

# 2021 MEDICAL EDUCATION RESEARCH and INNOVATION CONFERENCE

December 7, 2021



## Keynote Speakers



**Olle ten Cate, Ph.D.**  
*Professor of Medical Education,  
University Medical Center Utrecht  
Adjunct Professor of Medicine,  
University of California, San Francisco*



**Louis N. Pangaro, M.D.,  
MACP**  
*Professor of Medicine,  
Hebert School of Medicine of the  
Uniformed Services  
University of the Health Sciences*



**WAYNE STATE**  
School of Medicine

A close-up, low-angle shot of the marble statue of Abraham Lincoln. The statue is shown from the chest up, facing slightly to the right. It has a full, curly beard and hair. The background is a solid, bright blue sky. A dark green rectangular box with a thin yellow border is overlaid on the lower half of the image, containing white text.

*Wayne State is one of only a few  
public urban universities with the  
Carnegie Foundation's highest  
rankings in both research and  
community engagement.*

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# OVERVIEW

The Wayne State University School of Medicine (WSUSOM) will host its 3rd annual Medical Education Research and Innovation (MER/I) Conference to showcase completed and in-progress medical education research and innovation projects conducted by students, residents, staff and faculty Dec. 7, 2021.

More than 100 posters and oral presentations were submitted for the much anticipated virtual conference, believed to be the first of its kind nationally. Geared toward first-time research participants, topics are related to timely and important topics relevant within a medical education setting and to the broader educational community. Rewards and recognition will be given for best-in-class presentations.

The school's MER/I conference will feature two keynote speakers:

**Olle ten Cate, Ph.D.**

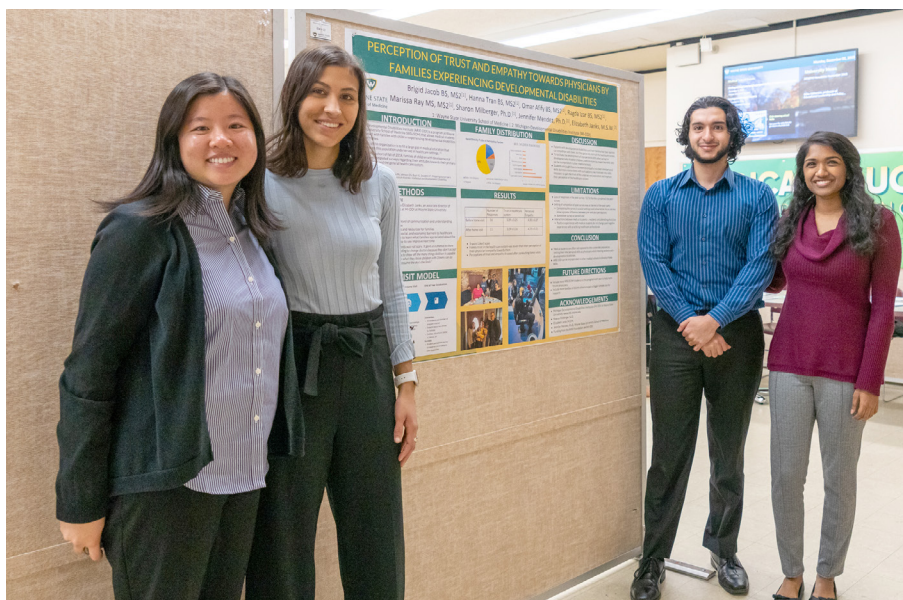
Professor of Medical Education,  
University Medical Center Utrecht  
Adjunct Professor of Medicine,  
University of California, San Francisco

**Louis N. Pangaro, M.D., MACP**

Professor of Medicine,  
Hebert School of Medicine of the Uniformed Services  
University of the Health Sciences

# CONFERENCE GOALS

1. Acknowledge current curricular innovations that take place at Wayne State University School of Medicine by providing participants a venue to showcase their work.
2. Help individuals take their works in progress to completed projects or innovations.
3. Help individuals take their research from the local stage to the national stage.
4. Help individuals translate their posters/oral abstracts to publications.







# AGENDA

2 p.m.

## CONFERENCE OPENING

Mark E. Schweitzer, M.D., Dean, Wayne State University School of Medicine  
Robert Folberg, M.D., Vice Dean of Medical Education

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2:30 p.m.

## PLENARY 1 (35 MIN + 15 MIN Q & A)

### Keynote speaker:

Louis N. Pangaro, M.D., MACP

Title: *From understanding to action in assessment systems*

3:30 p.m.

## ORAL PRESENTATIONS (BREAKOUT SESSIONS)

Learning and teaching in medicine - works in progress

Undergraduate medical education - works in progress

Education in the clinical environment - works in progress

Medical education

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4:30 p.m.

## PLENARY 2 (35 MIN + 15 MIN Q & A)

### Keynote speaker:

Olle ten Cate, Ph.D.

Title: *Assessment for entrustment in the workplace using EPAs; issues to think about*

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5:30 p.m.

## AWARDS CEREMONY

### Facilitators:

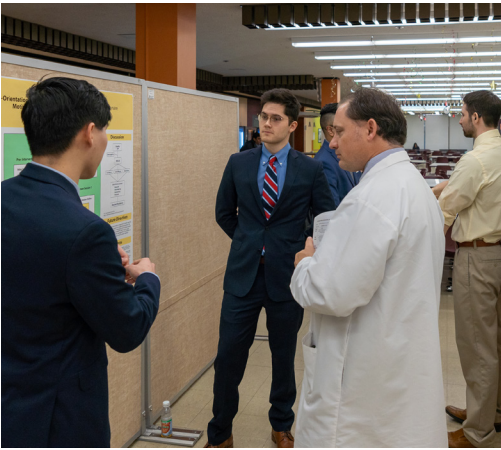
Robert Reeves, M.B.A., Director of Accreditation

Jenna Carter, Graduate Research Assistant, Cancer Biology

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6 p.m.

## AFTERGLOW WITH SPEAKERS





# BREAKOUT SESSIONS

3 p.m. **ORAL PRESENTATIONS**

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## LEARNING AND TEACHING IN MEDICINE - WORKS IN PROGRESS

**Facilitator:** Jenna Carter

**Title:** *Using Mental Models to Advance Clinical Reasoning*

**Author(s):** Sonal C. Patel, Shaun Cardozo, James A. Rowley, Madhumita Mohanty, Janet Poulik, Murray N. Ehrinpreis

**Title:** *The Impact of a Growth Mindset on Medical Students*

**Author(s):** Luke Wesemann

**Title:** *Evaluation of Spaced Repetition in Medical School Year One Gross Anatomy*

**Author(s):** Thomas Russo

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## UNDERGRADUATE MEDICAL EDUCATION - WORKS IN PROGRESS

**Facilitator:** Diane Levine, M.D.

**Title:** *Formation of a multi-stakeholder student driven coalition to address issues of justice, equity, diversity, and inclusion, in the medical education curriculum*

**Author(s):** Ashley Kramer, Sara Saymuah Stone, Enxhi Lalo, Suraj Jaipalli, Pavithra Margabandu, Michael J. Franklin Jr, Ntami Echeng, Capricia Bell, Lauren Varvatos, Riya Shah, Margaret Bove, Senthil Kumar Rajasekaran

**Title:** *Development of a Longitudinal Medical Ethics Curriculum for Pre-Clerkship and Clerkship Training*

**Author(s):** Margaret Bove; Benjamin Huber; Erin Miller, M.D.

**Title:** *Perceived Effectiveness of Video Interviews for Orthopaedic Surgery Residency During COVID-19*

**Author(s):** Jonathan Warren B.S., Lafi Khalil M.D., Alexander Pietroski M.S., Michael McIntosh B.S., Stuart Guthrie M.D., Stephanie Muh M.D.



## EDUCATION IN THE CLINICAL ENVIRONMENT - WORKS IN PROGRESS

**Facilitator:** Senthil Kumar Rajasekaran, M.D.

**Title:** *Improving Treatment Cost Communication for Spanish and Arabic Speaking Cancer Patients: Next Steps in the DISCO Protocol*

**Author(s):** RaeAnn Hill, Eyouab Tadesse, Lorna Mabunda, Lauren M. Hamel

**Title:** *Arab American Health Initiative: Educate & Empower*

**Author(s):** Mariam Ayyash, Marwa Ayyash, Fatima Saad, Hebah Reda, Malak Kabalan, Malak Ismail, Marwa Saad, Zain Jawad, Yasmine Elghoul, Roukaya Najdi, Roland Alexander Blackwood

**Title:** *A Multi-institutional Survey of E-cigarette Documentation in Electronic Health Records and Resident Physicians' Attitudes towards E-cigarette Usage*

**Author(s):** Mindy M. Kim, Priyanka Kale, Diane L. Levine

**Title:** *A Multi-institutional Survey of E-cigarette Documentation in Electronic Health Records and Resident Physicians' Attitudes towards E-cigarette Usage*

**Author(s):** Mindy M. Kim, Priyanka Kale, Diane L. Levine

## MEDICAL EDUCATION

**Facilitator:** Robert Reaves, M.B.A.

**Title:** *Do Medical Students Need Training in Mental Health First Aid? Comparison of Knowledge, Confidence, Comfort & Attitudes from Orientation to Residency Preparation*

**Author(s):** Eva Waimeo M.D., Robert (Brent) Stansfield Ph.D., May Chammaa, Margit Chadwell M.D.

**Title:** *When Awareness Leads to Action: Potential Mitigation Strategies for Medical Student Mistreatment by Patients*

**Author(s):** Emma Drenth, Besma Aly, Akanksha Vaishnav, Dariah Lauer, Ria Minawala, Nichole Tuite, Dr. Eva Waimeo, Dr. Jason Booza

**Title:** *Can 1-Hour Leave a Lasting Impression? Evaluating the Unique Contributions of Opioid Overdose Prevention and Response Training to the Pre-Clinical Medical Curriculum*

**Author(s):** Tabitha E. H. Moses, Jessica L. Moreno, May Chammaa, Eva Waimeo, Mark K. Greenwald

**Title:** *Mechanical Ventilation Training of Pulmonary Critical Care Fellows During The COVID-19 Pandemic*

**Author(s):** Aryan Shiari, M.D.; Abdelaziz Mohamed, M.D.; Divya Venkat, M.D.; Sarah J. Lee, M.D.; Abdulghani Sankari, M.D.



# KEYNOTE SPEAKERS

## Olle ten Cate, Ph.D.

Professor of Medical Education,  
University Medical Center Utrecht  
Adjunct Professor of Medicine,  
University of California, San Francisco



### PRESENTATION TITLE:

*Assessment for entrustment in the workplace using EPAs;  
issues to think about*

### BIOGRAPHY:

Olle ten Cate, Ph.D. is a professor of medical education at University Medical Center Utrecht, the Netherlands, and adjunct professor of medicine at the University of California, San Francisco.

With a background of undergraduate medical training and a Ph.D. in social sciences, he has four decades of experience, at the Universities of Amsterdam and Utrecht, with curriculum innovation, educational research, and faculty development in the health professions domain, locally, nationally and internationally. He was the founding director of the Center for Research and Development of Education at UMC Utrecht (2005-2017), served as the president of the Netherlands Association for Medical Education (2006-2012), and has published (450+) and presented (500+) widely about advances in health professions education. He has successfully mentored 24 doctoral students for a Ph.D. in health professions education and currently supervises 9 candidates. For his work he received several awards, among which the J.P. Hubbard award of the National Board of Medical Examiners, the Ian R. Hart award for innovation in medical education, the NVMO Han Moll medal and a Dutch Royal Distinction for contributions to medical education.

One of his interests is competency-based education in the health professions, and specifically in the application of entrustable professional activities and entrustment decision making, to improve education to serve the quality and safety of health care practice.



## Louis N. Pangaro, M.D., MACP

Professor of Medicine,  
Hebert School of Medicine of the Uniformed Services  
University of the Health Sciences

### PRESENTATION TITLE:

*From understanding to action in assessment systems*

### BIOGRAPHY:

Dr. Louis N. Pangaro is Professor of Medicine at the Hebert School of Medicine of the Uniformed Services University of the Health Sciences.

His medical degree is from Georgetown University (1973), where he also did a residency in Internal Medicine and fellowship in endocrinology. He was a research fellow in endocrinology at Walter Reed Army Medical Center and developed a radioimmunoassay for 3,5 Diiodothyronine. Dr. Pangaro joined the Uniformed Services University in 1978, with positions as Director of Fourth Year Programs, Clerkship Director and Vice-chair for Education. He was appointed Professor with tenure in 1998. He served as Medicine Department Chair from 2008 to 2018 and as Interim Dean from August 2020 to May 2021.

Dr. Pangaro's scholarly work is in the evaluation of the competence of medical trainees and has published more than 100 articles relating to medical education. Using the model of a radioimmunoassay he created "standardized examinees" to calibrate the validity of the prototype clinical skills examination of the US Medical Licensing Exam. He introduced the concept of "synthetic", developmental frameworks for defining expectations of students and residents (the "RIME scheme", for reporter-interpreter-manager-educator) that is now used in EPAs and milestones. The RIME alternative to the traditional knowledge-skills-attitudes paradigm is used in many American medical schools.

From 2009 to 2014 Dr. Pangaro was the faculty leaders of curricular redesign for the USU School of Medicine. Dr. Pangaro has personally evaluated and given individual feedback to several thousand medical students, nearly all of them are still part of the military medical community. As a facilitator in the Stanford Faculty Development Program he has worked with more than one thousand military faculty on their teaching skills. Starting in 2000, Dr. Pangaro created a six-day course for military GME program directors in assessing competence, and nearly 500 program directors have participated in the last decades. He has published and spoken widely on faculty development and leadership in medical education. He co-directs the annual Harvard Macy International Program for a Systems Approach to





Assessment in the Health Sciences Education. As Chair his department has initiated an MHPE and Ph.D. program in medical education, in which he taught the courses in leadership in medical education and in methods in clinical teaching.

Dr. Pangaro has served as an at-large member of the National Board of Medical Examiners, and on the editorial boards of Academic Medicine and Teaching and Learning in Medicine and is past-chair of the Research in Medical Education Conference Committee of the GEA/AAMC. He has served as President of the Clerkship Directors in Internal Medicine (CDIM), and of the Alliance for Clinical Education (ACE), the coordinating council for eight national organizations of American clerkship directors. Dr. Pangaro has been honored by the AAMC with the Glaser Distinguished Teacher Award (2005), by USU students with the Clements Awards for Excellence in Education (1990) and by the USU Faculty with the inaugural Carol Johns Teaching Medal (2001). He has been recognized by the NBME with its Edith J. Levitt Distinguished Service Award; by CDIM with all three of their awards: the inaugural award for Outstanding Program Development (1998, now named the Louis Pangaro Award), the Outstanding Educational Research Award (2000), and the Outstanding Service Award (2005); and by the British Embassy Players for his production of Shakespeare's Hamlet (1990). He was recognized by the Army chapter of the American College of Physicians with its inaugural Master Teacher Award (1997) and by the Washington, DC chapter of the College with its Sol Katz Teaching Award (2005) and its Laureate Award (2012). In 2010, Dr. Pangaro was named as a Master of the American College of Physicians (MACP), and in 2012, he received the Distinguished Medical Educator Award of the Association of Program Directors in Internal Medicine. In 2018 he received the John P. Hubbard Award from the NBME for excellence in the field of evaluation in medicine.









# CONFERENCE COMMITTEE

## MEDICAL EDUCATION RESEARCH AND INNOVATION CONFERENCE COMMITTEE SPONSORS:

**Mark E. Schweitzer, M.D.**

Vice President, Health Affairs  
Dean, Wayne State University School of Medicine

**Robert Folberg, M.D.**

Vice Dean of Medical Education  
Wayne State University School of Medicine

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## EXECUTIVE PLANNING TEAM:

**Jason Booza, Ph.D.**

Assistant Dean of Continuous Quality  
Improvement and Compliance  
Wayne State University School of Medicine

**Robert Reaves, M.B.A.**

Director of Accreditation  
Wayne State University School of Medicine

**Senthil Kumar Rajasekaran, M.D.**

Senior Associate Dean for Undergraduate Medical  
Education and Curricular Affairs  
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**Eileen Hug, D.O., FAAP, FACOP**

Associate Director of Medical Education for UGME  
Henry Ford Hospital  
Clinical Professor, Department of Pediatrics,  
Wayne State University, School of Medicine

**Diane Levine, M.D.**

Vice Chair for Education  
Professor, Internal Medicine  
Wayne State University

**Jenna Carter**

Graduate Research Assistant  
Cancer Biology

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## KEYNOTE SPEAKERS:

**Olle ten Cate, Ph.D.**

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Professor of Medicine, Hebert School of Medicine  
of the Uniformed Services  
University of the Health Sciences

## JUDGES:

Avnish Sandhu, D.O.  
 Melanie Hanna-Johnson, M.D.  
 Sajith Matthews, M.D.  
 Neelima Thati, M.D.  
 Yahya Osman, M.D.  
 Divya Venkat, M.D.  
 Sorabh Dhar, M.D.  
 Teena Chopra, M.D.  
 Zeenat Bhat, M.D.  
 Nashat Imran, M.D.  
 Devibala Govindarajan, M.D.  
 Laura Aravena  
 Laial Baltaji  
 Justin Bennie  
 Matthew Brennan  
 Julia Chase  
 Andrew Kohrman

Itzick Nahmoud  
 Riya Shah  
 Catrina Stephan  
 Youstina Abdallah  
 David Bai  
 Sabrina Bernardo  
 Sarah Henry  
 Dustyn Levenson  
 Emily Otiso  
 Harry Ramos  
 Nikita Sathiaprakash  
 Mike Franklin  
 Ashley Kramer  
 Varag Abed  
 Daniel Harris  
 Mitch Nevah  
 Jenna Carter

## FACILITATORS:

Jenna Carter  
 Diane Levine, M.D.  
 Senthil Kumar Rajasekaran, M.D.  
 Robert Reaves, M.B.A.

## SUPPORT TEAM:

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**Steven Pierce**  
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**Mike Crimmins**  
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 Wayne State University School of Medicine

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 Associate Director of Marketing  
 Wayne State University School of Medicine

**Phillip Van Hulle**  
 Associate Director of Communications  
 Wayne State University School of Medicine

**Dellashon Dicresce**  
 Special Events  
 Wayne State University



# 2022 WORKSHOP SERIES

In order to foster the development and dissemination of medical education research and innovation, the Wayne State University School of Medicine hosts a monthly seminar series that is devoted to scholarly interests of students, residents, fellows, staff and faculty. Sessions are held via zoom on the third Tuesday of every month from 4 to 5 p.m. The sessions are designed to be both informative and interactive. No advanced registration is required. To join a session, click on the zoom link below on the designated day and time.

