WGEA 2021 Call for Mini-Grant Proposals
Advancing the WGEA as a Community of Educational Scholars
Deadline: 11:59 PM PST, September 30, 2021

PURPOSE
The WGEA seeks to promote scholarship in medical education that examines interventions, modalities, and educational content created within the Western region. To that end, funds are available for investigators via a mini-grant program. Investigators can request up to $5,000 to initiate a new study. Repeat applications are encouraged. Please use previous years feedback to revise and resubmit your application.

Priority will be given to those activities that:
- Demonstrate potential for integration across the learner continuum (i.e., UME, GME, CME) or across disciplines
- Multiple WGEA institutions or Interprofessional collaborations
- Potential to improve diversity, equity, inclusion and/or anti-racism within medical education.
- Re-submitted grant applications that utilize committee feedback

ELIGIBILITY
1. The Principal Investigator must be a faculty member at a WGEA member school
2. Applicants may submit only one proposal per cycle and may not be an author on any other proposal currently receiving WGEA and national GEA funding
3. For multi-institutional studies, the principal investigator must be at a WGEA member school.

DUE DATE
September 30, 2021

APPLICATION AND SUBMISSION PROCESS
Application must follow the structure template in Appendix A and is comprised of TWO DOCUMENTS:
1. Grant Proposal
2. Letter(s) of Support

Submit application to WGEA MERSE Section chair, Constance Tucker at tuckeco@ohsu.edu by September 30, 2021.

REVIEW AND NOTIFICATION PROCESS
1. Grantees will be notified by December 2021 and funding decisions will be announced on the WGEA website subsequently.
2. The number of proposals funded will depend on the proposal quality and funding available.
3. Refer to reviewer criteria in Appendix B

FUNDING PROVIDED FOR

1. Administrative/technical support to carry out project (e.g., clerical, computer, data entry).
2. Supplies/expenses (e.g., duplication, mailings, computer software).
3. Communication(s) between participants (e.g., web/phone conference).
4. No faculty salary or overhead costs can be supported by the grant.
5. Conference registration (does not include lodging or transportation) will be reimbursed for WGEA grant recipients to present their findings. This cost does not need to be included in the proposed budget. The WGEA MESRE Chair will work with the grantees on the reimbursement process.

AWARDEE DETAILS

1. A final report must be submitted within 60 days of the project completion date (no longer than 18 months from award date) to the WGEA MESRE Section Chair and include copies of materials developed, dissemination activity and a detailed budget report).
2. Dissemination: all publications, presentations and/or products resulting from this project must acknowledge the WGEA as a sponsor of the work.
3. Project team leader or member(s) must submit a proposal to present the project results at a WGEA Regional Meeting within 3 years of receiving the mini-grant. Please be sure to notify the MESRE Chair when you have submitted your abstract through the regular WGEA call process so he/she can work with the planning committee on getting your presentation on the proceedings.
4. Unused funds shall be returned to the AAMC/WGEA.
5. One year after funding, PI must submit a progress report that include progress to date, obstacles and solutions, dissemination activities, and budget report.

CONTACT

For application questions and inquiries please contact the WGEA MESRE Chair, Constance Tucker at tuckeco@ohsu.edu.

APPENDIX A:
APPLICATION TEMPLATE

DOCUMENT #1: Grant Proposal
(Name your document Proposal2021_YourLastName)

Section 1: Cover page must include:
1. Name of applicant(s) and medical school(s).
2. For multi-institutional applications a representative from each institution.
3. Project title
4. Contact information for Principal Investigator (mailing address, telephone, e-mail)
5. For new investigators*: listing of a local mentor (name, position, e-mail)
6. State whether or not the grant proposal has been revised and resubmitted based on previous years' feedback.
7. Institutional grant/development officer to whom payment will be made (name, title, address, phone, fax and e-mail).

