

4th Annual William Davidson

Medical Education Week

May 18 - 20, 2015

A Humanistic Approach to Medical Education

- PRESENTED BY -





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Oakland University William Beaumont School of Medicine Featured Speakers

Robert Folberg, M.D.
Founding Dean
Oakland University William Beaumont School of Medicine
Chief Academic Officer, William Beaumont Hospital



A Humanistic Approach to Medical Education

Dr. Folberg became Founding Dean of the Oakland University William Beaumont School of Medicine in September 2008. He came to the School of Medicine from the University of Illinois at Chicago where he was the Frances B. Geever Professor of Pathology and Head of the Department of Pathology. He was also a Professor of Ophthalmology and Visual Science at UIC.

Dr. Folberg received a B.A. degree from LaSalle College in Philadelphia (now LaSalle University) and his M.D. degree from Temple University. He is board certified in Anatomic Pathology and Ophthalmology. He began his academic career at Thomas Jefferson University Medical School in 1982, and moved in 1984 to the University of Iowa where he became the first Frederick C. Blodi Professor of Ophthalmology. He moved to UIC in 2000.

Dr. Folberg is a clinician scientist who was funded for 20 years by the NIH to study the biology of uveal melanoma. While head of pathology at UIC, he served as deputy directory of the University of Illinois Cancer Center from 2003 to 2005. He has published more than 200 original articles and book chapters. He is recognized for innovation in medical education and continues to teach pathology of the eye to medical institutions within and outside the United States. He also continues his consultation practice of ophthalmic pathology at Beaumont Health System where he is William Beaumont Hospital's Chief Academic Officer.

Dr. Folberg brings experience in developing academic culture that are high achieving, self actualizing, and humanistic to the new Oakland University William Beaumont School of Medicine. At the new medical school, he has recruited a diverse and talented team to design and implement an innovative paradigm for medical education.

Ann Bonham, Ph.D.
Chief Scientific Officer
Association of American Medical Colleges (AAMC)



Medical Research: Fulfilling the Social Contract with Persons and Populations

A part of medical research is fulfilling the social contract with persons and populations. There are many implications of the national, economic, and political landscape on medical research. Developing a national perspective on trends in medical research from basic science to patient and population outcomes to addressing health inequities is necessary. A social contract of medical research to improve health in an environment must be sustained through effective strategies.

Arthur W. Frank, Ph.D.Professor Emeritus of Sociology University of Calgary



The Practices of Narrative Medicine & Narrative Medicine in Practice

Interest in narrative medicine has been developing since the early 1970s in multiple countries, so different forms exist, complementing each other. Some are oriented primarily toward clinical practice, and others toward medical education. This lecture reviews different forms of narrative medicine, their methods, and their objectives. The concluding section develops my own interests and approach.

The workshop is designed for both practicing clinicians and students. We will engage in several writing exercises designed to raise the following issues: (a) what is the difference between *narratives* and *stories*, and why does that matter? (b) what is a *companion story*, what stories are your companions, and how do these affect your practice? and (c) what is a *good story* in medicine?

Kevin R. Grigsby, D.S.W. Senior Director of Organizational Leadership Development, AAMC



Enacting Leadership

Academic medicine and science is in the midst of dramatic change. Some suggest the current environment is best described as VUCA - volatile, uncertain, complex, and ambiguous. Whether one agrees that the environment is VUCA, there is no reason to believe change will be less dramatic anytime soon. New models of leadership are better suited to the current environment than many of the leadership models of the past. Too often, those models are based on concepts and explanations (knowing) rather than on leadership as it is lived and experienced (being and acting). Stated most simply, self-knowledge and knowing about leadership concepts and theory is inadequate. Many of the prevailing leadership models encourage leaders to operate in a manner that unintentionally inhibits or prohibits drawing upon the intelligence of others. This presentation focuses on how to extract the genius of others, amplify organizational intelligence, produce better outcomes, develop existing talent in organizations, and develop an orientation toward the future that includes succession development at all levels of the organization.

Barron H. Lerner, M.D., Ph.D.
Professor of Medicine and Population Health
New York University Langone
School of Medicine



Two Doctors, Two Generations: Medical Ethics Then and Now

Drawn from Barron Lerner's new book, "The Good Doctor: A Father, A Son and the Evolution of Medical Ethics," this lecture will discuss the shift from paternalism to patients' rights through the prism of two medical careers: Barron Lerner's and that of his father, Phillip I. Lerner, MD. By analyzing several of the senior Doctor Lerner's complicated cases, this talk will both recall a bygone era in medicine and comment on the relevance of good doctoring at a time of health care reform.

Scott E. Page, Ph.D.Director, Center for the Study of Complex Systems University of Michigan



Identifying and Leveraging Diversity

Diversity is perceived as the "Right Thing To Do" and "Required by Law." The moral frame and the required by law frame is an unfortunate trade off logic; the logic is that there is a balance between being active and diverse and how we deal with them. Diversity enlarges the pool and diversity in itself is ability. If you want to achieve excellence, there are 2 pillars, ability and a great big complex world. Data found on the value of diversity can be translated and presented for use. Organizations have the power to leverage diversity.

Nelia Afonso, M.D. Assistant Dean for Community Integration & Outreach Associate Professor Biomedical Sciences OUWB School of Medicine



Maurice Kavanagh, MEd.
Director, Clinical Skills Training & Simulation Center
OUWB School of Medicine



Using Action Method Role Play to Enhance Communication Skills in Clinical Teaching

Action Method role-play is used to enhance communication skills in clinical teaching. A form of communication is the SPIKES model, which will be applied to the delivery of difficult/bad news. Communication skills are enhanced through the practice of identifying an immersive experience for sharing bad news, as well as, distinguishing an atmosphere conductive to effective communication skills. Using Action Method Role play allows for the application of effective skills for delivering difficult news.

