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Advances in Teaching & Learning Day Abstracts 2006

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INNOVATIVE APPROACH TO TEACHING RADIOLOGY INTERPRETATION IN THE CLASSROOM, Kenneth Abramovitch DDS, MS, Jerry Bouquot DDS, MSD, Paula O'Neill MEd,EdD. The University of Texas Health Science Center at Houston, Dental Branch, Diagnostic Sciences, Houston, TX, 77030

Purpose: Developing a differential diagnosis for hard tissue pathology of the jaws is primarily a clinical decision-making process. Teaching the process of developing a differential diagnosis list and differentiating between diseases in the list, is very difficult in a standard lecture format. An innovative classroom format was instituted to make the process of differential diagnosis more engaging in a classroom setting.

Methods and Results: The senior dental class of 62 students was divided into 10 groups of 6-7 students. On each successive week, one student group was assigned a radiographic case via posting on the BlackBoard 6.0 course website. Images, case information and an assignment page were uploaded in Adobe Acrobat 6.0 Professional files. The group then downloaded this information to prepare a PowerPoint presentation to be given during class the following week. Each student was graded on a five point nominal scale from 1 to 5. The grade was determined on how well they presented the case information to develop a differential diagnosis list of 5-7 disease processes. They then had to propose a treatment for the working diagnosis. All students demonstrated competency in utilizing the provided information to develop a differential diagnosis. The arithmetic mean on the five point nominal scale was 4.8. This grade contributed to 10% of the final course grade.

Discussion: The process of having to present cases in class forced students to organize, describe radiographic features and manage patient information much like the decision making process used for a radiologist's interpretation report or for a radiologic consultation of submitted radiographs. It simulated clinical scenarios in that they requested the need and identified the significance for additional information that could help them make a more accurate diagnostic impression. When mandated to organize and prioritize a diagnostic decision, students can understand and identify the practical dilemmas faced in clinical scenarios. Students adapt very well acquiring and utilizing digital media from BlackBoard 6.0. Their responses to the process ranged from supportive to non-supportive and unengaged. The latter opinions were related to the perceived dogmas of classroom instruction. These students were having problems identifying the need to formulate a decision-making strategy when a correct answer is not known. They could alter the typical mindset of a student in a classroom lecture- examination format. Future plans for this format are to introduce it to a smaller group seminars where more of the decision-making process of differential diagnosis can be evaluated rather than evaluati ng the course contents and decision-making abilities via objective multiple-choice mass examination.

MEDICAL STUDENT PROFESSIONALISM: ARE WE MEASURING THE RIGHT BEHAVIORS? A COMPARISON OF PROFESSIONAL LAPSES BY STUDENTS AND PHYSICIANS, Michael Ainsworth MD, Karen Szauter MD. The University of Texas Medical Branch, Internal Medicine, Galveston, TX, 77555 0410

Background Examining relationships between unprofessional behaviors observed in medical students and those in practicing physicians is important in determining whether medical school faculty are observing behaviors relevant to medical practice. We compared student unprofessional behaviors reported at our medical school through Early Concern Notes (ECNs) with the behaviors for which practicing physicians were sanctioned by our state medical board. Methods We calculated the type and frequency of ECN report in three categories: (1) professional responsibility/integrity, such as failure to reliably fulfill duties; (2) pursuit of excellence/insight, such as seeking minimally acceptable performance; and (3) personal interactions, such as inability to establish appropriate relationships with patients or co- workers. To obtain a measure of problematic physician behavior, we reviewed the state medical board's database of disciplinary actions. Results Most of the 110 ECNs related to students' professional responsibility and integrity (72.7%). The most frequent concerns were of failure to attend a required activity, but other examples included students who knowingly overstated their capabilities or role in patient care. Of the 516 state medical board disciplinary reports, the dominant source of concern (77.1% of actions) also dealt with issues corresponding to professional responsibility or integrity. For physicians, these violations included failure to meet licensing or medical documentation requirements, and abuse of privileges unique to physicians, such as non-therapeutic prescribing. Substantially fewer reports were seen for both students and physicians in the other two ECN categories (pursuit of excellence/insight, and personal interactions). The most frequent examples in both categories were similar across the two groups, including impairment, and ineffective relationships toward those with whom they interacted. Conclusions There are common features to the professional shortcomings seen in students at our medical school and practicing physicians in our state. These similarities serve to reinforce our efforts to teach, monitor, and remediate professionalism issues we identify.

GLOBAL ONLINE LEARNING COMMUNITY: AN INNOVATIVE CONTINUING EDUCATION PROJECT, Elizabeth Anderson DrPH, RN, Zena Mercer MS. The University of Texas Medical Branch, School of Nursing, Galveston, TX, 77555-1029

The purpose of this project was to develop a global online learning community that will serve as a resource for nurses on a variety of primary health care related topics and to provide a revenue source for global health activities in the school of nursing. Visiting professors from a variety of countries as well as nurses working in the community expressed the need for easily-accessible learning experiences to expand their knowledge and skills in primary health care. Academic programs, because of degree requirements and locale, are often not available to them. We agreed that courses that focus on skills in primary health care are needed and this was supported by materials from WHO and PAHO reinforcing that need. In the initial pilot of the course, specific modules include community assessment, analysis of community data, and development of a community nursing diagnosis using the community-as-partner model. Learners are able to work through the course at their own pace. Design of the course encourages learners to become engaged in the topic and to explore the various Internet resources recommended. This course is part of a two-course series with the second course focusing on program planning and evaluation. The system was designed to automate registration, payment, instruction, evaluation, and certificate generation. A back-end data system will capture demographic and evaluation data to aid in future planning. Additional courses will be developed based on continuing assessment of learners' needs and interests.

TEACHING NURSING HISTORY THROUGH FIRST PERSON HISTORICAL INTERPRETATION, Constance Ayers PhD, RN. Texas Woman's University, College of Nursing, Houston, TX, 77030

No matter how important it is that members of a profession understand the history of the discipline, it is often difficult to teach history in a way that facilitates the development of students and their appreciation of the works and contributions of those persons who came before them. The wisdom, insight, and understanding of context that history provides are critical to the personal and professional development of students; however, the clinical aspects of nursing sometimes overshadow the importance of nursing history. Consequently, teaching nursing's history is a challenge to any faculty member. This presentation describes the method of first person historical interpretation and portrayal to teach nursing history to undergraduate students. In order to provide a sense of relevance and at the same time present nursing's history in a meaningful, inspiring, and interesting way, Florence Nightingale's important contributions to nursing as a profession are portrayed using first person interpretation. Students are taken on a journey through one of nursing history's most momentous periods as Miss Nightingale tells the story of her personal path to discovery and transformation overcoming extreme odds to establish the modern profession of nursing. Scripts for the classroom portrayals were developed through historical investigation methods using Miss Nightingale's letters and personal documents located at the Florence Nightingale Museum and the Wellcome Library for the History of Medicine in London, England. Appropriate dress for the era was also investigated to develop a period costume for the historic interpretation, adding relevance and accuracy to the presentations. In addition to the classroom performances, first person portrayals of Miss Nightingale have been performed for community and nursing groups. Evaluations of presentations have been outstanding. Students have commented that the presentations help them gain a sense of assurance that this is the profession of which they want to be a part.

PEER TEACHING/PEER TUTORING IN A POST-PROFESSIONAL PROGRAM IN PHYSICAL THERAPY EDUCATION AT THE UNIVERSITY OF TEXAS MEDICAL BRANCH (UTMB),

Christine Baker EdD, PT. The University of Texas Medical Branch , SAHS/Department of Physical Therapy, Galveston, TX, 77555-1144

Considered to be an alternative mode of teaching and learning, peer tutoring or peer teaching is the system of instruction in which learners help each other and learn by teaching (Goodlad and Hirst, 1989). It involves students teaching other students in a given subject area and takes a variety of forms including one-to-one tutoring by more experienced students; formal student presentations in seminars and tutorials; and students actively assisting other students, both in small group learning activities in tutorials or labs. The unique component of the peer teaching experience at UTMB's Department of Physical Therapy is that post-professional students enrolled in a training grant are the 'teachers' of the second year Master of Physical Therapy (MPT) students. The post-professional interns are the leaders of the class; they decide what material will be presented; how the material will be presented; they decide how much time is spent on each activity; and if there will be reading assignments, 'contests' at the end of class to determine student comprehension of the material, etc. If videos are used they are to view these and lead the discussions that follow. They are also given an opportunity to critique the experience and outline what changes they would make in the future. Student presentations are beneficial to the students who have to research and understand their topic in order to be able to present clearly; they are also beneficial to students in the 'audience' who may find another student's explanation simpler and easier to understand than the teacher's, who might have forgotten what it was like not to understand a concept or topic (Beasley, 1997). Another benefit is the recruitment of promising future teachers into the profession.

MAKING THE CONNECTION: SCENARIO-BASED MULTI-LEVEL LEARNING FOR COUNTERTERRORISM INTELLIGENCE ANALYSIS, Chad Barksdale. Imedia.it, Inc., Instructional Design, Houston, TX, 77027

Threat analysis is a vital component of homeland security. It is comprised of very complex tasks that utilize the fundamentals of data analysis, pattern recognition, and critical thinking. The US Army Intelligence Center and School at Fort Huachuca offers the Intelligence in Combating Terrorism (ICT) course as a solid, two week training program for Intelligence Analysts. Soldiers learn to apply analytical tools and methods to determine terrorist group membership, internal and external structure, capabilities, and patterns of activity. Soldiers also learn to distinguish terrorist groups by scope of operations, degree of state support, ideology, and organizational structure. However, a restricted audience and limited instructor resources created a challenge. A self-paced, distance learning solution that preserved the benefits of a hands-on experience was needed. The validation study results, of the first SCORM 2004 compliant course delivered to the Army, show that the ICT IMI Courseware has proven itself to be a strong learning tool with exceptional design and validation results. All participants showed marked improvement as they made repeated attempts. It provides students with a practice environment where they can master the basic skills and knowledge of analyzing potential terrorist threats. This is accomplished by the student while working at their own pace, and may require only one instructor for the block of instruction, when used in conjunction with the instructor-led ICT course. The courseware works exceptionally well in a controlled environment under the supervision of an instructor as a blended learning technology; however, it is designed for playability in a distance learning environment as an Internet- delivered distributive learning program for use in either a digital training facility or home based computer configuration. Chad R. Barksdale is an Instructional Designer at Imedia.it, Inc. a design firm which provides performance based training approaches with complex programming architecture. He earned his B.A. in Communications from Texas State University and his M.S. in Instructional Technology from the University of Houston – Clear Lake.

