Team Based Learning: Lessons Learned Creating & Implementing a Hands-On Interactive & Practical Medically-Oriented MS2 Training. Haneme Idrizi, MD; Linda Solis, PhD; Bonnie Taylor, MA

Team Based Learning (TBL) emphasizes individual accountability and team collaboration. The challenge of this popular method of medical education is to create sessions that are engaging, content rich, and able to provide opportunity to apply clinical knowledge.

To teach medical students about pediatric short stature and ensure their ability to apply attained knowledge, a creative learning opportunity was developed that adhered to the classic hallmarks of TBL: backward design, the 4 S’s (Significant Problem, Same Problem, Specific Choice, and Simultaneous Report) and the Readiness Assurance Process (RAP) with appeals.

The lead facilitator reflected on yearly consecutive offerings of the TBL with solicited feedback from student participants and medical education specialists. Adhering to best TBL design practice and reflection on constructive feedback resulted in an overall improved learning experience, as revealed in evaluative data.

Pediatric Buddy Program as a Method for Creating a Positive Cultural Shift and Addressing the Clinical Learning Environment Review (CLER) Assessment Areas. Haneme Idrizi, MD; Beth Payne, MAEd, C-TAGME; Dina Tom, MD; Mandie Svatek, MD; Kelsey Sherburne, MD; Michelle Arandes, MD

Healthcare places increasing emphasis on multidisciplinary patient-care and graduate medical education (GME), as evidenced by the inclusion of the Clinical Learning Environment Review (CLER) program in the Accreditation Council for Graduate Medical Education (ACGME) residency certification process. Residencies have traditionally included quality and patient safety initiatives, but few have formally introduced a multifaceted team approach beyond bedside care. Knowing that quality patient-care and GME result from true health team collaboration, an innovative venture called the Pediatric Buddy Program was developed between the Department of Pediatrics at the University of Texas Health Science Center at San Antonio and their primary clinical learning site. This program matched pediatric interns with pediatric nurses from throughout the University Health System to collaborate on activities and develop quality improvement projects.

Beyond bedside teaching, residents rarely have the opportunity to develop lasting partnerships with other healthcare team members. The Pediatric Buddy Program fosters meaningful relationships, creating a medical culture built on mutual respect and collaboration. By addressing the CLER assessment areas and ensuring a high quality training environment that values a multidisciplinary team, quality medical care and a cultural shift in resident education can occur.

Partnering with Faith-based Organizations to Enhance Positive Outcomes for Home-bound Seniors. Linda Moore Ed.D., MSN, RN

Seniors remaining in their homes, opting out of moving into assisted living communities or nursing homes is more the norm rather than the exception across America. The majority of American seniors reside within their primary residence until their death, eventually succumbing to complex health conditions which render them home-bound. While Healthy People 2020 has developed goals to improve the health, function and quality of life of individuals of all ages who are able to go out to health events and/or other
activities, the one group of individuals who are over-looked are those individuals who have become home-bound due to physiological and/or psychological health disparities. The impact of federal healthcare regulations whereby individuals who are readmitted to inpatient hospitals within a period of thirty days with the same diagnosis lending to higher costs charged to the hospital systems which in turn lead to higher healthcare costs in general, is potentially a fiscally responsible approach by having healthcare students making home visits to home-bound individuals.

Thus, this innovative pilot study consisted of initiating a community partnership between a faith-based organization and a single clinical group of students in their final semester of undergraduate nursing school. Following the guidelines of Healthy People 2020 of improving quality of life and promotion of healthy behaviors, nursing students made home visits to home-bound seniors who are members of the partnering faith-based organization. The results revealed that all of the home-bound participants expressed unequivocal appreciation to the nursing students coming to their homes and performing physiological assessments as well as health, medication and nutritional education. All participants requested to continue receiving home visits in the future.