**18**  
**JANUARY**

4 to 5 p.m.

**Title:** Publishing in MedEd portal

**Link:** <https://wayne-edu.zoom.us/j/93308899974?pwd=MGV6dXZmeTVMK2x2L25lc2ZwZTNLZz09>

**15**  
**FEBRUARY**

4 to 5 p.m.

**Title:** Finding the right journal for your work

**Link:** <https://wayne-edu.zoom.us/j/93308899974?pwd=MGV6dXZmeTVMK2x2L25lc2ZwZTNLZz09>

**15**  
**MARCH**

4 to 5 p.m.

**Title:** The peer review process

**Link:** <https://wayne-edu.zoom.us/j/93308899974?pwd=MGV6dXZmeTVMK2x2L25lc2ZwZTNLZz09>

**19**  
**APRIL**

4 to 5 p.m.

**Title:** The medical education literature review

**Link:** <https://wayne-edu.zoom.us/j/93308899974?pwd=MGV6dXZmeTVMK2x2L25lc2ZwZTNLZz09>

**17**  
**MAY**

4 to 5 p.m.

**Title:** Medical education/innovation and the IRB

**Link:** <https://wayne-edu.zoom.us/j/93308899974?pwd=MGV6dXZmeTVMK2x2L25lc2ZwZTNLZz09>

**21**  
JUNE

4 to 5 p.m.

**Title:** Medical education research study design

**Link:** <https://wayne-edu.zoom.us/j/93308899974?pwd=MGV6dXZmeTVMK2x2L25lc2ZwZTNlZz09>

**19**  
JULY

4 to 5 p.m.

**Title:** Data analysis 101

**Link:** <https://wayne-edu.zoom.us/j/93308899974?pwd=MGV6dXZmeTVMK2x2L25lc2ZwZTNlZz09>

**16**  
AUGUST

4 to 5 p.m.

**Title:** How to write an abstract

**Link:** <https://wayne-edu.zoom.us/j/93308899974?pwd=MGV6dXZmeTVMK2x2L25lc2ZwZTNlZz09>

**20**  
SEPTEMBER

4 to 5 p.m.

**Title:** Funding medical education research

**Link:** <https://wayne-edu.zoom.us/j/93308899974?pwd=MGV6dXZmeTVMK2x2L25lc2ZwZTNlZz09>

**18**  
OCTOBER

4 to 5 p.m.

**Title:** Poster design 101

**Link:** <https://wayne-edu.zoom.us/j/93308899974?pwd=MGV6dXZmeTVMK2x2L25lc2ZwZTNlZz09>

**15**  
NOVEMBER

4 to 5 p.m.

**Title:** How to design and deliver an oral presentation

**Link:** <https://wayne-edu.zoom.us/j/93308899974?pwd=MGV6dXZmeTVMK2x2L25lc2ZwZTNlZz09>

**6**  
DECEMBER

December 2022

The 4th annual Wayne State University School of Medicine **Medical Education Research and Innovation Conference** will be held on December 6th. No workshops are scheduled.

# RESEARCH

## **“Medical Education Research”**

refers to research related to the learning process that occurs within a medical education setting. Topics include but are not limited to learner characteristics, optimizing the learning process, assessment and evaluation, professional development, instruction design, technology in the learning environment, wellbeing. Research at any level (undergraduate, graduate, practitioner, faculty) of medical education are welcome. Medical education research can also include quality improvement projects.

*please visit [mericonference.org](https://mericonference.org) to view current and past poster presentations*



## ***Evaluation of Spaced Repetition in Medical School Year One Gross Anatomy***

**TYPE:** Oral presentation

**CATEGORY:** Research

**AUTHORS:** Thomas Russo

### **BACKGROUND:**

Spaced repetition is a study strategy commonly used by students in the form of digital flashcards. One such program, Anki, supports spaced repetition using an algorithm which schedules reviews; correctly answered cards are scheduled further in the future. Conversely, incorrect card answers are scheduled sooner. Spaced repetition is highly effective at building durable learning. However, few medical schools provide course materials formatted to support this strategy. This project aims to create Anki decks to test whether this approach leads to more durable learning of course content.

### **METHODS:**

The study uses a crossover design with two groups, assessing the effectiveness of Anki decks customized to one M1 gross anatomy course at WSU-SOM. Two course laboratory sessions were selected in collaboration with the Course Director. Two decks will be created, one for each session. Participants will be randomly assigned to the two groups. Group one will be provided with an Anki deck corresponding to the first laboratory session, but not the one for the second. Similarly, group two will be provided with the Anki deck corresponding to the second laboratory session, but not the first. Participants are given one week to review the flashcards followed by a multiple-choice test with an equal number of questions from each laboratory.

### **RESULTS:**

Two scores are calculated for each participant: 1) Percentage correct when participants received an Anki deck and 2) Percentage correct when participants did not. Score distribution is used to test the hypothesis that receiving the flashcards will result in a higher percentage score for that laboratory's assessment questions.

### **CONCLUSION:**

Dependent on outcomes, this study aims to inform how medical schools may choose to allocate study materials for their students using the active learning strategy of spaced repetition. Such efforts serve to promote curriculum design that facilitates durable learning for students.



## **| Perceived Effectiveness of Video Interviews for Orthopaedic Surgery Residency During COVID-19**

**TYPE:** Oral presentation

**CATEGORY:** Research

**AUTHORS:** Jonathan Warren B.S., Lafi Khalil M.D., Alexander Pietroski M.S., Michael McIntosh B.S., Stuart Guthrie M.D., Stephanie Muh M.D.

### **BACKGROUND:**

During the 2020-21 residency interview season, interviews were conducted through virtual platforms due to the COVID-19 pandemic. The purpose of this study is to assess the general perceptions of applicants, residents and attendings at a single, large, metropolitan orthopaedic residency with regards to the video interview process before and after the interview season.

### **METHODS:**

Surveys were sent to all orthopaedic applicants, residents, and attendings before the interview season. Applicants who received interviews and responded to the first survey (45) and faculty who responded to the first survey (28) were sent a second survey after interviews to assess how their perceptions of video interviews changed.

### **RESULTS:**

Initially, 50% of applicants (360/722) and 50% of faculty and residents (28/56) responded before interview season. After interviews, 55% of interviewees (25/46) and 64% of faculty and residents (18/28) responded. Before interviews, 91% of applicants stated they would prefer in-person interviews and 71% were worried that video interviews would prevent them from finding the best program fit. Before interviews, 100% of faculty and residents stated they would rather conduct in-person interviews and 86% felt that residencies would be less likely to find applicants who best fit the program. Comparing responses before and after interviews, 16% fewer applicants ( $p=0.01$ ) perceived that in-person interviews provide a better sense of a residency program and faculty and residents' perceived ability to build rapport with interviewees improved in 11% of respondents ( $p=0.01$ ). However, in-person interviews were still heavily favored by interviewees (84%) and faculty and residents (88%) after the interview season.

### **CONCLUSION:**

In-person interviews for Orthopaedic Surgery Residency are perceived as superior and are preferred among the overwhelming majority of applicants, residents, and interviewers. Nevertheless, perceptions toward video interviews improved in certain domains after interview season, identifying potential areas of improvement and alternative interview options for future applicants.



## **Arab American Health Initiative: Educate & Empower**

**TYPE:** Oral presentation

**CATEGORY:** Research

**AUTHORS:** Mariam Ayyash, Marwa Ayyash, Fatima Saad, Hebah Reda, Malak Kabalan, Malak Ismail, Marwa Saad, Zain Jawad, Yasmine Elghoul, Roukaya Najdi, Roland Alexander Blackwood

### **BACKGROUND:**

The Arab American Health Initiative, or AAHI, is a nonprofit organization established in 2016 that is based in Dearborn, Michigan. The mission of AAHI is to reduce health disparities, highlight healthcare needs, increase health literacy, and fight stigma within the Arab community, with the goal of improving health outcomes for this vulnerable population.

### **METHODS:**

AAHI organizes seminars to educate and empower the Arab community by initiating conversations to destigmatize topics such as domestic violence, cancer, vaccines, mental health, palliative care, and more. AAHI has conducted multiple research projects in affiliation with undergraduate and medical students from Wayne State University the University of Michigan focusing on physician gender preferences, female reproductive health, domestic violence, cancer knowledge, autism, and more. Through its mentorship program, undergraduate pre-health students are matched with Arab American health professional students and physician residents, who provide support, encouragement, and mentorship throughout their journey. AAHI also holds panels for pre-health students and healthcare professionals to share journeys, including successes and failure, as well tips and advice for aspiring healthcare professionals.

### **RESULTS:**

Since AAHI's establishment, we have received multiple grants and conducted research studies with over 45 international, national, and local abstracts, publications, and presentation awards. We also conducted over 20 community events and volunteer opportunities to address stigmatized health topics within the Arab American community. These community initiatives have elevated Arab American voices as underrepresented minorities and allowed us to break stigma and educate while empowering pre-health students to take lead on improving health outcomes for the community.

### **CONCLUSION:**

To facilitate change in our communities, we must support and empower our youth to lead health initiatives. We must initiate uncomfortable conversations and vocalize underrepresented voices. Our organization continues to find creative ways to connect with the community during this unprecedented time and promote education and diversity in healthcare.





## **| A Multi-institutional Survey of E-cigarette Documentation in Electronic Health Records and Resident Physicians' Attitudes towards E-cigarette Usage**

**TYPE:** Oral presentation

**CATEGORY:** Research

**AUTHORS:** Mindy M. Kim, Priyanka Kale, Diane L. Levine

### **BACKGROUND:**

E-cigarettes is a major public health crisis. In 2019, 4.5% of U.S. adults reported using e-cigarettes. Although physicians routinely inquire about tobacco smoking, frequency in which physicians screen for e-cigarette is less established. It remains unclear to what extent Internal Medicine and Med-Peds resident physicians feel comfortable discussing e-cigarette and document e-cigarette usage in the electronic health record (EHR). This study investigates the frequency in which residents inquire about and document e-cigarettes usage and their knowledge base and attitudes towards e-cigarettes.

### **METHODS:**

This is a multi-institutional study that began through conversations at the Society for General Internal Medicine Quality & Patient Safety Subcommittee. Review of literature was conducted and gaps in the e-cigarette literature were identified. We devised a 30-question Qualtrics survey that examines resident physicians' e-cigarette documentation behavior, knowledge of their patients' e-cigarette usage, comfort inquiring about e-cigarette, prioritization of addressing e-cigarette usage and providing e-cigarette cessation strategies. Experts in the Subcommittee were consulted who piloted and refined the survey. Wayne State serves as the main institution, and our partners include Mt. Sinai, Yale, Harvard, Northwestern, Emory, UCSD. We plan to send the survey to 1000 Internal Medicine and Med-Peds residents and expect around 200 residents to participate.

### **RESULTS:**

We are in the process of getting IRB approval.

### **CONCLUSION:**

This will be the first study to our knowledge that assesses documentation behaviors of e-cigarettes among residents. Specifically, we will ask residents if they would be more likely to inquire about e-cigarettes if the EHR has a field regarding e-cigarettes. This study may be the first step in showing that having e-cigarettes as a premade field in the EHR will improve documentation and treatment of e-cigarettes. This survey will help improve understanding of residents' comfort with engaging about e-cigarettes and will elicit discussions on whether more medical education training is needed on e-cigarettes.



## ***Do Medical Students Need Training in Mental Health First Aid? Comparison of Knowledge, Confidence, Comfort & Attitudes from Orientation to Residency Preparation***

**TYPE:** Oral presentation

**CATEGORY:** Research

**AUTHORS:** Eva Waineo M.D., Robert (Brent) Stansfield Ph.D., May Chammaa, Margit Chadwell M.D.

### **BACKGROUND:**

Mental Health First Aid Training (MFAT) is an established course which teaches participants how to recognize and respond to a mental health crisis. Although multiple studies show it to be evidence-based, there are no published studies of its impact on US medical students. This study aims to evaluate medical students' self-reported attitudes, confidence, knowledge, and comfort at three distinct training points to aid an understanding of students' pre-MHFAT baselines.

### **METHODS:**

MHFAT was provided to medical students as part of mandatory curriculum during orientation at the start of their first year (August 2020), the start of their third year (April 2021), and during their residency preparation rotation toward the end of their fourth year (March and April 2021). A focus group of students and faculty developed survey questions based on those provided by MHFAT. Following IRB approval, these optional, anonymous surveys were sent to all students prior to MHFAT. Surveys assessed students' attitudes, confidence, comfort, and knowledge about mental health and ways to intervene in times of crisis.

### **RESULTS:**

Results are based on completed surveys by 273 first-year, 232 third-year, and 159 fourth-year students. After completion of analysis, student attitude mean ratings across 6 items, knowledge mean ratings across 5 items, comfort mean ratings across 10 items, and confidence mean ratings across 9 items will be compared during the three different training time-points.

### **CONCLUSION:**

Even at the end of medical school, there is room for further preparedness to address mental health concerns, and students may benefit from further training on this important topic with sessions such as MHFAT. Following the first-year class longitudinally and comparing the post-training scores with the baseline seen in classes further in their medical education may shed light on MHFAT impact compared to standard curriculum, in addition to measuring its utility in both clinical work and peer support.







## **| When Awareness Leads to Action: Potential Mitigation Strategies for Medical Student Mistreatment by Patients**

**TYPE:** Oral presentation

**CATEGORY:** Research

**AUTHORS:** Emma Drenth; Besma Aly; Akanksha Vaishnav; Dariah Lauer; Ria Minawala; Nichole Tuite; Eva Waineo, M.D.; Jason Booza, Ph.D.

### **BACKGROUND:**

Medical student mistreatment by faculty, residents, and other healthcare staff involved in their education is a recognized concern, one that institutions and governing bodies work diligently to mitigate through annual surveying and the development of policies and procedures. However, patients remain an overlooked source of mistreatment for medical students and are not yet considered during such mitigation efforts. Recent studies, including our survey of students at Wayne State University School of Medicine (WSUSOM), confirm patients are a prevalent source of mistreatment for trainees. After acknowledgement of this issue, the next steps include establishing policies and procedures that support students following these experiences and developing a curriculum that prepares students to handle these negative patient interactions before they occur.

### **METHODS:**

A survey investigating medical student mistreatment by patients was administered to all students enrolled at WSUSOM in the spring of 2020, with a response rate of 45.6% (n=523). It surveyed the prevalence, types, and effects of mistreatment by patients and assessed the interest in potential development of protective and preparative measures by the institution.

### **RESULTS:**

Of all survey respondents, 51.1% experienced at least one experience of mistreatment by patients and 86.0% believed these experiences should be included in mistreatment policies and procedures. Four out of five (80.1%) respondents thought they would benefit from training sessions that address how to appropriately respond to situations of personal and observed student mistreatment perpetrated by either patients or both patients and other professionals involved in their medical education.

### **CONCLUSION:**

Our survey indicates that WSUSOM students would support organized mitigation efforts related to mistreatment by patients. Training sessions modeled from pilots developed at other institutions, such as scenario-based small group discussions or role-play exercises, could be integrated into pre-clerkship curricula alongside continued surveying of mistreatment and impact of these sessions.



## **| Can 1-Hour Leave a Lasting Impression? Evaluating the Unique Contributions of Opioid Overdose Prevention and Response Training to the Pre-Clinical Medical Curriculum**

**TYPE:** Oral presentation

**CATEGORY:** Research

**AUTHORS:** Tabitha E. H. Moses, Jessica L. Moreno, May Chammaa, Eva Waineo, Mark K. Greenwald

### **BACKGROUND:**

Medical students begin interacting with patients during preclinical years and must be prepared to support individuals with substance use disorder (SUDs) using evidence-based, non-stigmatizing methods. Effective ways to integrate SUD training into undergraduate medical education (UME) are needed, but no studies have examined long-lasting effects of training and whether it provides value beyond standard UME curriculum.

### **METHODS:**

All medical students in the Class of 2023 (N=296) were asked to complete surveys entering their first, second, and third years (M1-M3). Surveys included the Opioid Overdose Knowledge Scale (OOKS) and Opioid Overdose Attitudes Scale (OOAS). Early in M1, 50% of the class was randomly selected to receive 1-hour Opioid Overdose and Prevention Training (OOPRT); the other 50% was assigned to receive training during M3. We used mixed-model ANOVAs with time (M1, M2, M3) as the repeated factor and condition (M1 vs. M3 training) as the between-subject factor to explore whether training influenced opioid overdose knowledge and attitudes beyond the standard curriculum.

### **RESULTS:**

Of 106 students included, 52.8% completed OOPRT during M1. Scores in all 4 OOKS domains increased over time regardless of training. At the start of M3, only one OOKS domain (naloxone use) differed between groups: students who received OOPRT in M1 demonstrated higher scores. Scores in 2 of 3 OOAS domains (concerns and competencies) improved in both groups but students who received training during M1 showed greater improvements.

### **CONCLUSION:**

These results confirm previous findings that OOPRT improves knowledge of and attitudes towards opioid overdose and demonstrate OOPRT provides long-term benefits beyond the standard medical curriculum. Nevertheless, the results also highlight the potential loss of training knowledge that occurs over time. Future studies should explore how training may impact student clinical and volunteering behavior and identify curricular additions to improve longitudinal knowledge retention.



## **| Learning Communities: Improving Imposter Syndrome and Loneliness Among Medical Students**

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Elmenini, Sahar; White, Nicole; Sherman, LaToya; and Ayers, Eric

### **BACKGROUND:**

Past research has linked imposter syndrome, isolation, and locus of control together. The creation of learning communities (LCs) is to directly and effectively combat loneliness, feelings of isolation, and IS, to better promote student's wellbeing and success. It has been hypothesized that those who attend more LC events will score lower on imposter syndrome scale and lower on social loneliness scale. It has been hypothesized that those who scored higher on imposter syndrome and social loneliness are more likely to have an external locus of control.

### **METHODS:**

To test our hypothesis, a survey was sent out to the Classes of 2021, 2022, 2023, and 2024 at Wayne State University School of Medicine, resulting in a sample size of 144 participants. The students' responses were recorded via Qualtrics and analyzed. The survey included questions from the following topics: gender, age, class, number of LC events attended, number of non-LC events attended, imposter syndrome, loneliness, and locus of control.

