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GERIWARD: AN INTERPROFESSIONAL TEAM-BASED CURRICULUM ON CARE OF THE HOSPITALIZED OLDER ADULT

### Permalink

<https://escholarship.org/uc/item/9446c1xw>

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### Publication Date

2011

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Peer reviewed

Original Publication

OPEN ACCESS

# GeriWard Falls: An Interprofessional Team-Based Curriculum on Falls in the Hospitalized Older Adult

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**Citation:** Larson C, O'Brien B, Rennke S. GeriWard Falls: an interprofessional team-based curriculum on falls in the hospitalized older adult. *MedEdPORTAL*. 2016;12:10410. [https://doi.org/10.15766/mep\\_2374-8265.10410](https://doi.org/10.15766/mep_2374-8265.10410)

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## Abstract

**Introduction:** Interprofessional (IP) collaboration is key in caring for older adults and a critical part of health professions education. Falls are a source of significant morbidity and mortality in older adults. GeriWard, an innovative curriculum, emphasizes IP collaboration during a clinical encounter with a hospitalized older adult. GeriWard Falls expands on the existing GeriWard curriculum, allowing medical, pharmacy, physical therapy, and nursing students to conduct a comprehensive falls risk evaluation at the bedside. **Methods:** The 2-hour exercise consists of participation in a team-based falls risk assessment at the bedside of a hospitalized older adult, development of a falls care plan and communication with the patient and primary inpatient physicians, and completion of clinical questions focused on systems-based interventions to reduce fall risk. **Results:** A total of 39 students participated in two sessions. Ninety-seven percent of students were likely to change their clinical activities as a result of the session. Faculty facilitators cited the students' ability to effectively collaborate, identify risk factors for falls, and propose systems-based interventions to reduce falls risk. Seventy-eight percent of primary inpatient physicians planned to implement at least one of the IP team recommendations; 89% agreed that the IP team recommendations were helpful. **Discussion:** The activity was engaging for students and helped them achieve competency with fall risk assessment. Communication of the students' assessment to the primary medical team not only was useful to the primary team but also helped students understand how systems can affect patient care.

## Keywords

Interprofessional Education, Geriatrics, Interprofessional Relations, Interprofessional Education Collaboration, IPEC, Hospital Medicine, Systems-Based Practice

## Appendices

- A. Background Reading.docx
- B. Team Worksheet.docx
- C. Student and Patient Consents.docx
- D. Facilitator and Inpatient Physician Evaluations.docx
- E. Student Postsession Survey .docx
- F. Email Templates.docx

*All appendices are peer reviewed as integral parts of the Original Publication.*

## Educational Objectives

By the end of this module, learners will be able to:

1. Identify relevant epidemiology and risk factors for falls in older adults.
2. Work as a team of interprofessional students to perform a focused falls risk assessment at the bedside, including history, physical exam, and medication review.
3. Work as a team of interprofessional students to propose a systems-based intervention to help prevent falls in the hospitalized older adult.

## Introduction

Interprofessional (IP) collaboration is a key part of caring for older adults and an important but often underemphasized part of health professional students' education. Providing students with experiences working in IP teams to care for older adults can help students build skills in IP collaboration and an awareness of systems affecting patient care.

Falls are a focus of several of the Association of American Medical Colleges (AAMC) minimum geriatric competencies for medical students and are also a significant cause of morbidity and mortality in older adults.<sup>1</sup> Standardized patient cases exist to educate medical students about falls in older adults and to

train IP teams in geriatric assessment.<sup>2,3</sup> Our GeriWard Falls curriculum adds to these resources by providing an IP team-based learning model using bedside assessment of hospitalized older adults to specifically address falls awareness and prevention.

GeriWard Falls is a novel IP team-based curriculum for health professions' students to teach comprehensive falls risk assessment through bedside interactions with a hospitalized older adult and communication with the primary inpatient physicians. This innovative curriculum expands on the existing GeriWard curriculum that addresses competencies in skin breakdown, restraints, and Foley catheter use by addressing new educational content related to falls with a bedside clinical evaluation and utilizing students' evaluations to directly impact patient care.<sup>4</sup>

We developed and implemented GeriWard Falls for learners on clinical rotations, including third-year medical, fourth-year pharmacy, third-year physical therapy, and graduate-level nursing students. The curriculum addresses the following AAMC geriatric competencies for falls, balance, and gait disorders:

12. Ask all patients > 65 years old, or their caregivers, about falls in the last year, watch the patient rise from a chair and walk (or transfer), and then record and interpret the findings.
13. In a patient who has fallen, construct a differential diagnosis and evaluation plan that addresses the multiple etiologies identified by history, physical examination, and functional assessment.<sup>1</sup>

## Methods

IP teams of medical, pharmacy, physical therapy, and nursing students work together to evaluate an actual patient on the inpatient medicine or cardiology service. The students learn from each other and refine their clinical skills as they address the important competencies of falls risk evaluation and prevention in the inpatient older adult. In addition, the curriculum aims to foster collaboration among health science students to gain awareness of systems-based practice by reviewing processes in the health system that contribute to patients' falls risk. The curriculum was submitted to the University of California San Francisco Human Research Protection Program Committee on Human Research and qualified as exempt.

### GeriWard Falls Session Overview

- Minutes 0-15: classroom—students arrive; faculty facilitator introduces the GeriWard Falls activity.
- Minutes 15-20: classroom—teams assemble and pick up team worksheets (Appendix B).
- Minutes 20-25: hospital floor—teams travel to wards, identify a patient (age > 65) to interview/assess, and obtain consent.
- Minutes 25-75: hospital floor/patient's room—teams perform bedside evaluation using the team worksheet as a guide.
- Minutes 75-105: classroom—teams reconvene and precept with faculty facilitators, draft e-mails with recommendations, and complete clinical questions.
- Minutes 105-120: classroom—teams send e-mails to primary inpatient physicians and complete postsession surveys; facilitators complete team evaluations.

The GeriWard Falls faculty facilitator will coordinate with the different health professional schools at least 3 months in advance to schedule a 2-hour time period for the workshop. Our faculty facilitators were hospitalists with geriatric expertise or geriatricians. Faculty facilitators from other health professional schools would also work, though at least one physician faculty member is recommended for the in-person session. Students are recruited from learners on clinical rotations from health professions schools. We had medical, nursing, pharmacy, and physical therapy students participate, but a different combination or inclusion of occupational therapy, social work, or clinical psychology students would also be successful. The students do not have contact with each other before the session. The faculty facilitator will send the students an introductory e-mail (Appendix F) with logistics and the background reading materials (Appendix A) and team worksheet (Appendix B) 7 days prior to the in-person session. Students are required to complete the background reading assignment on falls in the hospital setting prior to the in-person session.

Fifteen to 20 students from the schools of medicine, pharmacy, nursing, and physical therapy attend the 2-hour session. Following an introduction to the activity by the faculty facilitator, the students work in IP teams of four to five to complete a comprehensive falls risk evaluation at the bedside of a hospitalized older adult (age > 65) after receiving consent (Appendix C). The IP teams are numbered to help with tracking of the worksheets and evaluations. Hospitalized older adults are identified by either the students or the facilitator ahead of the workshop. The students may work with a hospitalized older adult that they already have a relationship with from their rotation, or alternatively, the facilitator can collaborate with nursing staff to identify appropriate patients. The students work together to interview the patient, conduct a focused history and exam, and complete the team worksheet. They also complete clinical questions focused on system-based interventions (such as communication and documentation of falls risk among health providers) to reduce falls risk.

Teams are encouraged to have one student write the responses on the team worksheet and are allowed to decide how to divide the interview and exam among the team members. Most of the tasks on the worksheet are not discipline specific. For example, the Get Up and Go test is part of nursing, medical, and physical therapy training. While students share responsibility for evaluation, they typically contribute expertise in the following ways: Medical students contribute knowledge about the treatment course, comorbid conditions, and physical examination of the patient; pharmacy students contribute knowledge about medication risks and side effects; physical therapy students contribute knowledge about gait and assistive devices; and nursing students contribute knowledge about activity levels, level of assistance for activities of daily living, orthostatic vital signs, and the Morse Fall Scale.

Following the bedside clinical exercise, the IP teams return to the classroom to discuss their assessments with one of two faculty facilitators. With the oversight of the facilitator, they will develop a falls care plan to reduce falls risk. These recommendations are communicated to the patient and to the primary inpatient physicians through use of a secure, template e-mail (Appendix F). Prior to leaving, the students complete a written evaluation of their experience with the workshop.

