Oregon Health & Science University
School of Medicine

Scholarly Projects Final Report

Title *(Must match poster title; include key words in the title to improve electronic search capabilities.)*

Addressing the Need for End-of-Life Discussions/ Palliative Care into Medical School Curriculum

Student Investigator's Name

Megan Swope

Date of Submission *(mm/dd/yyyy)*

03/20/26

Graduation Year

Spring 2026

Project Course *(Indicate whether the project was conducted in the Scholarly Projects Curriculum; Physician Scientist Experience; Combined Degree Program [MD/MPH, MD/PhD]; or other course.)*

Scholarly Project Curriculum

Co-Investigators *(Names, departments; institution if not OHSU)*

NA

Mentor's Name

Mackenzie Cook MD

Mentor's Department

Department of Surgery

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Concentration Lead's Name

Peter Mayinger PhD

Project/Research Question

Is a three-part palliative care enrichment curriculum for pre-clinical medical students feasible, acceptable and effective in increasing confidence and knowledge related to end-of-life and goals-of-care conversations?

Type of Project *(Best description of your project; e.g., research study, quality improvement project, engineering project, etc.)*

Project aim was innovation framework model to assess palliative care education at OHSU.

Key words *(4-10 words describing key aspects of your project)*

Curriculum innovation seeks to address identified gap in medical education by introducing key EoL/ GoC concepts early with a three- part palliative care enrichment series and pre-clinical elective.

Meeting Presentations

If your project was presented at a meeting besides the OHSU Capstone, please provide the meeting(s) name, location, date, and presentation format below (poster vs. podium presentation or other).

OHSU Symposium on Educational Excellence (SEE)/ March 25, 2024
Washington and Oregon Chapters of the American College of Surgeons/ September 12-14, 2025

Publications *(Abstract, article, other)*

If your project was published, please provide reference(s) below in JAMA style.

Submission to Archive

Final reports will be archived in a central library to benefit other students and colleagues. Describe any restrictions below (e.g., hold until publication of article on a specific date).

No Restrictions

Scholarly Project Final Report

Next Steps
What are possible next steps that would build upon the results of this project? Could any data or tools resulting from the project have the potential to be used to answer new research questions by future medical students?

Continue the palliative care series and elective to improve medical student access to palliative care frameworks and topics

Please follow the link below and complete the archival process for your Project in addition to submitting your final report.

https://ohsu.ca1.qualtrics.com/jfe/form/SV_3ls2z8V0goKiHZP

Student's Signature/Date *(Electronic signatures on this form are acceptable.)*
This report describes work that I conducted in the Scholarly Projects Curriculum or alternative academic program at the OHSU School of Medicine. By typing my signature below, I attest to its authenticity and originality and agree to submit it to the Archive.

3/20/2026

X

Student's full name

Signed by: trust_f1afc914-12dd-48d4-ad96-fe0e067de596

Mentor's Approval *(Signature/date)*

X

Mentor Name

Scholarly Project Final Report

Report*: Information in the report should be consistent with the poster, but could include additional material. Insert text in the following sections targeting 1500-3000 words overall; include key figures and tables. Use Calibri 11-point font, single spaced and 1-inch margin; follow JAMA style conventions as detailed in the full instructions.*

Introduction *(≥250 words)*

Advances in medical technology have significantly increased human life expectancy leading to a corresponding rise in chronic illness and complex care requirements. The World Health Organization predicts by 2050, one in six individuals worldwide will be age 60 years or older and by 2050 the population over the age of 60 will reach 2.1 billion (World Health Organization[WHO], 2023). This demographic shift shows the growing importance of palliative care and the importance of effective End-of-Life (EoL) and Goals-of-Care(GoC) discussions in clinical practice.

Despite this increasing need, there remains no standardized approach to prepare medical students or residents to conduct EoL and GoC conversations. Sullivan et al. revealed a substantial gap by surveying resident physicians and attending faculty about their training in topics of palliative care, the results were shocking. Only 18% of medical students and residents reported receiving formal coursework in EoL care with a merely 9% completing a clerkship in the area. Furthermore, many attending level faculty, those responsible for teaching these topics reported feeling unprepared to instruct learning in complex EoL discussions (Sullivan et al., 2003). These finding indicate a critical deficit in the U.S. medical education that persists across training levels.

Previous studies demonstrated that structured palliative care education improves knowledge, confidence and communication skills amount medical training (Horowitz et al., 2014). Early exposure has also been associated with improved patient-centered care and greater comfort managing serious illness (Kavalieratos et al.,2016). Given the increasing demand for palliative care services and the recognizes shortcomings in the current curricula, innovative educational strategies are needed to introduce EoL and GoC training earlier in medical education.

This project sought to address this gap by implementing a three-part palliative care enrichment series for pre-clinical medical students with the long-term goal of integrating this training into a formal medical school curriculum as an elective course.

Methods *(≥250 words)*

Study Design:

This project was designed with a curriculum innovation framework model which emphasizes desirability, feasibility and viability/acceptability. A three-part enrichment series was developed and delivered to pre-clinical medical students during their foundational medicine blocks.