### **RESULTS:**

Surprisingly, it was found that there was not a significant correlation between the number of LC events attended and imposter syndrome, loneliness, and locus of control. There was a slight positive correlation between loneliness scores and the number of non-LC social events attended. Furthermore, there were correlations between imposter syndrome, loneliness, and locus of control. In summary, this study coincides with past research with the connection between gender and imposter syndrome, loneliness, and external locus of control. Furthermore, our study contradicts past research on the connection between imposter syndrome and loneliness.

### **CONCLUSION:**

The study fails to affirm that LCs decrease feelings of loneliness and imposter syndrome. Further studies on the different types of LCs and how they contribute to the student body may shed some light on the gaps between LCs, imposter syndrome, and loneliness.



## **Evaluating the Effectiveness of Virtual First Aid Training for Medical Students during the COVID-19 Pandemic**

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Matthew Bautista, Thomas Vander Woude, Nikita Sathiaprakash, Katherine Palmer Loveluck, Kristiana Kaufmann M.D.

### **BACKGROUND:**

The COVID-19 pandemic shifted many learning opportunities to a virtual environment, posing a challenge to First Aid First (FAF) in effectively teaching first aid skills to physicians-in-training. In this project, FAF utilized pre-training and post-training survey questions to assess the effectiveness of virtual first aid training for medical students in Detroit. With this project, we hope to continue optimizing delivery of first aid education in both an in-person and virtual learning environment.

### **METHODS:**

Six elective, hour-long training sessions for medical students were hosted by FAF on Zoom in late 2020, each covering different first aid topics. An assessment survey was taken by participants before and after each training. Survey questions assessed first-aid knowledge, specific learning objectives, and participants' impressions of the training. REDCap was used to input data. Microsoft Excel was used for figure creation and statistical calculations.

### **RESULTS:**

Survey responses for session three were not included in statistical analysis due to incorrect pretest administration before the session. Across all six trainings, a decreasing amount of completed surveys denoted a general decline in student attendance. Within each session, fewer post-survey responses were received compared to pre-survey responses. Scores from pretests ( $M = 59.02$ ;  $SD = 20.2$ ) and posttests ( $M = 72.60$ ;  $SD = 22.1$ ) show a marked improvement in student performance after trainings, a finding confirmed to be statistically significant using a paired t-test ( $t(203)=10.42$ ).

### **CONCLUSION:**

This project demonstrates that virtual trainings are an effective method for teaching first aid to physicians-in-training. Additionally, the strong attendance in early sessions followed by a decline in participation highlight both appreciable student interest in first aid and the need to incorporate first aid training into the medical school curriculum as required material to fully engage students.



## ***Medical students' perspectives of remote residency Interviews***

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Tanha Shah, MS - Kennedy Werner, BS - Mary Morreale, M.D. - Cynthia L. Arfken, Ph.D.

### **BACKGROUND:**

Due to the COVID-19 pandemic, psychiatry residency interviews were held remotely in 2020. There is sparse research on students who participated in remote residency interviewing. Understanding their experiences may highlight areas of improvement for future virtual interviews.

### **METHODS:**

Two 3rd year medical students conducted 30-minute interviews with eight of the sixteen 4th year medical students from Wayne State University who matched into a psychiatry program via the National Resident Matching Program. The age of participants ranged from 25-36, half were female and six were Asian or Middle Eastern. Interviews were conducted, audio-recorded and transcribed on Zoom. The interview guide followed a temporal sequence of interview to promote recall with pre-specified prompts (e.g., videoconferencing fatigue). Thematic analysis was used. Wayne State University Institutional Review Board approved the study with one participant selected to win a \$100 gift certificate.

### **RESULTS:**

Positive aspects of the process included saving time and money. Participants noted that they had more time to prepare for the interview itself when they did not need to make travel arrangements. Negative aspects of remote interviews included the inability to physically view the hospital or city and meet current residents. Some participants mentioned dissatisfaction with virtual pre-interview socials event. For the interviews themselves, participants mentioned the drawback of using multiple platforms, receiving schedules and links last minute, and requiring the participant to enter a discussion room as opposed to the program sending them. Although no participants spontaneously reported fatigue related to remote interviews, several mentioned this when prompted.

### **CONCLUSION:**

Limitations include small sample size, one institution and only interviewing students who successfully matched. One student failed to match, similar to past years. Given identified concerns, program directors might consider adding virtual tours, so students can get a sense of the environment, as well video blogs from current residents to reveal the workplace culture. To ease students' anxiety, programs should send out a concise schedule of the interview day. Finally, for those unable to secure an appropriate setting, medical schools should provide adequate space and support.





## **I Improving Rapid Knowledge Translation During COVID-19 via Viewing of a Simulation Video**

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Henry Moss, Milson Ma, Anne Messman

### **BACKGROUND:**

Rapid translation of new knowledge was imperative in the continuously-changing clinical environment during COVID-19, particularly in the emergency department (ED). Research regarding different methods of learning has shown simulation, videos, and audio segments can all be effective forms of education for advanced self-directed adult learners, however little information exists regarding the effectiveness of video review of someone else performing a simulated patient encounter. We proposed that watching another clinician perform a simulated encounter and receive feedback on that encounter would result in an improvement in viewer knowledge and comfort thus being an effective method to rapidly convey new information to ED clinicians.

### **METHODS:**

A pre-intervention survey was sent to the faculty and residents of two emergency medicine (EM) programs (Sinai-Grace and Detroit Receiving Hospital) to assess physician comfort and knowledge related to COVID-19 monoclonal antibody therapy as well as addressing vaccine hesitancy with patients. Faculty and residents were then sent a video of a clinician performing a simulated patient encounter in which monoclonal antibody therapy and vaccine hesitancy were addressed; the video included the simulated patient encounter as well as a feedback session of the clinician's performance. Following video review, a post-intervention survey was sent out to those that completed the presurvey.

### **RESULTS:**

Thirty-four respondents completed the pre-intervention survey and 17 respondents completed the post-intervention survey. The average pretest score was 7.7 and the average post-test score was 12.5 with a p-value of 0.016 using a Mann-Whitney U test. Additionally, average comfort level and frequency of addressing COVID-19 vaccine hesitancy showed significant increases based on self-reporting after the intervention.

### **CONCLUSION:**

Our intervention demonstrates a significant difference of knowledge and comfort on pre- and post-tests, suggesting that watching a video of someone else completing a simulated patient encounter is an effective way to learn.





## **| Learning Community Impact at a Large Urban University**

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Emily Fisher, Maha Ahmed, Gowri Chandrashekar, Shatha Wahbi, Alexis Nguyen, Daniel Bota, and Haneen Ali

### **BACKGROUND:**

To evaluate whether the Learning Communities (LCs) has an impact on the overall learning of the student participants in a virtual setting.

### **METHODS:**

To be included in the study, participants were required to be WSUSOM students. Students agreed to participate in the survey via a virtual consent form. The study was conducted through an online Qualtrics survey with questions on the impact of LCs. 1,200 students were requested via email to participate. Number of responses were tabulated via Qualtrics reports. Filters were used to produce trends when looking at multiple variables simultaneously. Data was synthesize into graphs corresponding to impactful trends.

### **RESULTS:**

The survey showed that in a remote environment, the LC has a positive impact socially, emotionally, and academically, but faculty mentorship has proven difficult. 76% of students felt that they connected to their peers, 61% of students felt that their LC provided emotional support, and 54% of respondents felt comfortable reaching out to members of the LC for academic support. Only 31% of students found the faculty mentor meetings organized and useful. When evaluating the impact of COVID-19, the results showed that although the majority of responses portray a negative effect on LC experience due to COVID, 76% of these students still claimed to have enjoyed having LCs in medical school.

### **CONCLUSION:**

Within a class of 300 students, LCs were established at Wayne State as a means for students to connect with each other. This study was conducted to determine whether LCs are effective in attributing to a sense of community and well being amongst students. The emotional, social, and academic impact that the LCs had on students was examined and the role of faculty mentors was also evaluated. As expected, LCs fostered social connections among students. While it has been previously observed that LCs foster student emotional wellness, our results further show that this effect is enhanced as student participation in activities increases. While results show that students do not commonly use LCs for academic support, a slight majority of students did feel comfortable reaching out to their LCs for academic support. The LC experience has been different this year due to the circumstances surrounding COVID-19. Overall, COVID-19 had an expected negative impact on the medical school experience; however, LCs still proved to have had a positive impact on student wellbeing.

Therefore, LCs play a valuable role in connecting the medical school community and the positive effect of LCs can still be felt in a virtual setting. Lastly, the overall attitude towards the faculty mentor program was explored. The results suggest that mentors are not consistent in meeting program expectations such as hosting organized and useful meetings, connecting with students, and being punctual to meetings. Overall, these results suggest that LCs serve as a means for medical students to connect with one another, allowing students to become familiar with a subset of their class. LCs are a medium for student interaction and provide opportunities for students to reach out to their LC peers when facing challenges.





## ***Incorporation of handoff procedure training into undergraduate gross anatomy curriculum could improve learning and clinical preparedness***

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Alison Rousseau, Youstina Abdallah, David Bai, Ahmed Elattma, Priyanka Kale, Matthew Bautista, Harry Ramos, Paul Walker, Diane Levine

### **BACKGROUND:**

Recent research has demonstrated inaccuracies in postgraduate handoff execution and corresponding indication for undergraduate training. To address this, Wayne State University School of Medicine has implemented handoff training in the undergraduate gross anatomy curriculum through dissection handoffs, which procedurally mimic the clinical handoff with presentational substitutions of dissection objectives and cadaver status, to target dual goals of anatomy and patient safety education. A recent cohort was surveyed to investigate effects of this curriculum.

### **METHODS:**

A 18-item survey containing 15 Likert and 3 open-ended questions was administered electronically to the first-year student cohort (N=290). Questions assessed overall student sentiment, exhibition of clinical handoff associated skills, and perception of effectiveness of the curriculum. The “strongly agree” response was coded as 1, and Likert data were analyzed with descriptive statistics. Content analysis was conducted for themes in open-ended responses.

### **RESULTS:**

Response rate was 37.2% (108/290). Students agreed that they were able to exhibit many of the traits needed in clinical handoffs in these exercises, including professionalism, honesty, accountability, and efficiency ( $\bar{x} = 1.88$ ,  $s = 0.57$ ;  $\bar{x} = 1.30$ ,  $s = 0.46$ ; and  $\bar{x} = 1.86$ ,  $s = 0.88$ ; and  $\bar{x} = 1.78$ ,  $s = 0.81$  respectively). They also believed themselves to be well-prepared for clinical handoffs due to this training ( $\bar{x} = 2.14$ ,  $s = 0.81$ ). Prominent themes from open-ended responses included teamwork experience, development of accountability, and cultivation of clinical skills.

### **CONCLUSION:**

The present handoff procedure training allowed students to develop and demonstrate numerous skills vital to clinical handoffs, while also building student preparedness and confidence for handoffs through procedural practice. It also improved learning of anatomical knowledge. Future studies include longitudinal analysis of this training’s effectiveness in clerkship and postgraduate patient care.



## ***Comparison of In-Person and Virtual Gross Anatomy Lab Instruction of a First-Year Medical Undergraduate Cohort amid the COVID-19 Pandemic***

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Youstina Abdallah, David Bai, Alison Rousseau, Ahmed Elattma, Harry Ramos, Matthew Bautista, Priyanka Kale, Paul Walker, Diane Levine

### **BACKGROUND:**

Due to the recent COVID-19 pandemic, medical schools across the country have rapidly transitioned from face-to-face to various formats of virtual instruction. Ensuring that learning remains rich, meaningful, and impactful remains an ongoing objective in virtual medical instruction. In particular, the Gross Anatomy (GA) curriculum presents a unique challenge, as students cannot experience activities such as cadaver dissection when learning virtually. Here, a first-year cohort at Wayne State University School of Medicine (WSUSOM) that uniquely experienced both in-person and virtual GA lab instruction was surveyed to compare the two types of instruction.

### **METHODS:**

A 17-question Likert question survey was administered electronically to the first-year student cohort (N=290) at WSUSOM after completion of the GA curriculum. Questions compared student perception of the curriculum in general, faculty instruction, supplemental materials, professional identity development, and effectiveness of learning between in-person and virtual GA instruction. The “strongly agree” response was coded as 1 and “strongly disagree” as 5, and data were analyzed with descriptive statistics.

### **RESULTS:**

Response rate was 20.3% (59/290). Respondents strongly preferred in-person compared to virtual GA instruction ( $\bar{x} = 1.40$ ,  $s = 0.77$ ). Additionally, 92.9% ( $\bar{x} = 1.46$ ,  $s = 0.78$ ) felt that in-person GA instruction was an important part of professional identity development, but only 8.8% ( $\bar{x} = 3.98$ ,  $s = 1.05$ ) agreed that virtual GA instruction accomplished this equally well. Students moderately agreed that virtual sessions were effective overall ( $\bar{x} = 2.63$ ,  $s = 1.08$ ). However, they disagreed that they were as effective as in-person sessions both in terms of overall learning and time needed to learn concepts ( $\bar{x} = 3.74$ ,  $s = 1.29$  and  $\bar{x} = 3.47$ ,  $s = 1.26$ , respectively).

### **CONCLUSION:**

Despite some perception of effectiveness in virtual GA instruction, students felt that in-person instruction was both more effective and worthwhile.





## **Perception of Clinical Performance after Serving a Managerial Role in a Student-Run Free Clinic**

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Mugdha A. Josh, BS, Hannah Lowe, BS, Ann-Cathrin Guertler, BS, Jay Jarodiya, M.D., Matthew Compton, BA, Dr. Ralph E. Williams II, M.D.

### **BACKGROUND:**

Almost every medical school in America has a student-run free clinic (SRFC). While similar in name, each clinic is run fairly differently and is staffed in different ways. The SRFC at Wayne State University School of Medicine is unique in that the clinic is fully staffed by second-year medical students in every aspect of patient care and clinic function: finance, pharmacy, social work, clinic manager, etc. This early exposure to all the facets of a medical clinic allows medical students in their first and second years to learn about patient care. This study aims to assess the experiences gained from serving as a clinic manager and how those skills impact the student in the clinical years of medical school and beyond.

### **METHODS:**

Medical students who participated in a managerial role at the Wayne State SoM SRFC were surveyed on their duties while serving on the executive board, and then asked about their perception of their clinical performance later in their medical education.

### **RESULTS:**

Surveyed students unanimously agreed that their involvement with SRFC had a positive impact on their later clinical performance and that they felt better prepared for their clinical duties compared to their colleagues.

### **CONCLUSION:**

The results of this study show that working in an SRFC allows medical students to gain clinical skills not typically taught in the standard undergraduate medical education curriculum that positively impact them later in their medical careers. We show that working as a clinic manager helps cultivate leadership and interpersonal skills, even when not directly interacting with patients, that ultimately improve one's perception of clinical performance and, indirectly, confidence in the clinical setting. We believe that this emphasizes the importance of developing leadership skills early on in undergraduate medical education, which in turn will help improve the quality of future physicians.



## **Medical Student Attitudes towards Patients with Substance Use Disorders and Harm Reduction**

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Kelsey Gockman, Pavithra Margabandu, Tabitha Moses, Eva Waineo

### **BACKGROUND:**

Studies suggest that stigma towards patients with substance use disorders (SUDs) is at least partly responsible for inadequate care.<sup>1, 2</sup> Medical schools are updating their curriculum to better prepare students to treat patients with SUDs, but stigma persists.<sup>3, 4</sup> Harm reduction efforts aim to minimize harms related to substance use without requiring abstinence. Despite widespread education, barriers remain for people who use drugs, including physician disapproval of harm reduction methods.<sup>5</sup> Our goal was to examine the relationship between regard for patients with SUDs and attitudes towards harm reduction among first-year medical students. We predicted that negative attitudes towards people with SUDs would correlate with negative attitudes towards harm reduction methods.

### **METHODS:**

Incoming medical students in the class of 2025 (N=312) at Wayne State University School of Medicine were invited to participate in the study; 229 completed the survey, which examined students' regard for patients with SUDs and attitudes towards harm reduction methods. We explored correlations between total score on the Medical Condition Regard Scale (MCRS) for persons with SUDs and student support of different harm reduction methods.

### **RESULTS:**

Lower scores on the Medical Condition Regard Scale (MCRS), indicating a more negative attitude towards patients with SUDs, were correlated with negative responses to questions about harm reduction. These students were more likely to believe naloxone enables substance use.

### **CONCLUSION:**

Students with negative attitudes towards patients with SUDs are less likely to support harm reduction methods, which suggests that increasing empathic understanding of patients with SUDs in medical school education may be critical to implementing harm reduction. Future studies should further investigate whether medical education can play a role in increasing student awareness of harm reduction.







## **Identifying Positive and Negative Factors That Affect the Promotion of Clinical Faculty at the Wayne State University School of Medicine: Does Gender Matter?**

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Anne Messman M.D., Yang Liu M.D., John Collins M.D., Marissa Matthews M.D., Robert Ehrman M.D., R. Brent Stansfield Ph.D.

### **BACKGROUND:**

Historically, many women in academic medicine have fallen victim to a “leaky pipeline” which favors men in professional advancement, resulting in their underrepresentation in leadership positions. To explore this at the Wayne State University School of Medicine (WSUSOM), we surveyed all WSUSOM clinical faculty at the associate or full professor level to identify what aspects of institutional support were most helpful and what aspects of their work and life experiences they considered to be the biggest obstacles to their attainment of promotion.

### **METHODS:**

We distributed via email an anonymous survey asking demographic, quantitative, and qualitative questions about career advancement to all nonvoluntary, clinically active academic faculty at the rank of associate or full professor. Mean ratings of institutional support systems were compared between men and women respondents using t-tests with Welch correction.

### **RESULTS:**

There were 73 responses from about 300 eligible faculty, 58 (79%) of whom met the criteria for analysis. Women reported “Gender-specific networking” more helpful (mean 1.04) than men (mean 0.31) ( $t[38.8] = -2.62$ ,  $p = 0.0126$ ). Among ranked obstacles, 74% of women ranked “Lack of interest and encouragement from institutional or departmental leaders” in the top 3 (mean ranking = 2.21) vs. 39% of men (mean = 3.42) and 67% of women also ranked “Lack of tangible commitment from institutional or departmental leadership (e.g. protected time)” (mean = 2.25) vs. 45% of men (mean = 2.91).