This unique clinical pilot experience demonstrated the importance of community engagement of nursing students with home-bound seniors that holistically enriched the lives of both the students and the seniors. By partnering city-wide with churches of all domination as well as city and military leaders (San Antonio Mayor, the District Council Members, Metropolitan Health Director, School Superintendents and District School Nurses as well as the Armed Forces to include the Veterans Administration), the vision of this collaborative clinical application and learning experience for all UTHSCSA Students making home visits to home-bound individuals may be realized. As an untapped pioneering clinical application, this concept easily lends itself to replication across America which could demonstrate positive outcomes in terms of health and well-being of home-bound individuals, while at the same time facilitating positive growth and development of future healthcare providers across the United States. Finally, this type of collaborative-community based initiative may also align with University Quality Enhancement Plans (QEP).

**Development of a 3D Printed Model of the Larynx.** Alan Y. Sakaguchi, PhD, CSB; Charleen M. Moore, PhD, CSB; Sam Newman, Creative Media Services

The structure of the laryngeal airway and arrangement and action of the vocal cords are often confusing to beginning anatomy students, especially using only two dimensional images. Significant faculty time and use of expensive anatomical models are needed to clarify these concepts. We are using 3D printing to design and construct a simple, inexpensive, functional model of the larynx as an interactive teaching and learning tool for health professions students. We are also developing an educational SoftChalk package on the larynx that can be used in conjunction with the 3D model to teach beginning students in medicine, dentistry, and the health professions, as well as providing a review for advanced students, including residents and post-doctoral fellows. For the demonstration, we will describe the steps in creating the 3D model of the larynx, development of the SoftChalk educational package with tutorial, instructor’s guide and assessment question bank, and describe various uses for the model and teaching components. We will show the stages of preparation of the 3D model, including display of the actual 3D printer, the computer program to create the model, the model as it is produced by the printer with the scaffolding in place, and the final polished version of the larynx with detachable pieces, e.g., cartilages and muscles, that can be assembled and disassembled.

**Oral Health Literacy for Providers and Patients Attending the San Antonio Refugee Health Clinic: An Interprofessional Perspective.** Moshtagh R. Farokhi, DDS; Andrew Muck, MD; Matthew Hannan, DDS Candidate; Stephanie Lomeli, DDS Candidate 2017; Raed Zuhour, MD Candidate 2016; Supria Patel, DDS Candidate 2015; Christopher Wilson, MD Candidate 2017; Joanna Elshazly, BSN Candidate 2015;

Recent IOM findings indicate that limited oral health literacy is associated with inaccurate knowledge about preventive measures such as water fluoridation, dental care visits, and oral health-related quality of life. The IOM advocates the importance of improving access to oral health care, reducing oral health disparities as well as improving the oral health of the vulnerable and underserved population. Refugees
attending and interprofessional students serving the San Antonio Refugee Health Clinic (SARHC) can all benefit from an oral health literacy campaign.

By educating the interprofessional collaborative medical and nursing students, the quality of their SARHC/future patient encounters enhances towards a more holistic delivery of health care approach. The refugee patients benefit from an introduction to the mainstream San Antonio oral health care delivery system. This initiative addresses Healthy People 2020 Objectives including improving health literacy of the population by education and assess the effectiveness utilizing pre/post-test questionnaires and increase the inclusion of core clinical prevention and population health content.

The setting is at SARHC, a collaborative free student-run faculty-supervised partnership between the between medical, nursing, dental, and physician assistant students from the UTHSCSA in San Antonio. Pre-questionnaires assessed baseline knowledge of the participants about oral health practices, dietary intake, and tobacco use was administered followed by an educational session addressing nutrition, oral disease and oral cancer. Participant students then received oral hygiene instruction with the help of visual aids. Finally, a post-questionnaire assessed knowledge gained.

Seventy-two nursing (34) and medical (38) students participated. Results indicated an increase of 16% level of knowledge gained by all nursing and medical students. 187 refugee patients participated with assistance from bilingual students, faculty and interpreters with an improvement level of 33.9% oral health literacy rates.