The educational intervention consisted of three sequential sessions:

1. *Part One- Introduction to Palliative Care and EoL/GoC Conversations*
   Provided foundational knowledge of palliative care principles and introduced structured communication strategies with an emphasis on using Best Case/Worst Case framework.

2. *Part Two- Communication Skills Practice*
   Focused on interactive learning with role-playing exercises using established communication tools to practice difficult conversations.

3. *Part Three- Advanced Communication Skills*
   Interactive session using more advanced Best Case/Worst Case scenario practice with additional communication tools like creating a warning shot & headliner.

These sessions were designed to build progressively on student's understanding of pathophysiology and clinical reasoning that was developed during their foundational coursework.

Data Collection:

Participants were medical students enrolled in pre-clinical training throughout their foundational blocks of medical school (Beginning, middle and end of pre-clinical blocks). Pre- and post-session surveys were administered using a 5-point Likert scale to assess:

- Perceived importance of palliative care education
- Prior exposure to palliative care topics
- Comfort level with EoL/GoC discussions
- Interest in further training

Survey data was collected from multiple cohorts (n=172) in a two-year time span.

Feasibility Measures:

Faculty and student time required for curriculum development and implementation was recorded to assess feasibility.

Results *(≥500 words)*

The survey results shown in **Figure 1** demonstrate both a significant educational gap in palliative care training and measurable improvements in students' knowledge as well as their comfort following participation in the lecture series.

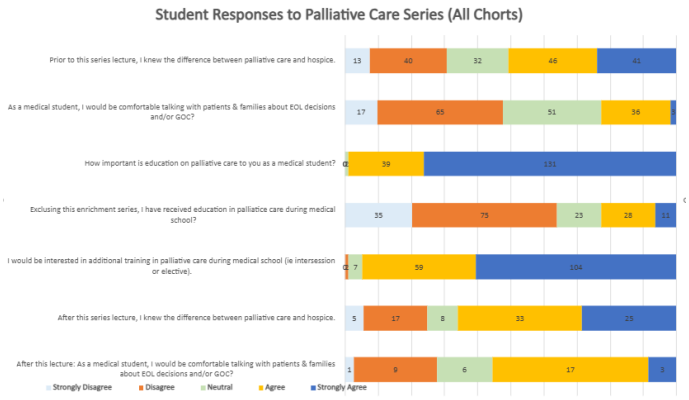

Figure 1 Student Responses to Palliative Care Enrichment Survey (All Cohort Responses Combined)

Prior to the enrichment series, student's familiarity with palliative care concepts was variable. When asked whether they understood the difference between palliative care and hospice, responses were widely distributed with a large portion of students selecting neutral or disagree responses indicating inconsistent baseline knowledge. Additionally, many students reported discomfort with End-of-Life (EoL) and Goals-of-Care (GoC) discussions in general, with a number indicating they would not feel comfortable speaking with patients or families about these topics prior to the attending the series. This finding is supported by another survey item which showed 111 of 172 students (64.5%) reported students had received little to no prior formal education in palliative care during medical school education, highlighting a significant gap in current medication training.

Despite this limited exposure, students overwhelmingly recognized the importance of the topic. Nearly all respondents, 170 of 172 students (98.8%) "agreed" or "strongly agreed" that palliative care education important to the them as medical students and a large majority, 163 of 172 students (94.8%) expressed strong interested in receiving additional training opportunities such as electives or intersession courses.

Among the final two cohorts pre- and post-intervention data was collected and demonstrated that knowledge scores improved by approximately 15 percentage points following a single lecture (n=88). Students reported that they understood the difference between hospice and palliative care with a clear

shift towards “agree” and “strongly agree” responses. Similarly, student comfort with discussing EoL and GoC decisions increased following the sessions with a greater proportion of students reporting that they would feel more comfortable initiating these conversations with patients and families. Overall, self-reported comfort with conducting EoL and GoC discussions more than double after participation (n=36). These changes suggest that even brief, structured educational interventions can meaningful improve students; perceived preparedness for difficult clinical conversations.

From a feasibility standpoint, curriculum development required approximately five hours of faculty time and fifteen hours of student-led preparation, suggesting the program is sustainable from a faculty workload perspective. Based on the strong positive feedback from students, an elective course was approved for integration into the School of Medicine curriculum beginning in winter 2026. Qualitative feedback further supported the value of the program with students reporting high satisfaction and noting the relevance of palliative care communication skills across all medical specialties as well as in personals experiences involving serious illness within their families.

Overall, the data presented in **Figure 1** highlights three key findings: 1) Medical students have limited prior exposure to palliative care education, 2) There is a strong student interest in learning about palliative care in the pre-clinical setting and 3) Targeted educational sessions can improve knowledge and confidence in conducting EoL and GoC discussions. These findings support the value of integrating structured palliative care education earlier in the medical school curriculum.