ASSESSING RESIDENTS' READINESS TO SCREEN FOR DOMESTIC VIOLENCE: UTILIZING THE TRANSTHEORETICAL MODEL'S STAGES OF CHANGE, DECISIONAL BALANCE AND SELF-EFFICACY, Laura Benjamins MD. The University of Texas Medical School at Houston, Departments of Family Practice/Community Medicine and Pediatrics (Adolescent Medicine), Houston, TX, 77030

Background: Domestic violence is experienced by millions of Americans each year and is associated with high morbidity and mortality. Most physicians, however, are ill prepared to identify and treat this major public health problem. This study utilizes a survey that uses constructs from the Transtheoretical Model to assess the readiness of primary care residents to screen for domestic violence. Information from this survey will be used to help design a curriculum on violence for primary care residents. Design: A forty-one item, self-administered survey was designed utilizing the Transtheoretical Model constructs of stages of change (SOC), decisional balance (pros and cons) and self-efficacy. From January to September of 2005, the survey was piloted with Pedicatric, Med/Peds, Internal Medicine and Family Medicine residents. Results: Of the 54 respondents, 29 (53.7%) were Pediatric residents, 3 (5.6%) Med/Peds, 5 (9.2%) Internal Medicine, and 17 (31.5%) Family Medicine. Only 2 residents (3.7%) indicated that they were currently screening all patients for domestic violence, and had been doing so for more than 6 months (Maintenance,). Most residents were in the earlier stagesa of precontemplation (50%), contemplation (16.7%) or preparation (29.6%). As predicted by the model, as stage of change increased (from precontemplation to maintenance) residents' self-efficacy increased (from 3.34 to 4.78 on a 5-point Likert scale), pros for screening increased (from 3.66 to 4.65) and cons decreased (2.32 to 1.4). Conclusions: A majority of the residents surveyed were not ready to screen all of their patients for domestic violence. The importance of barriers to screening (cons) and lack of self-efficacy may play a role. We will therefore develop a curriculum on domestic violence for residents that is stage-matched, promotes the pros over the cons, and encourages self-efficacy for screening.

A COMBINATION OF MULTIMEDIA, PROBLEM BASED LEARNING AND INTERACTIVE COURSE DESIGN, Jung-Wei Chen DDS, MS, Craig Johnson PhD, Thomas Wild DDS, Cynthia Phelps PhD, Robert Tate DDS, MS. The University of Texas Dental Branch and School of Health Information Science, Pediatric Dentistry and Health Informatics, Houston, TX, 77459

Dentistry requires not only rote memorization, decision making and problem solving skills, but also high levels of sensory-motor ability. The theoretical framework for sensory-motor skills is based upon information processing theory, and it emphasizes the importance of feedback in correcting motor behavior and selective attention in determining what actions are taken. It suggests two ways in which learning/teaching of motor skills can be facilitated: (1) slowing down the rate at which information is presented, and (2) reducing the amount of information that needs to be processed in each step. Multimedia programs have shown a positive effect in the development of higher cognitive skills in science learning. The use of multimedia representations of abstract scientific concepts has been related with enhanced holistic understanding of the content. Problem based learning has been proved to be a very effective way to teach undergraduate dental student in clinical diagnosis and treatment planning. In this current study, the course was designed with well rounded supports, such as interactive website, multimedia supportive material; problem based learning and hand-on experiments. The students were encouraged to use the interactive website to communicate with the faculties. The multimedia supportive material including animation, digital video clips, online PowerPoint slides show, and traditional video. In the problem based learning part, every 5 students are formed as a small group; they received the assigned cased with history, clinical pictures, radiographs and vital signs. Each group has to present the case in a formal manner to the class. This is a pediatric dentistry course now currently taught for second year undergraduate dental students and received a very positive response to it.

BUILDING M & M RELATIONSHIPS: MENTORING FOR PROFESSIONAL SUCCESS, Ming Ying Chu-Weininger PhD, MBA, MPH, MSLIS, FRIPH. Veteran Affairs Medical Center (152)/ Baylor College of Medicine, Health Services Research/ Department of Medicine, Houston, TX, 77030

The trajectory of a successful academic career is an accolade of good mentoring relationship, as is found in most fellowships today. This is true especially when a dynamic interpersonal mentor-mentee (M&M) relationship offers professional stimulation to both the junior and senior faculty members. On the other hand, mismatch or unrealistic assumptions about the attributes of a mentoring relationship are often precursors to the failure of the relationship. Imposed uncomfortable roles or responsibilities may challenge mentee's value systems and do more harm that benefit. It can be worse if the mentor failed to steer the unaccomplished mentee. Mentoring carries long-lasting effects on protégés, whether good or bad. It is, therefore, important to identify the obligations of being mentors or mentees. Institutional support through well structured mentoring programs facilitates perpetuation of gratifying cycles. Finding the right mentor(s) by alignment of expectations is the first step towards rewarding relationships. This workshop discusses attributes of successful and unsuccessful mentoring relationships: roles and responsibilities that may challenge both parties' values, and rewards that come along with successful relationships. Details that will be covered include how to find the right mentor(s) and avoid mismatches: mentor and mentee's roles, responsibilities, expectations, commitments, and detection of signs indicative of non-commitment through deteriorations in ritualistic "courtship" activities. E-mentorship, communication skills, resources for mentors, and evaluation of the M&M relationship will be explored. Best practices and core mentoring principles will be discussed. Learn about simple rules in mentoring that may benefit you for a long time. "The turquoise color transformed from blue is better than blue." It is a Chinese idiom meaning that the protégé, who under the influence of the master's experiences, is able to achieve better than the master. Whether you would like to be the color turquoise, blue, or both, come join us and have fun!

THE USE OF STANDARDIZED PATIENTS AND MOULAGE TO ILLUSTRATE INFECTIOUS DISEASES IN THE MEDICAL MICROBIOLOGY CLASSROOM AND LABORATORY, Rebecca Cox PhD, Tamara Owens MS, Karen Lewis PhD. The University of Texas Medical School at Houston, Microbiology and Molecular Genetics, Houston, TX, 77030

Education theory suggests that once students become excited about a topic, they become active learners. To present course and laboratory material in a more engaging and meaningful manner, we used a combination of Standardized Patients (SPs) and moulage to illustrate infectious diseases in medical microbiology classroom and laboratory settings. SPs are lay people from the community coached to simulate patients with medical illnesses. Moulage is the art of applying makeup, latex, or other theater techniques to SPs to add realism to simulations created to train healthcare professionals. With moulage, we created the appearance of specific microbial infections on the skin of SPs. This method has been used successfully to train medical first responders about naturally emerging or bioterrorist generated infectious diseases. Therefore, this method should also succeed in increasing the student's ability to recognize infectious diseases and to learn the related basic science of medical microbiology. Evaluations by first year medical students indicate that the use of SPs illustrating infectious diseases has stimulated their interest in microbiology and is useful in helping them retain course material. From this initial assessment, it appears that the use of SPs is an effective method of teaching microbiology in the classroom and laboratory.

WOUND JEOPARDY, Janet Davis MSN,RN,APRN-BC,CWOCN, Kathleen Murphey BSN, RN, COCN, CWCN. The University of Texas M.D. Anderson Cancer Center, Nursing Professional Development & Education, Houston, TX, 77030

Introduction: In the Wound, Ostomy, Continence Nurse Education Program, 42% of didactic content is wound management. A way to evaluate presented material and reinforce teamwork through shared decision- making was needed because of varied wound care and nursing experiences of the BSN-prepared RN/WOCNEP student. Rationale: Our goal was to create a game that informally tests and reinforces student wound product and wound management knowledge through a fun, interactive, and challenging format. Methodology: Two popular American game shows, Jeopardy and Family Feud were combined to create this educational tool. Using the Jeopardy format, a game board was fashioned on a clear shower curtain. Six topic categories and columns of color-coded cardstock with monetary values were affixed to the game board via clear pocket sleeves. As seen on TV, the game provided single and double Jeopardy rounds. As in Family Feud, WOCNEP students were divided into two groups and each participant alternated as spokesperson for their team. The spokesperson had a 20 second time limit in which to provide an appropriate response in the form of a question. Correct responses resulted in a team winning the monetary value assigned to that answer/question. Like Family Feud, an incorrect response allowed the opposing team the opportunity to respond correctly and assume control of the board. If the second team responded incorrectly, control of the board remained with the first team. In single Jeopardy, focus was placed on evaluating wound product knowledge while double Jeopardy's focus was clinical application. Results: The student's active game participation involved all team members regardless of previous experience or knowledge level, reinforced their knowledge and application of the material presented and was reflected in positive course evaluations. Conclusions: The game format provided the WOCNEP student with a valuable and active learning tool that reinforces the principles of adult learning.

CHRONIC ILLNESS NEEDS EDUCATED DOCTORS (CINED): AN INTERVENTION TO IMPROVE HEALTH RELATED QUALITY OF LIFE, Carlos Dumas MD, Lee Cheng MD, MSc. The University of Texas Medical School at Houston, Family and Community Medicine, Houston, TX, 77030

Initiative and Objectives We recently designed and implemented a family medicine residency curriculum program that encourages the use of health related quality of life (HRQoL) measurement in the care of patients with chronic illnesses. HRQoL (a person or group's perceived physical and mental health over time), is strongly correlated with morbidity and mortality. The curriculum trains our 36 residents to use: 1) the SF-36 instrument to document the HRQoL for patients with chronic illness; 2) motivational interviewing and brief interventions to improve the progress of patients; and 3) a flash drive portfolio as evidence of achieving a practice-based competency in chronic illness. Outcomes Following the receipt of federal grant funding, we presented workshops to teach residents and faculty the application of the HRQoL concept to routine patient care. All residents received HRQoL measures in English and Spanish, electronic readings, and a flash drive on which they keep track of the longitudinal progress of patients to whom they have administered the measure. Residents also upload additional readings about and reflections on these patients' chronic diseases To date, 20 residents have submitted the HRQoL measures from their patients with chronic illness. Upon receipt of these measures, we now use software to translate the patients' HRQoL into a visual format with comments. Residents have demonstrated that they can use suggestions for patient care based upon the measures and have placed their suggestions on the flash drive. Substantial functional and emotional limitations that adversely affect patients' HRQoL have led residents to write detailed preferences for the care and management of these chronically ill patients. Conclusion A new chronic illness curriculum has been implemented. HRQoL can serve as a focus for improving outcomes of care for chronically ill individuals.

BEING A STUDENT NURSE IN A PRECEPTED CLINICAL GROUP: QUALITATIVE AND QUANTITATIVE FINDINGS, Linda Dune PhD, RN, David Kohne MS, Kristin Ownby PhD, RN, Renae Schumann PhD, RN. The University of Texas School of Nursing at Houston, Acute and Continuing Care, Houston, TX, 77030

The shortage of nursing faculty has contributed greatly to the nursing workforce shortage. Nursing schools are turning away qualified applicants because there are not enough faculty to teach. Despite the faculty shortage schools are required to admit more students to alleviate the nursing shortage. Traditional nursing school clinical groups in Texas must maintain a student faculty ratio of 10/1, which is very expensive and difficult for nursing schools with larger programs to manage. Clinical groups in which preceptors are responsible for student learning may have a student to faculty ratio of 24/1, which extends faculty resources and increases flexibility for busy nursing students. Purpose: To determine the effectiveness of an alternative clinical experience (preceptorship). Methods: triangulation using quasi-experimental and qualitative methods. Groups were compared according to first semester clinical course grade, pharmacology course grade, second semester test scores, HESI scores, and quality and timeliness of clinical paper work. Preceptors and students were interviewed regarding their experiences and transcripts subject to qualitative analysis. Sample: 43 undergraduate nursing students enrolled in the second semester medical-surgical nursing course. 23 randomized to the experimental group. The preceptors were baccalaureate prepared nurses who have been practicing at least one year. Setting: two hospitals located in the Texas Medical Center. Statistical analysis: descriptive statistics and independent t-test. Results: there was no difference between the groups on the variables of interest. Content analysis was used to analyze the interviews conducted with students in the experimental group and their preceptors. Results revealed strengths and weaknesses of the preceptor experience by both the students and preceptors. Conclusion: Students in a preceptored clinical perform as well as those in a traditional clinical group. Precepted students believed they had more exposure to a variety of patients, better time management and organizational skills, and a real world view of the nursing profession.

