schedule face-to-face class meetings. A meta-analysis comparing face-to-face to online learning showed a modestly enhanced learning outcomes with online learning (Means, et.al. 2009, p. xiv). The effectiveness of online learning has been demonstrated for undergraduates, graduate students and professionals (Means, et.al. p. xv). This same meta-analysis concluded that online learning can be further enhanced by giving learners the opportunity to reflect and self-monitor their performance (Means, et.al. p. xvi).

### **Analysis**

The technology selected to operationalize this course is a learning management system, specifically coursesites.com. Many variables must be considered prior to selecting a learning management system including the nature of the course or curriculum and the needs of the

learners (Davis, Little, & Stewart, 2008). An LMS is a software application suite that allows course content to be divided into modules or units, and learning objects may be posted such as syllabi, readings, links to videos on the internet, handouts, etc. Discussions may be held in an LMS, as well as creation of a blog, journal, or wiki (Caplan, & Graham, 2008, pp. 246-247). Formative and summative evaluations and surveys may also be conducted within an LMS.

**Assessments** - Prior to beginning the 4 modules, learners will be asked to complete a “pre-course survey” assessing knowledge, skills and attitudes on content in the course. This survey will be repeated after completing all four modules to allow the coursemanager to assess educational outcomes.

Within each module, the initial learning activity is a self-assessment quiz, which may be repeated as many times as desired. After entering all quiz answers, the learner will be able to see the feedback, which explains why the correct answer is correct. At the conclusion of each module, the learner will take a summative assessment.

**Learning Objects** – Brief, targeted pre-recorded video lectures will be posted in the LMS. Lectures will be developed and posted using PowerPoint, and recorded using Camtasia. Thanks to streaming multimedia, learners will be able to view these multimedia recordings on their own device (McGreal, & Elliott, 2008, pp. 144-145). Handouts of the slide presentation and supplementary readings will also be posted within each module.

**Asynchronous Communication** –Discussion questions will be posted in each module; students will be required to post responses, and respond to colleagues’ posts. The coursemanager will follow these posts and interject comments and provide feedback and additional thought-provoking questions for the learners.

Students will be assigned to interprofessional groups, and in each module they will develop a wiki to propose an interprofessional plan of care for a posted patient case. According to Schwartz, Clark, Cossarin and Rudolph, wikis give learners experience in created communities of practice (2004, p. 2). Specifically, this includes “a virtual presence, a variety of interactions, easy participation, valuable content, connections to a broader subject field, personal and community identity and interaction, democratic participation, and evolution over time” (Schwartz et al, p. 2).

An enormous part of a successful palliative care practice is the ability to reflect, and work with patients to give them the space and direction to complete their life’s work. Health care providers are not born inherently possessing these skills. An important requirement in this course will be the development and regular updating of a blog. Students will be expected to write a blog post after each module, reflecting on their thoughts and insights on their journey in this course, and application to their practice. Pang (2009) listed several advantages to having students write a blog including the ability to form a relationship with students and understand their thought process, to monitor student progress, and to identify problems students are encountering (para.28). He also describes some disadvantages to blog posts including student reticence and technologic difficulties, the subjectivity of grading blogs and other variables (Pang, 2009, para. 29). Nonetheless, hospice is often touted as being “touchy-feely” and a blog is the perfect avenue to express and explore those feelings.

**Strategy for introducing technology** – When announcing that an organization will be acquiring an LMS, this can be met with great enthusiasm and a desire to roll it out immediately (Wood, Pollex, & Johnson, 2008, p. 3). In addition to managing expectations, it is critically

important to have a plan for introducing new technology, for both development and implementation.

First, open communication with all key stakeholders is essential. For Seasons Hospice & Palliative Care this will include the National DEQ, all site DEQs, and the Clinical and Executive Directors at all sites. A small working group will be assembled to oversee the deployment and administration of the LMS (Kaplanis, 2014, para. 4). The working group will consist of the National DEQ, 3 site-specific DEQ's, an ISD specialist/subject matter expert, a distance education expert, a nurse, and a chaplain. The first order of business for the working group is to tentatively lay out the plan for rolling out the LMS, including a time line. Next, the working group will poll and have conversations with all key stakeholders, described above. All concerns identified by the key stakeholders will be discussed, and satisfactorily addressed by the working group before work progresses. It is estimated that this may take up to 2 months. The next step is migrating all the learning materials into the LMS. The time frame for this step should not exceed 1 month.

The next critically important step is the development of two guides. The first is a "Train the Trainer" guide for all the site DEQs. This will include education on the principles of adult and distance education, and the technologic aspects of the LMS. The second guide will be a study guide developed for the learners. The guides will be developed by the ISD specialist/content expert, the distance education expert, and the National DEQ. It is estimated that it will take approximately 3 months to develop both guides. The guides will then be given to the rest of the working committee to review and critique. One month will be allowed for this step. After all edits are made, DEQs and four learners from three previously uninvolved sites will be invited to participate. Two months will be allowed for these 15 individuals to read and

interpret the guides, and to complete the online course. Up to 2 months will be allowed for the working group to take any necessary corrective action based on this feedback. Allowing one month for unanticipated delays, the LMS should be ready for roll-out one year after planning begins.

**Barriers to implementation** – One of the primary barriers will be push-back from site management who are anxious to get new staff out in the field, and do not want to allow new hires the time to complete this course. This barrier will be addressed by securing buy-in from the key stakeholders at the beginning of this process, and clearly building in specific time slots for all new clinicians to complete the course during their orientation period.

The second barrier will be the need for initial and ongoing technical support for using the LMS. The user guides should pre-empt most of this angst, and support will always be available. The local DEQ will serve as the initial support person, backed up by the ISD expert, the DE consultant, and the National DEQ.

**Weaknesses of the technology** – Despite our very best efforts, some learners (and faculty) will find the use of these selected technologies challenging or problematic. With asynchronous communication, not all students will engage in posting thoughts and response in the discussion sessions, and may not be as thorough as hoped in the wiki discussion. Also, there are inherent problems with group-work altogether, but that is a problem in common with both online education and face-to-face education. Groups need clear direction on setting ground rules and assuring participation from all group members.

### **Conclusion**

Given that Seasons' mission and vision clearly state that they support their staff so they can put the patient and family needs first, and their demonstrated commitment to development by

having a Director of Education and Quality at every site, use of an LMS to deliver a consistent, quality educational program during the orientation phase of each new hire will be a welcome addition. The LMS will allow learners to move through the content at their own pace, and will be able to practice working in the interprofessional environment in a culture of safety, cultivating essential skills for patient care. Learning about the needs and concerns of key stake holders is a critically important part of implementing this technology, and prompt and continued support for learners is equally important.

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