

# TEL Grant Proposal:

## Tools for Creating Virtual Integrated-Care Scenarios

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## What We Propose

For this grant, we propose to develop a set of online instructional tools that will facilitate the creation of virtual integrated-care scenarios. These scenarios will consist of patient case studies that model an integrated-healthcare approach, wherein the patient receives care from a team of providers that includes both conventional physicians or nurse practitioners and complementary therapists.

The ability to generate these types of integrated-care scenarios will be extremely useful for faculty in a wide range of disciplines in the Academic Health Center (AHC), particularly in the School of Nursing, College of Pharmacy, and Medical School. Faculty from these schools have identified that such virtual integrated-care scenarios will help students meet key desired competencies.

The tools we propose to develop under this proposal will include:

- A set of templates created in Flash (or possibly Dreamweaver). Individual templates would be designed for different parts of a typical patient scenario (for example, Taking the Patient History, Conducting the Physical Exam, Developing the Treatment Plan, Completing the Pharmacy Workup, etc.). The templates would allow users to easily incorporate a variety of multimedia elements (graphics, interactive questions, etc.). Faculty would select the templates that apply to their discipline or particular case, and use them as building blocks to create an entire scenario.
- A user-friendly input tool that allows faculty and other subject matter experts without a high level of computer expertise to populate the templates with content (for example using a simple XML Notepad editor to populate a structured XML file, which would be rather like filling out a spreadsheet)
- Instructional guidelines on how to develop the scenarios using the input tool and templates

## Programmatic Significance

### ***Identified Need***

Patient case studies are a key instructional strategy in healthcare education. An instructional designer at the Center recently completed an analysis that indicates a need for integrated-care scenarios in nursing, medicine, and pharmacy. The analysis, which was the result of extensive interviews with representative faculty from these schools, indicated that integrated-care scenarios could provide many benefits. These include the ability to:

- Model “true integration”, wherein healthcare providers offer a range of options for treatment and work as a team with nurses, pharmacists, physicians, PT, OT, chaplains, and complementary providers, and all provide value and have ownership of the outcomes
- Model relationship-centered care, wherein the patient is central and healing is enabled by the relationship between the patient and the healthcare team
- Educate on complementary approaches
- Provide “authentic” experiences of patient issues that students don’t usually encounter in classes or their clinical training

### ***Development Issues***

In addition to indicating the usefulness of these scenarios, our analysis also identified potential obstacles to creating patient scenarios. These include the limited availability of experts, the cost of their time, and the challenges in developing scenarios that have applicability across a wide variety of disciplines.

### ***Our Solution***

Our proposed tools will address these issues. They will:

- Allow faculty and other experts to develop scenarios on their own when they have time
- Provide a structure and guidelines to make case development faster and less intimidating

- Offer flexibility and extendibility—experts build a scenario by selecting those templates that are relevant to their disciplines
- Provide templates that incorporate effective instructional strategies
- Offer an easy-to-use input tool, such as a structured XML file, that allows end-users (faculty) to enter data and immediately see it formatted online
- Place all scenarios in one location so AHC faculty and students can easily locate them

It is our intent that the tools remove some of the obstacles to creating scenarios and lead to the creation of a sizable online library of integrated-care scenarios.

### **Programmatic Application**

The programmatic application is vertical in that these scenarios will be useful for many courses in one school. For example, in the Medical School, these scenarios could be used in the Physician and Society course, as well as in the Clinical Medicine courses and a number of clerkships. The scenarios could also be used in the College of Pharmacy’s Practice of Pharmaceutical Care, Pharmacotherapy, and Human Nutrition and Drug Therapy classes. In the School of Nursing, the scenarios could be used in Therapeutic Communication in Healthcare, Core Interventions for Nursing Practice and Critical Care Nursing classes, as well as in many graduate courses.

The application is also horizontal, because it will be useful across the AHC. (We have talked to nursing, medicine, and pharmacy, but we also think there is potential here for Dentistry and other schools.)

## **Evaluation**

### **Formative**

- Review of guidelines and templates by representative faculty from medicine, nursing and pharmacy
- Pilot test of the initial scenario developed using the templates and guidelines to test ease of use, thoroughness of content, effectiveness of screen design, etc.
- Pilot test of input tool

### **Summative**

- Hard copy survey given in class prior to use to evaluate confidence levels before the scenario and perceived knowledge
- Online form at the end of the scenario that asks about final confidence level and perceived effectiveness of the instruction. We will compare pre and post confidence levels and knowledge.
- Counter on scenario URL to track usage

## **Timetable**

2003									2004					
Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Analysis														
Design templates														
Build templates and develop test scenario														
Pilot test of test scenario														
Refine templates and develop guidelines														
Develop input tool														
Pilot test of input tool														
Refine input tool														
Initial mentorship														
General mentorship														

## Budget

<u>Primary Development Phase</u>			<u>TEL Grant</u>	<u>Dept Match</u>
Mary Jo Kreitzer, PhD, RN	Principal Investigator	2% FTE		\$2,812
Louise Delagran	Co-Investigator	10% FTE	\$ 691	\$7,757
Karen Melstad-Menke	Info Tech Professional	5% FTE	\$2,456	
Sheila Hoover	Graduate Research Assistant	5% FTE	\$3,103	
TBN	Flash Programmer	75 hours	<u>\$3,750</u>	
			\$10,000	<u>\$10,569</u>
 <u>Mentorship Phase</u>				
Louise Delagran	Co-Investigator	1% FTE	\$ 845	
Karen Melstad-Menke	Info Tech Professional	.5% FTE	\$ 246	
Karen Lawson, MD	Asst Professor/Prg Director	.25% FTE	\$ 419	
Testing Lab Rental			<u>\$ 1,000</u>	
			\$2,510	

## Collegiate and Department Support

This proposal directly contributes to the Center for Spirituality and Healing's strategic goal of integrating core competencies of complementary and alternative medicine (CAM) into the health professional training programs of the Academic Health Center as stated in the Center's 2002-2003 compact document. This goal is closely aligned with the following items listed in the AHC Strategic Plan:

Goal 1: Create and prepare the new health professionals for Minnesota. The strategic objectives and initiatives under this goal address emphasizing the core knowledge and skills of each AHC health professional discipline (1.1) engaging the community of providers, employers and consumers in helping to define the changing competencies, knowledge and skills required of health professionals.

Goal 4: Develop and provide new models of health promotion and care for Minnesota. The strategic objectives and initiatives under this goal address the need for using preventive health, wellness and integrated practices as well as traditional allopathic approaches (1.0), and developing and incubating novel interdisciplinary models of health promotion and care (2.0).

## Mentorship Program

### **Initial Phase**

We have arranged to work with Dr. Karen Lawson, Director of Clinical Services at the Center for Spirituality and Healing, who is developing curriculum for the Medical School. We will demonstrate how to use the guidelines to develop integrated-care scenarios and will provide instruction on using the template. Karen is currently planning on developing scenarios for several classes in the Physician and Society course in 2003 and 2004, including scenarios on energy medicines, manual therapies, and Traditional Chinese Medicine.

### **General Phase**

We further propose to offer a class to faculty in the AHC that will explain the guidelines and provide instruction on how to use the input tool and template. We will also offer individual mentoring to faculty developing scenarios that we think have a broad applicability.