INCREASING PATIENT RESOURCES IN AN ERA OF COST CONTAINMENT, Coni Ellis MS, RN, OCN, CWOCN, Janet Davis MSN, RN, APRN-BC, CW. The University of Texas M.D. Anderson Cancer Center, Nursing Professional Development and Education, Houston, TX, 77030

Increasing Patient Resources in an Era of Cost Containment This podium presentation will discuss how two Certified Wound, Ostomy, Continence nurses (CWOCNs)extended the services of the CWOCN's at their institution and in their community without great expense. This information should serve as a guide for other nurses facing this problem. The problem: an increase in the demand for the expertise of CWOC nurses services and the lack of educated nurses led to the development and presentation of an all day long "Basic Ostomy and Wound Care Workshop." (BOW's) The treatment: These 8 hour workshops were designed and marketed (via brochures/journal advertising) to nurses in the Houston metroplex hospital, out patient clinics, long term care and home care settings. THe $75.oo fee covered continental breakfast, lunch and course materials. The content of the workshop was broken down into 2 four hour segments (and awarded Texas CNE contact hours).The am portion focuses on ostomy care covering the general principles of assessment and management of patients undergoing GI or GU ostomy surgery. Suggestions are given for dealing with simple stoma and peristomal complications. Each participant prepares and wears a pounch until the end of the day. The second segment on basic wound assessessment, management and documentation, focuses on pressure ulcers and lower extremity ulcers. Using a gaming technique/case study wound care products are reviewed and the participants are rewarded with small prizes for their participation. BOW's has now been presented 10 times. Informal surveys of CWOCNs" in hospital/non-hospital settings report an increase in the number of patient needs being met in a more timely manner, decreased stress of the CWOCNs and increased job satisfaction of the newly education nurses.

INCREASING ENROLLMENT CAPACITY WHILE OPTIMIZING CRITICAL INCIDENT MANAGEMENT BY BACCALAUREATE NURSING STUDENTS USING HIGH-FIDELITY HUMAN PATIENT SIMULATION FACILITATED BY NON-FACULTY REGISTERED NURSES, Jan Foster RN, PhD, Susan Sheriff RN, PhD. Texas Woman's University, College of Nursing, Houston, TX, 77030

The nursing shortage in Texas has affected patient care. A shortage of qualified nursing faculty is a crippling force in efforts to increase the number of nurses needed to meet the healthcare needs of Texans. Faculty shortages have necessitated turning away thousands of qualified nursing applicants. At the same time, patient acuity is increasingly higher, with complex management. "Higher acuity with fewer nurses is a prescription for danger" (JCAHO, 2001). Maximizing faculty resources using non-faculty registered nurses (RNs) to supervise high-fidelity human-patient simulation (HPS) is an innovative strategy for addressing the nursing faculty shortage and preparing graduates to practice safely in hospitals. Texas Woman's University and Baylor University Louise Herrington School of Nursing have collaborated with 4 hospitals (The Methodist Hospital, S. Luke's Episcopal Hospital, and Memorial Hermann Hospital, Houston; Baylor University Medical Center, Dallas) for this project. The goal of this project is to increase student enrollment by training RN's from the hospital to teach simulation to nursing students which allows nursing faculty to teach more students in the classroom and clinical setting. During the first year of this two year funding period, 50 non-faculty RNs have been recruited for the program, mentored in the faculty role, and trained in high-fidelity HPS. During the second year of funding the non-faculty RNs will oversee high-fidelity HPS for 800 nursing students. As the use of clinical simulation under the direction of non-faculty RNs increases, the ability to accommodate more students in a clinical rotation with the same number of faculty increases.

USING TEAM LEARNING (TL) ON A PEDIATRIC IN-PATIENT SERVICE: AN EXPLORATORY ANALYSIS, Johnnie Frazier MD. The University of Texas Medical School at Houston, Pediatrics, Houston, TX, 77030

OBJECTIVE:To compare the benefits of team learning and lecture style on an in-patient pediatric service and levels of learner satisfaction with these two types of instructional strategies. METHOD:After attending a lecture and team learning activity, a four section, 15-item Likert scale evaluation was administered to third year medical students and first year residents. Response categories ranged from 1 to 5, with 1 indicating strongly disagree and 5 indicating strongly agree. Section one included statements about team learning concepts, materials, and preparatory instructions; section two learners responded to items about the individual readiness assurance test (IRAT), group readiness assurance test (GRAT), content, and group stimulation-discussion; section three included statements directly related to the learning activity and team interaction; and the last section included items comparing the benefits and learner satisfaction of TL and lecture style. RESULTS:Ninety-three percent of the learners agreed that the TL activity was instructive and provided valuable information. Ninety-one percent agreed that the TL style was effective and preferable than the lecture style. When the learners were asked if they preferred lecture style 26% agreed, whereas 59% disagreed and 23% were neutral. Eighty-four percent of the learners agreed that the faculty was knowledgeable and responsive to learner questions. Over 90% of the learners felt the TL style stimulated discussion among team members. CONCLUSIONS: This evaluation suggests learners enjoy and prefer TL to lecture style, however, a small percentage of learners prefer the lecture style. This study shows an overall positive response from learners to TL style. These results should provide an impetus for further exploration of the feasibility of implementing team learning within the pediatric in-patient setting.

TAKE TEN: A TEN MINUTE REVIEW FOR ONCOLOGY NURSES, Edwin Garcia RN, Carole Elledge MSN, RN. The University of Texas M.D. Anderson Cancer Center, Nursing Professional Development & Education, Houston, TX, 77030

Topic: TakeTen: A Ten Minute Review For Oncology Nurses E-learning is becoming increasingly recognized as a viable means of presenting educational content to nurses. The "just-in-time" approach afforded by e-learning offers the learner the opportunity to access content they value without barriers such as instructor, classroom or materials availability. At the University of Texas MD Anderson Cancer Center, the Nursing Professional Development and Education Department (NPD&E) is charged with meeting the orientation and ongoing education needs of over 2000 nurses in clinical, research, and other practice roles. In developing the "TakeTen" program, the E-learning team developed a strategy to offer core and cutting-edge oncology content in an interactive format to nurses across the institution. Purpose: The objective for this offering is to describe the "TakeTen" program from inception to implementation and evaluation. Interventions: The program was initiated in May 2004 and is planned so participants should only need approximately 10 minutes to complete each session. Each offering addresses a single oncology topic and is comprised of four multiple-choice questions, answer and rationale, references, and additional resources. The "TakeTen" link is sent to all nurses at UT MD Anderson biweekly via the email. Archived offerings can be accessed via the intranet. A database tracks number of correct responses, evaluations, and topic recommendations. Topics presented to date include Chemotherapy Induced Nausea and Vomiting, Obesity and Cancer, Gene Therapy, Acute Lymphoblastic Leukemia, and Superior Vena Cava Syndrome, and many more. Evaluation: To date, the site has incurred over 10,000 "hits" and completed evaluations for each offering have been highly favorable. A program evaluation was created and sent to nurses in December 2005. This online Likert-style evaluation included nurses' satisfaction level with the method of content delivery, participants' perception of value of the offering in meeting their educational needs, and impact on clinical practice. Discussion: E-learning offers a flexible and interactive means of delivering a wide range of information to nurses in diverse practice roles. The "TakeTen" program was created to enhance the nurses' knowledge of oncology content in a highly palatable manner. The planned evaluation will provide insight into the learners' perceived effectiveness of this teaching model and hopefully, guide us in developing additional e-learning offerings.

UTILIZING SIX SIGMA METHODOLOGY TO REDUCE HOSPITAL-ACQUIRED PRESSURE ULCERS, Senaida Garza RN BSN, Veronica Okere RN BSN CWOCN, Elaine Presutti RN CCRN, Jackson Igbinoba RN BSN BC, Kristi Novosad RHIA. Memorial Hermann Southwest Hospital, Center For Learning, Houston, TX, 77074

In 2004, Memorial Hermann Hosptial, Southwest (MHSW), in Houston, Texas noted a 12% incidence rate in hosptial-acquired which is higher than the national incidence rate of 7% to 9% in acute care setting. Utilizing the Six Sigma DMAIC (Define-Measure-Analyzing-Improve-Control) process, a nurse- led Six Sigma team set a target goal of 50% reduction in incidence rate in the first 6 months. Interventions to decrease hospital-acquired pressure ulcers were driven by the DMAIC process. In the define stage, a team of one Black Belt and two Green Belts were elected and trained to supervise and lead the hospital skin champions. The 20 Skin Champions consist of 2 nurses from each unit to include the Clinical Educator and one content expert (a cerified wound, ostomy and continence nurse). Educating the Skin Champions was very important and included an 8-hour workshop on skin, wound assessment and documentation and management of chronic wounds; several workshops and educational activities on the use of Negative Pressure Wound Therapy, Braden Pressure ulcer Risk Assessment tool and appropriate interventions, pressure reduction/reliefing surfaces and off- loading devices. These efforts were frequently measured by conducting monthly prevalence and incidence studies, weekly audits on skin assessment, Braden Scale documentation and interventions on admission (initial) and daily on the 24-hour flow sheet and nursing staff shift report on patient's skin status. Data demonstrated a reduction of the incidence of pressure ulcer from 12% to 5.4% within 6 months of initiating the Six Sigma project and a cost avoidance of $1.2 million. The incidence rate has since then decreased to as low as 2.9% and maintained for several months.

ASSESSING HEALTH CARE LEADERSHIP COMPETENCIES USING PORTFOLIOS, Gretchen Gemeinhardt PhD. Texas Woman's University, Health Care Administration, Houston, TX, 77030

Finding effective ways to assess student learning is crucial in health care management education. Without a professional field exam, it is difficult for programs to evaluate student leadership competencies as well as quantify value-added or support continuous improvement of curriculum. Other graduate disciplines such as school administration, library science and recently, medicine, collect student portfolios as part of their outcomes-based educational framework. Many of these disciplines also report using portfolio assessment results for program evaluation. The portfolio, however, is not widely used in health care management education though portfolios have the potential for both student demonstrations of competency development as well as program evaluation. The purpose of this paper is to discuss the development of student portfolios in a graduate health care administration program to demonstrate health care leadership competencies. The health care administration program requires students to complete and present a professional portfolio as part of its graduation requirements. Portfolios contain students' ongoing work over time, which provide evidence of learning and progress on educational and professional outcomes or learning objectives. In addition to providing a method to evaluate a student's progress, the development of the portfolio serves as a tool to empower a student's reflective process. Students present their portfolios to both program faculty and employer representatives. Having students present their portfolios to employers helps ensure currency and relevance of curriculum. Employer representatives and faculty members evaluated student portfolio presentations using a portfolio evaluation rubric. Inter-rater reliability as well as the relationship between the six evaluation subscales was examined. In addition, the relationship between portfolio scores, graduate GPA and entering GRE or GMAT scores was explored to see if the findings from this study suggest that portfolios can serve as a valid and reliable measure for assessing student competency.