Discussion *(≥500 words)*

This curriculum innovation directly addresses a documented gap in medical education by introducing key End-of-Life (EoL) and Goals-of-Care (GoC) communication concepts early in medical training. Prior studies have demonstrated that many medical students and resident physicians feel unprepared to engage in EoL/GoC conversations with patients and families due to limited formal instruction during their training (Sullivan et al., 2003). Similarly, surveys of U.S. medical school have identified substantial variability in the amount and timing of palliative care education within the curriculum (Horowitz et al., 2014). Our intervention sought to address this gap by implementing an early, structure palliative care enrichment series designed to introduce foundational knowledge and communication skills before medical students enter their clinical phase of training.

To guide evaluation of this project, we applied an innovation framework model which assess new programs through three key pillars: desirability, feasibility, and viability (acceptability). Within this framework, desirability reflects whether the intervention meets the needs and interest of the learning, feasibility evaluates the practicality of the implementation and viability assesses whether the innovation is sustainable and valued within the institutional environment **(Figure 2)**.

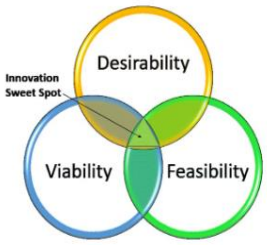

Figure 2 Core Innovation Framework Criteria (The 3 Pillars)

Desirability

The results of the study demonstrated a strong desirability for early palliative care education among medical students with 98.8% of the students either “agreeing” or “strongly agreeing” that palliative care is important while 94% expressed interest in receiving additional training outside our enrichment series. At the same time, 64.5% reported little or no prior exposure to palliative care education, highlighting a significant gap in current training. These findings suggest that students recognized both the importance of EoL/GoC communication and the lack of structured opportunities to develop these skills during the early phases of medical school.

Quantitative data further demonstrated measurable education impact. Among the cohort with pre-and post-intervention data, knowledge score improved by approximately 15 percentage points (n=88) following the lecture series. Similarly, self-reported comfort with conducting EoL/GoC discussions more than double after participation (n=36). These finding suggest that even brief, targeted educational interventions can significantly improve students' perceived preparedness for difficult clinical conversations.

Qualitative feedback from the participants reinforced these findings. Students reported that the sessions were highly informative and applicable across specialties. Several participants noted that the communication strategies taught could be applied not only in future clinical practice but also in personal experience with serious illness among family members. Students also emphasized the importance of expanding the program with comments suggestion that the sessions should be longer or integrated into the formal curriculum. Collectively, these responses indicated strong learner engagement and support the desirability of incorporating structured palliative care education earlier in medical training.

Feasibility

The feasibility of this intervention is notable. Curriculum development required approximately five hours of faculty time and fifteen hours of student-led preparation, demonstrating that the program can be implemented with relatively minimal resource investment. From a faculty workload perspective, this represents a practice approach to introducing palliative care education without significantly increasing curricular burden.

In addition, the modular design of the three-part series allows the sessions to be integrated within existing foundational medicine blocks, making it adaptable to different curricular structures. This flexible design increases the likelihood that similar programs could be implemented across other medical schools seeking to address gaps in palliative care education.

Viability (Acceptability)

Beyond feasibility, the program demonstrated strong viability and acceptability within the educational environment. Students consistently reported that the sessions were valuable and relevant to their future clinical practice. Positive feedback from the pilot sessions further reinforced the perceived need for structured training in EoL/GoC communication skills.

Importantly, the success of the pilot program contributed to institutional support for continued implementation. Based on positive student feedback and demonstrated educational impact, an elective course was approved for integration into the School of Medicine curriculum beginning in winter 2026. This progression from an enrichment activity to the addition of a formal elective reflects the program's sustainability and institutional viability while maintaining the original enrichment series to broaden student access.

Limitation and Future Directions

Several limitations should be considered when interpreting these findings. First, the evaluating relied primarily on self-reported survey data which may be influenced by response bias and may not directly reflect clinical performance. Second, the enrichment series was implemented at a single institution which may limit generalizability of the results to other medical schools with different curricular structures. Finally, while the study demonstrates improvement in knowledge and perceived comfort, it does not yet evaluate long-term retention of skills or real-world application in clinical settings.

Future research should focus on longitudinal assessment of communication competency including evaluation during clinical rotations and objective structured clinical examinations (OSCEs). Additionally, expanding the curriculum to include advance simulation, interprofessional training and required clinical experiences may further strengthen students' preparedness for EoL/GoC conversations. Multi-institutional studies may also help determine whether this model can be successfully adapted across diverse medical education program.

Conclusions *(2-3 summary sentences)*

Overall, this curriculum innovation demonstrates that early, structured palliative care education is both desired by students and feasible to implement while being valued by learners and supported institutionally. Early, structured exposure to palliative care and EoL/GoC communication has been shown to improve medical students' knowledge, comfort and overall confidence in caring for patients with serious illness. Integrating this scalable, feasible model into undergraduate medical education addresses a critical training gap and supports the development of compassionate, patient-centered physicians.

References *(JAMA style format)*

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