The objectives for the curriculum are evaluated through three different perspectives: the students, facilitators, and primary inpatient teams. GeriWard faculty facilitators use a rubric (Appendix D) to score student teams' falls assessment worksheets, clinical questions, and oral presentations using a Likert scale (evaluating objectives 1, 2, & 3). The primary inpatient medical team completes an electronic questionnaire regarding the clarity and usefulness of the student IP recommendations (evaluating objectives 1 & 3). The student participants complete a questionnaire (Appendix E) regarding satisfaction with the educational exercise (evaluating objective 2).

Implementation of the module led to the development of some special guidelines and requirements. School calendars must be coordinated in advance to schedule the 2-hour, in-person GeriWard Falls session. Coordination with a representative from each school or director of the respective clinical rotations is recommended to schedule the session and recruit and notify students. The GeriWard faculty facilitator should obtain contact information for all the students to communicate with them in advance of the in-person session.

Before the session, the facilitator should notify and obtain permission from nurse managers on the units where students will be working with patients. The facilitator should also print copies of the background reading (one per student), team worksheet (one per team), facilitator evaluations (one per team), student postsession surveys (one per student), and consents (one per student, as well as one per team for patient consent).

Prior to the workshop, students on their clinical rotations in the hospital should think of at least one older patient who may be interested in participating; alternatively, the GeriWard facilitator can identify patients prior to the workshop.

While only one faculty facilitator is needed to organize and introduce the sessions, at least two faculty facilitators are needed to precept the teams of students at the end of the session. Assign each team an

appointment time to return to the classroom to precept with a designated preceptor in order to reduce wait times. Facilitators may circulate to provide bedside observation in addition to precepting at the end of the session.

A large classroom in the hospital or near the hospital is needed for students to convene at the beginning and end of the session. Access to at least four computers is helpful so IP teams may draft and send their e-mails to the primary inpatient physicians. Students will also need access to the electronic medical record at the hospital.

Facilitators should obtain the names of the primary inpatient physicians for each patient interviewed. These physicians should be contacted to complete a survey about the clarity and usefulness of the IP team recommendations.

## Results

A total of thirty-nine students (11 physical therapy, 13 medical, nine nursing, and six pharmacy) participated in two pilot sessions. Learners on clinical rotations were recruited to ensure sufficient participation across professions. The students were divided into teams of four to five members, with at least three different professions per team.

Facilitators rated the student oral presentations highly, with a mean oral presentation score of 14.1 ( $SD = 0.78$ , maximum score = 15), citing the students' ability to effectively collaborate, identify risk factors for falls, and propose systems-based interventions.

A total of nine primary inpatient physicians (three attending physicians, six residents) provided feedback following the two pilot sessions. This represented a 36% response rate for the first session and a 50% response rate for the second session. Seventy-eight percent of the respondents planned to implement at least one of the IP team recommendations. One hundred percent of respondents agreed or strongly agreed that the recommendations were clear, and 89% agreed or strongly agreed that the recommendations were helpful.

Using a 5-point Likert scale on the postsession survey, students rated each component 4-5 on average (*very good to excellent*), including usefulness of the activity (4.26 for session 1, 4.82 for session 2) and overall quality of the session (4.17 for session 1, 4.82 for session 2). Ninety-five percent of students from session 1 and 100% of students from session 2 felt there was a good, very good, or excellent likelihood that they would make changes in clinical activities as a result of the session.

Students identified key learning points in the following domains, and many of the learning points aligned with the objectives of GeriWard Falls and AAMC competencies.

Regarding the geriatric competencies of falls risk assessment and prevention, the learners said the following:

- “[In the future, will] know and document fall risk and ask and assess in H&P, and review medications with an awareness to fall risk”—medical student.
- “[In the future, will be] looking at meds that increase falls risk, evaluating the patient’s room for increased ambulation and decreased falls, and ensuring patient can go home and remove risk factors for harm”—pharmacy student.

Regarding the hospital-based care competencies of patient-centered care, patient education, and systems issues, the learners said the following:

- “The interview with the patient was very valuable”—pharmacy student.
- “[I valued] practice with chart review and patient interaction”—physical therapy student.
- “[In the future, will] stress importance of mobility in the hospital and increase communication with each patient’s care team”—physical therapy student.