Section 2: Body of the proposal is limited to 5 single-spaced typed pages (with 12- point font) including all tables, figures, appendices and must include:
1. Statement of the problem/need to address: Rationale for the study
2. Specific project aims/objectives
3. Review of pertinent literature: How is the effort novel and interesting? How does it advance scholarship in ways not previously explored?
4. Reference to theoretical framework or learning theory on which research builds
5. Methodology: Is the methodology appropriate in light of the research question? Are they written in a way that could be replicated by others?
6. Anticipated outcomes and impact: How can this effort be used as a model to inform teaching and learning at other academic medical centers?
7. Plan for dissemination of project outcomes regionally and nationally. This should include a statement of your intent to present your work at the annual WGEA regional meeting within 3 years of the award start date.
8. Project timeline (not to exceed 18 months)
9. Budget including itemized costs and justification
*References and Biographical sketches are **excluded** from the 5-page limit.

Section 3: References must follow the AMA Citation style and should be no more than one page.

DOCUMENT #2: Letter(s) of Support
(Name your document LOS2021_YourLastName)

If you are required to submit more than one letter of support, please merge all letters into one document for final submission. Letters are not included in the 5-page proposal limit.

For new investigators (e.g. student, resident, fellow, or junior faculty), letters of support are required from a project mentor and the associate dean for education or equivalent position from the applicant's institution stating their commitment to the project.

For experienced investigators, a letter of support is required from the associate dean for

education or equivalent position from the applicant's institution their commitment to the project.

For multi-institutional studies, a letter of support is required from the associate dean for education or equivalent position from the lead institution.

Document #3: IRB Documentation (if applicable)
If this is a research project involving human subjects, a copy of the application to the host IRB must be included. The study does not need to be approved prior to submitting your grant application, however before payment for the grant can be made, a copy of the letter stating that the project is approved or that approval was not necessary must be submitted to the WGEA Executive Committee.

APPENDIX B:
MINI-GRANT REVIEWER CRITERIA

The review criteria are:
1. Is there a statement of the problem and rationale of the study? (5 points)
2. Summarize pertinent literature and present a compelling case for the submission's novelty and innovation? (5 points)
3. Is there a conceptual framework upon which the research builds? (3 points)
4. Are the research question/objectives clear and does it flow logically from the problem statement? (5 points)
5. Is the methodology appropriate in light of the research question? Are they written in a way that could be replicated by others? (5 points)
6. Is the project timeline realistic? (3 points)
7. Is the budget appropriate and realistic and justified? (5 points)
    a. Ensure that incentives are consistent with your institutions guidelines
8. Is the proposal clearly written? (3 points)
9. Has the research the potential to make an impact or serve as a model for other research initiatives? (3 points)

Bonus criteria:
1. Is this a multi-institutional (WGEA institutions) or interprofessional project? (2 points-bonus)
2. Does the proposal demonstrate potential for integration across learner continuum (i.e., UME, GME, CME) or across disciplines? (2 points)
3. Has this grant proposal been reviewed in previous application cycles and utilized the review committee feedback to improve? (2 points)
4. Does this proposal have the potential to improve diversity, equity, inclusion and/or anti-racism within medical education? (2 points)

Additional review considerations:

*For new investigators:
The PI is self-identified as a new investigator in medical education research and appropriate identification and support of a project mentor.

Each year the Review Panel will include the MESRE section chair, 2-3 current Steering Committee Members, and WGEA external reviewers. Reviewers may not be authors of proposals under consideration during the review cycle. If a potential reviewer has any real or apparent conflict of interest with a specific proposal, then the reviewer should not be involved in the entire review of proposals. If such a person is involved in the review process, then they MUST exclude themselves from the review of the proposal with which they have a conflict of interest. Examples of real conflict of interest are being an employee at the same institution, having an active collaboration with the PI or any Co-PI, as well as formally or currently mentoring or advising the PI or any co-PI.

QUESTIONS?
All inquires and communications should be addressed to the WGEA MESRE Section Chair, Constance Tucker at tuckeco@ohsu.edu.