Jeffrey Devries, M.D.
Director of Graduate Medical Education,
Beaumont Health System
Associate Dean for Graduate Medical
Education
Professor Pediatrics OUWB School of



James Kruer, M.D. Internal Medicine Program Director St. Mary Mercy Livonia Saint Joseph Mercy Health System

Kathy Schlecht, D.O.Associate Professor Pediatrics
OUWB School of Medicine





Overcoming Common Mistakes in Teaching

Teaching encounters have many outside factors that require accommodation for effective learning to occur. Factors include the clinical setting, distractions, the culture, the content of material, and the learner. This lecture reviews different forms and methods that lead to common mistakes in teaching while trying to achieve a learning objective.

This workshop is designed for residents and physicians who provide teaching to all levels of training. The goal is to practice helping yourself and others improve teaching through coaching. Participants will engage in a brainstorming session of common mistakes they have encountered. Small group breakout sessions will review scenarios, list teaching barriers, and develop solutions. The ultimate goal of this session is to raise awareness of the barriers to teaching and create strategies to improve the teaching provided at Beaumont.

Marlene Seltzer, M.D.
Director, the NoBLE Program, Beaumont Health System
Assistant Professor, OBGYN



Intimidation in the Learning Environment

Intimidation in the Learning Environment will focus on the clinical environment. Understanding intimidation, its multifaceted manifestations, and the factors that have made 'education by humiliation' a longstanding tradition in the medical environment will be discussed. The consequences for individuals, the work climate, and patient care will make it clear that this is a 'tradition' that should be retired.

Oakland University William Beaumont School of Medicine Faculty Presents Fellowship in Medical Education Abstract

Mallikarjuna Barremkala, M.D. Assistant Professor Anatomy OUWB School of Medicine



Behavior Modification in M1 Students Through Peer Evaluation

Peer evaluation has been shown to be an effective tool in promoting professionalism among medical students. This tool might be most effective when implemented in gross anatomy lab as the students spend several hours exploring the human body through team collaboration. Giving and receiving feedback through peer evaluation can be used to change the negative behavior and enhance positive behavior. This idea is based on students desire to have conformity between their behavior and their peer's perception of their behavior (self-consistency theory). Students from M1 class of 2018 have completed the evaluation of four members of their dissection team using an online survey tool. Through this project, by using a mixed method analysis, I am hoping to quantify the perceived changes in the student behavior. I am expecting to see an improvement in the professionalism and communication skills among the students. I am also hoping to understand the dynamics of peer evaluation, its benefits and consequences.

Bhavinkumar Dalal, M.D.Assistant Professor Sleep Medicine Pulmonary & Critical Care Medicine OUWB School of Medicine



Comparing Didactic Lectures with Hybrid Think-Pair- Share-Method for Medical Knowledge Assessment and Students Engagement in Classroom

There is a constant need to improve types of medical education to engage students better. The purpose of this study was to compare engagement and outcome of think-pair share method with conventional didactic lecture method. One batch of M3 students were taught about chest radiology in didactic fashion for (series of 4 lectures) and the other batch of M3 students were taught the about same topic for one didactic lecture and 3 think pair share type of methods (Hybrid Think Pair Share method). Students' satisfaction and engagement was checked by validated survey. Pre and post knowledge was checked by test consisting of 20 multiple-choice questions.

Post-test scores were improved compared to pre-test sores (p=0.004) for the group who was taught in didactic style. Results for comparison of survey and results of Pre-test and post-test comparison for think pair share group is pending. Teaching chest radiology by didactic teaching is effective. If one-way of teaching is better than the other, it will be decided after all results are available.

Suzan ElSayed, VMD, Ph.D.Associate Professor Physiology OUWB School of Medicine



Implementing a Dialogical Story-Telling Approach in Medical Education

The "Dialogical Story-Telling" approach is an interactive method to teach physiology for Medical students during didactic lectures. This interactive method integrates an interactive conversational style within a story-telling method. The story telling incorporates dialogue with the students, which is in a question-answer format that not only creates a motivating learning context but also builds an educationally safe and supportive environment.

Celeste Farr, Ph.D., MPH
Assistant Professor Public Health
OUWB School of Medicine



Exploring Methods to Improve the Delivery of Diversity Related Topics in Medical Education

Teaching medical students about diversity issues can be challenging because the students do not want to engage the material and consider how social determinants of health impact the lives of their patients, or they feel that they will not need this information in their selected medical specialty so they fail to see the relevance of the content. This project tested the effect of the inclusion of a research paper on health care disparities on medical student's ability to identify the impact of social determinants of health on health outcomes. Students were assigned a disease or condition and were required to write a group paper that discussed the health disparities relevant to their assigned disease. The paper background and conclusions were analyzed for themes to determine if the students were able to accurately discuss diversity issues and relate social determinants of health-to-health outcomes. The assignment accomplished the goals set by the Course Directors. The students were able to demonstrate that they learned the lessons that were important to the project. The students did not read their paper all the way through, so next year a small group presentation will be mandatory for all groups to encourage them to read the whole paper and to allow the students to share what they have learned with their peers. The conversation about their learning was rich and robust so that will become a mandatory session to increase student participation.

David Hodge, M.D.Assistant Professor Gynecology
OUWB School of Medicine



Hand-Held Computer Based Application for Obstetrical 3rd Year Medical Students

Computer assisted learning through hand-held devices have begun to supplement traditional modes of education. In obstetrics there exists a need to quickly understand key concepts that can be presented in a uniform and updated fashion. Students are comfortable with hand-held devices and have been exposed to the "leveling up" aspect of modern video games. The purpose of this research study is to evaluate if a hand-held computer based educational application will improve the 3rd year medical student's performance and understanding during their rotation.