### **CONCLUSION:**

Our main finding was that women faculty reported less support from their program and institution, particularly from institutional leadership and with regard to protected time. Further, women were more likely to rate gender-specific networking higher than men (it is unclear whether men explicitly engage in gender-specific networking) and less likely to rate support from a stay-at-home partner as beneficial to their career.



## ***The Impact of Prior Experience with Opioid Use Disorder on First-Year Medical Students' Views on Naloxone Access***

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Kaycee Ching, Tabitha E. H. Moses, Jessica Moreno, Eva Wainee, Mark K. Greenwald

### **BACKGROUND:**

In 2020, there was a 37% increase in opioid overdose deaths.<sup>1</sup> Naloxone is a medication that rapidly reverses opioid overdose. Increased naloxone access reduces overdose deaths.<sup>2</sup> Barriers to naloxone access include pharmacy availability, high costs, and lingering stigma.<sup>3</sup> Our study examined how previous healthcare and personal experiences with opioid use disorder (OUD) or substance use disorder (SUD) prior to medical school affects student beliefs regarding naloxone access, and whether naloxone training and education impacts these beliefs.

### **METHODS:**

All first-year medical students at WSUSOM were asked to complete a survey before and after Opioid Overdose Prevention and Response Training (OOPRT). We used Pearson Chi square correlations to explore relationships between a student's previous clinical and life experience with OUD/SUD and opinions on 1) naloxone availability without a prescription, 2) who should have access to naloxone. Using RM ANOVA, we then explored the change in these outcomes post-training and the interaction between personal experiences and training.

### **RESULTS:**

Among participating students (n=238), we found that knowing someone with a SUD was associated with more permissive views regarding naloxone access and availability both in general ( $p=.007$ ) and for specific groups (e.g. people prescribed opioids). Clinical experience working with people with OUD had no impact on these pre-training outcomes. Additionally, OOPRT had a significant impact on students' positive opinions on naloxone availability without a prescription.

### **CONCLUSION:**

Students entering medical school who know someone with a SUD had more positive opinions towards increased naloxone availability and distribution compared to those with clinical experience with OUD. Training also significantly positively impacted student's opinions on naloxone access. These findings highlight the need for medical education on naloxone access and merit further attention.



## ***Improving a mentor/mentee program to enhance relationships between incoming and senior medical students***

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Hannah L. Shuman, James Ninia, Roxanne Ilagan, Trishya L. Srinivasan, Kenan Alhayek, Nimra Hassan, Diane L. Levine

### **BACKGROUND:**

The Aesculapians Honor Society, a student service organization at Wayne State University School of Medicine, organizes a yearly mentor/mentee match between upperclassmen and first-year medical students (MS1s) in order to foster relationships between different classes. In past years, mentors were matched based only on specialty of interest. Informal feedback revealed students struggled to connect with their mentors - the program often did not create lasting partnerships. This year, in an attempt to encourage stronger bonding, personal questions were added to allow pairing of MS1s with upperclassmen with similar life experiences. The purpose of this quality improvement project is to assess the success of the changes made through a survey administered to the MS1 participants before and after the academic year.

### **METHODS:**

A presurvey (9/2020) and post-survey (7/2021) were administered to MS1s that participated in the program via qualtrics. In both, students were asked questions such as how connected to medical students outside of their class they felt and whether they knew an upperclassman that they felt comfortable seeking advice from. In the post-survey, MS1s were asked if they felt the program had impacted their success in medical school.

### **RESULTS:**

Of the 73 MS1s that participated, 43 completed the pre-survey and 24 completed the post-survey. 54.1% of MS1s strongly agree or somewhat agree that their mentor had faced similar challenges. 73.9% either strongly agree or somewhat agree that they were paired with a mentor they could open up to. Feedback received included multiple MS1s requesting more contact with their mentor and feeling “zoom burnout” during the COVID-19 pandemic.

### **CONCLUSION:**

Adding personal questions to the questionnaire positively impacted MS1 perceptions of the mentoring program, encouraging the formation of lasting relationships. The quality improvement project also revealed opportunities to further build the program.

## **I First Aid First: Examining the Need for Required First Aid Training in the Wayne State School of Medicine Pre-Clerkship Curriculum**

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Thomas Vander Woude, Nikita Sathiaprakash, Matthew Bautista, Katherine Palmer Loveluck, Kristiana Kaufmann M.D.

### **BACKGROUND:**

Wayne State University School of Medicine (WSUSOM) prides itself in community service through student-led initiatives in Detroit. With such close ties to the community, it is reasonable for the community to expect medical students to help when emergent situations arise. In this project, we examine the need for mandatory first aid training as part of WSUSOM's pre-clerkship curriculum.

### **METHODS:**

Students in the WSUSOM Class of 2025 participated in required first aid training during their second week of medical school. A 3-hour first aid video lecture (assigned for asynchronous viewing) was followed by an in-person skills practice session led by First Aid First (FAF). A post-session survey was administered to assess first-aid knowledge, perception of the training, level of confidence regarding first aid skills, and previous emergency response certifications. 214 responses were collected.

### **RESULTS:**

52.3% of medical students reported having never received any emergency response certifications prior to medical school. Of the 47.7% that did report previous certification, 38.8% obtained CPR and/or Basic Life Support (BLS) certification, 6.5% obtained lifeguard certification, 6.1% obtained Emergency Medical Technician (EMT) certification, and 0.9% obtained Emergency Medical Responder (EMR) certification. After the training, 88.8% of students stated they strongly agreed with the statement, "At this time, I think that first aid is an important skill to have." Additionally, 100% of respondents who answered the question "Would you recommend first aid training to others?" stated they would recommend the training.

### **CONCLUSION:**

Medical students clearly value possessing first aid skills early in their medical education to serve as dependable physicians-in-training in the surrounding community. However, many enter medical school with no prior experience or certification. This project demonstrates the need for first aid training to be a required part of the pre-clerkship curriculum at a community-based school such as WSUSOM.





## ***Improving Medical Student Knowledge Concerning Opioid Use in Metro Detroit***

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Ala Addin Sid Ahmed, Shabber Syed, Abdulmohsen Ghuloum, Muhammad Ahmed, Nedda Elewa, Fuad Abbas, Noor Suleiman, Anirudh Chitale

### **BACKGROUND:**

The city of Dearborn is experiencing a rising opioid epidemic. Since 2016, there has been a greater than two-fold increase in opioid-related deaths. Dearborn, composed of a largely Arab immigrant population, faces unique challenges with this epidemic such as deeply rooted perceptions of taboo, shame, and guilt around opioid use. In an effort to increase awareness about this problem, and to enhance the knowledge base of medical students concerning opioid use, the Islamic Medical Student Association (IMSA) at WSUSOM created a seminar around opioid misuse and treatment of opioid use disorder (OUD).

### **METHODS:**

IMSA hosted an educational seminar to educate WSUSOM students about the opioid epidemic in Metro Detroit. The audience was targeted through emails and social media platforms. Pre-surveys were conducted to determine knowledge regarding the opioid crisis and to measure cultural competency. Service learning hours were provided to student participants to satisfy curricular required hours. Following the seminar, an identical post-survey was sent out to all attendees. Both surveys had Likert scale survey questions, where participants rated their degree of agreement with certain statements.

### **RESULTS:**

58 participants filled out the pre-survey, and 44 filled out the post-survey. There was an increase in average Likert scores for many statements about opioid usage and cultural literacy. Participants strongly agreed to statements about treating OUD patients and the impact of misunderstanding cultural customs on patient compliance. Statements about language barriers and opioid prevalence experienced a decrease in average score.

### **CONCLUSION:**

This seminar was designed to identify and address gaps in medical students' understanding of the opioid epidemic within local minority communities, and improve cultural cognizance. We hope to use our analyses to optimize our program and eventually integrate it into the WSUSOM population health education curriculum. The model of this seminar could also be applied to educate many communities in various health crises.



## ***Breaking Barriers: Assessing Health Equity and Justice Initiatives of Healthcare Programs in Southeast Michigan***

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Matthew Bautista, Priyanka Kale, Sahar Galal, Nathan Sim, Maha Ahmed, Maham Ahmed, Preetha Ghosh, Emily Fisher, Tracy Wunderlich-Barillas Ph.D, Juline Asamoah M.D., Michael Hofman M.D., Ijeoma Nnodim Opara M.D.

### **BACKGROUND:**

Many barriers still exist that make it difficult for marginalized communities to receive proper healthcare. Decades of research have demonstrated that despite our efforts to eliminate health inequity, racial, ethnic, and socioeconomic disparities in healthcare persist. As our awareness of these issues continues to grow, it is important that we remain diligent in introducing actionable and sustainable change that will improve health outcomes for even the most vulnerable populations.

### **METHODS:**

This quality improvement project, titled Action 4 Health Equity (A4HE), is aimed at identifying health equity initiatives of various healthcare programs in Southeast Michigan. The students spearheading A4HE will work closely with faculty advisors to first establish clearly defined parameters that can measure program involvement in promoting health equity. Then, the IRB process will be completed to create an extensive survey based on these parameters that will be sent to SEMCME affiliated programs. Data will be collected and a media campaign will be created to highlight the various different avenues being taken in Southeast Michigan to promote health equity and justice.

### **RESULTS:**

Survey responses will be used to assess the breadth of health equity initiatives that exist at each program. These may include resident or faculty-led projects, seminars, classes, and more. We will explore past and ongoing research to further understand the regional barriers that hinder healthcare accessibility for minority populations. Lastly, we aim to create a media campaign to promote awareness and highlight health equity initiatives in place to address these barriers.

### **CONCLUSION:**

Ultimately, we hope that this project provides a transformative framework for which regional healthcare programs can innovate and employ different health equity initiatives based on what other programs are doing. We hope to continue raising awareness of existing barriers against minority populations in Southeast Michigan.





## **| Effectiveness of an Interactive Approach to Improving Mental Health Literacy in Young Adults**

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Matthew Hansen, Arqam Husain, Jordan Molina, Alex Ramirez, Jessica Tan, Julia Yee

### **BACKGROUND:**

The prevalence of anxiety and depression (AD) disorders has been steadily increasing and AD disorders are some of the most common mental disorders in the US[1,2]. AD presents differently across communities and disparities exist between various social, racial, and ethnic groups[3,4]. Oftentimes, AD disorders can present with atypical symptoms making it difficult to differentiate between normal levels of anxiety and clinical symptoms of AD disorders, and a large portion of the population with symptoms diagnosable for AD do not reach out for help[3]. In order to educate young adults on how to distinguish between normal levels of AD from clinical symptoms, atypical symptoms of AD, and effective coping methods, we plan on presenting an engaging method of patient education that moves away from a didactic teaching style and towards an interactive style to better educate a younger population. Additionally, we hope to increase the likelihood of early identification and treatment, we aim to increase the public health literacy of AD through direct educational engagement. Studies have shown that an interactive teaching style can be more effective in increasing health literacy than didactic methods[5]. We intend to test the effectiveness of an interactive teaching style with quizzes after each topic on educating young adults on health literacy, specifically focusing on the domain of mental health disorders.

Citations: 1. Twenge, J. M., & Joiner, T. E. (2020). U.S. Census Bureau-assessed prevalence of anxiety and depressive symptoms in 2019 and during the 2020 COVID-19 pandemic. *Depression and anxiety*, 37(10), 954–956. <https://doi.org/10.1002/da.23077> 2. Czeisler MÉ, Lane RI, Petrosky E, et al. Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic – United States, June 24–30, 2020. *MMWR Morb Mortal Wkly Rep* 2020;69:1049–1057. DOI: <http://dx.doi.org/10.15585/mmwr.mm6932a1>external icon. 3. Roness, A. (01/2005). &#34;Help-seeking behaviour in patients with anxiety disorder and depression&#34;; *Acta psychiatrica Scandinavica* (0001-690X), 111 (1), p. 51. <https://doi:10.1111/j.1600-0447.2004.00433> 4. Zvolensky, M. J., Garey, L., & Bakhshaie, J. (2017). Disparities in Anxiety and its Disorders. *Journal of anxiety disorders*, 48, 1–5. <https://doi-org.proxy.lib.wayne.edu/10.1016/j.janxdis.2017.05.004> 5. Kumar, N., Bostow, D., Schapira, D., et al. (2009). Efficacy of interactive, automated programmed instruction in nutrition education for cancer prevention. *Journal of Cancer Education*, 8(3), 203–211. <https://www.tandfonline.com/doi/abs/10.1080/08858199309528230>



## METHODS:

A pre-survey will be given to participants assessing their current level of knowledge on the subject matter. After which, the participants will be split into a control group and a test group. A PowerPoint will be presented. For the test group there will be a trivia game (Kahoot!) interspersed throughout the presentation to keep the participants engaged and to reinforce topics being taught. For the control group, the same PowerPoint will be presented, but without a trivia game. At the end of the presentation, there will be a post-survey to ascertain whether the aims of our presentation were met. We will also use the data from the post-survey to compare the efficacy of the interactive modality with the non-interactive modality to see whether there is a significant difference in retention of the material presented. The survey asks the participants to rate their agreement with the following statements/questions: 1) Anxiety and depression is a prevalent concern among young adults 2) How confident do you feel identifying one coping skill for anxiety and depression? 3) How confident do you feel identifying a resource for managing anxiety and depression? 4) How confident do you feel identifying when someone could use professional help for anxiety and depression?

## RESULTS:

We have already conducted research using the interactive modality test group. No significance was found for the pre- and post-survey questions for question

1. (0.11,  $p=0.16$ ). The differences in pre- and post-survey confidence ratings were significant for questions 2-4
2. 0.74,  $p=0.0009$
3. 1.11,  $p=0.0004$
4. 1.11,  $p=0.00007$

We plan on conducting a session with a control non-interactive group.

## CONCLUSION:

Interactive Kahoot! style creates a low-stakes competitive environment that improves student-engagement and attention to the content presented. Future research should aim to understand the effectiveness of interactive modalities on other educational topics and its possible impact on course performance. The data presented compares only changes in outcome measures before and after the interactive presentation. Therefore we will be conducting a non-interactive session to compare results.





## ***I Do Medical Students Know Enough about Naloxone Access and Good Samaritan Laws? Exploring the Need for Additional Training in Harm Reduction***

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** May Chammaa, Tabitha E. H. Moses, Jessica L. Moreno, Eva Waineo, Mark K. Greenwald

### **BACKGROUND:**

Over 2 million people have opioid use disorder (OUD) in the U.S. Clinicians can help individuals with OUD by providing access to evidence-based treatment, and by providing necessary guidance about legislation and harm reduction. Lack of physician knowledge and comfort in discussing these issues is a barrier to comprehensive care. Evaluating medical student knowledge of and attitudes towards harm reduction is critical to establish whether further education is needed.

### **METHODS:**

Incoming medical students completed a survey related to substance use knowledge that included 6 statements each on naloxone access and Good Samaritan Laws answered on a 5-point Likert scale. At the start of 1st year, 50% were randomly assigned to received a 1-hr Opioid Overdose Prevention & Response Training (OOPRT); the other 50% were a no-training control. Each year, students complete a follow-up survey. All participants who completed the baseline and 2nd year surveys were included. We used repeated measures ANOVA to compare naloxone access and Good Samaritan laws scores across the 2 timepoints.

### **RESULTS:**

Responses (n=167) showed incoming medical students are unsure about availability and legality of naloxone. After 1-year, all had improved knowledge regarding naloxone access. Students who received OOPRT showed greater improvement in knowledge about legality of using naloxone without a prescription and risks of using it to help others. Students who received training demonstrated more confidence in this knowledge (32.1 vs 10.8% unsure).

### **CONCLUSION:**

Medical students interact with patients who use drugs throughout training so it is important they have a strong foundation of knowledge about harm reduction laws. A brief 1-hour OOPRT resulted in some improvements but this was inconsistent across questions. These findings emphasize the need for targeted training for medical students regarding legislation that impacts treatment access for individuals with OUD.



## **| The Role of Gender in the Mentorship Preferences of Medical Students**

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Sabrina Bernardo, Jason Booza Ph.D., Ijeoma Nnodim Opara M.D.

### **BACKGROUND:**

Women in medicine face increased discrimination, sexual harassment, and difficulties maintaining work life balance. Mentorship within the medical field is a vital aspect of the medical education process. Women in medicine have been found to benefit the most from mentorship, which may be due to a mentor's ability to aid in the challenges that women face. Despite being ubiquitous in undergraduate medical education, mentorship best practices especially for female students, have yet to be developed. Part of the problem lies in the fact that male and female mentees have very different needs and preferences in a mentoring relationship. Thus the aim of this study is twofold. First, to explore the mentoring preferences of female medical students. Second, to further examine the role that intended specialty plays in their mentoring preferences, specifically in male-dominated specialties.

### **METHODS:**

An internet-based survey will be administered to all third- and fourth-year medical students at Wayne State University School of Medicine (WSUSOM). Survey items include intended specialty, and Likert-scale questions regarding mentorship preferences. Students will also be asked to identify barriers to mentorship in medical school and state their ideal and experienced mentorship relationships. This project has been approved by WSU institutional review board.

### **RESULTS:**

Descriptive analysis using the survey data will include Chi-square tests for categorical variables. First, a Chi-square test will be performed between male and female medical students with our independent variable being gender and dependent variable being mentorship preferences. Secondly, a Chi-square test will be performed between female students interested in male dominated specialties and female students who are not. Male-dominated specialties will be defined as less than 40% of entering trainees are female.

### **CONCLUSION:**

Our results will guide development of effective mentoring program for female medical students in order to increase career opportunities and ultimately reduce gender-based disparities in the medical field.





## **| *The impact of peer-assisted remediation on at-risk preclinical student performance***

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Simone K. Brennan, Ph.D., Jennifer Crystal, Ph.D., Sonal C. Patel, MA, Eva Waiono, M.D

### **BACKGROUND:**

Medical students who serve as peer tutors are highly valued for supporting learning in medical education and are commonly used in U.S. medical schools. Peer tutors are found throughout the undergraduate medical education supporting many aspects of curriculum. However, peer tutors are rarely used as part of the direct support for students who are high risk of course failure or dismissal. The aim of this study is to describe the efficacy of a peer assisted academic support program for students at WSUSOM who were at heightened risk of course failure.