TIPS for WGEA MESRE Mini-Grant Submission

1. **Before You Write**
   a. Review the Call for Proposals carefully. Then review it again. Determine if your proposed project fits the topics and priorities outlined in the Call for Proposals.
   b. Determine who your mentors are for this project. Consider if you may have/need mentors or collaborators outside of your institution.
      i. You will need letters of support—determine from your mentor and Associate Dean (if needed) if you need to draft a letter for them or if they will draft their own.
   c. Set a timeline. Work backwards from the deadline and set targets for literature search completion, proposal outline, initial proposal draft to mentors, edits back from mentors to review, and final proposal completion. It makes this more feasible and less overwhelming!
   d. Consider what learning theory or theoretical framework upon which you can base your mini-grant proposal.
   e. Do a literature review before writing the proposal to develop and refine your conceptual framework.
   f. Confirm that you completed your institution's requirements for IRB training.
   g. Think broadly about your budget—not just the "tangibles" such as supplies and participant recruitment materials, but also the software or subscriptions to software that you'll need, transcription services, abstract submission fees, etc.
   h. Contact your grants/awards office at least 30 days prior to the deadline to identify the requirements and timeline of the grant proposal submission process.

2. **While You are Writing**
   a. In your rationale, use the "problem/gap/hook" framework—clearly delineate the problem you've identified, what is missing in the literature, and how you are going to fill in that gap. (Lingard L. Joining a conversation: the problem/gap/hook heuristic. Perspect Med Educ. 2015;4(5):252-253. doi:10.1007/s40037-015-0211-y)
   b. Clearly highlight your target learners for your project (e.g., what type and level of students, if interprofessional explain what professions)
   c. Describe the educational theory up front; refer back to it and how it's incorporated into your design and data analysis plan. Make it clear to the reviewer that you are grounding your project in a theoretical construct that is setting up your conceptual framework.
   d. Text space is at a premium for these proposals. Can you transfer your ideas out of plain text and into a figure that better encapsulates your plan and saves space?

3. **Before You Submit**
   a. Give the proposal to peers who are not on the study team and ask for feedback

      i. Consider bringing your proposal to a "Works in Progress" meeting at your institution.
b. Read the Call for Proposals carefully, again, and make sure that you clearly address <u>each</u> item in the reviewer criteria.
      i. Headers can be helpful to highlight and organize content.

P*lease see example of submitted application below.*

Project Title:

Tools of the trade: Using activity theory to investigate the tools of interprofessional student care planning

Applicant/Project Leader and Medical School:

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Project Mentor:

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Statement of the problem/Rationale: Educators create materials and tools (e.g., patient case summaries, note templates, rubrics) for students to use during interactive educational activities, but rarely pay close attention to how students actually use these resources and how they affect learning. The intent behind a tool's creation may not be fully realized, especially when students differ in knowledge, experience, training, and professional background.[1] Interprofessional (IP) educational activities offer many opportunities to explore learning processes occurring as students interact with tools. For example, when students are asked to develop an integrated approach to comprehensive patient care they typically receive instructions and templates (tools), but the tools may be more familiar to some professions than others; or, rather than encouraging thoughtful discussion and problem solving, tools may instead prompt round-robin, rapid-fire reporting that allows quick and efficient documentation but generates minimal discussion and decision-making across professions.[2,3] Care planning templates must incorporate not just team members' individual recommendations, but also support discussion between team members to create a shared care plan focusing on the disciplines' interplay.[4,5]

We propose that the tools provided to students during IP care planning activities play a key role in their learning how to communicate, coordinate, and collaborate during care planning and that by understanding how students use tools, we can help educators craft better educational materials and improve educational experiences for students. To improve the design of tools and resources provided in IP learning activities, we will use activity theory (AT) as a guiding framework and design based research (DBR) methodology to investigate how the structure and stated objectives of an IP care plan template and care planning process encourage or discourage participation and contribution from all professions, promote discussion and collaboration, and develop IP approaches to a patient's health care.

Specific aims: Using activity theory as a guiding conceptual framework, we plan to:
1. Explore how IP students use care plan templates to construct IP patient care plans
2. Create an empirically grounded IP care plan template that fosters IP participation and supports clinical team collaboration in the development of patient care plans

Literature Review and Theory: AT provides a way to delineate the interactions among individuals, rules, tools, and the tasks and goals that guide IP learning as "activity systems" while also attending to the social and cultural context of that activity system.[6,7] Analysis of an activity system can focus on specific types of interactions, such as learners and the tools they utilize (e.g., structured protocols, equipment, or diagnostic databases), and can offer novel insights to enhance understanding of IP activities and learning.[3,8]

