these topics. Quantitative (Table 1) and qualitative (Table 2) feedback was solicited through a survey with participating residents and faculty. The most useful sessions engaged residents in interactive discussions, leveraging their experiences to highlight how discrimination affects the work environment. Skill-building sessions facilitating practice of verbal interventions to address problematic interactions will be incorporated into future iterations of this curriculum.

Impact: Resident-led initiatives about diversity and inclusion educate not only peers but also faculty at their institutions. All participants reported increased understanding (Table 1), while many requested that these discussions continue (Table 2). Further work is needed to identify strategies to support residents, particularly those with underrepresented backgrounds, who pursue health equity work as clinicians and educators.

Table 1. Perception of Utility of Health Equity Retreat (n=29).

Reported increased understanding of residents' experiences of diversity in the workplace	100%
Found "Sharing Stories, Creating Definitions" very or extremely useful	94%
Found "Microaggressions Workshop" very or extremely useful	94%
Found "Verbal De-escalation of Agitated Patients" very or extremely useful	79%
Requested further training in:	
>Dealing with discrimination from patients	83%
>Best practices in hallway care	83%
>Implicit bias	59%
>Trans health	55%

Table 2. Dominant Themes from Open-Ended Survey Response (n=29).

Theme	Sample Quotes
Perceived Value	"Thanks for putting together an important training even though it can be uncomfortable at times." "So, so worthwhile." "Thank you for conducting the most thoughtful and effective professional development event that I have ever attended."
Perceptions of Format	"I liked the layout, plenty of time for audience participation and small group work." "I wish we could have had a report back for lessons learned and key discussions from the different groups."
Need for Continued Discussion	"I wonder how we keep these conversations going."
Involvement of Other Key Stakeholders	"I wish more faculty members had been there." "Next time we should have nursing come too." "The big unaddressed issue is that a lot of the tension comes from nursing…[nurses] are the front line when patients get aggressive."

36 Scholarly Work Jumpstart

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Introduction/Background: The ACGME requires that residents participate in scholarly activity during training. Challenges to involvement in scholarly work include lack of experience or comfort with scholarship, and lack of early mentorship. Delayed exposure and participation can lead to less meaningful projects than desired.

Educational Objectives:

- Provide a scaffolding to assist in developing a topic of interest into meaningful scholarly work.
- Facilitate scholarship early in residency, in a supportive environment, with a structured mechanism to enhance the project.
- Facilitate networking to assist with moving projects forward.
- Develop a curriculum to facilitate early resident involvement in meaningful scholarly work.

Curricular Design: The Scholarly Work Jumpstart (SWJ) Program, inspired by the SAEM Lion's Den event, was adapted to aid residents in developing, presenting and refining scholarly work. In the first phase, each PGY1 develops their topic of interest by answering five questions that frame the topic as a problem to be solved, then discuss it at their June semi-annual review. (Table 1) During the second phase, the PGY2 residents present their five minute jumpstart proposal to students, residents, and EM faculty, followed by five minutes of questions. (Table 2) Presentations conclude with offers from the audience to help refine the project, collaborate, or help with networking.

Impact/Effectiveness: Two classes have completed the SWJ. The structured tool was used effectively by PGY1s. The diverse audience provided dynamic discussion. Providing a deadline enhanced early involvement in scholarly work, and the templates increased the substantiveness of resident scholarly projects. Resident and faculty consensus is that this format is meeting the educational objectives. Several SWJ project abstracts and manuscripts have been submitted for peer review. While it is too early to say if there has been a significant increase in overall scholarly productivity, the SWJ provides a timeline and format to engage in meaningful work.

Table 1. Scholarly Work Jumpstart Application.

1) Project Title (make it catchy, if you can)
2) What's your question?
3) What is the unmet need that your project will address (BACKGROUND/SIGNIFICANCE)?
4) What's your vision for answering the question? How are you going to solve this unmet need (RESEARCH PLAN/METHODS)? If you have already started to work on this project, please share with us what you have done.
5) What is your metric of success (MEASURES/OUTCOMES)?
6) What personal resources do you bring to this project?

Table 2. Scholarly Work Jumpstart Presentation Framework.

-Convince us that your topic is worthwhile, your approach is good, and you are worth mentoring or collaborating with. Have some fun with your presentation (or keep it serious...your choice)!
-5 areas to cover (1-2 slides for each)

1) Title

2) Background
3) Methods
4) Outcomes
5) Your qualifications

-You have 5 minutes maximum to present your idea. You will be timed, and cut off, if necessary.
-You will have 5 minutes of commentary and questions from the panelists and the audience, with the goal of finding mentorship in this process itself. What you do with the offer is up to you! You can commit to your idea, find someone else whose project you like better to work with, opt in with someone who is looking for help on a pre-existing project, or scrap your idea in favor of a new one.