### **METHODS:**

This research involves surveying students who participated in the Advanced Learning Coach program, an innovative approach used to include peers in the support of students at risk for course failure. After a literature review, a team of faculty and counselors developed a survey for students assigned to peer learning coaches and students who serve as peer learning coaches. The survey will capture students' perspectives of their experience in this peer-assisted academic support program. No identifiers will be collected. We will also evaluate de-identified exam scores prior to and after at-risk students received support from peer learning coaches. The study is submitted to the IRB. We aim to analyze participant feedback and outcomes to make recommendations for improvement in future iterations of the program.

### **RESULTS:**

Core research team members will use a mix of qualitative and quantitative analysis of collected survey data and will quantitatively analyze exam outcomes data. We will also describe de-identified academic records prior to and after at-risk students received support from peer learning coaches.

### **CONCLUSION:**

Based on analysis, we will explore the impact of a peer-assisted academic support program on at-risk student exam outcomes and experiences, addressing areas for improvement in future iterations of the program, lessons learned, and feasibility of application to other institutions.



## **| A Standardized Patient Model to Empower Medical Students to Care for Patients with a Visible Disability**

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Nikita Sathiaprakash BS, Sonal Patel MA, Jason Booza Ph.D.

### **BACKGROUND:**

When medical students graduate, many feel that they have had little to no exposure to patients with disabilities. Some even feel anxiety when given the opportunity to care for a patient with a disability. Giving students earlier and more frequent encounters with patients who have disabilities can improve their knowledge, attitudes, and skills to care for this population. Unfortunately, students do not get many chances to interact with patients with disabilities. As a result, some schools have relied on standardized patients (SPs). SPs are useful tools to help medical students build upon their competencies and learn the correct approaches through simulated clinical scenarios.

### **METHODS:**

A group of students will be provided the opportunity to engage with an SP scenario, where the SP will have a visible disability (in a wheelchair). There will be a short information session before the SP scenario where disability history questions and other aspects of providing care are conveyed. A pre-survey and post-survey will be distributed in person before and after the session to assess the comfort level and knowledge of the students.

### **RESULTS:**

A mixed approach will be utilized where quantitative data will be gathered (Likert scale questions) while also having anecdotal/reflective evidence about the effectiveness of the education intervention. The quantified results can be analyzed for trends in comfort level and knowledge. The qualitative data can be examined for emerging themes that are attributed to engaging with the SP scenario as well as what could be modified in the scenario to make it more effective.

### **CONCLUSION:**

Physicians in every specialty work with patients who have disabilities. Medical students should be trained to confidently interact with and develop rapport with all patients, including those with disabilities. An SP scenario is a valuable method of training students to prepare them for future interactions.



## **What Sorts of Residents Get What Sorts of Ratings? An Analysis of Quantitative Ratings of Resident Competencies and Descriptive Adjectives**

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** R. Brent Stansfield and Andrea Milne

### **BACKGROUND:**

Resident evaluation by a Clinical Competency Committee (CCC) must summarize performance assessments made by many stakeholders, including faculty, attendings, nurses, peers, patients, and students. Quantitative ratings are valuable but difficult to interpret without qualitative data. An approach that combines the standardization of quantitative ratings with more qualitative information may help CCCs formulate more accurate conclusions about resident performance.

### **METHODS:**

A novel evaluation form was used by Family Medicine faculty and attendings to assess all residents for 4 residency academic years (July through June, 2017-18 through 2020-21). The form included quantitative ratings and a list of adjectives to describe the resident. The frequency of each adjective's use was computed from the data, and the most frequently used were included in further analysis. Mean ratings of Overall and milestones competencies were computed across raters for each resident, and the percentage of each adjective was computed. Linear regression determined the relationship of adjectives to quantitative ratings.

### **RESULTS:**

The dataset included 742 ratings of 55 unique residents by 10 unique raters. Positive adjectives were most used (Capable, Logical, Organized, Mature, and Resourceful were each used in over 30% of responses). Seventeen adjectives were used on 10% of the rating forms or more and so were included in the analysis. These 17 explained a significant amount of variance for Overall ( $R^2 = .13$ ), and all competency ratings ( $R^2$  from .24 to .28). Adjectives showed different patterns of association with ratings. High rated residents were described as Organized and Clear-Thinking. Lower-rated residents were described as Considerate, Friendly, Cooperative.

### **CONCLUSION:**

These findings reveal behavioral preferences that faculty and attending raters prefer in the residents they rate which may not be intuitive to administrators and program leadership tasked with evaluating residents' strengths and weaknesses in CCC or other assessment situations. Care must always be taken when interpreting quantitative ratings.





## ***Examining the Decline in Empathy Seen in Medical Students and Association with Mistreatment Experienced Throughout Medical School***

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Youstina Abdallah, Jason Booza

### **BACKGROUND:**

Physician empathy is a vital component of patient care and has been associated with better patient outcomes and less physician stress overall. Studies have shown that medical student empathy declines as they progress through medical school. Mistreatment of medical students is common and has been associated with an increase in student burnout and distress, but the effects on student empathy levels have not been studied. Here, the results of the Association of American medical colleges (AAMC) Year 2 questionnaire (Y2Q) and the AAMC Graduation Questionnaire (GQ) will be analyzed to compare levels of medical student empathy and association with mistreatment.

### **METHODS:**

The AAMC Year 2 Questionnaire is administered annually to active second year M.D. students in the United States. The Graduation Questionnaire is administered by the AAMC to all graduating M.D. students in the United States. The Interpersonal reactivity index is given in each of these surveys to measure levels of empathy. In the GQ, students are asked whether they have experienced any of 16 indicators of mistreatment throughout their time in medical school. These indicators include derogatory comments, discrimination based on gender, public humiliation, and others.

### **RESULTS:**

The results of the 2020 Y2Q and GQ will be evaluated first by using descriptive statistics to look for if a decline in empathy is seen between year 2 and Graduating students. Next, correlational analysis will be done to look for a correlation between empathy and mistreatment experienced by students. An inferential regression model will be used to look for causation and to control for other variables such as gender, race, and age.

### **CONCLUSION:**

Expected conclusion is that there is a decline in empathy when comparing the Y2Q and GQ, and that the decline in empathy is associated with medical student mistreatment.



## ***Comparison of First and Second-year WSUSOM Medical Students' HBV Knowledge and Attitudes***

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Kelly Yang, Andrew S. Kao, Jessica Zhao, Nathan Sim, Matthew Bautista, Emily Chow, Ronald Thomas, Jocelyn Ang

### **BACKGROUND:**

Limited understanding of hepatitis B virus (HBV) disease transmission contributes to fear of close contact and stigmatizes affected individuals. Medical students at Wayne State University School of Medicine (WSUSOM) learn about HBV and liver pathophysiology during their second year of medical school, and normal human function during their first year. By comparing pre- and post-seminar surveys between first- and second-year medical students, we aim to assess the impact of educational seminars and second-year pathology curriculum on medical students' HBV-related knowledge and attitudes.

### **METHODS:**

24 first-year and 16 second-year medical students at WSUSOM attended a virtual HBV seminar and completed a pre-seminar survey evaluating HBV-related knowledge and attitudes. The seminar consisted of thirty minutes of didactics from an HBV research scientist from University of Michigan Health System followed by case studies in breakout rooms. Participants then reconvened to discuss case studies and completed a post-seminar survey similar to the pre-seminar survey.

### **RESULTS:**

Analysis will consist of comparing first- and second-year pre-seminar responses to determine baseline knowledge and attitudes for each class. Pre- and post-seminar responses will be compared within each year to assess the seminar's efficacy on improving HBV knowledge and attitudes. First- and second-year post-survey results will be compared to measure the knowledge and attitudes achieved after the seminar.

### **CONCLUSION:**

While baseline knowledge may be greater among second-year students, similar pre-seminar attitude responses to people infected with HBV among both classes may suggest stigmatizing attitudes toward people infected with HBV. Improvement in both HBV-related knowledge and attitudes after the seminar will demonstrate the efficacy of virtual seminars and emphasize the importance of continued education on HBV and bloodborne pathogens beyond preclinical years to decrease possible preconceived notions towards patients with infectious diseases. Future studies may assess HBV knowledge and attitudes of clinical-year medical students compared to pre-clinical year medical students.



## **Flipped Curriculum vs. Traditional Lecture for Back Pain**

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Muhammad Ahmed, Elizabeth Dubey M.D., Sarah Meram MS, Arqam Husain

### **BACKGROUND:**

The use of the traditional lecture model (TLM) as the primary teaching tool in emergency medicine residency grand round conferences has been questioned due to its lack of learner engagement. The flipped classroom model (FCM) - an instructional strategy that encourages learning at home and practice in the classroom - has gained popularity due to its student-centered approach. Studies on FCM's use in medical education have found evidence of increased satisfaction among residents but no evidence of improved medical management (MM) or knowledge acquisition (KA). Our primary aim is to determine whether FCM, when compared to TLM, results in significant change in a resident's MM in the emergency department (ED). The secondary aim is to determine the impact of FCM on KA in residents.

### **METHODS:**

This is a retrospective EMR review of atraumatic back pain (ABP) patients treated by residents. All residents training at Sinai Grace Hospital (SGH) and Detroit Receiving Hospital (DRH) EDs during the 2019-2020 academic year will be included in the study. SGH residents will be educated on ABP management via TLM and DRH residents via FCM. To assess our primary aim, we will compare how closely residents' MM of ABP patients aligns with ACEP guidelines. Additionally, residents' KA will be evaluated by the administration of a quiz before the teaching intervention and then six months afterwards.

### **RESULTS:**

EMR data will be de-identified then analyzed by a statistician using standard statistical techniques. Data from quizzes will be entered into an EXCEL spreadsheet, de-identified, stored on a secure WSU server, then analyzed using standard descriptive statistics and EXCEL functions.

### **CONCLUSION:**

This study will investigate whether FCM, compared to TLM, results in a significant change in resident MM and KA. We anticipate our study will contribute to a better understanding of FCM's effectiveness in medical education and inform future studies on this subject.



## **Introducing LGBTQ+ Standards of Care and Assessing Medical Student Comfort with Pronoun Usage in Clinical Skills 1 Course.**

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Margabandu, P; Jaipalli, S; Lalo, E; Bove, M; Franklin, M; Saymuah Stone, S; Shah, R; Varvatos, L; Miller, E

### **BACKGROUND:**

Transgender and gender-nonconforming people have often been forced to teach their own providers about their gender identity and LGBTQ+ specific health needs. A 2017 survey showed that in addition to 19% of transgender people being refused medical care, 28% postponed their medical care due to discrimination [Grant 5]. Medical schools are positioned to combat these disparities by teaching inclusive clinical practices that affirm gender-diverse patients and by expanding curriculum on LGBTQ+ health. Students at WSUSOM have worked with course directors to launch pronoun usage training within the Clinical Skills 1 course.

### **METHODS:**

Wayne State SOM students from the Class of 2025 (N=312) will attend a pronoun usage training as part of their Clinical Skills 1 curriculum. Students will be taught about the importance of creating a welcoming environment for LGBTQ+ patients, why a physician should ask for pronouns, and how to formally ask for pronouns in a clinical setting. This training will include pre- and post-intervention surveys to assess students' comfort with using pronouns and acquire student feedback on the training session.

### **RESULTS:**

Based on the results of the pre- and post-training survey, we will determine the effectiveness of the training in increasing student awareness and comfort level with pronoun usage in a clinical setting via paired t-tests on the results of key outcomes. We will use our results to adapt the training to better serve medical students as they learn how to address LGBTQ+ health issues.

### **CONCLUSION:**

The goal of training medical students on pronoun usage is to provide the foundations of gender-affirming clinical practices and expand the medical curriculum to address health issues and clinical care of the LGBTQ+ population. Student feedback will determine the effectiveness of the pronoun usage training and guide future initiatives.



## **| Survey Assessing the Attitudes and Knowledge of Programs on Gender Equity**

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Miloni Shah, Dr. Beena Sood, Kate Sheppard

### **BACKGROUND:**

As of 2020, more than half of medical students in the United States are women. However, numerous barriers that negatively affect women's opportunities in the medical field. These factors include a lack of support of maternity leave and childbearing, absence of mentorship programs, workplace harassment, and gendered implicit biases. Residency and fellowship programs are a key part of medical training, where women must be given the agency and opportunity to grow in their field. Therefore, it is important to survey future and current physicians in training about the improvements they hope to see in their medical training.

### **METHODS:**

Medical students from WSUSOM completed an anonymous Qualtrics survey. The questions were adopted from both the ACP Recommendations for Gender Equity and the Family Friendly Practices portion of American Pediatrics' Annual Survey of Graduating Residents. Students were asked to rank how important certain factors/benefits were in selecting a future training program scale, as well as future recommendations to improve gender equity.

### **RESULTS:**

Currently, 155 medical students have completed the survey. Initial results indicate that the top three gender equity factors that are most important to medical students include proper understanding of reporting procedures for harassment, the ability to utilize harassment reporting procedures without fear of negative consequences, and inclusion of female members on job search committees. In terms of family friendly practices, the three most important factors included a flexible rotational and daily schedule and care for ill children. Future recommendations emphasized improvement in parental leave, mentorship, and implicit bias training.

### **CONCLUSION:**

There must be a greater emphasis on improving gender equity policies in medical training programs in order to create equal opportunities for growth and success. Medical students indicate an importance of family friendly practices, improved harassment reporting procedures, flexible scheduling, and female leadership.





## ***Investigating Changes in Ethical Leadership, Cultural Competence, and Community Engagement among Participants in a Longitudinal Volunteering Program.***

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** Ryan Nolan, Hannah Shuman, Dan Harris, Marissa Ray, Ryan Thummel, Ph.D.

### **BACKGROUND:**

The Aesculapians Honor Society, a student service organization at Wayne State University School of Medicine, chooses annually a community organization with which to partner. In an effort to enhance professional development and civic engagement, members complete a longitudinal volunteering program aligning with the mission of the community partner. This study aims to assess the effects of this longitudinal volunteering program in the domains of community engagement, cultural competence, and ethical leadership among medical students in a service-based honor society.

### **METHODS:**

This is a cohort study being performed at a medical school in Michigan during 2021-2022. Both before and after taking part in a longitudinal volunteering program with Brilliant Detroit, participants will be surveyed using the Public Affairs Scale- Short Survey (PAS-SS), a validated 15-item survey assessing the efficacy of service learning programs in community engagement, cultural competence, and ethical leadership. A paired t-test will be used to analyze the responses.

### **RESULTS:**

We plan to survey about 70 participating medical students. We anticipate that following completion of the longitudinal volunteering program, participants' responses will indicate improvement in each of the three domains of focus which include community engagement, cultural competence, and ethical leadership.

### **CONCLUSION:**

We expect that our data will reveal that completion of a longitudinal volunteer program with a community partner strengthens professional development and civic engagement in the domains of community engagement, cultural competence, and ethical leadership.



## **| Characterizing student-derived self-directed retrieval practice methods in undergraduate medical education**

**TYPE:** Poster

**CATEGORY:** Research

**AUTHORS:** David Bai, Jason Booza

### **BACKGROUND:**

Managing learning strategies is a vital part of a physician's professional development, starting from undergraduate medical education. Retrieval practice, as a strategy, has been reported to be especially effective. However, much of the current body of research on retrieval practice is based on retrieval practice related to the formal curriculum or intuitional impetus; retrieval practice originating from and directed by students individually, or student-derived self-directed retrieval practice (SDSDRP), has not been described as extensively. Here, a mixed methods approach is deployed to characterize the nature, effectiveness, and efficiency of SDSDRP methods used by a first-year undergraduate cohort at Wayne State University.

### **METHODS:**

First, a focus group will be conducted to understand perception of SDSDRP and specific SDSDRP methods employed by first-year students. Subsequently, with input from the data gathered, a survey assessing the nature, effectiveness, and efficiency of both SDSDRP in general and each of the most common SDSDRP methods will be sent to the first-year undergraduate cohort. Descriptive statistics will be used to characterize and compare these methods. Open-ended responses obtained from the survey will also be compared to focus group data.

### **RESULTS:**

Here, for the first time, the breadth of SDSDRP methods employed by first-year students will be defined from firsthand qualitative data from the focus group. The subsequent survey will establish basis for qualitative and quantitative comparison of various SDSDRP methods' effectiveness and efficiency.

### **CONCLUSION:**

Assessment of SDSDRP practices will allow better understanding of common methods. This will not only allow for further research characterizing and comparing these methods but also can indicate to individuals, medical schools, and other institutions which methods should be most recommended and supported.





# INNOVATION

## **“Medical Education Innovation”**

refers to innovative curricula that address a current issue within medical education. The innovation should be based on learning principles and be designed to meet a specific need. Examples include but are not limited to health and wellness, quality improvement, patient safety, interprofessional education, service learning.

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## **| Using Mental Models to Advance Clinical Reasoning**

**TYPE:** Oral presentation

**CATEGORY:** Innovation

**AUTHORS:** Sonal C. Patel, Shaun Cardozo, James A. Rowley, Madhumita Mohanty, Janet Poulik, Murray N. Ehrinpreis

### **PROBLEM STATEMENT:**

- Research shows that learners seldom make correct connections between biomedical knowledge and clinical features of a case on their own.
- Institutional student performance data shows gaps in students' ability to apply foundational science concepts to diagnosis and management of disease.
- There is limited direct instruction on clinical reasoning in the curriculum.

### **METHODS:**

Groups of 3-4 students used two cognitive integration strategies to develop mental models for clinical reasoning through eight case-based learning sessions. First, Integrated Illness Scripts with highly structured and repeated questions were used to guide thinking and help students build connections between basic science core concepts and the clinical features of a case. Then, students created unique concept maps (Mechanism of Disease maps) to visually summarize their learning, and these were evaluated as formative assessments

### **RESULTS:**

- After eight sessions, students are able to work through cases with more independence, greater depth, and faster speed.
- Disease maps showed a great deal of variation, with some students providing minimal concept mapping and other students showing detailed physiology and even treatment, which was not required.
- Student feedback indicates CBLs are highly structured, purposeful, and reinforce key learning. Students now use the Mechanism of Disease Maps strategy for all of their cases during independent study time.

### **CONCLUSION:**

- Providing tools to develop mental models for clinical reasoning helps students better organize new learning, build connections between basic science and clinical science concepts, promotes higher-order thinking, and enhances retention and recall.
- Clinical educators should reinforce connections between biomedical knowledge and clinical evaluation during training.