Regarding the IP team care competencies of value of IPE experience, roles of health professionals, and IP communication, the learners said the following:

- “I really found the interdisciplinary teamwork to be extremely valuable and I think it made all the schools more tangible to me”—nursing student.
- “I always love interacting with other students of other fields of health care. I think that we learn a lot from each other and foster good relationships for the future”—physical therapy student.
- “This was a very practical session and I liked that it included active participation rather than lecture”—medical student.

### Discussion

GeriWard Falls is a novel IP curriculum that emphasizes IP collaboration and geriatric competencies using a clinical encounter with a hospitalized older adult. The activity was engaging for students and helped them gain competency with falls risk assessment. Communication of the students’ assessment to the primary inpatient providers not only was useful for the primary team but also helped students understand how systems can affect patient care.

While the curriculum was largely successful, we did identify opportunities for improvement. Though one facilitator is needed to organize the logistics of the session, introduce the session, and divide the students into teams, having two faculty members to precept the teams at the end of the in-person session is much more efficient and allows greater time for teaching. We assigned 10-minute appointments for each team to precept with a faculty member in order to maximize teaching and minimize wait times. Involvement of faculty preceptors from the schools of physical therapy, nursing, and pharmacy would also be helpful. Our faculty facilitators circulated to observe the teams of students during their interviews with the patients, but the faculty evaluations were based on the team presentations at the end of the session. Incorporation of faculty evaluation of the IP interactions during the patient interaction would be helpful but necessitates a higher faculty:student ratio.

The addition of occupational therapy, social work, or clinical psychology students to the IP teams would be helpful to more broadly address the functional, psychological, and social factors that influence fall risk. Though not included in our pilot studies, a question regarding a fear of falling has been added to the team worksheet as this is a significant risk factor for falls and impacts mental, social, and physical health. A section on outpatient follow-up needs, including with the primary care physician, home health, and/or mental health, was added to the recommendations to the primary medical team. While GeriWard Falls is a time-limited curriculum focused on evaluation of fall risk in the inpatient setting, noting fear of falling and the importance of follow-up and interventions for this in the outpatient setting is key.

Working with actual hospitalized patients offers educational opportunities beyond those of standardized patients, giving students the opportunity to see patients in the hospital setting, interact with the care team, and more directly impact patient care. However, there are also understandable challenges of working with real patients, and we wanted to ensure a good experience for both patients and students. We found that speaking with the nursing staff on the floor prior to the session to identify appropriate patients who would be willing to speak with students and did not have any planned tests or consults during the time of the activity was very helpful. We did not obtain formal feedback from the patients themselves, but anecdotally, they greatly enjoyed the extra time and attention from the team of students.

For the first session, we allowed students to work with medicine or surgical inpatients. However, we found eliciting feedback from the primary inpatient physicians was easier when working with patients on the inpatient medicine team (particularly since the facilitators were internal medicine physicians), so for subsequent sessions, we had students work with patients on the medicine service.

Evaluation data from the facilitators and inpatient teams were positive but were limited by possible bias from the facilitators (who also created the curriculum) and the small number of responses from the inpatient team members. While feedback from the students was overwhelmingly positive in terms of both their enjoyment of the session and also its anticipated impact on their clinical practice, we did not assess the long-term impact of our workshop.

We hope to continue this curriculum and expand to other hospitals in the university system. We also aim to incorporate an IP falls prevention team to the inpatient service.

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#### Disclosures

None to report.

#### Funding/Support

None to report.

#### Prior Presentations

American Geriatrics Society Annual Meeting; May 2014; Orlando, FL. Winner: Resident Poster Award: second-place award for Geriatrics Education Category.

Western Group on Educational Affairs (WGEA) Regional Conference; March 2014; Honolulu, HI. Winner: Medical Education Scholarship Research and Evaluation (MESRE) Award for Excellence in the category of Outstanding Poster Presentation of an Educational Innovation in Medical Education.

University of California San Francisco Research Scholarly Festival; San Francisco, CA. Winner: 2013-2014 Pathways to Discovery Award in Health Professions Education.

Society of General Internal Medicine (SGIM) Annual Meeting; April 2014; San Diego, CA.

Society of Hospital Medicine Annual Meeting; March 2014; Las Vegas, NV.

#### Ethical Approval

Reported as not applicable.

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**Received:** November 1, 2015 | **Accepted:** April 14, 2016 | **Published:** June 3, 2016