37 Sim/QI: A Novel Simulation Based Curriculum for Meaningful Achievement of Resident Patient Safety Milestones

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Introduction/Background: There is a gap between the idea of "work as imagined" and the reality of "work as done" that hinders QI work's impact. Resident physicians are often experts in "work as done." The ACGME requires that residents learn patient safety competencies. Sim-QI is a resident elective that shows a novel way to both teach high yield patient safety skills and to improve local clinical processes.

Learning Objective: The learner will:

1) Use the IHI Quality Improvement (QI) Essentials Toolkit to assess local procedural practice.
2) Incorporate simulation (sim) into the QI process.
3) Identify opportunities for QI and share with leadership.
4) Achieve a high level of expertise on ACGME Milestone 16.

Curricular Design: This two week Sim-QI elective curriculum used the Institute for Healthcare Improvement (IHI) QI Essentials Toolkit in conjunction with in situ sim to improve a local process. Learning activities included: attending hospital safety meetings, participating in a team in-situ sim scenario, and guided asynchronous digital learning. Together, sim faculty and the learner designed a local QI needs assessment process focused on the central venous line (CVL) procedure. The learner implemented a QI needs assessment through an observational, cross-sectional, case series study with mixed methods at one ED. Methods included video-recorded in situ sim procedures, direct observation of clinical procedures, standardized interviews with interprofessional staff directly involved in vascular access. Data were used to create a Failure Modes Effect Analysis (FMEA) and process map. These were shared with clinical leadership. The resident assessed the elective experience using a standardized program assessment, and their work was reviewed for achievement of the Patient Safety milestone.

Impact/Effectiveness: The learner created a CVL process map (Fig.1) and an FMEA table (Fig. 2). The main opportunity identified was the need for a central line cart. This data will also inform curricular development for an upcoming health system wide CVL training initiative. We envision that this novel Sim-QI curricula can be applied broadly to other procedures and practices, and could be used in other EM programs to both improve workflows and build QI competencies.

Figure 1. Process Map

Steps in Process	Failure Mode	Failure Causes	Failure Effect	Likelihood of Occurrence (1-10)	Likelihood of Detection (1-10)	Severity (1-10)	Risk Profile Number (RPN)	Actions to Reduce Occurrence of Failure
Alert nursing staff about procedure	-Nurse unavailable -New nurse unfamiliar with procedure and responsibilities	-Staff shortage -High number of new staff	-Missing materials - inefficient time spent -Missed steps due to lack third party observer	6	8	2	96	-Train new nurses on CVL procedure -Make policy that nursing needs to be present for specific times of procedure (ex. Time out, set-up) - Address low RN staffing
Gather Materials: kit, bundle, ultrasound, sterile probe cover, chloraprep, sterile caps, mayo stand	-Delay in finding materials especially sterile probe covers, caps, kits -Materials not in ED	-ED not well stocked with sterile central line materials -Multiple locations where materials could be found -High staff turnover (residents and nursing)	-Delay in central line placement -Removing materials from trauma slot and emergency ward (unavailable for critical case)	10	5	6	300	-Create bundle/kit combo that has all necessary components other than US and mayo stand and have it readily available in same place in ED -Create central line cart
Wipe down US probe and use US to find target vessel and ID carotid/lung prior to sterile procedure	Not wiping down probe Not tracing vein Not ID proper landmarks	-Forgetting to wipe down or lack or knowledge -Lack of experience or training finding target vessel and ID carotid/lung - Wipes not available	-Risk of infection, (CLABSI) -Carotid cannulation -Pneumothorax (PTX)	7	8	5	280	-Have probe wipes with each US machine -Include in checklist
Prep kit for use: -Draw up lidocaine - Flush all ports and cap - Remove needle and wire caps	-Missing any steps listed -Missing materials -Faulty materials	-Multiple steps to remember -Possibly multiple operators -Lack of experience/training	-Air embolism -Kinked wire during procedure -Need for new kit mid-procedure, possibly introducing higher risk infection	3	5	8	120	-Checklist procedure - study line failures ona systemic level to identify common themes in cases where complication occurs - SIM CVL placement -Supervision by senior resident, attending
Attending in room for needle in to wire out	-Resident not getting attending -Attending unavailable	-Busy ED -Multiple sick patients -Unaware of policy	- improper placement - PTX - CLABSI	5	4	5	100	-Make all staffs aware of policy (email, central policy platforms) -Checklist in time out

Figure 2. Excerpt from Failure Modes Effects Analysis - note multiple steps in process not displayed in this excerpt