### **NEXT STEPS:**

- Create opportunities for peer review of Mechanism of Disease Maps.
- Develop processes to provide students with more detailed feedback on their Mechanism of Disease maps so they understand new learning with more depth.
- Develop an assessment process to track clinical reasoning development longitudinally.



## **| The Impact of a Growth Mindset on Medical Students**

**TYPE:** Oral presentation

**CATEGORY:** Innovation

**AUTHORS:** Luke Wesemann

### **PROBLEM STATEMENT:**

A growth mindset has been correlated with many positive outcomes in both educational and professional environments. Defined as an intrinsic belief that one's skillset and ability can always be adapted and improved upon through focused effort and collaboration, a growth mindset is embodied by a medical student who is hungry to learn for the sake of enhancing their understanding and is unbothered by setbacks or current gaps in knowledge. In contrast, a student with a fixed mindset believes that he or she was born with a level of intelligence and skill that cannot be altered. The purpose of this project is to determine if presenting a short-term module about adopting a growth mindset to medical students in Detroit can have a positive impact on their mental health and study habits.

### **METHODS:**

As part of the WSUSOM Detroit class of 2024 year 2 curriculum, 290 medical students took a pre- and post- survey surrounding an educational and applicational module regarding growth mindset to receive a BRS score, a validated measure of resilience. The applicational component involved videos, essays, group sessions, and a summative capstone presentation to medical residents regarding the application of a growth mindset in real-life conflict-resolution scenarios (patient conflict, administrative conflict, and peer conflict). Groups to be compared include non-traditional students, traditional students, students returning from a leave of absence, as well as basic demographic characteristics. The questionnaire consists of eight subjective questions that assess factors such as resilience, self-confidence, self-esteem, and other factors related to growth mindset.

### **RESULTS:**

We anticipate that a statistical analysis of the questionnaire data collected will reveal that the average BRS Score for the medical students following completion of the growth mindset module will be significantly higher than the pre-module baseline score. This result will show that students perceive themselves as having higher levels of resiliency when faced with setbacks following even minimal training on embodying a growth mindset during their medical education.

### **CONCLUSION:**

The expected results of this study will advocate for the benefits of exposing medical students to training regarding the adoption of a growth mindset during their pre-clinical coursework. Enhancing the average perceived level of self-resilience across an entire class cohort suggests a broad adoption of a growth mindset and is likely to strongly correlate with an increase in students who believe that they can hone their personal skills while successfully addressing their shortcomings to overcome the hurdles that are inevitably present not only in their preclinical years but throughout their entire career.



## ***Formation of a multi-stakeholder student driven coalition to address issues of justice, equity, diversity, and inclusion, in the medical education curriculum***

**TYPE:** Oral presentation

**CATEGORY:** Innovation

**AUTHORS:** Ashley Kramer, Sara Saymuah Stone, Enxhi Lalo, Suraj Jaipalli, Pavithra Margabandu, Michael J. Franklin Jr, Ntami Echeng, Capricia Bell, Lauren Varvatos, Riya Shah, Margaret Bove, Senthil Kumar Rajasekaran

### **PROBLEM STATEMENT:**

To enhance the School of Medicine's (SOM) curricular alignment with their mission statement, the Institutional Justice and Inclusion student subcommittee conducted a Community Needs and Assets Assessment (CNAA) to determine how students are affected by issues of Justice, Equity, Diversity, and Inclusion (JEDI). The CNAA revealed a consistent lack of focus on JEDI within the medical curriculum at the SOM. To address this, we created a Social Justice Medical Education Coalition (SJMEC) as a student driven intervention focused on curriculum review.

### **METHODS:**

The SJMEC brought together affinity groups such as student organizations, student senators, and learning community leaders, to redirect silo initiatives into one standing entity. We have developed a robust leadership structure within the SJMEC to orchestrate our short and long term goals, and ensure sustainability of the mission with leadership turnover.

### **RESULTS:**

To date, we have implemented microaggression training throughout M1-M4 segments, and initiated an ad hoc subcommittee of the Curriculum Management Committee, with plans to establish as a permanent committee. We have recruited a diverse group of students to form an army of "Social Justice Warriors" who are performing a detailed, systematic review of curricular content to flag areas for improvement in JEDI. We are also flagging areas in the curriculum where additional historical and societal context is warranted. To date, changes have already been implemented in the Clinical Skills-1 course, and Basic Sciences course changes will be reviewed this spring for implementation in the 2022-23 academic calendar. Lastly, we are surveying available qualitative and quantitative data for internal measurement of success and comparison to other medical schools.

### **CONCLUSION:**

The student-driven collaborative model of SJMEC supports and facilitates student-driven initiatives to generate administrative action and support. Curriculum review will remove outdated and problematic schools of thought in favor of inclusive teaching sensitive to the needs of many unique patient subpopulations.



## ***Development of a Longitudinal Medical Ethics Curriculum for Pre-Clerkship and Clerkship Training***

**TYPE:** Oral presentation

**CATEGORY:** Innovation

**AUTHORS:** Margaret Bove; Benjamin Huber; Erin Miller, M.D.

### **PROBLEM STATEMENT:**

The Wayne State School of Medicine Curriculum Committee has worked over the past year to identify gaps in our pre-clerkship and clerkship curricula - the bioethics curriculum being one key area of focus. Ethical decision-making is an integral part of being a physician and is one standard for LCME accreditation. Therefore, we have been working on developing a more robust bioethics curriculum that meets these requirements and better prepares our medical students for their future as physicians.

### **METHODS:**

A literature review was performed and multiple medical school curricula were reviewed to gain an understanding of different methods of teaching ethics in the medical school setting; and the AMA Code of Ethics was referenced to identify key themes deemed “essential” for medical education and clinical practice. Measurable learning objectives were formed based on the aforementioned material using Bloom’s Taxonomy. The current pre-clerkship and clerkship curricula were reviewed, specific courses and rotations were identified as potential areas of implementation, and learning objectives were assigned to each course. MedEdPORTAL was used to find coursework relevant to our learning objectives that could be included in future lectures and seminars.

### **RESULTS:**

The curriculum will be presented to the Curriculum Management Committee for final approval and implementation.

### **CONCLUSION:**

Training and examination in medical ethics is not only a standard for LCME accreditation and a requirement for medical licensure, but it is essential to the training of all physicians. By implementing a more robust medical ethics curriculum at the Wayne State University School of Medicine, we can ensure that our students are well prepared for their future careers as physicians. Potential areas for growth include evaluating student satisfaction with the curriculum and knowledge of key concepts through the use of pre/post-coursework surveys.



## **Improving Treatment Cost Communication for Spanish and Arabic Speaking Cancer Patients: Next Steps in the DISCO Protocol**

**TYPE:** Oral presentation

**CATEGORY:** Innovation

**AUTHORS:** RaeAnn Hill, Eyouab Tadesse, Lorna Mabunda, Lauren M. Hamel

### **PROBLEM STATEMENT:**

Significantly more likely to file for bankruptcy than people without cancer, cancer patients are on average responsible for \$16,000 in annual out-of-pocket costs. Financial toxicity, or the material and psychological impact of treatment costs, tends to burden patients who are racial/ethnic minorities, have lower incomes, and/or are below the age 65, compared to white, wealthier, or older patients.

### **METHODS:**

We designed the Discussions of Cost (DISCO) App to increase patient cost education and prompt patient-physician cost discussions. In addition to a brief cost education video, the DISCO App also asks patients to provide demographic information which the app uses to generate an individually-tailored list of questions patients can consider asking their oncologist. Patients newly diagnosed with cancer are randomized into the usual care or intervention arms. Interventional arm participants use the DISCO App before their second oncologist interaction. Additionally, half of the patients randomized to use the DISCO App receive an intervention “booster” two months later. Over a year, all patients complete four follow up surveys. The DISCO App effectiveness is assessed through self-report and observational measures of short- and longer-term outcomes, including patient-physician cost discussions, patients’ self-efficacy for managing treatment cost, and financial toxicity.

### **RESULTS:**

We are implementing the DISCO App in Detroit, Michigan, which is a racially/ethnically diverse city with large Spanish- and Arabic- speaking populations. We argue it is imperative to adapt the DISCO App for these languages. A recent study of 301 healthcare providers who treated limited English proficiency breast cancer patients identified language as a major barrier to discussing treatment options and prognosis.

### **CONCLUSION:**

As we move to adapt the DISCO App to other languages prevalent in our patient population, conceptual, methodological, and intervention implementation feedback from other health communication experts and practitioners is needed.





## ***Mechanical Ventilation Training of Pulmonary Critical Care Fellows During The COVID-19 Pandemic***

**TYPE:** Oral presentation

**CATEGORY:** Innovation

**AUTHORS:** Aryan Shiari, M.D.; Abdelaziz Mohamed, M.D.; Divya Venkat, M.D.; Sarah J. Lee, M.D.; Abdulghani Sankari, M.D.

### **PROBLEM STATEMENT:**

Mechanical ventilation (MV) management is an essential skill for Pulmonary and Critical Care Medicine (PCCM) fellows to master during training. The unprecedented emergence of the COVID-19 pandemic highlighted the need for advanced operator competency in MV to improve patients' outcomes. We aim to create a standardized case-based curriculum tailored for expert-level understanding and evidence-based management to allow for quick assimilation of first year fellows before caring for critically ill patients.

### **METHODS:**

This MV curriculum consisted of the following steps: Baseline

1. Baseline written knowledge test with fifteen multiple-choice questions (MCQs) about MV, latest evidence-based practices and discovered pathophysiology of the COVID-19.
2. A one-on-one session using a high-fidelity simulation. Intervention
3. A structured debriefing tailored per a 50-point competency assessment checklist from the simulation.
4. Supervised didactic videos.
5. A 60-minute hands-on session in small groups for basic knobology, waveforms, and various MV modes. Post-testing
6. A one-on-one simulation reassessment session.
7. A written knowledge post-test.
8. A post-training confidence survey using a 5-point Likert scale. Post-testing occurred within two weeks from the baseline testing.

### **RESULTS:**

In July 2021, eight first year PCCM fellows completed the training. The average MCQ score improved from  $7 \pm 3$  to  $10 \pm 2$  questions, which equated to a 43% increase from baseline (P

### **CONCLUSION:**

Our new pandemic MV curriculum using video didactics, hands-on small group sessions, and high-fidelity simulation testing allowed for improvement in advanced knowledge and competency of MV use during the pandemic in PCCM fellows. Thus far, our curriculum will be the first evidence-based competency checklist for managing adult patients on MV and incorporates best practices of the COVID-19 pandemic.





## ***Emergency Medicine Virtual Case Studies Series: An Innovative Approach to Medical Education During The COVID-19 Pandemic***

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Kristina Barrientos, Sara Saymuah Stone, MS, Catalina Kenney, Collin Brooks

### **PROBLEM STATEMENT:**

Medical education has experienced an unprecedented disruption in interactive problem-solving sessions and clinical immersion experiences due to the COVID-19 pandemic. Social distancing requirements precluded in-person service learning, shadowing opportunities, and clinical skills simulations, prompting medical educators and students to implement virtual clinical experiential opportunities. Wayne State University School of Medicine's Emergency Medicine Interest Group addressed this challenge by initiating an interactive virtual learning Case Studies Series consisting of real case analysis of various chief complaints. This virtual series enhanced preclerkship and clerkship curriculum, granted service learning hours, and provided students with opportunities to interact with emergency medicine physicians.

### **METHODS:**

The EMIG coordinators recruited EM resident physicians in the Detroit Metro area and scheduled five Zoom Case Study Series events, each lasting a minimum 1 hour in duration. Each installment featured a heavily interactive component, such as polling within the Zoom interface or the use of the chat or audio feature. Afterwards, feedback was solicited via an open text survey distributed to attendees to promote high retention rates.

### **RESULTS:**

The EMIG coordinators recruited EM resident physicians in the Detroit Metro area and scheduled five Zoom Case Study Series events, each lasting a minimum 1 hour in duration. Each installment featured a heavily interactive component, such as polling within the Zoom interface or the use of the chat or audio feature. Afterwards, feedback was solicited via an open text survey distributed to attendees to promote high retention rates.

Results (If a work in progress, provide an analysis/evaluation plan):

Overwhelmingly positive feedback was provided via the surveys and indicate that Case Study Series was well-received by medical students and that Zoom was an appropriate platform for the event.

### **CONCLUSION:**

EMIG was able to secure curricular acknowledgment of these events by receiving approval to designate this voluntary attendance as fulfilling the WSUSOM service-learning program requirement as either a clinical or outreach hour. Currently, 209 hours of online service-learning clinical hours have been confirmed for medical students through the EMIG Case Study Series. This preliminary analysis indicates interactive virtual events can provide valuable clinical insight for medical students unable to attend clinic or shadow in the emergency department. The model of the Case Studies Series is reproducible, and EMIG aims to outline methodology to encourage medical institutions to provide similar experiences to their medical students.



## ***Virtual Volunteering in a Student Run Free Clinic: A Pilot Program***

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Charlotte Thill, Sabrina Bernardo, Yasmeen Alcodray, Sanjna Ghanshani, Kaitlin Ross, Iyanna Peppers, Alyssa Kalsbeek, Zoya Gurm, Robert Sherwin M.D.

### **PROBLEM STATEMENT:**

Medical student participation at student-run free clinics (SRFC) enhances the medical education curricula. SRFCs offer the opportunity for medical students to be at the forefront of patient encounters and treatment plan determination. Medical students from Wayne State University School of Medicine volunteer at Cass Clinic, which is a SRFC in Detroit, MI. However, due to the COVID-19 pandemic, first-year medical students were not able to volunteer in-person at Cass Clinic. In response, the leadership of Cass Clinic developed an opportunity for students to experience volunteering at a SRFC in a virtual setting.

### **METHODS:**

Care teams at Cass Clinic are led by third- and fourth-year medical students who were in-person for all patient encounters. Cass Clinic leadership coordinated online video calling between first-year medical students and care team leaders. During patient encounters, first-year medical students were encouraged to actively participate in history taking, case presentation, and treatment plan determination. First-year medical students were required to submit HIPPA certification prior to participation. A feedback form was administered to first-year medical students to identify improvements and overall satisfaction with the experience.

### **RESULTS:**

This initiative was achievable to implement with limited challenges. Furthermore, in the post-session feedback form, all first-year medical student participants (N=16) reported that this experience was beneficial to their clinical skills education. 10/16 first-year medical students (62.5%) were able to elicit a patient history.

### **CONCLUSION:**

Benefits from volunteering in-person at a SRFC may also be achieved in a virtual setting. Furthermore, offering volunteer opportunities in a virtual setting may increase accessibility and availability for more medical students and pre-medical students to learn valuable lessons from SRFC.



## ***Mandatory Wellness, via Zoom?!?: The Structure, Process, Feedback, and a Glimpse of the Larger Plan***

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Katelyn Kerr, Ellie Lewandowski, Thomas Sprys-Tellner, Eva Waione

### **PROBLEM STATEMENT:**

LCME guidelines call for medical schools to promote student well-being and certain institutional changes show positive impacts. The COVID19 pandemic led to unique additional stressors and imposed limits on methods of support and curriculum delivery. There is limited data on student feedback of virtual sessions. Our aim is to understand student response to a mandatory zoom-based wellness session which will inform future institutional initiatives.

### **METHODS:**

A longitudinal wellness curriculum was developed by students and faculty as part of a larger response to promote wellness through institutional change. The curriculum was approved by the CMC. A zoom-based format was necessitated due to the COVID-19 pandemic. This session was attended by the entire M2 class and opened with a discussion on burnout/wellness, followed by seven concurrent 30-minute workshops. Although the session was mandatory, students had autonomy in workshop choice. Students were sent optional, anonymous feedback surveys.

### **RESULTS:**

Results are based on 250 pre-session and 187 post-session surveys on which students rated responses on a 1-5 Likert scale. Students reported an increase in understanding of burnout (4.24/5 to 4.58/5), ways to reduce burnout (3.84/5 to 4.36/5), and confidence in ability to take care of their own well-being (3.76/5 to 4.15/5). A variety of workshops were offered, including activity-based (art, yoga, meditation, HIIT exercise) and discussion-based (Non-traditional, out-of-state, and stress management) sessions, which provided students with options to engage through movement, connection, or exploration. Ratings ranged from 3.58-4.5/5; activity-based sessions were rated higher and yielded higher participation.

### **CONCLUSION:**

In conclusion, required virtual wellness sessions engaged the entire class in professional development while meeting diverse needs of students. Follow-up is needed to determine long-term impact. Wellness initiatives provided at an institutional level which include but are not limited to curriculum may help to shift to a culture that emphasizes wellness and self-care in medical training and beyond.





## ***Evaluating the Effectiveness of an Online Practicum to Cultivate Confidence in Conducting a Quality Improvement Project in Medical Students***

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Mindy M. Kim, Caleb Sokolowski, Shabber Syed, Diane L. Levine

### **PROBLEM STATEMENT:**

Quality improvement (QI) is an effective way to improve the delivery of healthcare through systematic problem solving. As medical students enter their clinical training, students witness inefficiencies that could be modified, however, students are often unequipped to approach these problems in a systematic manner or to show evidence these modifications improve clinical outcomes. Through participation in the Institute for Healthcare Improvement (IHI) QI practicum, students may gain fundamental QI skills required to develop and oversee their own QI projects. We evaluate if participation in an online practicum improves students' confidence in conducting QI projects.

### **METHODS:**

Four Wayne State University School of Medicine students participated in the IHI online practicum "Moving Quality Improvement from Theory to Action" in 2020. This was a 9-week online course that focused on developing QI knowledge and implementing a QI project. Students completed the online course and applied their knowledge to their QI project. After completing the practicum, students were assessed using a 5-question Likert Scale survey examining perceived growth as well as a qualitative assessment.

### **RESULTS:**

100% of the students strongly agreed this practicum increased their QI knowledge. 100% of students agreed they felt well equipped to keep their future patients safe, with 75% agreeing and 25% strongly agreeing they could address problems observed in hospital settings. 100% of students agreed to having confidence in starting a QI project, with 25% strongly agreeing with this statement. Notably, 50% of students were neutral on enjoyment of the practicum.

### **CONCLUSION:**

Based on our preliminary results, we feel this QI practicum was effective for students to learn more about QI and gain confidence in starting a QI project. While we recognize these results are preliminary due to the sample size, we have a new cohort of 9 students participating in the practicum currently and will conduct further research. Sponsors: Wayne State University School of Medicine Alumni Association and Office of Medical Student Research Programs Sources: 1. Kohn LT, Corrigan JM, Donaldson MS, eds. To err is human; building a safer health system. Washington: National Academy Press, 2000.