Serena Kuang, M.D., Ph.D.Assistant Professor Physiology & Neuroscience OUWB School of Medicine



Enhancing Learning Outcomes by Optimizing Medical Students' Mind Settings

Most current medical education efforts focus on optimizing learners' external factors, whereas efforts to optimize learners' internal factors such as mind settings are rare. The objective of this FME project is to develop a curriculum that optimizes learners' mind settings by inducing and nurturing their appreciative attitude toward life and toward everything we usually take for granted. The curriculum is structured as four modules dealing with four main themes: human achievement (levels and patterns), human potential (how intelligent and how much intelligence), human relationships, and human appreciative behaviors. Its format will be weekly, doable, short, fun tasks, readings, or thought pieces offered over the course of a year. As learners go through these four modules, appreciation will be inspired. The curriculum will be evaluated and modified in future qualitative and quantitative medical education research and applied to appropriate learner populations.

Sarah Lerchenfeldt, Pharm.D.Assistant Professor Pharmacology
OUWB School of Medicine



Relationship of Learning Techniques on Academic Performance for Second-Year Medical Students

Good study skills are fundamental to academic competence, in which high utility learning techniques contribute to student success both inside and outside of the classroom. Our study investigated the relationship between learning techniques and academic achievement for second year medical students at Oakland University William Beaumont School of Medicine. In our study, learning technique utility varied from the literature, which may be a distinction from research focused on general education. Self-explanation was identified as having high utility, and imagery for text was identified as having moderate utility. In the literature these learning techniques are designated as moderate and low utility, respectively. Utility designation in our study for the remaining six learning techniques was consistent with the literature. We intend to repeat the study with students who received training about learning techniques during their first week of medical school, and further investigate our hypothesis that self-explanation is a high utility learning technique for medical students.

Gustavo Patino, M.D., Ph.D.Assistant Professor Neuroscience
OUWB School of Medicine



Getting in the Mood: Does Delayed Testing Enhance Performance During a Clinical Clerkship?

Does delayed testing enhance performance during a clinical clerkship? Retrieval-based learning (RBL), the systematic use of testing as a learning method, has been proven as one of the most effective techniques to increase retention. However, its implementation in medical education has been limited by the lack of time for testing besides the current courses, and the lack of evidence for RBL to enhance higher-order cognitive skills. Our research project aims to study if testing for previously taught, highly relevant content at the beginning of a clinical clerkship can enhance the student performance in the latter.

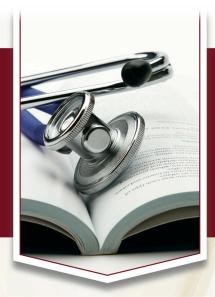
Manveen Saluja, M.D., FACP Assistant Professor Rheumatology OUWB School of Medicine



Interactive Rheumatology Course for Third Year Medical Students

The project will be innovative, online, self-paced rheumatology educational program for third year medical students. This will be an interactive program to enhance students understanding of complex rheumatologic conditions and educational strategy that will target rheumatology content knowledge and the clinical reasoning skills with M3 students demonstrating competency with pre and post test questionnaire.





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Poster Abstracts

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A Student-Directed Framework for Active Learning in Medical Ethics and Humanities

Julie Blossom; Jay Brahmbhatt; Jay Kachoria; Tania Kohal; Eric Raynal MD Candidates, OUWB Class of 2017

Biomedical Ethics (BE) is a student organization that promotes student-directed, extracurricular active learning in ethics and humanities. Student leaders take the initiative of defining learning objectives for each meeting, synthesizing learning material, and facilitating discussions. The open-ended nature of the discussions allows students, faculty, and staff participants to pursue individual learning outcomes by directing discussions.

BE events are facilitated discussions of ethical issues in a student-directed framework, which require faculty to incorporate their individual expertise. The discussion format is driven by the contributions of each participant, which provides opportunities for reciprocal learning and steps beyond hierarchies prevalent in traditional education. Because students are able to establish the learning environment, they are more receptive to knowledge shared by faculty. Faculty, in turn, are afforded the opportunity to explore how students define, perceive, and reason through ethical and humanistic issues.

A useful hidden curriculum is inherent to BE, particularly with respect to executive board members who, in addition to gaining familiarity with the field of bioethics, learn to navigate administrative policies, organize educational events, and procure CME-credit approval. Board members also gain professional skills, particularly by interacting with constituencies. This includes facilitating peer and faculty learning, building relationships with faculty and physicians, and co-planning events with other student organizations. This primes executive board members for leadership roles later in their educational and professional careers.

In sum, BE enriches the academic environment not only by setting a precedent of active learning for student organizations at OUWB, but also through its hidden curriculum that fosters collegiality and leadership.

Creation of an Innovative Interactive Learning Tool for Anatomy

Claudio Cortes PhD¹; Wenjin Zhou PhD²; Mallikarjuna Barremkala MD¹; Mizumi Malhan³; Sofia Kosmidis⁴; Tudor Moldovan⁴

¹OUWB Department of Biomedical Sciences ²Oakland University Department of Computer Science & Engineering ³Oakland University Student, School of Engineering & Computer Science ⁴Oakland University Student, College of Arts and Sciences; OUWB Student Assistant

BACKGROUND: There is a need for generating interactive educational tools that allow students to encourage self-directed learning and self-assess their progress in order to attain proficiency in a given topic. Creating educational tools, which can be used before the lectures, will allow instructors to utilize the lecture time for introducing higher order levels of cognitive skills.

PURPOSE: Our main goal is to create a multimedia-learning tool that is interactive, competitive, and encourages self-directed learning. This tool will help students to assess their progress and reach a proficiency level prior to lecture.

PRELIMINARY RESULTS: We have designed a prototype of an Interactive Learning Tool for Anatomy (ILTA). Novices (n=3) and experts (n=3) in anatomy used ILTA to drag and place muscle in bone structure, and to answer multiple-choice questions. ILTA recorded the number of attempts required to place muscles in the right location and the time spent to complete the session. ILTA provided instant scores, and ranked users at the end of each session. We found that novices, from a maximum score of 37, had lower scores (17±4.3) than experts (28±0.94) when using ILTA for the first time. Interestingly, novices reached similar scores of experts after using ILTA four times (novices 26±7.33 versus experts 32±3.1). In addition, there was a reduction of the numbers of attempts (24.67±11è4.83±3.3) and the time spent to find the correct answers (236±110è131±28sec) the more they use ILTA. Finally, the average time required for a novice to reach an expert level was 12.4±5.9 minutes.