USING GROUP PROJECTS TO TEACH NURSING THEORY TO UNDERGRADUATE BACCALAUREATE NURSING STUDENTS, Robert Hanks MSN, RN, Claudine Dufrene MSN, RN. The University of Texas Medical Branch, School of Nursing, Galveston, TX, 77555-1029

Teaching nursing theory to nursing students in a realistic, applicable, and practical sense can be a challenge to nursing educators. This poster describes an application method of using collaborative group projects as a method of teaching nursing theory to undergraduate nursing students enrolled in a fundamentals nursing course. The application of this method has been piloted for two years with students being divided into groups of approximately 10 students with each group being assigned a nursing theorist to present. In year one, students created PowerPoint presentations focusing on the assigned nursing theorist and posted the presentations online using a WebCT platform. For year 2, students created and presented live presentations on their assigned nursing theorist. Student surveys indicate that students' comfort level with using nursing theory in practice increased after presenting the group project. A majority of students recommended further use of the group project method for teaching nursing theory in the future. In addition, this pilot project also encourages the use of team building to perform collaborative work for completion of a project.

DIAGNOSIS, EVALUATION AND TREATMENT OF PEDIATRIC OBESITY USING THE TEXAS PEDIATRIC SOCIETY OBESITY TOOL KIT, Jennifer Helmcamp MD, Amalia Guardiola MD. The University of Texas Medical School at Houston, Joint Primary Care Fellowship-Pediatrics, Houston, TX,

Focus: Currently, the burden of childhood obesity/overweight falls on 14% of children in the United States. Studies show that practicing pediatricians are not appropriately diagnosing and treating childhood obesity. We have designed a curriculum, to be implemented in a series of hands- on workshops that will teach 3rd year pediatric residents to use the Texas Pediatric Society Obesity Tool Kit (OTK) as a guideline for the appropriate diagnosis, evaluation and treatment of pediatric obesity. Using the OTK will help residents meet the ACGME core competencies of patient care, medical knowledge, practice-based learning and improvement, and interpersonal and communication skills Moreover, residents who learn to use the OTK in their third year of residency will have an evidence-based guideline to follow when practicing in areas with fewer resources. . Implementation: The specific goals of the curriculum include: implementation of the TPS OTK to understand diagnostic criteria and co-morbid condition for obese children, initiate appropriate work-up, and counsel obese children and their families. The material in the OTK will be covered during a 2 session workshop by a facilitator trained at a TPS sponsored conference by the designers of the OTK. Each participant will be provided with an OTK to read prior to attending the workshop. Lectures will be given at the beginning of each session on how to reference the OTK for diagnosis, evaluation and treatment of obesity. Then, residents will join small groups and go over case presentations to provide them with guided-practice on history taking skills and evaluation of co- morbid conditions. These small groups will take part in role-playing scenarios that will reinforce nutritional and exercise counseling skills. A pre-test given prior to the OTK Workshop will be compared to that of a post-test for outcomes evaluations. If successful, the TPS will implement this workshop at other residency programs.

REDUCING REPETITIVE MOTION INJURIES BY PROMOTING ERGONOMIC SKILLS IN RADIOLOGY RESIDENTS, Jeffrey Helmcamp MD, Jennifer Helmcamp MD. The University of Texas Medical School at Houston, Diagnostic & Interventional Imaging/Radiology Diagnostic, Houston, TX, 77038

In recent years there has been a proliferation of Picture Archiving and Communication Systems (PACS) workstations, electronic medical records and voice recognition dictation systems. With increasing exposure to these technologies, radiologists are at increasing risk for repetitive motion injuries. Currently, typical reading rooms and workstations are not designed to maximize ergonomics and there is little education provided to radiology residents regarding prevention of repetitive motion injury. The goal of this curriculum is to increase awareness of repetitive motion injuries in the workplace, decrease the incidence of injury of radiology residents, and introduce radiology residents to ergonomic equipment and techniques for prevention. This curriculum will provide a lecture series to 1st year residents at UT Houston Medical School early in their training. Each lecture will be taught by a different specialist including an orthopedic surgeon, occupational therapist and information technologist to provide information about ergonomic strategies and equipment. In addition, residents will be able to practice and reinforce their knowledge of these techniques using an Ergonomic Workstation placed in the Hermann Hospital ER. This location was selected for its steady work load and frequent use by all residents. A website will be available as a resource for residents to review the ergonomic information as they practice at the workstation. An in-service will be provided to give residents an initial experience with the Ergonomic Station and the informational website. This in-service will be facilitated by an information technologist and radiologist who will be able to answer any questions the participants have about use of the ergonomic equipment or about navigating the website. Residents will complete a brief pre-test covering knowledge of ergonomic techniques, as well as a post-test to assess the efficacy of the curriculum.

CHALLENGES OF RAPID DEVELOPMENT: CREATING COMPUTER BASED TRAINING FOR NEW NURSING SOFTWARE, Jaime Henderson. Imedia.it, Inc, Instructional Design, Houston, TX, 77027

When MD Anderson was developing new medical records software, they needed to train large numbers of nurses very quickly. Computer Based Training (CBT) seemed like the optimal solution. However, rapidly producing CBT to teach the use of software still under development presented three main challenges. The first challenge was to find a way to present the material most effectively, while still meeting time and budget constraints. Several options were considered, ranging from a text- based tutorial describing the system to a fully interactive simulation of the software. Once this decision was made, we faced the challenge of exactly what needed to be taught. Different nurses would need to know different elements of the software. Close collaboration between representatives from Nursing, Nursing Education, Training, the software development team and the CBT developers was required to narrow down the topics to be covered and direct the instruction toward nurses in various settings. The final challenge was simply meeting the training and implementation deadline. Because the software was still under development, specific screens and procedures were changing daily. Technical challenges included making sure the audio and video elements worked as expected for a course delivered across the internet and making sure the course worked correctly in the new Learning Management System (LMS). The ultimate solution to these challenges was a fairly simple overview of the software using audio and video to demonstrate procedures nurses would following during the course of their day. By keeping the technology fairly direct, we were able to create the training even as the developers where finishing the final software. And, finally, because the LMS delivery made the CBT available over the internet, nurses were able to easily access the training at their convenience and complete the training in time for the software implementation.

AN INNOVATIVE INSTRUCTIONAL DESIGN FOR GRADUATE LEVEL NURSING RESEARCH,

Yuh-Fong Hong PhD. The University of Texas School of Nursing at Houston, Nursing Systems, Houston, TX, 77030

Research Application, a graduate level nursing course, provides information relevant to the use of computer technology for nursing research. This course emphasizes on the hands-on learning of computer packages including reference retrieval systems, a bibliography management program, and SPSS statistical software. With the increasing diversity in nursing student body, students varied largely in computer knowledge and skills. It becomes challenging for students who are not computer literate to learn software programs through in-class demonstrations and practices. To address this issue, multimedia-oriented online modules were developed. The goal of these modules was to offer an easy-to-use and yet interactive learning environment that tailors to each student's leaning needs and learning styles. Online lectures were created using Microsoft Producer. Producer integrates PowerPoint as its base program and incorporates streaming video/audio. Producer shows a classroom-like PowerPoint presentation. Students use the control bar and a content list to navigate through the presentation and review any slide. PowerPoint is the most popular instructional technology in nursing schools. Thus, this format was chosen to reduce students' anxiety in learning online contents. To facilitate students' hands-on learning experiences for various computer programs, detailed step- by-step demonstrations were created using Macromedia Captivate. Captivate can record actions on a computer screen. Captive displays step-by-step interactive video with captions and/or audio. With the control bar, students can play, pause, move forward or repeat steps in the demonstration video. With full control of the demonstration, students can easily watch the animated video while work simultaneous hands-on practices. Compared to students without online modules, using online modules helped students decreased computer anxiety. Students who were not computer literate found this method to be user friendly and helpful for them to complete assignments without difficulties. Overall, students liked the interactive program demonstrations and they learned other essential computers skills at the same time.

RESEARCH GOES BETTER WITH COKE, Everlyne Jackson MSN, RN. Memorial Herman Southwest Hospital, Center for learning, Houston, TX, 77074

Research Goes Better With Coke Abstract Objectives: To provide a brief description of web-based research program using a unique strategy designed to educate staff nurses about the research process and illustrate model for the Center for Nursing Excellence's model at Hermann Memorial Hospital Southwest. Background: The need for nursing practice to be founded on research has been well established. Hospitals now require educational programs to teach the research process to nurses on a large scale. These educational programs must be basic enough to accommodate individuals with different levels of education. The desire to continue the creation of a culture of excellence at Memorial Hermann Southwest Hospital was the impetus for this venture. A model which demonstrated the incorporation of research as a component of a four part Center for Nursing Excellence where all four components functioned interdependently was the overriding goal of this venture. Methods: A web-based intranet educational research program entitled, "Research Goes Better With Coke" was developed as a means of demonstrating the research process. The population of concern was overweight teenagers who consume large amounts of soft drinks. This research inquiry examined the preferences of teens when Cocoa-cola was sweetened with fructose, splenda, and aspartame. The project was designed to attempt to identify a low- or no-calorie sweetener that has an acceptable taste to teenagers. An instructor-led workshop was conducted to evaluate learner responses. Results: Nurses verbalized an increased understanding of research and comfort level with the research process. The overall evaluation score on all areas was 4.7 on an ascending scale of 1 to 5. Nursing Implications: Using coca-cola to teach research to nurses was an effective strategy. Using an intranet web-based tutorial to teach nurses the research process proved to be a convenient and suitable methodology for instruction.

COMPARISON OF GRADUATE AND PROFESSIONAL STUDENT RISKS FOR SUCCESS IN HEALTH EDUCATION DISCIPLINES, Craig Johnson PhD, Ronald Johnson DDS, John McKee PhD. The University of Texas Health Science Center at Houston, School of Health Information Sciences, Houston, TX, 77030

Purpose. Utilizing the Personal Background and Preparation Survey (PBPS), this project obtained individual risk counts of factors putting students in graduate and professional schools at risk for success in their academic programs. It then determined whether PBPS risk counts differed significantly by discipline or underrepresented minority (URM) status to identify where students might benefit from an early alert and retention program. Methodology. In August 2004, 541 graduate and professional students from six health science schools in the Houston Texas Medical Center were administered the PBPS during first year orientations. Valid counts of risk measures were obtained by counting PBPS risks identified by each student. Coefficient alpha reliability of the 51 risk items of the PBPS was 0.774. Parametric and nonparametric ANOVA's (a = .05) were performed on the same six by two (School X URM Status) nonorthogonal factorial design. Both were employed due to violations of ANOVA's normality assumption, and grossly diverse cell sizes ranging from 11 to 161. Nonparametric procedures employed the Puri-Sen L test, L = (N -1)SSH/SST; (Puri & Sen, 1969, 1971, 1985; Thomas, Nelson & Thomas, 1999; Zwick, 1985; Harwell & Serlin, 1989). Parametric and nonparametric (L test) versions of the FSD2 procedure, recommended by Cohen (1983) and generally unexcelled in maximizing statistical power while minimizing experimentwise alpha level inflation (Carmer & Swanson, 1973), were employed for post hoc comparisons. Both procedures yielded identical significance test decisions. Results and Discussion. Students were identified with significant numbers of risks. URM's had uniformly high numbers of risks. Schools having the lowest overall risk were schools where URM's had significant and substantial risk disadvantages. Overall risk levels mask substantial risk disadvantages for URM's at schools where the overall risk is least and where a URM targeted early alert retention program would address the greatest risk differentials.