## ***Medical Comics: A Vehicle to Explore Humanism and Reflection in Medicine***

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Zahraa Alqatan, Elizabeth Moore, Destiny Stroman, May Chammaa, Eva Waineo, Diane L. Levine

### **PROBLEM STATEMENT:**

Retention of medical knowledge is understandably the focus of medical schools. Often overlooked is the cultivation of humanism in medicine in which art is a potent tool. Humanism in medicine is outside the bounds of board exams, yet more medical schools are incorporating it in their curricula. We examine the utility of a medical comics session in facilitating student discussion and self-reflection of clinical experiences and aim to explore how student feedback of this pilot session may inform future initiatives.

### **METHODS:**

All 3rd-year medical students were offered an optional 1-hour online session during their Clinical Reasoning Integration Skills Practice course and 12 students elected to attend. The session began with a faculty facilitated PowerPoint discussion about the utility of medical comics in education with some examples. Students then created comics illustrating their expectations before 3rd-year, experiences during 3rd-year, and hopes for 4th-year. The session ended with students discussing their work and completing an optional, anonymous feedback survey.

### **RESULTS:**

All students (100%, n=12) completed the survey, which consisted of 4 questions rated on a 5-point Likert scale. Most students were not familiar with medical comics (2.17/5; 1 is very unfamiliar, 5 is very familiar). Most students thought drawing a personal comic was valuable in reflecting on their clerkship experience (4/5; 1 is very valueless, 5 is very valuable), and in planning for success during 4th-year (3.8/5). Students rated the session well overall (4.42/5; 1 is poor, 5 is excellent).

### **CONCLUSION:**

This session introduced medical comics to medical students and showcased their value in introspection and formulating plans for success. The use of medical comics has great potential in allowing the expression of complex experiences by evoking humanism in medicine and deserves further study with a larger group. Future projects can focus on launching a school comic open to medical students and faculty submissions.





## ***Harm Reduction: An Educational Resource For The Detroit Community***

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Kristina Barrientos, Kristen Hawes, MS, Warren Elmer, Tabitha Moses, MS, Eva Waineo, M.D., Mark K. Greenwald, Ph.D.

### **PROBLEM STATEMENT:**

Harm reduction (HR) is a set of evidence-based strategies aimed at reducing the consequences associated with drug use. Overdose (OD) rates have decreased in communities with HR education and naloxone distribution programs (Walley, 2013). Detroit vs. Addiction (DvA) is an organization at WSUSOM which collaborates with local organizations that aim to reduce negative outcomes for individuals with substance use disorders (SUDs). DvA created an educational pamphlet about HR with these objectives in mind.

### **METHODS:**

We chose a pamphlet as an educational tool because they are inexpensive and can be widely distributed. Medical jargon was excluded to address individuals of varying health literacy. We derived this methodology from a previous DvA pamphlet that provided resources for outpatient treatment clinics. Information in this pamphlet was obtained from the National Harm Reduction Coalition. Components include HR strategies modified in the setting of COVID-19, signs of/how to respond to an OD, syringe exchange programs, supervised consumption services, naloxone distribution, and mental health support hotlines. It has been distributed at health fairs and we plan to incorporate it in clinical settings.

### **RESULTS:**

This HR resource can be distributed by healthcare providers to patients at any point of care to assist individuals with SUDs at all stages of recovery, including emergency departments and inpatient settings that have patients with SUD-related complications. We hope that the information provided in this pamphlet helps reduce SUD-associated adverse events. Survey of its impact and frequency of use are areas for future study.

### **CONCLUSION:**

The US is experiencing a rise in OD deaths, with many occurring in communities that lack HR services (Logan, 2010). The goal of DvA is to disseminate information on HR, educate the Detroit community on how to respond to ODs, and provide national/local resources. This initiative demonstrates the community impact possible by student organizations.



## **Improving Hemoglobin A1c Guideline Adherence in a Student Run Free Clinic**

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Sabrina Bernardo, Harry Ramos, Serina Beydoun M.D., Robert Sherwin M.D.

### **PROBLEM STATEMENT:**

Cass Clinic is a student-run free clinic in Detroit, MI that offers care to patients who are un- or underinsured. Cass Clinic offers hemoglobin A1c (HbA1c) testing to their diabetic patient population. HbA1c testing is a vital step for effective diabetes management, however, Cass Clinic reports low adherence to testing guidelines. Lack or delay in HbA1c testing can lead to subsequent delay in treatment modification and poor patient outcomes.

### **METHODS:**

Medical student volunteers at Cass Clinic were provided an information sheet with HbA1c testing guidelines by the American Diabetes Association. These guidelines include assessing HbA1c at least every 3 months in diabetic patients whose therapy has recently changed and/or who are not meeting glycemic goals, in addition to assessing HbA1c at least every 6 months in diabetic patients who are meeting treatment goals and who have stable glycemic control. Ordering of a HbA1c test was recorded during each clinic day by students. 3 months following the intervention, a retrospective chart review and data analysis were conducted to determine if the implementation was successful in improving HbA1c guideline adherence.

### **RESULTS:**

Prior to the intervention (N=24), 66% of type II diabetes patients at Cass Clinic had a HbA1c test within 3 months, 7% had a HbA1c test > 6 months ago, and 29% never had a HbA1c test. After intervention implementation (N=13), 77% of type II diabetes patients at Cass Clinic had a HbA1c test within 3 months, 8% had a HbA1c test 3-6 months ago, 8% had a HbA1c test > 6 months ago, and only 8% never had a HbA1c test.

### **CONCLUSION:**

Quality improvement initiatives can improve laboratory testing guideline adherence at Cass Clinic. Initiatives can be adapted to other laboratory tests offered at Cass Clinic including Total Cholesterol, LDL Cholesterol, and HDL Cholesterol testing.





## **White Coat Pocket Cards: A Unique Approach to Growth Mindset and Professional Identity Formation of Medical Students**

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Salar Brikho, Colin Hartgerink, Katherine Keith, Hannah Milad, Farzad Razi, Susan Wager

### **PROBLEM STATEMENT:**

Developing a professional identity is an important element of medical education. Beyond acting in a professional manner, identity formation encompasses a psychological transformation into someone who thinks, acts, and feels like a physician. Wayne State University School of Medicine's curriculum is influenced by Carol Dweck's theory of a growth mindset, which states that human capacities are not fixed but rather fluid and dependent upon outlook. With a growth mindset, failure and conflict present as opportunities for personal and professional development.

### **METHODS:**

To foster professional identity development, an educational initiative was created around conflict resolution between students and their peers, administrators, and/or patients. Fifty groups of six students each workshopped "white coat pocket cards;" each card - sized to fit inside "white coat" pockets - listed a specific conflict and provided a resolution which promotes collaboration and cultivates professional relationships. Students reflected on the importance of situational awareness, conflict resolution, and a growth mindset in professional identity.

### **RESULTS:**

The aim of this project was to enable 298 students to contribute to their professional identity by exploring conflict resolution in the medical field with administrators, peers, and patients. As a follow-up, data was collected from students to informally gauge project success. 20 students (64.52%) agree that the project "allowed me to consider situations I have never thought of before;" students also reported learning most from reflection of conflicts related to administrators (14 students).

### **CONCLUSION:**

Medical education, and Wayne State University School of Medicine specifically, continues to evolve, enabling students to cultivate growth mindsets (e.g. "challenges help me grow") over fixed mindsets. This project focused on conflict resolution with peers, administrators, and faculty and emphasized a growth mindset. Post-assignment data suggests that this project positively contributed to medical training and implored second-year medical students to reflect on the development of their own professional identities.



## **Evaluating the Need for an Inclusive Full Body Skin Exam in the Dermatology Clinical Skills Curriculum**

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Belinda Joseph Benher, Meena Moossavi, Kristine Shango

### **PROBLEM STATEMENT:**

Although melanoma occurs at a higher rate in non-Hispanic whites, patients with skin of color (SOC) have lower survival rates. Additionally, primary care physicians have more frequent opportunities to detect skin cancer in high risk patients compared to other physicians, therefore their ability to detect skin cancer at an earlier stage can have significant public health outcomes. Furthermore, limited time is designated to dermatology during medical school; thus, developing curricular materials that would have the most significant impact on medical students' practice of the full body skin exam (FBSE) is important. Therefore, the purpose of this study is to highlight the need for inclusivity in the Dermatology clinical skills curriculum to improve outcomes for patients with SOC.

### **METHODS:**

Second-year medical students taking the MSK/Derm/PNS course will be given an optional "Full Body Skin Exam" module. The module contains teaching material for history-taking, the FBSE, and various skin cancers with images depicting the cancer in different skin phototypes. A pre-survey and post-survey will be administered to evaluate confidence before and after the module. Confidence will be measured on a Likert scale of 1-5, 1 being least confident and 5 being most confident. Data collected will be anonymous.

### **RESULTS:**

Results are pending. Improvement in confidence among the four parameters in the pre-survey and post-survey will be measured and analyzed. The four parameters include confidence level in asking appropriate questions during history taking in a Dermatology encounter, performing the FBSE on a Caucasian patient, performing the FBSE on a patient of color, and approaching skin cancers in a variety of skin tones.

### **CONCLUSION:**

This study aims to explore an educational intervention to address the concerns of the poor prognosis of skin cancer in SOC by exploring the need for incorporating the FBSE, inclusive to SOC, into the Dermatology clinical skills curriculum.



## **| Development of a Free Clinic Research Consortium: Reaching the Underserved**

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Meredith Hengy, BS, Peter Dimitrion, MS, Narmeen Rehman, BS, Sara Saymuah, MS, Steven Daveluy, M.D.

### **PROBLEM STATEMENT:**

In the United States, approximately 29 million (9.1%) Americans were uninsured as of 2017. The cause is multifactorial, partly due to incomplete participation in the expansion of Medicaid and patient ineligibility for Medicaid leading to a health gap. Free clinics help close this gap by providing care to many of these patients. However, financial support for free clinics has been declining, reported in 2016 by the National Association of Free and Charitable Clinics to be as much as 20%. Declining funding highlights the acute need for targeted care approaches. In addition, free clinic populations remain poorly studied. Additional research is needed to determine the specific and unique health concerns of the Detroit free clinic population, as is needed in other locations. Often there exist numerous free clinics in one region, and data from a single clinic does not always provide a true representation of the entire population due to travel boundaries, patient population size, and organizational differences in terms of structure and scope. The Detroit Free Clinic Research Consortium aims to overcome this issue by using a de-identified data repository to conduct more comprehensive research and identify the unique patient health concerns and needs.

### **METHODS:**

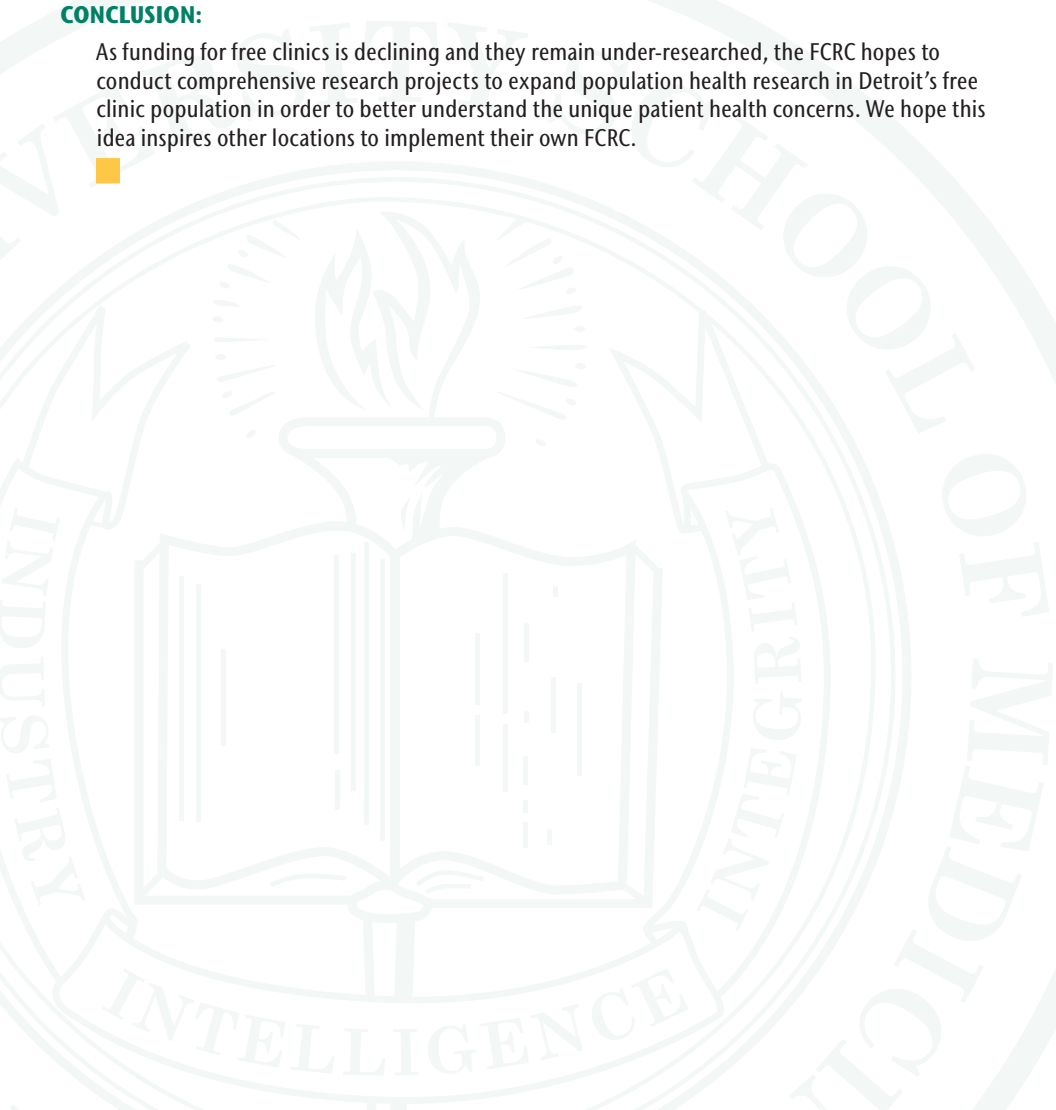
FCRC will focus on five student-run free clinics in Detroit, Michigan. It was determined that a data repository can be created through the IRB, and all subsequent research studies will require individual IRB support. The first step in developing the FCRC has already been completed with the creation of organizational bylaws, in addition to receiving local free clinic and physician mentor support. The second step involves recruitment to the organization and the creation of an executive board consisting of 3 research co-chairs, 5 research coordinators, 3 database coordinators, and 4 faculty supervisors. Once the organization has been established, we plan to conduct an initial large-scale research study seeking to identify the top 10 health concerns of the Detroit free clinic population. We will use this information to inform local free clinics and guide patient care. Further research will be conducted to answer more specific questions, particularly related to specialty specific research and investigating the variations in organization structure and function. Bi-weekly organization meetings will be planned to discuss current research projects, generate new research ideas, and discuss results. Meaningful research conducted by the FCRC will be presented at conferences and used to help guide health policy decisions.

**RESULTS:**

As the goal of the FCRC will be to perform highly impactful research studies that guide changes in care for free-clinic populations, we will primarily determine the success of our organization through the completion of research studies and our measure for quality will be determined by journal/conference feedback. We will assess changes in the local free clinics based on our findings.

**CONCLUSION:**

As funding for free clinics is declining and they remain under-researched, the FCRC hopes to conduct comprehensive research projects to expand population health research in Detroit's free clinic population in order to better understand the unique patient health concerns. We hope this idea inspires other locations to implement their own FCRC.





## ***The Application of Exercise Prescription Education in Medical Training***

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Thomas Sprys-Tellner, Asim Kagzi M.D.

### **PROBLEM STATEMENT:**

Physical inactivity is a hallmark of chronic disease and a contributor to many acute conditions. Awareness of the role of physical activity (PA) in disease prevention and management has been increasing, but there is still a significant gap in the education of exercise prescription (EP) amongst physicians. Most physicians report this lack of education as the major contributor to their inability to properly prescribe exercise to their patients. The aim of this research was to further explore the need for EP education and determine the effectiveness of an EP curriculum.

### **METHODS:**

A one-hour curriculum was developed based on the American College of Sports Medicine principles of EP. Qualtrics surveys will be administered to assess perceived EP education level and confidence levels for prescribing exercise to patients among groups of Wayne State SoM medical students and residents. Virtual curriculum sessions will be held over Zoom and Qualtrics surveys will be re-administered following the sessions.

### **RESULTS:**

Survey results will be tracked to assess the effectiveness of the EP curriculum on perceived educational level and confidence in prescribing exercise to patients.

### **CONCLUSION:**

While increased PA awareness has been improving the activity level of patients and promoting better health outcomes, it falls short of giving patients actionable steps they can take to increase their activity level and improve their health. By learning the tenets of exercise prescription and how to apply them, physicians can provide better concrete PA advice and actionable programs to their patients. In as little as one hour, education levels and confidence in the ability to prescribe exercise can be significantly improved. This small amount of time could provide large benefits to patients and as medical education continues to develop, EP should serve as a vital component if significant improvements in patient health are desired.



## **| Optimizing Clinical Skills Curriculum Throughout the COVID-19 Pandemic**

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Joshua Collins, M.D.; Erin Miller, M.D.; Sonal C. Patel, MA; Christopher Guyer, M.D.

### **PROBLEM STATEMENT:**

Wayne State University School of Medicine is the largest single-campus medical school in the country with approximately 290 students enrolled per class. After working through a transformative curriculum change process, including redefining our pre-clerkship clinical curriculum, we met the challenge of interrupted and uncertain processes related to clinical skills course delivery as informed by the COVID pandemic. Dictated by local, state and national guidelines that have greatly limited face-to-face interaction, our team has been able to transition to a hybrid model of simulation-based medical education. Built on the foundation of competence-based medical education and near peer educators in addition to traditional simulated patient activities, our unique approach to assessment in clinical skills courses allowed for a fluid response to the ever-changing landscape of medical school curriculum delivery over the past year, flowing between fully in-person, fully remote and a hybrid of remote and in-person activities.

### **METHODS:**

Individual and cohort student performance data metrics collected from M1 and M2 pre-clerkship clinical skills courses. Student reported data collected from the internally administered clinical readiness survey and compared to two prior academic years.