CONCLUSION: We have generated an interactive learning tool that have the potential to be used as an outside class pre-reading material. Future studies to determine whether ILTA improves the learning outcomes of medical students when compared with traditional reading material are warranted.

Creation of an Online Module about the Complement System for Medical Students

Claudio Cortes PhD¹; Kathleen E. Doyle MEd²; Misa Mi, PhD, MLIS¹; Stephen Loftus PhD¹; Mallikarjuna Barremkala MD¹; Sofia Kosmidis³; Tudor Moldovan³

¹OUWB Department of Biomedical Sciences ²OUWB Department of Educational Information Technology ³Oakland University Student, College of Arts and Sciences; OUWB Student Assistant

BACKGROUND: There is a need for generating interactive educational tools that enhance self-directed learning outside the classroom in medical schools, especially in those topics that require a lot of factual memorization. The creation of such educational tools allows instructors to optimize in-class time engaging higher order cognitive skills (e.g., application, analysis) rather than spending time delivering factual information.

PURPOSE: Our main goal is to create an educational module that is interactive, encourages self-directed learning, and helps students self-assess their progress.

METHODS:

Educational Module We have generated an online educational module about the complement system, an essential arm of the innate immunity, using Softchalk and Camtasia 2.0. To learn about the complement system requires a lot of memorization (comprises more than 30 proteins), and is hard to understand due to its complexity. This module explains in ~60 minutes how the complement system works using video simulation with narration, and applies this knowledge in clinical cases associated to deficiencies of the complement system (e.g. SLE, aHUS, meningococcemia).

Participants The module will be introduced to M1 medical students in BFCP-1. Students will be invited to use the module to enhance their learning experience and prepare for their in-class activities.

Module Evaluation This module contains pre and post formative assessments to determine students' progress, and incorporates a survey to evaluate user satisfaction where improvements can be suggested.

RESULTS: This poster will demonstrate how the module is designed and developed to engage medical students' attainment of high level learning outcomes. If successful, this module could be used as a prototype to develop more tutorials in the biomedical sciences.

"Read – Fill" Approach to Support Self Directed Learning of Threshold Concepts during Lecture-Based Classes

Suzan ElSayed VMD, PhD; Stephen Loftus, PhD

OUWB Department of Biomedical Sciences

The Read-Fill approach is a technique to enhance self-directed learning of threshold concepts and to make didactic lectures more interactive. Threshold concepts are key ideas needed to understand a topic but which may be difficult to learn, requiring special efforts by teachers to ensure students engage a topic with the depth required.

A week before the lecture, students are provided with copies of the PowerPoint slides to be used. At strategic points some of the slides will have only headings and/or subheadings. The students are instructed to fill in the slides appropriately. For example, a number of bullet points of relevant material might be expected. During the lecture the teacher will ask the students what answers they were able to provide. The responses from students can be compared and contrasted with each other and then with the teacher's version. The strategic slides are chosen in order to focus attention on aspects of threshold concepts, which require students to actively process information rather than simply recall facts. The technique can be used to identify and dispel common misunderstandings and be the focus of short interactive discussions.

This exercise has a number of advantages. For example, by requiring students to engage with material in advance, active self-directed learning is promoted. In addition, the positioning of the slides throughout the lecture can also maintain students' arousal and interest throughout the teaching session.

Cultural Differences in Perceptions of Cadaver Dissection Between Two Medical Schools

Inaya Hajj Hussein PhD; Jason Wasserman PhD; Brent Thompson PhD; Mallikarjuna Barremkala PhD; William Forbes DDS

OUWB Department of Biomedical Sciences

Cadaver dissection remains a cornerstone of Medical Education. However, visceral reactions to the experience may impact learning outcomes. This study compared two groups of medical students, one from a US medical school located in the Midwest (n=62) and another from a medical school in the Middle East (n=99). Items on the survey assessed their emotional reactions to the dissection experience as well as coping strategies and self-perceived learning outcomes. The survey was administered one week after the first dissection lab and again at the end of the course. It aimed to assess changes to emotional reaction and coping, and to examine any cultural differences therein.

Preliminary results suggest that on a scale of 1 to 5, students from both countries tended to find the dissection activity enjoyable (3.84), challenging (4.04), stimulating (4.09), exciting (3.98), and interesting (4.32), as opposed to nauseating (1.73), scary (1.55), painful (1.46), or depressing (1.61). However, ratings for the "emotion" inherent in the experience centered at 2.32, suggesting that students were still affected by the experience. Preliminary comparison of the two sub-samples finds that the US students report finding the activity scarier (F=13.68; p<0.001), more challenging (F=11.12; p<0.01), more stimulating (F=4.99; p<0.05), more informative (F=21.21; p<0.001); more interesting (F=18.34; p<0.001) and more emotional (F=6.34; p<0.05).

Coping strategies were largely equivalent across the two sub-samples. However, US medical school students did report higher levels of self-distraction p<0.001), and use of emotional support; p<0.05).

In conclusion, there appear to be, however, cultural differences with US medical school students reporting greater emotional qualities of the dissection experience and more often seeking or utilizing support mechanisms.

Integrating Histology, Gross Anatomy and Histopathology in a Case Based Approach to Inflammatory Bowel Disease

Inaya Hajj Hussein PhD¹; Mallikarjuna Barremkala PhD¹; Brent Thompson PhD¹; Douglas Gould PhD¹; William Forbes DDS¹; Ann Marie Blenc MD²; Mitual Amin MD²; Judith Venuti PhD¹

¹OUWB Department of Biomedical Sciences ²OUWB Department of Pathology

At Oakland University William Beaumont School of Medicine (OUWB), integration has progressed beyond the basic concept of horizontal and vertical integration. We now emphasize student-directed learning, active learning, development of interpersonal skills, problem solving, and self-reflection. Inflammatory Bowel disease (IBD) has two major constituents: ulcerative colitis and Crohn's disease. It can involve any segment of the GI tract, as well as other systems that share clinical and pathological characteristics. As such, IBD serves as an excellent model for how we accomplish integration within our curriculum.