Tools in healthcare are diverse and hold different meaning depending on the background and role of the learner. Understanding how tools can bring together or divide members of a team directs us to modify and adapt those tools. Tools designed to improve efficiency in patient care can pose barriers to IP teamwork. Varpio et al showed how a tool, the Electronic Health Record (EHR), can inhibit connectivity and interconnections among IP providers by deconstructing a patient's care into fragments. Her findings suggest that learning how to use tools such as the EHR in ways that impart meaningful connectivity is a crucial part of health professions education.[9] Similarly, in a study of an IP student clinic, Kent et al raised concerns that a tool created to guide students through an IP patient interview may have limited patient-student conversations; that the "real life complexity" of working with patients requires integration of multiple healthcare professional perspectives that would benefit from tools that do not yet exist.[3] There are examples, though, of tools working to improve collaboration between IP groups. IP documentation forms, for example, allow for non-verbal communication between providers working in tandem to each other on the same patient's care.[10] Haland et al describe how implementation of a collaborative "care pathway" tool for older patients transitioning out of the hospital helped IP team members feel more included and equal.[11]

In our study, AT provides a systematic way to examine how **subjects** (students) interact and utilize an educational **tool** (care plan template) to produce the desired **object** (patient care plan). Secondarily, AT can clarify relationships among the tool and the health care environment (community), students' contributions (division of labor) and professional norms (rules).

Methodology:
Design: We will use DBR methodology combined with AT framing[12,13] to explore students' interactions

with one another and with different versions of a tool (care plan template) while formulating IP patient care plans. DBR is a research approach that can address complex problems in educational practice for which no clear guidelines or evidence-based solutions exist. DBR is defined as "*the systematic study of designing, developing and evaluating educational interventions (such as programs, teaching-learning strategies and materials, products and systems) as solutions for complex problems in educational practice.*"[14] As described below, this study will be conducted over one year as student teams rotate through 2 week blocks of an IP elective in a skilled nursing facility. The UCSF/San Francisco VA IRB has approved this elective's research activities as "Exempt" status. The rotations (7 total) are spread out between fall 2016 and spring 2017, which provides iterative cycles needed for DBR. The PI will have time between iterations to analyze data, refine theoretical insights and propositions, and modify the care plan template for testing in subsequent blocks.

Setting: The IP elective occurs in the San Francisco VA Medical Center's Community Living Center (CLC), a skilled nursing facility caring for >100 veterans. The CLC includes faculty/staff in medicine, nursing, pharmacy, rehabilitation, social work, nutrition, recreation therapy, and spiritual care.

Participants: Sixteen students, including UCSF 4th year medical and pharmacy students and various Physical Therapy program students in their 2nd and 3rd year practicums, will participate in the elective.

Design-Based Research Process - Intervention and Data Collection: Prior to the start of the elective, the PI will meet with an IP committee consisting of the CLC medical director, pharmacist, and physical therapist to construct a "gold standard" rubric of what the IP committee would expect to see in an IP patient care plan. This rubric will serve as a guide during the observations of student teams, but will not be considered the only version of an effective IP care plan.

A medical, pharmacy and PT student will work as a "mini team" during the 2 week elective, seeing and assessing 2-3 CLC patients per week, participating in CLC faculty and staff meetings, and attending didactics. Each week of the elective, student teams will write an IP care plan (ICP) outlining medical, functional, medication, and psychosocial concerns for their patients. Teams will have dedicated time to review the patient's chart, see the patient, ask questions of and receive guidance from the patient's CLC care team. After completing data gathering activities, students will meet to discuss and draft the patient's ICP. Iterations of the care plan template will be constructed based on findings from each previous version. Data sources will include 1) field notes from observations of Care Planning Sessions, 2) Care Plan Template products, and 3) transcripts from Care Plan Session Debriefing interviews (outlined below).