### **RESULTS:**

Individual and cohort student performance maintained throughout pre-clerkship clinical skills courses and also through core clerkship rotations. Student reported data from the internally administered clinical readiness survey demonstrated largely stable self assessment of clinical readiness in nearly all core areas except “document the history and physical exam findings” and “verbally present your findings to the resident or your preceptor”.

### **CONCLUSION:**

While the content and delivery methods of our simulation-based curriculum have varied since March 2020, student performance outcomes have remained largely unchanged. Building our curriculum on a competency-based education model allowed for a fluid response to the ever-changing requirements dictated by national, state and local guidelines. Next steps in this work include monitoring student performance metrics in the pre-clerkship and clerkship phases and internal program evaluation for continuous iterative improvement and evolution.



## ***Institute of Healthcare Improvement Innovations Hub: A Quality Improvement & Patient Safety Consulting Charter for Wayne State School of Medicine Student-Run Free Clinics***

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Cedric Mutebi, Priyanka Kale, Diane Levine

### **PROBLEM STATEMENT:**

The Institute for Healthcare Improvement (IHI) student chapter at Wayne State University School of Medicine (WSUSOM) has been providing Quality Improvement (QI) and Patient Safety (PS) education for medical students since 2013. IHI has designed an innovative space to utilize the QI principles taught during the preclinical years, providing students' opportunities to have real-world experiences. The IHI Student Clinic Innovations Hub provides a collaborative space for developing and implementing QI/PS projects within WSUSOM student-run free-clinics by leveraging the student-skills within IHI to enhance quality of care delivered in student-run free-clinics.

### **METHODS:**

The Innovations Hub will serve as a consulting group to WSUSOM's student-run free-clinics: working with them to develop and implement QI/PS projects in their clinics. "Innovation Leads" will complete relevant IHI certificate training and will have foundational knowledge in QI/PS. A Faculty and student Council made up from IHI previous board will serve as resources for the innovation leads. Utilizing our student-clinic innovation model adapted from validated IHI frameworks, the Innovation Leads will work with each partnered student clinic to identify the opportunities for intervention and will guide their projects through the Model for Improvement (PDSA cycle etc).

### **RESULTS:**

Survey assessments of trainee's QI knowledge and confidence in implementing QI/PS measures will be administered before and after the initiation of the clinic innovation. Successful development, implementation, and analysis of the intervention will be assessed against the IHI QI frameworks by a faculty mentor for efficacy and sustainability.

### **CONCLUSION:**

Our student-clinic innovation model fosters a space for medical students to deliver QI/PS projects to vulnerable patients in their community. Further, this innovation advances and diversifies IHI's ability to disseminate education on QI/PS at WSUSOM.





## **Upgrade standardized patients' feedback skills to support pre-clerkship medical students**

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Jenjen Liu-Toth, Ph.D.

### **PROBLEM STATEMENT:**

The purpose of feedback in pre-clerkship courses is to inform medical students of their learning progress and help them sufficiently prepare for their third-year clerkship. In the past, standardized patient (SP) training emphasized adequately portraying patients and completing checklists. When the pre-clerkship courses switched to competency-based assessments in 2019, grading students' performances and providing specific feedback became essential parts of standardized patient training. The most recent medical students' surveys and course evaluations reveal a need to improve standardized patients' feedback consistency and quality.

### **METHODS:**

The updated feedback training started in June 2021. At the beginning of the training series, the trainer walks SPs through the importance of feedback, constructive feedback principles, and effective feedback processes. Next, the trainer and SPs watch previous encounter recordings to practice meaningful feedback applying the situation, behavior, and impact (SBI) format. Finally, standardized patients learn to help medical students set up their goals and reflect on their performance. The trainer assesses standardized patients' feedback skills during the training, whereas the educator monitors their skills through LearningSpace recordings, Qualtrics survey, and Canvas comments. To determine the training effectiveness, we will analyze four types of data, including

- a. a comparison between pre-training and post-training surveys,
- b. individual medical students' interviews,
- c. monthly students' dispute reports, and
- d. LearningSpace encounter recordings. (The data will be collected and analyzed at the end of Nov 2021.)

### **RESULTS:**

Anticipated results: The satisfaction surveys and interviews indicate that the students' satisfaction rate in standardized patient feedback increases.

### **CONCLUSION:**

Based on the anticipated results: Medical students are satisfied with the SIB format feedback and believe it helps them improve their interview and physical examination skills. Students' surveys also show that the consistency among SP feedback has improved.





## **Implementation of a Multi-segment, Mixed Synchronous-Asynchronous Patient Safety and Quality Improvement Subcurriculum for First Year Medical Students to Improve Clinical Preparedness**

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** David Bai, Youstina Abdallah, Alison Rousseau, Ahmed Elattma, Priyanka Kale, Harry Ramos, Matthew Bautista, Paul Walker, Diane Levine

### **PROBLEM STATEMENT:**

Patient safety (PS) and quality improvement (QI) are vital healthcare concepts for every physician. Studies in the last decade have endorsed inclusion of PS and QI education into undergraduate medical education to better prepare new residents. Here, a three-part multi-segment, mixed synchronous-asynchronous PS and QI subcurriculum integrated with anatomical dissections is currently being implemented for a first-year undergraduate cohort at the Wayne State University School of Medicine.

### **METHODS:**

Students were first introduced to PS principles through a presentation that also introduced subsequent anatomical dissection timeout and handoff activities designed to emulate corresponding clinical procedures. Subsequently, students will be primed for an upcoming case-based learning (CBL) activity with asynchronous, online QI modules from Institute for Healthcare Improvement Open School. To conclude, students will undertake an original CBL activity that guides development of a QI plan for common primary care issues. A 16-question Likert pre-survey was distributed prior to the first session, and a post-survey will be distributed after the final session. Differences in pre-post surveys will be used to assess effectiveness of this new curriculum.

### **RESULTS:**

Pre-survey response rate was 85.6% (261/305). Before the curriculum, 57.7% and 84.7% of respondents felt familiar with the definitions of QI and PS, respectively, and 60.2% felt that they understood how QI principles might be applied to improve PS. However, only 31.3% of respondents felt confident in developing a QI plan to address a PS issue, and only 16.1% reported experience working with QI. Finally, only 19.8% and 20.7% of respondents felt confident in leading a timeout or handoff, respectively.

### **CONCLUSION:**

Students are anticipated to gain enhanced knowledge and confidence in basic PS and QI skills, as measured by pre-post surveys, after completing this subcurriculum.



## ***Enhancing the Educational Impact of an Opioid and Cultural Literacy Seminar***

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Shabber Syed, Ala Addin Sid Ahmed, Abdulmohsen Ghuloum, Sahar Galal, Noor Suleiman, Aya Dudar, Anirudh Chitale, Nedda Elewa

### **PROBLEM STATEMENT:**

Dearborn, Michigan is home to a growing population of Muslims facing an opioid crisis amidst deeply rooted stigma around opioid use. To spread awareness, the Islamic Medical Student Association (IMSA) at WSUSOM created a seminar aimed at educating students on the opioid epidemic and associated cultural nuances. The first seminar attracted around 60 students, however this event could have a larger impact and audience. We did not measure how effective our advertising campaign was previously, but predict that augmenting our methods will increase student reach. We aim to increase the audience to 80 WSUSOM students and analyze the seminar using QI principles.

### **METHODS:**

Advertising methods used for the last seminar included class-wide emails, sharing to WSUSOM student organizations through WhatsApp and Facebook, and incentivizing the session by offering service learning hours to fulfill curricular outreach requirements. We plan to continue these methods while adding this year's seminar to WSUSOM's Diversity Week programming. We hope to increase participation amongst students by scheduling our event during this period of focused cultural awareness.

### **RESULTS:**

We will analyze aspects of the seminar using QI measures. The main outcome will be measured using survey submissions to track attendance changes across the two events. The number of pre-survey submissions will be used to gauge the number of individuals reached through the advertisement efforts made. The number of post-survey submissions will be used as a measure of attendance. The change in number of both surveys will inform us of the efficacy of the advertising efforts.

### **CONCLUSION:**

We predict scheduling the seminar during WSUSOM's Diversity Week will achieve our goal of having 80 WSUSOM students attend. In the future, we hope to continue augmenting the educational impact of this seminar by reflecting on previous iterations and implementing new changes. Our long term goal is to include this seminar in WSUSOM's official curriculum.



## **| Student Led Consulting Group Improves Patient Quality Care in a Free Clinic at Wayne State University School of Medicine**

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Harry Ramos, Sabrina Bernardo, Kanye Gardner, Robert Sherwin, Diane Levine

### **PROBLEM STATEMENT:**

The aim of this project is to pilot a student-led consulting group, in collaboration with a free clinic at Wayne State University School of Medicine (WSUSOM), in spearheading a healthcare improvement project to increase adherence rate of hemoglobin A1c (HbA1c) point-of-care (POC) tests.

### **METHODS:**

Cass Clinic, a student-run free clinic, collaborated with Institute of Healthcare Improvement Chapter at WSUSOM, to increase adherence rate of HbA1c POC tests to its diabetic patient population. Using the Define, Measure, Analyze, Improve, and Control (DMAIC) method, a project charter and key stakeholders were formulated and identified, respectively. The following key project events, along with timeline, were identified and delivered: current state analysis, gap analysis, workflow strategy workshop, future state validation, and testing. For implementation, materials and new workflow were disseminated to the clinic staff. A small placard detailing the HbA1c guidelines set forth by the American Diabetic Association (ADA) was placed in each desktop. To track adherence with new workflow and to evaluate success of project, retrospective chart review was performed tabulating the numbers of HbA1c POC tests resulted. A PowerPoint slide deck was the final deliverable establishing new workflow, educational materials, and future strategy.

### **RESULTS:**

The project went live on 05/27/2021. Desktops were re-designed to add the ADA's HbA1c guidelines allowing 'face-up' visibility to follow protocol by clinic staff. Post implementation, a standardized workflow was established to order HbA1c POC tests. We demonstrated adherence to new workflow. Most noticeably, the percentage of diabetic patients who were not able to receive their duly HbA1c POC tests decreased from 29% to 8%.

### **CONCLUSION:**

Our data suggests that the DMAIC method and the key project events/timeline streamlined the execution of the project engagement. This demonstrated the effectiveness of a student-led consulting group in leveraging a market-tested project management and consulting tools to launch similar quality improvement projects to scale.



## ***Fostering wellness and community: Medical student attitudes about virtual journal discussions***

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Zoya Gurm MS2, Sara Koussa MS2, Zaina Khoury MS2, Diane Levine M.D., Jennifer Mendez Ph.D.

### **PROBLEM STATEMENT:**

With medical school moving to an online format, students have faced challenges in meeting their peers and fostering meaningful relationships. Accordingly, an innovative model for promoting mental wellness through community building in the wake of the pandemic is necessary. To respond to this gap in medical education, the Wayne State University School of Medicine (WSUSOM) chapter of the American Medical Women's Association (AMWA) held monthly Journal Article Discussions with two goals: (1) to help facilitate supplemental learning through conversations about gender-related issues in medicine and (2) to create a sense of community and promote mental health through peer-to-peer discussion groups. Because medical school administrations must continuously adapt to the pandemic and reimagine the ways online platforms can be used in medical education, research on alternative, informal methods of connecting is critical for community building in medical schools as we move forward.

### **METHODS:**

The principal investigator and co-investigators of this project emailed eligible students-- those who have attended at least one journal article discussion-- a Qualtrics survey link to gauge student perceptions about virtual and informal journal article discussions. Eligible students were emailed twice within a 45-day data collection period. Results were collected without any identifying information to promote transparency and honesty in submission of responses.

### **RESULTS:**

While our results are still being analyzed under IRB certification (Protocol ID: IRB-21-06-3658), our preliminary findings are promising in demonstrating that informal and accessible community-building events such as our journal article discussions positively impact medical students' sense of wellbeing and community in a virtual educational setting.

### **CONCLUSION:**

We predict our study results will suggest that informal and accessible journal article discussions have a positive impact on sense of community for students studying in a virtual setting.



## ***The Impact of The ARIE Program on Medical Student Perceptions On Children with Disabilities.***

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Jessica Tan, Dana LaBuda, Kiernan Bloye, Cameron Rubino, Ruchi Mangal, Jennifer Mendez, Ph.D.

### **PROBLEM STATEMENT:**

Studies have reported that medical students hold negative attitudes toward patients with disabilities and are uncomfortable interacting with them [1]. These attitudes can translate into poor health outcomes for patients. Children with developmental disabilities have unique needs and their families report dissatisfaction with their primary physicians stemming from poor communication and lack of understanding of their child's condition and its impact on family life [2]. Early interactions with this population can improve attitudes and promote better communication and understanding between both parties [1]. When service learning is integrated into medical curriculum, it has been shown to enhance medical education through improved communication, understanding of public determinants of health and policy, and social responsibility [3]. Many medical programs do not have a specific curriculum that addresses caring for children with developmental disabilities. Current literature suggests that early frequent encounters with individuals with disabilities can improve medical student attitudes and comfort level with this patient population [4]. The ARIE program is a WSUSOM student-led program that provides medical students the unique opportunity to interact with a child with a developmental disability and their family over the course of 3 months. We hypothesize that preclinical medical students do not feel adequately prepared to interact with children with developmental disabilities and their families. Following completion of the ARIE program, students will have more favorable and empathetic attitudes toward children with disabilities and their families.

### **METHODS:**

48 WSUSOM first- and second- year medical students voluntarily participated in the study. Two to three medical students are assigned to one family. The families and students engage in two phone calls, two video conference sessions, and an end-of-program celebration, which allows several opportunities for medical students, children, and their families to build meaningful relationships. Through these interactions, students learn about developmental disabilities, adaptive lifestyles, and resultant obstacles faced in healthcare. Students are responsible for providing community resources to families in need. Students complete an identical 30-item Qualtrics pre- and post- program survey. The survey covers topics related to perceptions, comfort level of interaction, and experience with people with disabilities. The survey will be scored according to Synmons et al [4], the original authors of the survey from whom we have gotten written permission to use. We plan to use bivariate analyses with paired t-test to compare pre- and post-program survey performance. A Chi-Square test will be used to analyze a portion of the pre-program and post-program data with a P value

**RESULTS:**

Work in progress. Data collection will be complete by late-November 2021.

**CONCLUSION:**

The ARIE Program is a service-learning program that aims to provide a positive point of contact between families and the healthcare community. The ARIE Program is an important addition to medical education by addressing medical student perceptions of students with developmental disabilities and their families. In addition, program outcomes aim to improve medical student empathy, communication, and disability awareness. [1] Tervo, R. C., Azuma, S., Palmer, G., & Redinius, P. (2002). Medical students' attitudes toward persons with disability: A comparative study. *Archives of Physical Medicine and Rehabilitation*, 83 (11), 1537–1542. [2] Liptak, G. S., Orlando, M., Yingling, J. T., Theurer-Kaufman, K. L., Malay, D. P., Tompkins, L. A., & Flynn, J. R. (2006). Satisfaction with primary health care received by families of children with developmental disabilities. *Journal of pediatric health care : official publication of National Association of Pediatric Nurse Associates & Practitioners*, 20(4), 245–252. <https://doi.org/10.1016/j.pedhc.2005.12.008> [3] Stewart, T., Wubben, Z.C. (2015). A Systematic Review of Service Learning in Medical Education: 1998–2012, *Teaching and Learning in Medicine*, 27:2, 115-122, DOI: 10.1080/10401334.2015.1011647 [4] Symons, A. B., Fish, R., McGuigan, D., Fox, J., & Akl, E. A. (2012). Development of an instrument to measure medical students' attitudes toward people with disabilities. *Intellectual and Developmental Disabilities*, 50(3), 251–260. <https://doi.org/10.1352/1934-9556-50.3.251>





## **I The “Non-Traditional” Student is now “Traditional”: “Simpatico,” the Circuitous Route to Medical School, and Why Both Matter**

**TYPE:** Poster

**CATEGORY:** Innovation

**AUTHORS:** Hannah Milad

### **PROBLEM STATEMENT:**

Undoubtedly, diversity – in both patient population and medical school student body – is one of Wayne’s strengths. In the Class of 2025 alone, 305 students, including 38 first-generation college graduates, represent 29 birth countries! However, starting medical school, there was a palpable sting experienced by those within a uniquely well-represented yet under-supported (misunderstood, even) population: the non-traditional medical students.

### **METHODS:**

Through the mentorship of Dr. Emily Roben (Feinberg School of Medicine), Dr. Fatin Sahhar (DMC), and Dr. Senthil Rajasekaran, “Simpatico” was launched in Spring 2021. By creating a community for non-traditional medical students to share in their personal and professional identities, the new organization “Simpatico” provides a supportive space to celebrate success and find creative solutions to current challenges faced by “career-changers.” We aim to increase student and faculty awareness to the diverse backgrounds and needs of non-traditional medical students. To date, methods include: collaboration with the Mothers-in-Medicine interest group, informal gatherings, and speaker series from physicians who themselves were “non-traditional” medical students. Future initiatives include: advocacy work, paired mentorship, “lightning talks” (short, 5-10 minute talks on any topic), hosting non-traditional student panels for undergraduate students, and maintaining a list of clinicians in the area who are willing to allow a non-traditional medical student to shadow them. One unique aspect of this organization is that all members are considered equal stakeholders and rotate planning future events, in order to avoid hierarchy and to improve organization “buy-in.”

### **RESULTS:**

Simpatico continues to search for unique ways in which to collaboratively apply non-traditional students’ experiences to improving the quality of education at Wayne State University School of Medicine. This organization is necessary: non-traditional students face distinct challenges including balancing unique priorities (e.g. marriage and/or children) and mourning the loss of pre-medical school careers (and salaries!). In a 2005 study published by “Medical Education,” feelings of marginalization and isolation were reported by a subset of non-traditional students who come from an impoverished family background; interestingly, these students suggested that their experience with exclusion may serve as a strength once in clinical practice. This organization looks forward to future data collection around the attitudes and perceptions of non-traditional medical students as well as academic performance.

**CONCLUSION:**

Though this submission itself is somewhat non-traditional, the message is important. Wayne State University School of Medicine provided the resources and support to introduce a new, non-traditional student interest group. Future data collection and collaborative initiatives will provide evidence backing the importance of supporting this unique population of students. Overall, our shared goal of improving medical education requires embracing diversity in all its forms; lest we forget the non-traditional medical students!





# WAYNE STATE

## School of Medicine

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