We will use clinical scenarios of IBD cases, with learning objectives defined by the students. Students will address comprehensively the anatomy, histology, histopathology, and pathophysiology in a manner that will provide a thorough understanding of the disease. Then, they will establish a final diagnosis. This approach will be facilitated by making available to the students a wide variety of resources. Students and instructors will grade these activities along with formal evaluations based on well-defined criteria.

This student-directed strategy requires a major shift in the way educators think about medical school teaching. It is a successful integration approach whereby students themselves take initiative and responsibility for determining what is worthwhile to learn. In addition to horizontal integration and vertical integration, it offers several intangible benefits. Chief among those benefits is building a community of students with high level of skills and professionalism.

As time goes on, new educational activities will be initiated that will promote student-directed learning, critical thinking and working collaboratively.

Assessment of 4th Year Medical Student's Competency in Diagnostic Workup for Anemia and Lymphadenopathy Prior to Diagnostic Medicine Clerkship

James Huang MD

OUWB Department of Pathology

BACKGROUND: In 2014, we started to offer a new two weeklong clerkship, Diagnostic Medicine (DM) combining radiology and pathology to the first class of medical students of Oakland University William Beaumont School of Medicine. The pathology component of the clerkship was designed to develop their competency in application of Pathology to Diagnostic Medicine. Students started their DM rotations in their 4th year. Their competency gap was largely unknown to our teaching faculty because none has taught similar clerkship before. Therefore, I built a pretest as a pilot project to assess the student's competency prior to diagnostic medicine clerkship.

METHODS: A pretest with twenty multiple-choice questions was prepared to assess the diagnostic competency on anemia and lymphadenopathy, mainly on ordering laboratory tests and interpreting the test results. It was designed as an open-book test with no time limit and administered online (https://softchalkcloud.com/lesson/serve/sNx0fPqnw8Uye5/html) with SoftChalk Cloud, a digital curriculum authoring software. Students were asked to take this pretest prior to the session of anemia and lymphadenopathy in Diagnostic Medicine clerkship.

RESULTS & LESSONS LEARNED: 35 students took the pretest so far. Their mean score was 50 on a scale of 100 (range, 15-80). 90% of students were able to recognize typical CBC and blood smear morphology of vitamin B12 deficiency. However, only 20% of the students were able to recognize the typical CBC and differential count of chronic myeloid leukemia. Choosing hematology path consult, CBC with differential, flow cytometry, iron studies, and hemoglobin electrophoresis was frequently inappropriate. Generation of appropriate differential diagnosis for anemia based on history, CBC+ differential count and smear review was difficult to many of them. These results have provided objective and useful information to clerkship director and instructors to design or modify the curriculum that would best suit the 4th year medical students.

Putting the Pieces Together: A Curriculum Designed to Integrate the Imaging and Laboratory Findings of a Symptomatic Patient

James Huang MD¹; Lynda Misra DO, FACP, MEd²⁻⁴; Michelle Young MD¹; Rachel VanHulle MD^{5,6}; Paresh Mahajan MD⁵

¹OUWB Department of Pathology ²OUWB Department of Internal Medicine ³OUWB Department of Neurology ⁴OUWB Administration ⁵OUWB Department of Diagnostic Radiology ⁶OUWB Department of Pediatrics

LCME ED-17 states that the educational opportunities must be available in a medical education program in multidisciplinary content areas (e.g., emergency medicine, geriatrics) and in the disciplines that support general medical practice (e.g., diagnostic imaging, clinical pathology).¹

At Oakland University William Beaumont we designed a fourth year clerkship called Diagnostic Medicine that integrates the supporting disciplines of diagnostic imaging and pathology. The case base topics include the hypotensive patient, the bleeding pregnant patient, breast mass, cough, joint pain, unconscious patient, anemia and lymphadenopathy, palpitations, abdominal pain and masses, and diarrhea and flank pain.

Didactic lectures, small group sessions, and online modules are designed using these daily case topics to teach medical students the fundamental knowledge and skills to choosing imaging studies and laboratory tests wisely. Basic imaging and laboratory interpretation is also included.

The cumulative grade is based on clinical performance evaluations, a diagnostic radiology online exam with questions obtained from the Association of University Radiologists national web based RadiologyExamWeb database, and a pathology written exam. The student evaluations and exam scores are utilized for outcome measurement on a monthly and yearly basis.

This poster will outline the curriculum of the Diagnostic Medicine rotation, a novel approach to the LCME ED-17 requirement. By putting the pieces of the two disciplines together we simulate the way the information is provided to the primary doctor or emergency room physician after seeing a patient.

Primary Care Physicians and Screening for Mental Health Issues and Suicidality

Kaitlin Liroff¹; William Miles MD²; Ronald Samarian MD²

¹MD Candidate, OUWB Class of 2016 ²OUWB Department of Psychiatry

INTRODUCTION: In 2013, 41,149 people committed suicide. Approximately 45% of those who complete suicide see their primary care physician (PCP) within a month of their death. The US Preventative Task Force on Suicide Prevention indicated that they could not prove the efficacy of screening. This has raised the question: is screening ineffective, or, are the correct risk factors not being identified? The purpose of this survey is to investigate how PCPs are screening for suicide. By identifying gaps in physician screening this survey could be used to inform education programs for PCPs.

METHODS: Surveys were presented to PCPs in the OBGYN, Family Medicine, and Internal Medicine departments in Beaumont Health System. The survey consisted of 13 questions. Surveys were collected and results were analyzed.

