Abstract

Introduction: Safe transitions of care are an essential component of safety and quality for the patient community. It is imperative that providers choose appropriate discharge settings to reduce avoidable hospital readmissions. Additionally, providers must also ensure that the multifaceted needs of each patient are met with every discharge recommendation. There is often a lack of formal instruction in medical school on the various discharge dispositions, indications for rehab, and clinical indications for each setting. This is problematic for new interns who are tasked with entering discharge orders and relaying critical information between lead physicians and the interprofessional team. Methods: A 60-minute workshop with both didactic and experiential components provided medical students with opportunities to gain an overview of discharge dispositions while also exercising critical thinking using case examples. The workshop was part of a 2-week Transition to Residency course at a single institution. Results: Twenty-two fourth-year medical students participated in the workshop. Following the workshop, 100% of the participants stated that they had learned something new and that they intended to use the content in practice as interns. Subjective responses indicated that workshop content ought to be incorporated earlier in medical training. Discussion: These results suggest that a 60-minute workshop including didactic instruction as well as experiential and inquiry-based learning can impact medical student knowledge and intent for practice change in regard to providing safe transitions of care for the patient community.

Keywords
Interprofessional Education, Discharge Planning, Interprofessional Collaboration, Transitions of Care, Physical Medicine and Rehabilitation, Transition to Residency

Educational Objectives

By the end of the workshop, learners will be able to:
1. Describe the management of rehabilitative services in various settings.
2. Report basic characteristics of the various rehabilitation settings.
3. Identify common durable medical equipment in order to recommend correct devices and ensure safety for patients.
4. Match appropriate discharge recommendations to care settings that meet the unique needs of each patient.

Introduction

Safe transitions of care are an essential component of safety and quality. In recent years, rising costs have placed increased emphasis on the importance of reducing avoidable hospital readmissions. Furthermore, patient-centered care is a high priority for physicians. Therefore, the ability to identify the most appropriate discharge setting for patients is a crucial performance skill that physician trainees need to begin to demonstrate. Despite a call for action by the Liaison Committee on Medical Education to elevate the level of content covering rehabilitative care (standard ED-13) and interprofessional communication (standard ED-19) within medical schools, many students do not receive adequate instruction, if any, about concepts of rehabilitation and discharge dispositions across the continuum of care. This is problematic as new interns are commonly required to provide timely and appropriate discharge recommendations.
Additionally, new interns are faced with weighing the balance of honoring patient autonomy versus risk avoidance and patient safety. Discharge skills workshops have been shown to be beneficial for medical students.\textsuperscript{3,6-9} Prior publications have also demonstrated the advantage for residents of workshops on discharge summaries\textsuperscript{10}; however, due to the crucial patient impact this information has, there is a need for imparting it earlier in physician training, at the level of medical student education. It is essential that medical students be exposed to the various discharge settings early on in their academic education to be optimally prepared for residency. To date, productive medical student discharge planning workshops have been conducted emphasizing patient-to-provider communication,\textsuperscript{11} and the use of case-based instruction with clinical vignettes has been shown to be successful in illustrating the challenges for determining the most appropriate care setting for patients upon discharge.\textsuperscript{12} The current publication describes the session activities and instructional materials for a 1-hour workshop for fourth-year medical students on discharge planning and rehabilitative care. The session was led by an occupational therapist at a single-center teaching hospital serving as a clinical campus for a university medical school.

In our required 2-week Transition to Residency (TTR) course, the objectives aimed at meeting the multifaceted needs of our fourth-year medical students related to competency and comfort level with various aspects of patient care and professional behaviors. In response to student feedback and personal experiences as both a former practicing occupational therapist and current academic medical educator, this workshop was developed. The initiative was deemed quality improvement by the NYU Winthrop Hospital Institutional Review Board on March 2, 2018.

**Methods**

The workshop began in a classroom set up with four rows of rectangular tables, with four chairs on a single long side of each table, so that all chairs were facing forward. In the front of the room were a smart board and podium that the students were directed to in the beginning, didactic portion of the workshop. The first 15 minutes of didactic instruction constituted an overview of the various discharge settings that interns can recommend (Appendix A). Particular emphasis was put on the requirements for a patient’s activity tolerance, need for skilled services versus dependence on maintenance care, and potential for return to prior level of function, as these were core elements that new interns needed to be adept in identifying.

Next, the students were provided with opportunities for experiential learning, for which they received assistive devices borrowed from our occupational therapy department, such as a sock aid, dressing stick, and reacher. The students were then asked to guess what each device was indicated for and if they could demonstrate how to use it. Students also had opportunities to manipulate and resize a rolling and standard walker, as well as a single axis cane and a quad cane; these were all borrowed from our physical therapy department. It was emphasized to students that our patients expect a lot from their providers and that, in order to give the best care, providers need to recognize if a patient’s cane or walker is not at the appropriate height or if the patient has weakness and decreased joint range of motion and could benefit from an occupational or physical therapy consult to demonstrate use of lower extremity dressing devices. The instructor of this course at this institution is an occupational therapist and was both qualified for and comfortable with teaching this portion of the workshop. For institutions that do not have access to partner with an occupational or physical therapist to coteach, a detailed resource sheet has been provided to outline the identity, indications for use, and purchase options for the assistive devices used in this workshop (Appendix I).

The workshop closed with case studies and group learning (Appendices B-H). The students broke into teams of five to six, discussed fictional patient scenarios, and determined the most appropriate discharge setting for the patient in each case. Within these case studies, the importance of the patient’s physical environment at home, the family/caregiver situation, and the life roles the patient was fulfilling that
influenced discharge plans were highlighted. This approach of using cases for inquiry-based instruction has been shown in medical education and other health professions training to be successful in inducing a deeper sense of learning, spanning from knowledge retention to actual changes in patient outcomes. Furthermore, this approach has been used in medical education related to discharge planning.