FACULTY GUIDE TO STUDENT RESOURCES AND SERVICES, Ronald Johnson DDS, Craig Johnson PhD. The University of Texas Health Science Center at Houston, Office of Cultural and Institutional Diversity, Houston, TX, 77030

Faculty counseling and mentoring provide assistance to students facing risks, concerns and challenges that affect teaching and learning in graduate or professional health education programs. The University of Texas Health Science Center at Houston, Office of Cultural and Institutional Diversity, with input from faculty and consultants throughout the Medical Center, developed the "Faculty Guide to Student Resources and Services". An alphabetized list of concerns and challenges that affect student learning is conveniently located in the Table of Contents of the Guide. Page numbers quickly locate statements of explanation and suggestions advisors can use in the counseling process. Categories of concerns include academic, personal, familial, psychological and institutional issues. In the appendix, there is a listing of religious organizations (i.e., churches, synagogues, temples, mosques, etc.) to help students locate their spiritual needs. There is also a list of student organizations to assist those who feel isolated or want involvement in student government. An advisor-student contact record provides a document to record date, time, place and topic of the student's visit. The cover page clearly warns that under no circumstances should an advisor attempt to make a clinical diagnosis or provide professional counseling for concerns self-reported by students. Instead, the advisor should use the services and resources outlined in the faculty guide to suggest sources for assistance. The Guide provides a robust resource (especially in conjunction with the PBPS results) for targeted early-intervention and referral aimed at addressing students' needs.

TARGETED EARLY-INTERVENTION AND RETENTION OF GRADUATE AND PROFESSIONAL STUDENTS, Ronald Johnson DDS, Craig Johnson PhD, Chris McKee PhD. The University of Texas Health Science Center at Houston, Cultural and Institutional Diversity, Houston, TX, 77030

This project identifies and quantitatively measures characteristics that put graduate and professional students at-risk for successful completion of their educational programs. These characteristics are used in a program of Early-Alert and Intervention to reduce the number of students with academic problems, reduce attrition and improve retention. It features advising; counseling; efforts to improve study skills, test-taking abilities and time management; faculty training; and identification of available institution resources and services. The UTHSC-H Office of Cultural and Institutional Diversity, together with input from advisors throughout the University, designed a Personal Background and Preparation Survey (PBPS) to evaluate factors affecting student progress. The survey was converted into a "scannable" format for administration to first-year students during their August orientation. Survey responses are scanned into a database designed for this project. Advisors and students are encouraged to take advantage of the PBPS Program benefits. Background information, examples and excerpts of student interests and potential risks and concerns are used to generate two independent and confidential reports. Following student authorization for release, one of the reports is mailed to the student and the other to their advisor. Explanations and suggestions to help students resolve concerns are contained in the advisors' report. Total number and categories of responses for each student are assigned to high, medium or low groups. A six-week study skills workshop is offered during fall and spring semesters, and students with high or medium scores are strongly encouraged to participate in a workshop and follow-up counseling with their advisor. At the end of the academic year, students with clinical and/or academic problems are recorded; categories of responses and participation in the program are evaluated against other variables (i.e., gender, ethnicity, nationality, age, health education discipline, etc.).

A MODEL OF AN INTERDISCIPLINARY SKILLS DEVELOPMENT ENVIRONMENT FOR EMERGENCY/DISASTER RESPONSE TEACHING AND TRAINING, Florez-Arango Jose MD MS, Lopez-Jaramillo Jorge MD MS. UTHSC-H, SHIS, HOUSTON, TX, 77030

Emergency and disasters medicine require teams and responders properly trained, with specific skills, interdisciplinary orientation, and a high level of decision making. In order to offer a proper response in emergency and disaster situations in Colombia, a model of training and evaluation has been developed. Colombia is a country facing recurrent natural disasters and with an internal military/political conflict that leads to terrorist situation. We are presenting the elements of the model, which includes the use of On-Line training, use of simulators and role games, as well as the structure of the process to deliver the training including scenarios from the impact zone to the moment of patient discharge from the hospital, in all moments of the cycle of disasters. Also is presented some of the developments in simulation made with locally available resources, as example creation of an ambulance simulator and role games. This model has permitted create a strategy in how invest in the acquisition and use of simulators, and develop the concept of Pyramid of Simulation. This model has two components: macrosimulation (use of physical elements) and microsimulation (use of software). Our methodology uses three basic steps with different channels of information as rehearsal of the knowledge. Elements of this methodology has been applied in public and private medical education institution with high satisfaction of the alumni, long term permanency of knowledge and very well developed skills. The methodology has been applied for teaching first aids, prehospital care, massive casualties' triage, emergency preparedness for communities, industries and hospitals, blue code for emergency room teams, crisis handling, critical support for patient transport, response in emergencies in aircrafts for aircrew and medical personal, international humanitarian right protection. The concept and tools are used also as a methodology to evaluate teams and individuals. Benefits as repetition, availability acceptation and enjoyment of the learning are stated. Future development and strategies are presented.

IS IT A LEARNING OR IS IT A GAME?, Shari Koch PhD, Lorna Horton MS. Imedia.it, Instructional Technology, Houston, TX, 77027

Online learning is fast becoming a more readily used tool in training and education. Using an interactive 3D environment or simulated training keeps learners interested and attentive while increasing their motivation by allowing them to apply acquired skills and knowledge in a real world environment. Simulated training places the learner in computer generated real world situations. This type of interactive training leads to higher levels of thinking and the top levels in Bloom's Taxonomy. The learner is able to analyze, synthesize and evaluate the events in the virtual world and make decisions accordingly. The development of effective simulations can be a time consuming and expensive process. From an instructional design perspective, simulated training is a very complex product to create. Designing a simulated training course that is educationally sound requires an in depth analysis of measurable objectives or goals as well as inclusion of knowledge based content. Every possible situation that may arise within a given scenario must be well defined. Instructional designers must account for all possible actions the learner can take and give the learner the ability to take any such actions with real time consequences and supporting feedback. Effective simulated training requires thorough design based on educational principles and accurate depictions of real world environments.

ARE PERIOPERATIVE EMPLOYEES RECEPTIVE TO LEARNING IN AN ONLINE ENVIRONMENT?, Veronikia Lee RN, MSN, MBA, CNOR. Ben Taub General Hospital - Harris County Hospital District, Operative Services, Houston, TX, 77030

PURPOSE OF PROJECT: Online learning is progressively becoming popular in the nursing arena to increase knowledge and obtain continuing education credits. The purpose of this project is to assess the perception of perioperative employees to an online learning environment. BRIEF DESCRIPTION OF METHODOLOGY Surveys were distributed to perioperative employees in the operating room (OR) of a large teaching hospital, in order to assess their perception to online learning. Perioperative learning needs, learning characteristics, personal learning style, self-efficacy of online learning, and computer competence were assessed. RESULTS Of the respondents, 52.6% were registered nurses. Primary perioperative learning needs consisted of instrumentation, patient safety, coronary artery bypass grafting, and hip replacements. A majority of the respondents (89.5%) were suited for online learning, and 84.2% of the respondents indicated that they have adequate computer skills for online courses. Overall, the perioperative employees were receptive to a perioperative online learning environment. PERIOPERATIVE NURSING IMPLICATIONS It should be noted that only one hospital was included in this study. The study would be more conclusive by including a target audience of perioperative nurses within a larger geographic area. Upon generalized concurrence with online learning, a pilot perioperative online learning environment can be developed and implemented to assess effectiveness of the program. A comprehensive perioperative online learning environment will provide perioperative nurses the opportunity to easily access information at the worksite or home in order to increase knowledge, competency, and explore evidence based practices, thus contributing to optimized patient outcomes.

EVALUATION OF WEB-BASED LESSON USE AND STUDENT PERFORMANCE IN DENTAL BIOCHEMISTRY, Alan Levine PhD, MEd. The University of Texas Medical School at Houston, Biochemistry & Molecular Biology, Houston, TX, 77030

Objectives: Web-based lessons are increasingly used in dental and other educational settings. Studies indicate that these methods are well received by the students but few studies show a relationship between web-based lesson use and student performance. The purpose of this study is to describe the relationship between student use of web-based lessons and student performance in dental biochemistry. Methods: Web-lessons covered the metabolism section of Dental Biochemistry for 1st year students at UT-Houston, Dental Branch and were accessed through Blackboard course management software. IRB approval was obtained and students (N=61) self-selected to be in the study. Students completed a log recording the length of time they used each lesson, whether they printed each lesson, and whether the web-based lessons were used interactively. Time of use data was also obtained from the Blackboard server. All data was compared to student performance on two multiple choice exams and analyzed using the Pearson product-moment correlation technique. Results: A statistically significant negative correlation ($r = -.29$, $p = .02$) between student performance on exam 1 and the self-reported lesson use time was obtained indicating that the poorer performers on the exam used the lessons more. No statistically significant correlation was found between student performance on the 2nd exam and self-reported lesson use time or student performance on either exam and the web lesson access reported by Blackboard. No statistically significant correlation was found between student performance and printing of the lessons (<15% printed lessons) or interactive use of the lessons (>80% used lessons in this manner). Students responded positively (>80%) to a questionnaire evaluating lesson value and usefulness. Conclusions: Although students value the web-based lessons, no positive correlation between any aspect of lesson use and performance was found. Other factors such as previous knowledge of biochemistry, motivation, or learning styles might influence web-lesson use.

A MODEL OF AN INTERDISCIPLINARY SKILLS DEVELOPMENT ENVIRONMENT FOR EMERGENCY/DISASTER RESPONSE TEACHING AND TRAINING, Jorge Lopez MD MS, Jose Florez MD MS. The University of Texas Health Science Center at Houston, School of Health Information Sciences, Houston, TX, 77030

Emergency and disasters medicine requires teams and responders properly trained, with specific skills, interdisciplinary orientation, and high level of decision making. In order to achieve a proper response in emergency and disaster situations a model of training and evaluation has been developed in Colombia, country facing recurrent natural disasters and with an internal military/political conflict that leads to terrorist situation. We are presenting the elements of the model, which includes the use of On-Line training, use of simulators and role games, as well as the structure of the process to deliver the training including scenarios from the impact zone to the moment of patient discharge from the hospital, in all moments of the cycle of disasters. Some of the developments in simulation were made with locally available resources, as creation of an ambulance simulator and role games. This model has permitted also create an strategy how to invest in the acquisition and use of simulator, developing the concept of Pyramid of Simulation, with two components: macrosimulation (use of physical elements) and microsimulation (use of software). This methodology uses three steps with different channels of information as rehearsal of the knowledge as basis. Elements of this methodology has been applied in public and private medical education institution with high satisfaction of the alumni, long term permanency of knowledge and very well developed skills. The methodology has been applied for teaching first aids, prehospital care, massive casualties' triage, emergency preparedness for communities, industries and hospitals, emergency room teams in blue code, crisis handling, critical support for patient transport, response in emergencies in aircrafts for aircrew and medical personal, international humanitarian right protection, as well as a methodology to evaluate teams and individuals. Benefits as repetition, availability acceptation and enjoyment of the learning are stated. Future development and strategies are presented.