RESULTS: Seventy-eight surveys were collected: 40.3% indicated that mental health screening is a part of first time visits, 44.7% also screen for suicidal ideation. In response to the question: "What would prompt you to screen for suicide?" 4.05% mentioned hopeless, 18.91% mentioned anxiety, and 10.1%, all of whom were OBGYN physicians, indicated the postpartum period as a prompt for screening.

CONCLUSION: The results suggest that many PCPs may not be asking about key risk factors for suicidality, and that there is a lack of universal and routine screening. This information should be part of a larger conversation about mental health and screening for suicidality. These results could be used to inform physician education about screening so that these important opportunities for intervention are not missed.

Relationship of Learning Techniques on Academic Performance for Second-Year Medical Students

Sarah Lerchenfeldt PharmD; Rodney Nyland PhD

OUWB Department of Biomedical Sciences

BACKGROUND: Dunlosky and colleagues explored the efficacy of ten learning techniques that students could use to improve their success across a wide variety of content domains. According to Dunlosky and colleagues, two of the techniques most favored by students, rereading and highlighting text, were insufficient in terms of educational outcomes. They also found that practice testing and distributed testing, two of the most useful techniques, were shown to be unpopular among students. The proposed study will investigate the relationship between learning techniques and academic achievement for second-year medical students at Oakland University William Beaumont School of Medicine.

METHODS: An optional survey about learning techniques used will be given to students. The survey will include the ten popular learning techniques discussed by Dunlosky and colleagues, including elaborative interrogation, self-explanation, summarization, highlighting/underlining, keyword/mnemonic, imagery for text, rereading, practice testing, distributed practice, and interleaved practice. The survey will also contain an area for free text. Four pharmacology lectures will be given during the Psychopathology course. Optional quiz questions will be provided based on the material discussed in each lecture. Results from the students' learning techniques will be analyzed and correlated with their quiz scores. The impact of the different learning techniques on academic achievement (quiz scores) will be evaluated.

RESULTS: Based on the results, a study skills session may be offered to all students, including those with low utility study skills and quiz scores, with the goal of aiding in the development and maintenance of effective study skills across the curriculum.

A Medical Education Certificate for Faculty at OUWB School of Medicine

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Medical education is complex. Faculty who provide medical education need to learn how to navigate this complexity so that they can provide a high quality education. At OUWB School of Medicine we now offer an official certificate course that introduces faculty to the theory and practice of medical education. Subjects range from the practical issues of how to organize and deliver a lecture, or manage a small group teaching session, to wider theoretical issues, such as the latest thinking in educational theory. For example, what is phronesis and why is it relevant to medical education? The certificate course also introduces participants to current issues and controversies affecting medical education. These issues include the role of the hidden curriculum, the balance between theoretical and practice-based education, and the balance between training and education. Issues affecting the wider world of higher education are also introduced, such as blended learning, threshold concepts and their usefulness, and the growing role of simulation. The certificate course also tries to make use of the approaches it advocates. Sessions are highly interactive, requiring involvement of all present. Participants are expected to think with, and think about, the ideas being presented and share their own insights with others present.

Prospective Assessment of the Integration of Evidence-Based Medicine into an Internal Medicine Residency Program

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OBJECTIVE: This study aims to assess the efficacy of three EBM teaching sessions in improving Internal Medicine (IM) Resident critical thinking.

METHODS: An EBM curriculum was implemented which included three separate EBM teaching sessions, each having three days of lectures. Topics covered included critical appraisal of randomized control trials (RCTs), case-control and cohort (Harm) studies, and studies on diagnostic tests. Anonymous pre- and post- quizzes were administered to IM Residents to assess the efficacy of the curriculum to improve EBM knowledge. Participation in the course was required, however participation in the pre- and post- quizzes was voluntary. The quizzes also assessed the ability to interpret relevant statistics to the above studies.

RESULTS: The majority of residents were from the IM department. In total, 37, 33, and 39 residents participated in the therapy, harm, and diagnosis sessions, respectively. Each set of preand post- quizzes showed statistically significant improvement in quiz scores. Quiz scores for RCTs improved from 58% to 77%. Quiz scores for harm studies improved from 65% to 73%. Understanding of diagnostic principles improved from 49% to 68%. Additionally, there was improvement in sub-topics including the concepts of concealment, intention to treat, relative risk and number needed to treat.

DISCUSSION AND CONCLUSION: The results display the effectiveness of teaching EBM principles to residents in three short sessions. This study also highlights EBM topics, which remain poorly understood following the implementation of our curriculum. Retention of knowledge and implementation to practice will require further investigation.

Purging the Binge and Purge: An Interactive Study Skills Workshop for First-Year Medical Students

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Cognitive psychology shows the most common student study habits are often the least effective techniques, such as massed practice and highlighting textbooks. We developed an interactive workshop to teach first year medical students evidence-based study techniques, such as spaced practice and metacognitive note taking, and set them up for success in an integrated medical school curriculum. The workshop was offered during the first week of our foundational, semester-long integrated basic science course.

The workshop employed activities designed to engage the students and, more importantly, reveal flaws in common study practices. In one activity students were asked to estimate their ability to remember an everyday object, a penny, and then tested on the details. On average students overestimated their ability to remember the details by 100%, and overestimated the "top class performance" by 350%. Student feedback showed the activities were important for going beyond theory to prove ineffectiveness of common study techniques.

We also addressed a practical aspect during the workshop – the limited time available to medical students. Thus, near the end of the workshop we distilled the principles into a few approaches they could immediately put into practice – before, during, and after lecture. In one hour we covered strategies that would confer the greatest benefit, and provided a detailed handout after the workshop with expanded details and additional references.

Introducing this study skills workshop, combined with continued reinforcement of effective study practices, will serve to better prepare our students to succeed in the evolving integrated medical curriculum.