The students then completed self-rated paper summative evaluation forms (Appendix J) that asked them about the following outcomes: generation of new knowledge and intent to use workshop content in practice as an intern. The last item on the evaluation asked students to provide any comments or feedback to the instructor about the workshop and ideas for future sessions. The decision to use paper evaluation forms was driven largely by the small number of students in the workshop and the desire to retain the self-rated student outcomes in a timely matter. However, future facilitators of this workshop may consider using an electronic survey for a summative evaluation. For an outline of the workshop, please see the Table.

| Table | Outline of Workshop |
|-------|-------------------|
| Minutes | Instructional Method | Anchoring Subject | Specific LO |
| 0-15 | Didactic instruction | Discharge settings | Requirements for admission; patients' activity tolerance (LOs 1, 2) |
| 15-30 | Experiential learning | Assistive devices | How to manipulate and adjust for patients' needs (LO 3) |
| 30-50 | Case examples | Clinical scenarios | Determine appropriate discharge setting (LO 4) |
| 50-60 | Questions, summative evaluations | | |

Abbreviation: LO, learning objective.

Results

Twenty-two fourth-year medical students in total attended this workshop. The reaction from students was overwhelmingly favorable, both to the course content and to the educational experience. Learner feedback was positive; all 22 students (100%) stated that they had learned something new and that they intended to use the workshop content in practice. This latter finding is promising as it has been shown that intent to change practice correlates with actual behavior change and transfer to practice. The finding is thus consistent with prior publications where instruction on care transitions led to advances in self-efficacy in facilitating them.

Subjective feedback concerning intent to apply the workshop content to practice included sentiments about using the content to interact with team members more and make group decisions: “I will use the advice to interact with my team and tackle things together.” As for subjective feedback relating to the workshop objectives to describe management of services and characteristics of each rehabilitation setting, sentiments were generally favorable about the interactive component, particularly the case examples and discussions: “Interactive,” “enjoyed the cases,” and “helpful in giving students perspective and different discharge options.” Most of the subjective feedback provided by the students pertained to the workshop objective concerning identification of common durable medical equipment and assistive devices and included comments that this portion was very helpful and useful: “It was very useful to learn about assistive devices.” Finally, some subjective feedback pertained to the timing of the workshop in the larger scheme of our medical education program and recommended that it be integrated earlier in the curriculum: “I value this education and think it should be integrated earlier in med school.”

Discussion

This workshop achieved its purpose of providing medical students transitioning to residency with an overview and guide to the management of rehabilitation services and the characteristics of each in their respective settings. Additionally, the workshop was successful in giving students the opportunity for experiential learning by having ambulatory and assistive devices available in the classroom for them to see and manipulate. Finally, the case examples were an excellent way to aid the students in critically
thinking about how to determine a safe and appropriate discharge plan for the patient in each scenario. The curriculum in this workshop lends itself well to promoting the importance of seeking interprofessional collaboration, and the timing of the delivery of this workshop as medical students are transitioning to be interns is optimal for highlighting this. This publication builds upon prior published literature on discharge planning and care transitions education for medical students\textsuperscript{6,7,9-12} and contributes to the knowledge base in this important aspect of medical training.

This workshop will be continued as part of the TTR curriculum in our undergraduate medical education program. The students' comments regarding their desire for this information to be offered earlier in academic training will be considered, with efforts made to increase opportunities for students' exposure to and involvement with interprofessional care coordination. This can be done via 1:1 observations and team rounding during the clerkships with nursing, social work, physical and occupational therapy, and case management. Finally, prompted by the students' feedback, consideration will be taken within the basic science curriculum to add more case scenarios with indications for assistive devices and the criteria for acceptance to the range of discharge settings in order to facilitate students' thinking about these common clinical scenarios while they are in their basic science training.

Some lessons learned from implementing this workshop relate to the case content, particularly in regard to patient populations. As the case examples in the workshop dealt primarily with geriatrics and adult physical rehabilitation, more than one learner indicated that they would like to hear more about pediatric cases, and so, this will be taken into account in future workshops. Other institutions looking to implement this workshop should consider providing case examples representative of the entire patient population that they serve. Additionally, since this was the first time that the workshop was taught, there was no prior feedback from other learners in earlier cohorts to gauge what aspects of the workshop would be deemed more favorable. For this workshop, the assessment form was issued after its completion. Instructors at other institutions may want to consider attempting some formative assessment of the students that could be given and perhaps completed electronically a few days before the workshop to establish a solid baseline of knowledge and familiarity with the various discharge dispositions. Finally, a limitation of this resource is that the evaluation is not standardized and is perception-based on the part of the student. To strengthen the evaluation data, more robust scales with questions pertaining directly to the learning objectives are recommended.

This workshop can be easily replicated in any hospital/academic setting. The resource needs are simple: a classroom with an overhead monitor or smart board to display the slides, ample room to have the durable medical equipment and assistive devices, and enough space for the students to break into small groups for the case studies. Other institutions may consider having an occupational or physical therapist coteach the workshop in order to provide background expertise that could be beneficial in addressing the range of questions that may arise among the learners. Given the fact that discharge planning is a common aspect of a physician's day-to-day duties, it is recommended that this workshop be implemented across all institutions that have a designated course for medical students transitioning to residency.

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Ethical Approval
NYU Winthrop Hospital Institutional Review Board approved this study.

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