The initiative raised awareness about oral disease/prevention, its link with nutrition, while encouraging more engaging open communication regarding oral health care. Even though the student participants had an existing oral health background, their baseline knowledge was at the level of patient's acquired training. Participant students remarked: "The illustrations were great", "Great presentation", "to the point", "Thanks", "Excellent", "I learned a lot", and "It was very thorough".

Reflecting on reflection: A comparison of two approaches to reflective writing analysis in the evaluation of a resident advocacy experience in juvenile justice. Elizabeth R. Hanson, MD; Jean A. Petershack, MD.

Reflective exercises are growing in popularity in medical curricula and offer a window to evaluate learning that takes place outside of the traditional clinical structure. There are two main approaches to evaluating this data: qualitative analysis and analytical instructional rubrics designed to assess learner depth or quality of reflection.

Residents at UTHSCSA participated in a community advocacy experience in the juvenile probation department and completed a written reflection on the experience. Twenty reflections were de-identified and reviewed by two independent reviewers using two different methodologies: thematic coding and an analytical instructional rubric (the REFLECT Rubric). Rolling inter-reviewer discussions were used to established consensus and standardize the use of the REFLECT rubric. For coding, reviewers used a three-pass approach to identify themes, solidify the code, and apply it to the larger sample. The data from these two methods were compared. This study was certified as exempt by the UTHSCSA IRB.

Each review technique took approximately 10 minutes per reflection. Analysis using thematic coding revealed several recurrent themes including: the role of the physician, the importance of family and social context, and the recognition of biases and misconceptions. Analysis using REFLECT rubric revealed a range of reflective levels from habitual action to critical reflection with transformative learning. Distinguishing between introspection and reflection was the most difficult for the two reviewers, with recognition of the role that their own past experiences played in how they interpreted the reflections.

Analysis of written reflections using thematic coding and the RELFECT rubric provided valuable but different information on the impact of an advocacy experience. Further discussion is needed around the
The best use of these reflective pieces and the possible applications of this type of data in feedback, debriefing and milestone-based evaluations.

**The Impact of Community Service Learning Participation on Medical School Students.** Melanie Stone, MPH, MEd; Jason Rosenfeld, MPH; Ruth Berggren, MD

Service-learning has not systematically been utilized as a teaching method in health science programs. A formal community service learning (CSL) program at The University of Texas Health Science Center at San Antonio was initiated in 2008, and we are assessing the impact of the program. Using a cross-sectional design, the goal of this study is to explore whether participation in CSL as a medical student prepares graduates to be professional, capable, culturally aware, and empathetic physicians oriented towards primary care. Specifically, this study assesses the impact of CSL participation on academic performance, cultural awareness, empathy, and residency choice.

Four cohorts of graduating medical students from 2013 to 2016 will participate in this study. Data and methods from the first cohort are reported here. An electronic survey was sent to the 2013 graduating class (n=225) and was completed by 128 students. The survey included demographics; self-report CSL participation; and two validated scales: the Jefferson Scale of Empathy and The University of Texas at Austin School of Nursing Cultural Awareness Scale. Survey data were combined with residency match data, validated CSL participation data, and Objective Structured Clinical Exams (OSCE) scores. A Total CSL score was calculated as a measure of depth of participation. All analyses were completed using SAS version 9.3 for Windows.

Just over half (52%) of the 2013 graduating class participated in CSL, while 78.6% of those that completed the survey participated. CSL participants had higher cultural awareness scores ($p=0.008$) and empathy scores ($p=0.07$) than non-participants. There was a weak, positive correlation between Total CSL score and empathy ($p=0.27$, $p=0.002$) and cultural awareness ($p=0.24$, $p=0.008$).

A limitation of this study is that participants are self-selected. Results indicate that CSL participation is associated with empathy and cultural awareness, but not with residency matches or OSCE performance. The 2014 data is under analysis and will determine if these initial results are strengthened with a greater sample size. These findings may support the rationale for health science students participating in community service learning during their years of education and training.