Development of a Pre-Clinical Elective for Medical Students at a Residential Diabetes Camp

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Chronic illness is widespread in society, yet frequently difficult to understand in strictly an academic setting. A residential, overnight diabetes camp has been used as a clinical learning ground for nursing and pharmacy students, but currently no documentation exists for medical students in their pre-clinical years. A pre-camp curriculum was established and assessed for effectiveness in educating and training medical students in type 1 diabetes treatment and management. The study was designed to enhance a pre-clinical elective rotation curriculum for medical students at Oakland University William Beaumont (OUWB) School of Medicine. The study design is a pre-post test design with a non-randomized control and experimental group. The control group included medical students at camp who did not partake in the curriculum. Due to the small number of participants, data collection and analysis in the pilot study focused on qualitative data from trend changes of the knowledge based tests, surveys, and short answer questionnaires. Three OUWB first year medical students participated. One OUWB second year medical student and one Wayne State third year medical student participated as the control group. Preliminary results suggest that the curriculum increased knowledge of treatment and management of type 1 diabetes and perceived greater confidence in skills for medical student participants. The program was well received and highly recommended for future students, and suggestions were collected to improve the curriculum. Additional participants will be recruited to increase the power for statistical analysis and a revised curriculum will be implemented for the summer of 2015.

Does OUWB's Neuroscience Course Content Reflect the USMLE Step 1 Exam?

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The United States Medical Licensing Examination (USMLE) is a three-step examination for medical licensure. Step 1 is typically taken after the second-year and is the major determinant for residency placement. Therefore, one goal of the first two years of medical school is to prepare students for Step 1 of the USMLE. With the newly adopted integrated system where students get increased clinical exposure starting with year one, this could mean less time spent covering core science principles. This study aims to evaluate the OUWB neuroscience course to determine how well it reflects a *Master List* of neuroscience topics. The 2014 neuroscience course content on Moodle was evaluated against the Master using an iSEEk word count. The First Aid (FA) books are the most widely used board preparation materials; their content was similarly evaluated. OUWB's neuroscience course and FA books covered the majority of topics in the Master list. However, the course failed to cover the venous drainage of the diencephalon, saccades, carcinomatosis, and substance abuse. The FA books failed to cover petrous apex syndrome, channelopathies, and anti-neoplastics. Neither the course nor the FA books covered any behavioral topics. Areas in the OUWB neuroscience course that may be lacking were identified. The course is complemented by a behavioral neuroscience course, and a psychopathology course in the second year, as well as neuroscience topics throughout the systems courses that likely capture several of the identified topics.

POSTER 16 Is "Meaningful Participation" Meaningful?

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Engaging clinical faculty within a medical school environment today is not only essential, but also required by the Liaison Committee on Medical Education (LCME). Academic institutions are faced with the dilemma of identifying mechanisms to recruit and retain practicing physicians to assist them with the medical education of their students. Although the concept of utilizing volunteer faculty is a long-standing practice in medical education, the time commitment for practicing physicians is substantial. Therefore many institutions have resorted to the utilization of rewards to stimulate involvement. Current literature identifies a plethora of examples of rewards that have been used by academic institutions including access to library resources, university parking tickets, special faculty development conferences, discounted tickets to academic events, academic appointments and monetary supplements. In order to address the need for physician engagement the OUWB School of Medicine established a system to appoint physicians, offered a monetary incentive for participation (PPAP, Physician Payer Adjustment Program) and then set performance expectations by way of a program called "Meaningful Participation." The program was designed to outline the conditions necessary to maintain a faculty appointment and to assure the involvement of faculty in the medical school. MPP required physicians to obtain professional development and service credits in order to maintain their faculty appointment. Evaluation of participation levels indicates that Meaningful Participation program is meaningful. The poster will outline the program, its objectives and statistics supporting the programs success.

A Demographic Analysis of Medical Students' Understanding of Myths and Misconceptions Regarding Sexual Abuse

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Despite a high incidence of sexual abuse cases, formal preparation of medical students to address these cases is lacking. To improve the standard of medical care and satisfy the needs of victims of sexual abuse and the healthcare professionals that treat them, the topic must be addressed in the curriculum.

The goal of this study was to determine a baseline regarding M2 students' understanding and how a session on sexual abuse might influence their beliefs. We explored students' perceptions regarding sexual abuse before and after an educational intervention by a forensic expert from the Haven Clinic*. Analysis of student responses suggested that many of their initial perceptions were built on myths and misconceptions and that the information session helped dispel these. To further extend our analysis we compared responses obtained from students according to gender, age and if individuals were themselves victims of abuse and/or had family members that were victims.

Survey results were analyzed by determining the percent of responses that were in agreement with the forensic expert for males vs. females, victims vs. non-victims and different age groups before and after the information session. Differences were observed between the genders and in the responses of victims and non-victims.

Our goal is to determine which misperceptions need to be further addressed to enable planning of more directed information sessions in the future. The intent is to create a sound curriculum designed to narrow health professionals' knowledge gap regarding sexual abuse victims and their needs and address medical students' perceptions of these needs.

The Long-Term Influence of Survivors Teaching Students on Medical Student Learning

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HYPOTHESIS: Survivors Teaching Students® (STS®), a program that educates medical students on ovarian cancer and survivorship care through the use of the "patients-as-teachers" model, is effective in producing long-term retention of concepts.

METHODS: Previously, the STS® program was evaluated by a pre- and post-test conducted on the presentation day. In order to determine if students retain the presented information, an additional survey was sent six months after the presentation to the third year medical students at Oakland University William Beaumont School of Medicine. The post-survey contained the same seven multiple-choice questions as the pre-test and three new questions to determine use of knowledge and interest in the field. Composite data from the pre-test, post-test, and six-month post-survey were compared for retention of ovarian cancer facts and understanding of survivorship care concepts.

RESULTS: Fifty medical students completed the pre- and post-test on the day of the presentation. Nineteen medical students completed the 6-month post-survey. When asked to list three ovarian cancer symptoms in the survey, 76% of the symptoms listed by students were one of the four symptoms described in the Ovarian Cancer Symptoms Consensus Statement. Additionally, one student has reported that she was able to diagnose a patient with ovarian cancer based on the information taught.