1. <u>Care Planning Sessions:</u> Students have 2 hours to meet a patient, review his/her history, and develop a problem-based assessment and care plan. The PI (a geriatrician) will observe the care planning process as a non-participant observer, meaning she will not offer medical advice or guidance on students' decisions. Following Kent's approach, she will use AT as guiding framework for field notes that document:[3]

    a. Which students (subjects) are participating in each part of care planning (objects)
    b. What actions are taken by students (subjects) as they construct their care plans (objects)
    c. How students (subjects) utilize the templates (tools)

2. <u>Care Plan Template</u>: Students participating in elective blocks 1 and 2 will receive a skeleton problem/assessment/plan ICP template that has been used in simulated IP activities at our institution.[15] This iteration allows the researcher to see how students approach IP care planning with minimal tools (a bare-bones template). Each care plan and related materials will be collected, de-identified and analyzed (see analysis plan below) between elective blocks 2 and 3. Findings from these initial analyses will inform the development of a new ICP template to be used in block 3. Subsequent blocks will use iterations of this ICP template, with findings from each block guiding modifications for the next block (see Figure 1).

<u>Figure 1. Elective Design Based Research Model</u>
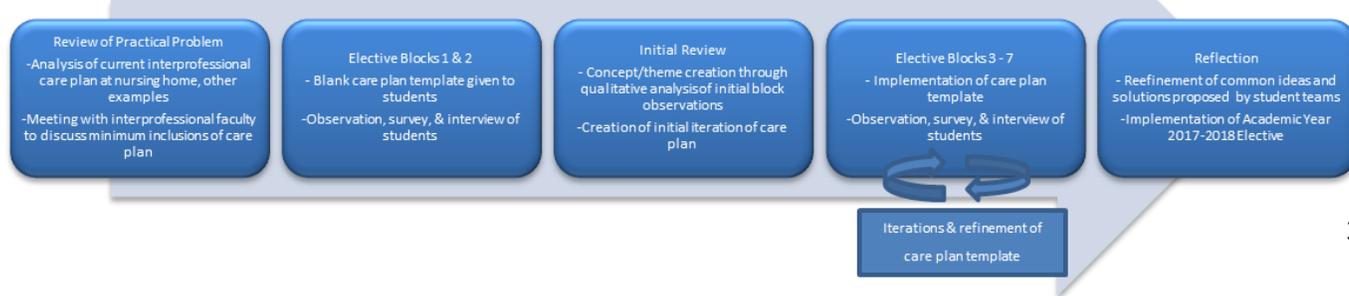
3. Care Planning Debriefing: The PI will conduct a brief semi-structured group interview with students after their care planning sessions, asking about overall perceptions of the experience, group process, any challenges faced while writing a care plan, and any tools that might be helpful. Interviews will be audio recorded and transcribed.

Data Analysis Plan: In keeping with DBR, the PI will analyze field notes, transcripts, and care plan products in an iterative and integrative manner. After each team completes a care plan and debrief, the PI and project mentor will review all data sources and complete a 3-pronged analytic process, outlined below. Goals of data analysis are to understand both the process employed by students in IP care planning as well as the care plan product in order to create improving care plan template iterations that guide IP planning dialogue.

1. Care planning **process** analysis: The PI and project mentor will review session field notes and debrief transcripts and develop a coding scheme guided by AT, focusing on structural elements of the planning process, student utilization of the care plan template tool, and signs of the tool impacting the conversations about patient care planning. They will use the coding to create a map of the IP care planning activity system. Data will also be analyzed for signs of collaborative practices, including: students' engagement in the process (e.g., generating problem list, explaining rationale for recommendations, negotiating priorities in care plan) and efficiency (e.g., time management, time used to complete plan).

2. Care plan **product** analysis: The PI and IP elective committee will review the student care plans and compare to the "gold standard" rubric created prior to the elective, determining whether care plans contain minimum elements. Consistently included elements will be considered for inclusion in subsequent care plan templates.

3. Reflective analysis/design **iterations**: The PI and project mentor will use constant comparative methods to generate each version of care plan template. They will use findings from the "planning process" and "product" analysis, to identify key elements to incorporate into the next iteration of care plan template tool. Iterations of the care plan will be presented to the IP elective committee for review and feedback prior to distribution to student groups. The ultimate goal is to design a template that encourages collaboration among students and development of comprehensive, holistic, integrative IP care plans while maintaining enough flexibility for students to innovate and improvise as needed.

Anticipated outcomes: Over the course of the next 12 months, we anticipate: 1) multiple iterations of IP care plan templates, leading to a final, recommended version, 2) demonstration of a process other educators can use in various clinical or simulated settings to guide development and refinement of context-sensitive educational tools.