MULTIMODAL LEARNING STRATEGIES FOR EFFECTIVE SELF-CARE EDUCATION IN NURSES, John Luquette MA, LPC, LCDC, CGP, Coni Ellis MS, RN, OCN, CWOCN. The University of Texas M.D. Anderson Cancer Center, Nursing Administration, Houston, TX, 77030-4009

Multimodal Learning Strategies for Effective Self-Care Education in Nurses Introduction: The context of the current nursing shortage and renewed efforts at nurse retention highlight the high rate of nurses leaving the profession in their first year of practice. Research suggests that educating nurses to the realities of the job and to self-care strategies may increase their retention. Rationale: Information is not knowledge until it is internalized, where it impacts critical thinking and professional practice. Engaging learners in a variety of tailored learning experiences to capitalize on multiple learning modalities to facilitate assimilation and accommodation of information, allow for its critical analysis, and motivate improved practice. Methodology: This carefully sequenced, two hour model seeks to develop appreciation for the potential costs of caring, identify types of job-related distress and interventions, and initiate workable personal care plans. A simple narrative of an airline attendant instructing adults to put on their oxygen masks before helping dependents grabs the learners' attention through identification of a common experience. Having a volunteer list the group generated characteristics and needs of nurses completes buy-in. Didactic material on professional distress presented in a Socratic method ensures correct comprehension and retention. Live demonstrations and experience in detachment techniques provide behavioral and social reinforcement for their use and allow nurses to adapt techniques to personal situations. Recitation of strategically placed emotional material shifts the learning mode to reinforce and contextualize the material. Interspersed written exercises allow time for consolidation and reflection on personal application. Finally, the nurses commit to one self-nurturing activity, sign a card, and placed in their badge holder as a reminder. The lesson comes full circle by ending with the same airline attendant story. Results: Post presentation discussions and positive evaluations reflect the effectiveness of the multimodal model, as does the retention of the commitment cards on random follow-up. Conclusions: Multimodal learning strategies facilitate the internalization of self-care information. Imparting such information may increase nurse retention and foster professional competence.

EVALUATION OF A TRAINING MODULE FOR DETERMINING COMPETENCY IN IDENTIFYING LEVELS OF AGGRESSION, Colin McKay PhD, Cynthia Phelps PhD. Smilex, Inc., Translational Research, Houston, TX, 77006

Nursing students evaluated the instructional effectiveness of an interactive online competency training program. The training is designed to teach how to 1) identify aggressive client behavior markers; 2) categorize the aggressive behaviors into one of three levels/phases of aggression; 3) select the least restrictive and appropriate interventions for the selected aggression level/phase, and 4) accurately document the event. The training consists of six vignettes representing common psychiatric diagnoses associated with aggressive behaviors. Learners watch streaming-video of client displaying aggressive behaviors and then make choices to meet the learning goals. A test mode of each vignette was developed, and the protocol included subjects logging onto the system, test mode, the training environment, and then completing again the test mode of the same vignette. The modules' instructional effectiveness was analyzed in a within-subjects 6 by 2 factorial design having vignettes and pre versus post as the two factors. Competency was determined by comparing pre- and post-test scores and completion times. Preliminary results suggest that the number of students who scored 90 or above (our criterion for "competence") were two- to eight-fold greater in the post-test versus the pre-test simulations, and the Effect Sizes (ES) ranged from 0.59 to 2.0 depending on the vignette. Data will be further analyzed to look for a positive transfer of learning across the series of cases studies, with the hypothesis being the more case studies practiced the better the pretest scores.

ENHANCING ON-LINE COURSES USING MULTIMEDIA TOOLS, Zena Mercer MS. The University of Texas Medical Branch, School of Nursing, Galveston, TX, 77555-1032

This presentation will focus on the use of several tools and techniques that can be used to enhance on-line courses for distance education students as well as web assist sites for traditional class- based students. This array of tools includes Horizons Wimba, Macromedia Breeze and Presenter, learning objects and web logs. Wimba is a set of audio communication tools are used to facilitate dialog among students, between the students and the instructor and in some cases, external course consultants. Instruction is also enhanced using interactive learning objects that take discrete pieces of content that can be presented using a variety of media such as audio, video, animations and illustrations. These learning objects are gathered into an on-line library that can be utilized by a variety of courses. The audience will also be introduced to the use of Macromedia Breeze/Presenter and web logs (blogs) in on-line instruction. These tools can easily be integrated into an on-line course management system to allow for a rich integrated learning experience.

ENHANCING HIGHER ORDER THINKING AND LEARNING SKILLS THROUGH CONCEPT MAPPING AND TABLET PCS, Susan Miertschin MEd, Cheryl Willis Phd. University of Houston, Information Logistics Technology, Houston, TX, 77204-4023

As early adopters of an emerging technology, the Tablet PC (TPC), certain University of Houston faculty began to integrate Tablet PCs into an undergraduate Information Systems Technology curriculum in Fall 2003. The experience reinforced the authors' belief that the inherent visualization capabilities of TPCs give them great potential to improve higher order thinking and learning skills in STEM disciplines. The instructional activity that the authors have experimented with most to date is the semantic organization tool of concept or mind mapping. As of September 2005, through funding from NSF (NSF CCLI A&I Proposal # 0511672) and Univeristy of Houston (Faculty Development Initiative Program AY 2006) the authors have begun a formal investigation of the effectiveness of using TPCs as an instructional tool to facilitate the development of higher order thinking and learning skills through concept mapping. The funding enables the development of modules that employ mind mapping software on a TPC to develop concepts pertinent to an undergraduate Information Systems Technology curriculum. The module format is flexible to be extendable to content areas in health science disciplines as well. The project's purpose is to extend previous work on the effectiveness of mind maps for improving critical thinking and problem solving skills. By combining the visual learning technique of concept mapping with the portability and power of TPCs and pen-enabled mind mapping software, the authors believe the strategy will be particularly attractive and useful to students who are motivated by new learning formats based on technology. The authors also plan to examine gender differences with respect to results as well. In this presentation, the authors will provide the background for the work to be done and present initial anecdotal results. We will provide a review of the literature on the role of visualization in the development of higher order thinking and learning skills. In addition, we will describe a variety of visual learning tools and techniques including the semantic organization tools of concept and mind mapping. Third, we will present initial results of module development efforts aimed at creating instructional activities focused on mind maps that enhance the development of higher order thinking skills, including the skills of connecting, analyzing, evaluating, elaborating, synthesizing, and imagining.

IMPLEMENTATION OF AN ELECTRONIC PATIENT RECORD (EPR) SYSTEM AT THE UNIVERSITY DENTAL CENTER: A PILOT PROJECT., Joel Napenas DDS, Deborah Lampl, Jean Garza RDH, James Spence, John Valenza. The University of Texas Dental Branch at Houston, General Practice Residency Program, Restorative Dentistry and Biomaterials, Houston, TX, 77030

The Electronic Patient Record (EPR) is the storehouse for patient information supported by digital computer input and integrated with other information sources. In April 2006, the University Dental Center serves as the pilot clinic for the school-wide conversion to an EPR system at the University of Texas Dental Branch. The University Dental Center is the home base for the Dental Branch's General Practice Residency (GPR) Program, which currently trains seven to eight residents per year in a hospital-based environment. An electronic patient record allows the practitioner to electronically document patient care and process claims transactions more quickly and reliably. Electronic data interchange can also occur more quickly between clinicians, other health professionals and third-party payors. This is especially useful in the GPR education environment, which deals with special needs and medically complex patient populations, requiring multi-disciplinary collaboration and consultation with medical and dental colleagues. Standardized dental charting and short-hand notation is utilized, reducing inconsistency and ambiguity between providers. Quality assurance procedures can be performed and patient care monitored by analyzing patient and provider groups. The use of digital radiography has advantages for both the patient and providing team, including being a better diagnostic and educational tool for patients, dentists and residents, requiring less time and money spent on film processing and mounting, and providing less exposure to ionizing radiation for the patient and staff. Clinical research should also be more feasible with a readably accessible and standardized database contained within the EPR. Specifically, the Dental Branch is contracted to use the axiUm (Exan Academic, Inc.) commercial software product for EPR management, and the MiPACS (Medicor Imaging) Picture and Archive Communication System (PACS) for storage, retrieval and manipulation of radiographic and photographic images. Issues associated with this vast undertaking include data conversion, both of electronic and paper sources, security and privacy issues, hardware and software selection, training of personnel, and development of efficient operating algorithms within the clinic and education environment.

IMPLEMENTATION OF A PROBLEM-BASED LEARNING (PBL) MODEL DURING THE FIRST SEMESTER OF A PROFESSIONAL PHYSICAL THERAPY CURRICULUM., Rupal Patel PT, MS, Katy Mitchell PT,PhD. Texas Woman's University, School of Physical Therapy, Houston, TX, 77030

Problem-based learning (PBL) has been cited as a teaching/learning method in health education for many years. The objective of a professional physical therapy curriculum is to prepare graduates to become entry-level clinicians who can manage a breadth of patient problems. The faculty within the graduate School of Physical Therapy at Texas Woman's University Houston Center recently implemented a patient case-based PBL model during the first semester of the curriculum. The goal was to help students integrate knowledge from all courses in the context of a patient case. Each faculty facilitator was assigned a disease process by the primary course director. The faculty received an in-service on the PBL method and was given a content outline to follow while constructing their case. Faculty members were instructed to meet with their student group for a minimum of three sessions to introduce the case. During each session, students discussed the case information revealed along with questions that needed further study. Students engaged in self-directed, independent study of the questions between sessions. Follow-up sessions began with a discussion of what the students had discovered before the facilitator revealed the next part of the case. The project culminated with each group presenting their case to classmates and faculty. Sixty-three percent (N=27) of the students indicated that the PBL project was a positive experience. Results from a faculty survey indicated that 78% of the respondents (N=9) felt that PBL was a valuable method of teaching and learning. However, most of the faculty (89%) felt that more clearly defined expectations were needed to assure uniformity among groups. Overall, the PBL model could be a useful format to introduce early in allied health curricula to help students integrate human anatomy, biological disease processes and basic discipline related skills within the context of a patient case.

ASSESSMENT BEST PRACTICES IN WEB-BASED TRAINING, Kim Payne. Imedia.it, Inc,
Instructional Design, Houston, TX, 77573

Web-based training (WBT) is a field that advances rapidly. Rapid advancement leads to the development of
industry standards and best practices. This session will review practices related to assessment design and
evaluation and how each is applied to WBT. These best practices include multi-level learning, immediate and
meaningful feedback, and an assessment rubric. Multi-level learning is defined as administering a pre-
assessment to determine a learner's prior knowledge and then placing those learners in a skill-appropriate level
of training. This learning approach is extremely effective when dealing with large groups of students with
varying backgrounds and educational levels. This approach has been validated in courseware implemented by
the US Army. The results showed significant improvement in student results indicating that multi- level
learning is effective. Learners taking online courses rarely, if ever, see an instructor, yet they are still in need of
detailed, immediate feedback about their performance. In WBT, learners receive consistent, immediate
feedback because their performance can be tracked in a database. The second type of feedback that WBT can
give to the learners is an after action review or AAR. This is a detailed report at the end of training. Many
times the AAR is in the form of an assessment rubric. An assessment rubric is a form of evaluation that
graphically depicts the conditions and standards for a training product. A learner knows exactly what is
expected of him or her. Allowing the learner to review the conditions and standards of the training at the
beginning of the event informs the learner of learning expectations. Using the assessment rubric as the AAR,
with the learner's results clearly articulated, allows the learner to analyze his or her results. An assessment
rubric can be a valuable tool for evaluating learner performance if it is well-planned, detailed, and effectively
integrated into WBT.