CONCLUSION: Although additional research would be needed, positive outcomes provide evidence of the program's success at promoting long-term retention of concepts. Furthermore, it provides a basis for research into the use of this unique teaching method for other concepts in the medical school curriculum.

Attention and Interpretation Training in Medical Students: Decreasing Stress and Increasing Mindfulness

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INTRODUCTION: The Attention and Interpretation Therapy (AIT) program was developed by Dr. Amit Sood of Mayo Clinic. It teaches mind-body techniques of focused attention and thoughtful interpretation of life experiences as stress management tools. Medical school is a stressful, anxiety-producing time. This research seeks to identify if practicing the AIT program as a medical student decreases stress and anxiety, and increases mindfulness.

METHODS: This one-arm case study had a pre- and post-test design. First and second year OUWB medical students were invited to participate in four sessions, during which key AIT concepts were taught. 20 participants were enrolled; 12 second year students and 8 first year students. Self reported measures of mindfulness, stress, and anxiety were scored via three surveys (Perceived Stress Scale, Mindful Attention Awareness Scale, and Generalized Anxiety Disorder 7-item scale). These were administered pre and post-sessions, 12 weeks from baseline, and one year out. The change over time was analyzed via one-way repeated measures ANOVA.

RESULTS: All participants completed the study. Over time, participants showed decreased anxiety (p = 0.015) and increased mindfulness (p = 0.001). Though it did not reach significance, there was a trend of decreased stress (p = 0.068).

CONCLUSION: Practicing the AIT program is correlated with significantly decreased anxiety and increased mindfulness, as well as a trend of decreased stress. Further research with a larger number of medical students could be considered. A control group could be utilized as well.

Exploring Cultural Competence in a Medical Education Curriculum

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INTRODUCTION: As the demographics of the United States become more diverse, patient populations reflect the growing number of cultures represented. The American Association of Medical Colleges indicates "cultural competence in health care combines the tenets of patient/family-centered care with an understanding of the social and cultural influences that affect the quality of medical services and treatment". Health care providers should learn to communicate in a culturally competent manner, as effective cross-cultural communication can affect health outcomes as well as patient satisfaction and compliance. This study explores the cultural competence curriculum at Oakland University William Beaumont School of Medicine (OUWB).

METHODS: A content analysis will be performed on the curriculum at OUWB as implemented in Fall 2014. Various aspects of cultural competence represented within the curriculum will be identified as well as the frequency with which they are presented to students. As the majority of the topics pertaining to cultural competence are introduced during students' first and second years, material presented during that time will be analyzed.

RESULTS: The topics presented to students in the curriculum that pertain to cultural competency will be reported, as well as those that the curriculum does not address. Areas where student learning can be enhanced will be identified and can be strengthened for upcoming years.

CONCLUSION: Analysis of the cultural competence curriculum may indicate the necessity for instructional changes to include those topics not represented. Thus, students will be best prepared to work with diverse patient populations in their future careers as physicians.

Assessing the Need for Autism Spectrum Disorder Physician Education

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OBJECTIVE: Autism Spectrum Disorder (ASD), a lifelong developmental disorder characterized by impaired social interaction and difficulty communicating, can lead to challenges when navigating health care. This study aims to identify some of these challenges that could be addressed through increased education of the medical community.

METHODS: Young adults (ages 18-30) diagnosed with ASD enrolled in Oakland University Center for Autism and their parents/caregivers were asked to complete a survey addressing medical care experiences. Results were analyzed for frequency trends.

RESULTS: Six young adults (age 18-23) with ASD and 23 parents/caregivers completed the surveys. Ninety-one percent (21/23) of parents/caregivers routinely help their young adult with ASD to obtain medical care. Sixty-one percent (17/23) felt there was not immediate understanding by the medical personnel that their young adult has specific needs during their visit. Seventy-four percent (17/23) of parents/caregivers believe increased education of medical students, medical school faculty, and physicians on the specific needs of individuals on the spectrum would improve health care delivery to their young adult. Of the young adults surveyed, 83% (5/6) want specific instructions from medical staff during their visits, 83% (5/6) need help with forms, and 50% (3/3) prefer an explanation before examinations/tests are performed.

CONCLUSION: Although a limited number of surveys were returned, the responses verify that young adults with ASD and their parents/caregivers encounter challenges when accessing health care. Future studies targeting the implementation of an ASD centered educational program for medical students and physicians may address some of these needs.

Evolution of Applicant Perceptions of Oakland University William Beaumont School of Medicine (OUWB)

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INTRODUCTION: Since the recent inauguration of OUWB, the number of applicants has increased by approximately 150%, reflecting a rise of pre-medical interest in the school. This study investigates how applicant perceptions of the school changed over the past 5 application cycles. The findings will be informative for the array of new medical schools in their nascent stages of development, as well as other new programs in health and allied professions.

MATERIALS AND METHODS: Student Doctor Network (SDN) is an anonymous Internet forum, where prospective and current medical students exchange opinions on each medical school in the United States. This study employed a grounded approach to systematically examine these narratives. Posts were extracted from the OUWB sub-forums in SDN spanning 5 consecutive application cycles from 2010-2011 to 2014-2015. Posts that provided pertinent information were tabulated and coded line-by-line by two separate coders. Emergent patterns in the data formed the themes that constitute the primary findings of this paper.

RESULTS: Pre-medical applicants were primarily concerned in the early cycles about the newness of OUWB compared with the older, more established institutions. They were, however, generally impressed with the facilities, resources, curriculum, and community spirit through interview days and other sources. This gradually promoted a replacement in the initial anxiety with more confidence about the school among later cohorts. Over time, applicants began to shift their attention from the infrastructural features of the school (e.g. anatomy lab and Beaumont Hospital) to its organic components (e.g. faculty, students, and culture) that unfolded in a malleable learning environment.

CONCLUSION: This study sheds light on applicant perspectives on a recently established medical school. It also provides a basis upon which new medical schools may focus their attention as they establish their reputations, build their brands, and navigate the competitive environment of attracting applicants.

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