Plan for Dissemination of project outcomes regionally and nationally: Presentation at UCSF Education Showcase in 2017, WGEA Annual Meeting in 2017, the American Geriatrics Society (AGS) Meeting in May 2018, and at other regional and national education meetings.

Project Timeline:
9/2016-10/2016: Start of CLC IP Student Elective (student blocks 1-2).
11/2016-1/2017: Analysis of first 2 student elective blocks' data. Creation of initial care plan template.
2/2017-4/2017: Student blocks 3-7. Iterations of care plan template developed and implemented.
5/2017-8/2017: Review of year's worth of iterative data. Implementation of changes to CLC IP Elective.
Fall 2017: Abstract proposals. Start of AY 2017-2018 elective.

Budget:

Item	Itemization	Total
Transcription of student debriefing ($1.00/minute) for qualitative analysis/coding	30 min x 2 sessions x 7 block=420 min	$420
Qualitative analysis software license (@$12.95/month)	12 months of use during elective	$155.40
Abstract submission fees to AGS Annual Meeting	One-time fee	$35.00
Total		**$610.40**

1.   Titzer JL, Swenty CF, Mustata Wilson G. Interprofessional education: Lessons learned from conducting an electronic health record assignment. *J Interprof Care*. 2015;29(6):536-540. doi:10.3109/13561820.2015.1021000.

2.   Posenau A, Peters T. Communicative positioning of one's own profession in interprofessional settings. *GMS J Med Educ*. 2016;33(2):Doc27. doi:10.3205/zma001026.

3.   Kent F, Francis-Cracknell A, McDonald R, Newton JM, Keating JL, Dodic M. How do interprofessional student teams interact in a primary care clinic? A qualitative analysis using activity theory. *Adv Health Sci Educ Theory Pract*. January 2016. doi:10.1007/s10459-015-9663-4.

4.   Goldman J, Reeves S, Wu R, Silver I, MacMillan K, Kitto S. A sociological exploration of the tensions related to interprofessional collaboration in acute-care discharge planning. *J Interprof Care*. 2016;30(2):217-225.

5.   Reeves S, McMillan SE, Kachan N, Paradis E, Myles L, Kitto S. Interprofessional collaboration and family member involvement in intensive care units: emerging themes from a multi-site ethnography. *J Interprof Care*. 2015;29(3):230-237.

6.   Battista A. Activity Theory and Analyzing Learning in Simulations. *Simul Gaming*. 2015;46(2):187-196. doi:10.1177/1046878115598481.

7.   Johnston J, Dornan T. Activity theory: mediating research in medical education. In: *Researching Medical Education*. Chichester, West Sussex ; Hoboken,NJ: John Wiley & Sons, Ltd.,; 2015:93-103.

8.   McMurty A, Shanta R, Kilgour K. Socio-material perspectives on interprofessional team and collaborative learning. *Med Educ*. 2016;50:169-180. doi:10.1111.

9.   Varpio L, Day K, Elliot-Miler P, et al. The impact of adopting EHRs: how losing connectivity affects clinical reasoning. *Med Educ*. 2015;49:476-486.

10.   Heldal F. Multidisciplinary collaboration as a loosely coupled system: Integrating and blocking professional boundaries with objects. *J Interprof Care*. 2010;24(1):19-30. doi:10.3109.

11.   Haland E, Rosstad T. Care pathways as boundary objects between primary and secondary care: Experiences from Norwegian home care services. *Health (N Y)*. 2015;19(6):635-651.

12.   O'Neill K. Understanding Design Research-Practice Partnerships in Context and Time: Why learning sciences scholars should learn from cultural-historical activity theory apporaches to DBR. *J Learn Sci*. 2016;ePub ahead of print. doi:10.1080/10508406.2016.1226835.

13.   Penuel WR, Cole M, O'Neill K. Introduction to the Special Issue. *J Learn Sci*. 2016;ePub ahead of print.

14.   Plomp T, Nieveen N. An introduction to Educational Design Research. November 2007.

15.   Rivera J, Yukawa M, Hyde S, et al. Interprofessional Standardized Patient Exercise (ISPE): The Case of "Elsie Smith." *MedEd Portal Publ*. 2013. https://www.mededportal.org/publication/9507.