CREATING GAMES FOR LEARNING, Cynthia Phelps PhD, Irmgard Willcockson PhD. The University of Texas Health Science Center at Houston, School of Health Information Sciences, Houston, TX, 77030

Every new medium has been hailed as the panacea to "save" education by making it easier for the instructor to teach and student to learn. This was the case with television, multimedia, and now electronic games. What has emerged from years of implementing new technologies in education is a general rule that good instructional design yields better learning. With that caveat, certain media do provide more opportunities for different types of learning experiences, and in many cases multimedia has been shown to be an improvement over learning from more traditional means such as didactic lecture or from textual material. Several things are currently converging to bring about the rise of electronic games for learning. Over the past 5 years, there has been a big shift within the electronic gaming industry to expand its markets to new demographics to improve sales. With the prevalence of computers and multimedia in the classroom, instructors are becoming more comfortable with using a variety of media in their courses, and are seeking additional ways to improve learning. In addition, military training "games" that have been in design and development for over 30 years are being marketed as entertainment for the public. These events have created a synergy of people interested in games for learning and a movement called the Serious Games Initiative. As the field of serious games emerges as a science, professionals are struggling to evaluate how games effect learning outcomes, understand how interdisciplinary design teams can best work to create serious games, and to establish a "best practices" for learning games design. Data from a game designed to teach kids about neuron development will be presented as evidence of game design effectiveness, and serve as an example to discuss how to implement sound instructional design in a serious game design. Tools and tips for designing games for your own students will be presented and discussed.

AN INTRODUCTION TO USING DIGITAL STORYTELLING IN MEDICAL EDUCATION, Bernard
Robin PhD. University of Houston, Curriculum and Instruction, Houston, TX, 77204-5027

Digital Storytelling is the practice of using computer-based tools to tell stories. A number of other terms may
be found that describe this practice, such as Digital Documentaries, Computer- Based Narratives, Digital
Essays, etc.; but in general, they all revolve around the idea of combining the art of telling stories with a
variety of multimedia. As with traditional storytelling, most digital stories focus on a specific topic and contain
a particular point of view. As the name implies, digital stories contain some mixture of computer-based
images, text, recorded audio narration, video clips and/or music. Most digital stories last for between three and
ten minutes and these short, media-rich mini-movies have become a powerful instructional tool in education.
This presentation will demonstrate how Digital Storytelling can be used to support teaching and learning in a
wide variety of medical education areas, including clinical instruction and patient education. Many
practitioners of Digital Storytelling use video in their work, however, digital stories may be created by just
using a series of still images. Many powerful digital stories have been created by incorporating what has come
to be known as the "Ken Burns Effect," the process popularized by documentary filmmaker Ken Burns, and
now available in many multimedia software applications that allows users to add motion to still images by
creatively panning and zooming over images. This presentation will include an overview of Digital
Storytelling using still images and describe how this process can be used in medical and patient education. The
presentation will include a step-by- step demonstration of free software that can be downloaded from the web
and easily used to begin creating digital stories. The Educational Uses of Digital Storytelling website, created
at the University of Houston, and including digital story examples and tutorials to help novices get started, will
briefly be demonstrated.

EDUCATIONAL SCHOLARSHIP: AN EMERGING CONSENSUS ABOUT STANDARDS OF EVIDENCE, Gary Rosenfeld PhD, Boyd Richards PhD. The University of Texas Medical School at Houston, IBP, Houston, TX, 77030

In February, 2006 the Association of American Medical Colleges' Group on Educational Affairs held a Consensus Conference on Educational Scholarship focused on confirming what is known about educational scholarship and developing consensus on the standards for evaluating specific educational accomplishments for purposes of promotion and tenure. The goal of the conference was to achieve consensus about the evidence that supports educational scholarship in such areas as teaching, learner assessment, curriculum, mentoring/advising, educational administration/leadership, and establish standards for evaluating these accomplishments so that individual faculty members and institutions are better prepared to understand, value, publicly articulate, and reward them. Following a brief presentation of background information, including key outcomes from the GEA Consensus Conference, workshop participants will assemble in small groups and critique a mock faculty portfolio for content and format: In the interest of time, the portfolio will include only activities in teaching and learner assessment. The working groups will reconvene and identify those areas around which there is consensus in their critiques and those areas in dispute or needing further discussion. We will then compare these results to promotions criteria at our respective institutions. We anticipate that the criteria will be similar for all Texas Medical Center educational institutions. However, if this is not the case, it will be of great interest to discern what the major differences might be. Lastly, ideas will be solicited regarding "next steps" to help narrow any gaps between local criteria for promotion and tenure and the recommendations from the GEA consensus conference on educational scholarship.

LECTURE FREE LEARNING, Roger Rossen MD, Holly Birdsall MD, PhD, Britta Thompson PhD. Baylor College of Medicine, Immunology, Houston, TX, 77030

Analysis of study habits of students enrolled in Basic and Clinical Immunology in 2004 and 2005 suggested no significant differences between test scores of those who attended lectures and those who learned from videotapes of the lectures, the syllabus, and the textbook. Since less than 33% of students attended class, we postulated that live lectures were the least valued learning aid. In 2006, lectures were not given but the syllabus and reading assignments remained the same. Students could view archived videos of lectures from 2005 if they desired. Class time was used to review a comprehensive set of review questions about the content of each lecture. Students were called on at random in class to provide answers to the questions. Beginning in the third week, answers to the most difficult questions were posted 1 - 2 days after class on the web site for the course. There were no other changes in the 2006 course. Four open book, multiple choice formative quizzes, given at 7-10 day intervals during the seven week course, assessed intermediate progress and served as learning aids. Students had 4-5 days to discuss the questions with each other before posting their answers. Despite a 56% increase in the number of final exam questions, 60% of the 2006 class vs. 31% of the 2005 class had a grade of >87% on that exam (p. < .01, Chi Square). Performance on the identical questions used in 2005 was likewise significantly better. We postulate that emphasis on problem solving and self learning improves comprehension and retention of course content.

FACULTY DEVELOPMENT AND CAPACITY BUILDING: ENHANCING THE CLASSROOM EXPERIENCE THROUGH AN INFUSION OF RESEARCH AND TEACHING, Leatrice Shacks MSc, MPA, Irvine Epps Ed.D, Jeffrey Guidry, Larry Laufman. Texas Southern University, College of Continuing Education, Houston, TX, 77004

In 2001, Texas Southern University (TSU), College of Continuing Education conducted a national survey utilizing the Dillman Total Design Method for survey administration. The survey targeted minority researchers and researchers at minority serving institutions of Higher Education. Participants included 220 leading minority researchers. Participant representation was as follows: 40% Historically Black Colleges and Universities; 39% Hispanic Serving Institutions; 9 % Jr. Colleges; 6% American-Indian Tribal Colleges and 6% county-funded Community Colleges. Factors identified by respondents as barriers to scholarly involvement were grouped into four broad categories: 1.) lack of institutional infrastructure; 2.) insufficient incentives; 3.) excessive teaching loads; and 4.) the lack of an institutional research agenda. Moreover, the results of this survey determined that there were significant deficiencies in the capacity of these institutions to initiate and sustain research projects. With these data, Texas Southern University's College of Continuing Education sought funding from the U.S. Department of Education, National Institute for Disabilities and Rehabilitative Research to develop a forum at which a network of researchers could address the findings of the survey, thus the formation of the Center for Minority Training and Capacity Building (the Center). The pedagogy of the Center is to promote faculty development and capacity building with an aim of enhancing the classroom experience through an infusion of research and teaching. Following the principle of adult learning theory, the Center designed a "train-the-trainer" field tested model curriculum entitled Scholar/ Champions. The primary goal of the Scholar/ Champion curriculum is to increase the capacity of minority serving institutions of higher education to engage in grantsmanship and conduct vigorous scholarly research. The curriculum takes form in an amalgamation of web-based training modules (to facilitate distance learning), coupled with bi- yearly face to face interactions. Currently, TSU Center for Minority Training and Capacity Building is working with faculty at Huston-Tillotson University, Jarvis Christian College, Paul Quinn College, Texas College and Wiley College through our Scholar/ Champion Program to build their research capacity in which we hope would lead to an enhanced learning experience for students enrolled at these universities.

THIRD YEAR MEDICAL STUDENT UNDERSTANDING, KNOWLEDGE, AND ATTITUDES TOWARD THE USE OF ECT, Nurun Shah M.D., Patricia Averill Ph.D.. The University of Texas at Houston Harris County Psychiatric Center, Psychiatry and Behavioral Sciences, Houston, TX, 77021

Objective: The purpose of this study was to determine whether medical students' opinions about Electroconvulsive Therapy (ECT)were influence predominantly by media portrayals and whether their opinions can be improved as a result of didactic training and observation. ECT is a type of treatment that has been used since 1934 for intractible psychiatric disorders. It involves introducing an electrical current to the head, resulting in a seizure. Methods: All third year medical students were asked to complete a survey before and following their third year psychiatry rotation and they were asked whether they just received didactic ECT training or also received adjunctive observation training.

WORKSHOP: HOW TO BUILD INTERACTIVE ONLINE EXERCISES WITH A SHOESTRING BUDGET AND WITHOUT A GEEK TO HELP YOU, Kimberly Smith MS, MT(ASCP). The University of Texas Health Science Center at Houston, School of Health Information Sciences, Houston, TX, 77030

The Web offers almost unlimited possibilities for providing students with multimedia-rich, interactive learning exercises covering a wide variety of topics. However, instructors who want to create even simple online exercises for their students face several financial and technical obstacles, including what software to use, software costs, how to use the software once it is purchased, and how to get exercises out on the Web for students to access. This workshop will demonstrate readily-available, free or low-cost, easy-to-use software for creating interactive online exercises and publishing them on the Web. While these programs were originally developed for language courses, examples of their use in healthcare-related applications will be shown. Programs that will be demonstrated include: • Hot Potatoes (http://hotpot.uvic.ca/index.htm), which includes functionality for creating a variety of exercises such as multiple choice, matching, fill-in-the-blank, scrambled sentences, and crossword puzzles • Quandary (http://www.halfbakedsoftware.com/quandary.php) for developing decision-based exercises • Odeo (www.odeo.com) a free voice-recording utility for creating MP3 files The workshop will also demonstrate two online learning environment programs. Hotpotatoes.net is a low-cost website that provides password-protected teacher and student accounts, and automatic uploading of documents and other files from within the Hot Potatoes software. Moodle (www.moodle.org) is a free, open-source course management system similar to BlackBoard and WebCT. A handout of all resources discussed in the workshop will be provided.

DESIGN OF A LEARNING ENVIRONMENT FOR VETERINARY PARASITOLOGY LIFE CYCLES, Kimberly Smith-Akin MS, MT(ASCP, Cynthia Phelps PhD. The University of Texas Health Science Center at Houston, School of Health Information Sciences, Houston, TX, 77030

An intimate and working understanding of parasite life cycles is critical to the effective diagnosis, treatment, and control of parasites. However, veterinary students often memorize this material but are unable to apply it to specific clinical situations encountered as a practicing veterinarian. Tutorials designed to help students interact with and visualize information in different ways should improve learning, as well as facilitate understanding the material well enough to extrapolate and apply information that is not explicitly stated. The purpose of this project is to design an online learning environment that utilizes certain learning and pedagogical theories to assist students in understanding the relationship between the life cycles of common parasites and their associated pathology, treatment, and control. For this project, a needs assessment, a user analysis, and goals for the learning environment were developed. The goals were then associated with content from syllabus entries from the parasitology course at Texas A&M College of Veterinary Medicine. Objectives, behavioral objectives, and evaluation criteria were developed for each goal. Theories for learning, teaching, and instructional design guided the design of a series of interactive tutorials for adult, professional-level students. Finally, a detailed navigation and storyboard document that provided in-depth instructions for system functionality, behavior, and user interface development was created. The design plans were implemented in Moodle, a free, open-source course management system (www.moodle.org), using HTML, Flash (www.macromedia.com), and Hot Potatoes (http://hotpot.uvic.ca/index.htm), and will be presented. Assessment of the learning environment by first-year veterinary students is pending institutional review board approvals.

ABNORMAL PHYSICAL EXAMINATION FINDINGS IN STANDARDIZED PATIENTS ARE NOT DOCUMENTED BY STUDENTS, Karen Szauter MD. The University of Texas Medical Branch, Internal Medicine and Office of Educational Development, Galveston, TX, 77555 0420

Purpose Complicated interviewing, counseling, and interpersonal challenges can be portrayed by standardized patients (SPs), but the range of physical examination (PE) findings that can be simulated is limited. We developed cases for SPs with actual PE findings for our Year-4 clinical skills examination to assess medical student technique, recognition and documentation of PE abnormalities. Methods We recruited two experienced SPs with stable findings. One SP (aortic valve replacement) had a systolic murmur and metallic click. The second SP (chronic renal failure) had a systolic murmur and forearm vascular graft with a loud bruit. Scenarios of transient neurological symptoms were developed for these patients, incorporating modified details of their actual medical histories. Students completed a 15-minute patient encounter and 10-minute patient note. Encounter videotapes and notes were reviewed for this study. Results During 2004-2005, 53 students encountered these cases. Accurate documentation of auscultatory findings included: Case 1 (n=27) valvular click 6(22%); murmur 6(22%), (no student correctly reported both); Case 2 (n=26) fistula /bruit 5(12%); murmur 10(38%). Across both cases, five additional students described the murmurs incorrectly. Twenty-three students (43%) documented "no murmur, rub or gallop". Video review showed that all 23 students performed technically sufficient examinations to detect the murmur. Discussion Less than half of the students were able to correctly identify and document the abnormal physical findings in the SPs. Potential explanations for this include the inability to recognize the findings, deliberate disregard of findings in the "standardized patient", or careless documentation. While much of early medical skills training is focused on learning the correct techniques of the physical examination, educators must also verify that more advanced learners can correctly recognize and document PE abnormalities.

ADAPTING THE PHYSICIAN CHARTER FOR THE UTMB COMMUNITY, Karen Szauter. The University of Texas Medical Branch, Internal Medicine and the Office of Educational Development, Galveston, TX, 77555 0420

Professionalism in healthcare has been the topic of much discussion over the past decade. Many initiatives have been undertaken on our campus to address professionalism. We describe the development of the UTMB Professionalism Charter. Process: Supported by a grant from the American Board of Internal Medicine, the Professionalism Charter Subcommittee was established in 2002. Membership includes faculty, staff and students from all four of the UTMB schools. The focus of the group's work was to adapt the document Professionalism in the New Millennium: A Physician Charter (Annals of Internal Medicine, 2002) for use by the entire university community. The subcommittee drew on the principles outlined in the charter and drafted an initial document in 2003. The document was circulated across the campus, and several sessions were held to allow discussion and feedback on the Charter. Extensive edits were undertaken, and a second version of the charter was released in 2005. The UTMB Professionalism Charter provides fundamental guidelines for the professional behavior of all students and employees of UTMB. The principles are posted in strategic locations on campus and on the professionalism website. Plans are underway to highlight campus groups that adopt specific principles of the charter in their everyday practices. We are interested in sharing the process of adapting, distributing and revising this document with other educators.

AFTER THE FACT: USING PERFORMANCE DATA FROM A STANDARDIZED PATIENT EXAMINATION TO INFORM THE CURRICULUM, Karen Szauter MD, Michael Ainsworth MD. The University of Texas Medical Branch, Internal Medicine and Office of Educational Development, Galveston, TX, 77555 0420

Introduction: The application of standardized patient (SP)-based examinations to assess student skills has been studied extensively and is widely accepted. We have performed detailed reviews of outcome data from SP based examinations. We describe how this information can inform the educational curriculum Methods: Our institution requires all medical students to successfully complete a SP-based clinical skills assessment early in the fourth year. This multi-station examination includes content from all third-year clerkship disciplines. Students are scored by the SPs on the medical interview, physical examination, counseling and interpersonal skills. The post-encounter note, scored by faculty, assesses written communication and integration of knowledge. We have used a variety of approaches to ascertain general strengths and weaknesses of the students including 1) checklist item analysis 2) comparison of overall performance across cases 3) review of SP comments 4) detailed review of written documentation and 5) video-review of specific scenarios. Results: Our class size is 200 students. Through careful analysis of group performance we have noted deficits in specific content areas, patient age groups, and types of presenting complaints. (eg: extremes of age, constitutional or behavioral complaints) SP comments have revealed global issues relating to patient comfort. Review of written documentation has revealed deficiencies in student identification of pertinent positive and negative information, and in the connection between data collection and diagnostic reasoning. Video-review of specific cases (eg: breaking bad news) has allowed us to pinpoint general strengths and weaknesses in complex communication issues. Discussion: Information gained from detailed examination analysis has been provided to course directors and the curriculum committee. While deficits in individual students can be addressed with feedback and remediation for the learner, class level deficiencies suggest a mismatch between curricular objectives and student achievement. This latter finding provides the basis for discussion among educational leaders and informed curricular modification.

A MOVIE IS WORTH INNUMERABLE WORDS, Sudha Veeraraghavan PhD. The University of Texas Medical School at Houston, Biochemistry & Molecular Biology, Houston, TX, 77030

The objective of this presentation is to showcase the use of moving images to disseminate scientific knowledge. Graduate students of biological sciences, including medical students, are under intense pressure to learn large amounts of material in a very short period of time. Topics in emerging areas of biological sciences utilize structural details to understand macromolecular function. Yet, the majority of students have not been exposed to such materials in their undergraduate curriculum which adds to the difficulty of learning these materials "over-night". However, structural data offer a keen advantage, namely, visualization in vivid color. More importantly, colorful movies that incorporate structural models or even simple animated cartoons aid the learning and/or memorization processes. Although this tool is of particular help to students who are visual learners, it can also provide reinforcement for those who tend to learn from didactic methods. Further, the movies, web-links, or images can be made available via Blackboard as additional resources for enhanced learning experience. Potentially, students exposed to these teaching methods will seek out similar self-educating resources for years to come. Here, I will demonstrate examples of visual aids that I have used during the Medical Biochemistry Conferences which are highly appreciated by freshman medical students.

A REVIEW OF COMPUTER AND INTERNET-BASED INTERVENTIONS FOR SMOKING BEHAVIOR, Scott Walters PhD, Jo Anne Wright MSI, Ross Shegog PhD, Sarah Matson. The University of Texas School of Public Health, Behavioral Science, Houston, TX, 77030

This article reviews published studies of computer and Internet-based interventions for smoking behavior, published between 1995 and August 2004. Following electronic and manual searches of the literature, 19 studies were identified that used automated systems for smoking prevention or cessation, and measured outcomes related to smoking behavior. Studies varied widely in methodology, intervention delivery, participant characteristics, follow-up period, and measurement of cessation. Of eligible studies, nine (47%) reported statistically significant or improved outcomes at the longest follow-up, relative to a comparison group. Few patterns emerged in terms of subject, design or intervention characteristics that led to positive outcomes. The "first generation" format, where participants were mailed computer-generated feedback reports, was the modal intervention format and the one most consistently associated with improved outcomes. Future studies will need to identify whether certain patients are more likely to benefit from such interventions, and which pharmacological and behavioral adjuncts can best promote cessation.

DESIGN OF A HOSPITAL POLICY AND PROCEDURE LEARNING ENVIRONMENT FOR NURSING STUDENTS, Stephanie Wheeler BSN, RN, CCRN, BC, Cynthia Phelps PhD. The University of Texas Health Science Center at Houston, School of Health Information Sciences, Houston, TX, 77081

In an effort to ensure that employees provide consistent, high quality care, hospitals require their employees to annually complete several hours of mandatory in-services and training that include hospital policies. This training may utilize a variety of platforms, such as computer based training, paper documents, and live simulations. However, nursing students who are new to the clinic are often trained about hospital policies by their individual instructors, with no controls in place to ensure that students are adequately prepared. As a result, training on policies and procedures appears to be inconsistent for nursing students, who are interacting with and caring for patients and are therefore responsible for maintaining the same standards of care. This inadequate preparation for clinical rotations also contributes to the anxiety and stress levels of students, which inhibits the learning process. It is essential that student nurses are oriented to hospital standards before their first patient interaction. Therefore, there is a need for a role-based learning environment designed to educate incoming student nurses on basic hospital policies and procedures. In order to address this need, a web based learning environment was designed to provide student nurses with essential policy and procedure information regarding infection control, patient safety, patient privacy, and emergencies. User analysis and needs assessment were done in collaboration with the nursing clinical training and development department of a Houston medical center teaching hospital. Exercises were developed utilizing the principles of Adult Learning Theory and Andragogy. Information is delivered in scenarios based on the role of the student nurse. Evaluation of the learning environment is pending institutional review board approval.

UTILIZE WEB-BASED TESTS FOR RN-BSN HEALTH ASSESSMENT, Erica Yu MSN, RN, ARNP. The University of Texas Health Science Center at Houston, School of Nursing, Acute and Continuing Care, Houston, TX, 77030

RN-BSN health assessment is an online-based course provides the student with an opportunity to develop skills in health assessment and to evaluate a client's health status from a holistic perspective. Lectures are available online and organized into one folder for each week. Students are required to come to clinical performance labs to practice health assessment skills. There are two examines required for this course and examines are delivered traditionally in the paper-and- pencil form. Due to the limitation of the paper format, test items were all multiple-choice questions. Student always had questions about what the correct answers were for certain questions. It's time consuming for test review and it used a lot of office hours to discuss test results. Therefore, a web-based testing method was selected to deliver examines. Web-based testing software generally divided into the following five categories: (1) online instructional packages which include testing components; (2) high end testing systems; (3) mid-level testing programs; (4) personal level testing programs; (5) online testing CGIs. Mid- level testing programs were determined to be appropriate for the nature for the exam and level of students. Traditionally, developing, administering, scoring, recording the results of tests, and providing feedback to students involves a lot of repetitive and mundane work. The good news is that computers excel at the repetitive and mundane. The two examines were written and administered using Question Mark Perception testing and assessment software. Less than a second after finishing each test the students can see all wrong answers on their screens, and an explanation of what the right answer should have been. Test also became a learning tool for students. Benefits and concerns of using computer to deliver examines will be discussed further in the presentation.