Original Publication

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Essentials of Ambulatory Care: An Interprofessional Workshop to Promote Core Skills and Values in Team-based Outpatient Care

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Citation: Borman-Shoap E, King E, Hager K, et al. Essentials of ambulatory care: an interprofessional workshop to promote core skills and values in team-based outpatient care. *MedEdPORTAL*. 2018;14:10714.

https://doi.org/10.15766/mep_2374-8265.10714

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Abstract

Introduction: Team-based, interprofessional approaches to outpatient care are critical to high-quality patient care. However, few specific educational interventions promoting these skills in graduate level health care trainees have been described to date. **Methods:** University of Minnesota faculty from the Schools of Medicine, Pharmacy, and Nursing created an interprofessional workshop experience exploring core concepts in outpatient care for graduate level trainees in pediatrics, family medicine, medicine-pediatrics, internal medicine, graduate-level nursing, and pharmacy. We focused on four key content areas: teamwork, systems thinking, the patient-centered health care home, and patient-centered communication. The workshop included brief didactics, role-plays, team-based experiences, and interactive skill practice. Participants completed an end-of-day survey reflecting on knowledge and attitude. **Results:** From 2014-2017, nine workshops reached 305 trainees. Survey results from the 2015-2016 academic year are representative of our overall results and revealed that learners found the content high yield, and that they valued the opportunity to learn with their interprofessional colleagues. Improvements in perceived knowledge were noted in all domains. Trainees also reported increased skills, with 81% reporting both increased confidence in working within the interprofessional team, and change in attitude, and 90% reporting increased interest in working with their interprofessional colleagues after the workshop. **Discussion:** Creating an opportunity for postgraduate level trainees from a variety of disciplines and professions to convene and focus on interprofessional team-based skills can fill a gap in interprofessional learning as they enter practice. Trainees were able to draw on their everyday experiences and find common ground with their interprofessional colleagues.

Keywords

Communication, Teamwork, Interprofessional, Internal Medicine, Family Medicine, Outpatient, Pediatrics, Interdisciplinary, Primary Care, Pharmacy, Systems Thinking, Patient-Centered Health Care Home, Advanced Practice Nursing

Educational Objectives

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

1. Define the characteristics of effective teams.
2. Compare and contrast the roles of various team members in the outpatient clinic setting.
3. List the elements of the patient-centered health care home.
4. Apply systems theory to the design of an outpatient clinic space to meet the goals of the Triple Aim.
5. Deploy the Patient-Centered Observation Form to enhance patient-centered communication skills.

Introduction

The Essentials of Ambulatory Care (EAC) workshop was the result of a 2013 national collaborative, based on the Primary Care Faculty Development Initiative (PCFDI), a national Health Resources and Services Administration-funded initiative created to improve primary care teaching across family medicine, internal medicine, and pediatrics residency programs in the United States.^{1,2} At the University of Minnesota, we

Appendices

- A. Facilitator Guide.docx
- B. PowerPoint Presentation .pptx
- C. Administrative Tasks.docx
- D. Workshop Agenda.docx
- E. Team Quiz and Discussion .docx
- F. Morning Huddle Exercise .docx
- G. Morning Huddle Exercise Stickers.docx
- H. Team Communication Conflict Scenarios.docx
- I. Communication Tools Handout.pptx
- J. Patient-Centered Observation Form.pdf
- K. Role-Playing Exercise.docx
- L. End of Day Reflections Worksheet.docx
- M. Workshop Evaluation.docx

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

chose to involve pharmacy residents and doctor of nursing practice (doctoral level nurse practitioners) students in our collaborative, to expand the reach of the program and advance an interdisciplinary, interprofessional team approach. In reviewing the previous typical curriculum of our incoming graduate level learners, we recognized that many trainees had been exposed to some key concepts in interprofessional teamwork and outpatient care. However, our faculty identified that many of our trainees were not familiar with the essential components and theory behind the delivery of effective primary care such as teamwork, role definitions, patient-centered medical home principles, systems theory, and patient centered communication skills. Trainees also identified for themselves, via focus groups during a PCFDI site visit, that they lacked content knowledge in these key areas, and that they struggled with time management during an outpatient clinic session, as well as panel management in between office visits.

The hands-on clinical work and increased responsibility that our graduate level medical learners experience allows them to revisit these content areas through a new lens and with a better idea of how they will immediately apply new concepts in their work. To facilitate this, the University of Minnesota faculty developed a one-day workshop for postgraduate trainees, borrowing content from the train-the-trainer sessions hosted by the PCFDI in May of 2013.³⁻⁷ In addition, we built on the existing family medicine experience of using the Patient-Centered Observation Form (PCOF) to teach their residents patient centered communication skills.^{8,9} We performed a literature search and identified other key resources, including recent work in the development of the Patient-Centered Health Care Home (PCHCH), teamwork, as well as interprofessional competencies and entrustable professional activities as originated by educational leaders in these areas.¹⁰⁻¹⁴

Other *MedEdPORTAL* resources also shed light on possible approaches, including the work of Chou and DeVries,¹⁵ and Lu, Goolsarran, Hamo, Frawley, Rowe, and Lane¹⁶ using simulation to assess and teach interprofessional teamwork. Their publications focused on simulating the interprofessional team, whereas our sessions were designed to include current trainees from all of the programs. Durham's *MedEdPORTAL* publication, as well as the recent work of Phillips described high quality interprofessional primary care curriculum.^{17,18} However, their work focused on the undergraduate level of health professions training, while our workshop was designed for graduate and postgraduate level trainees.

Once the materials and presentations were fully developed, our faculty were assigned to coteach and facilitate the workshop with this role eventually expanding to include previous learners as cofacilitators. We had a core group of six to eight faculty who were the lead presenters and met on a monthly basis to plan for workshops, review survey results, and coordinate timing for upcoming sessions. We have been fortunate to receive administrative support from our Academic Health Center's 1Heath Interprofessional Team in conducting this work.

Methods

Starting in the 2014-2015 academic year, we hosted a day-long workshop at the University of Minnesota Academic Health Center for learners from the pediatrics, internal medicine, medicine-pediatrics, family practice, nurse practitioner, and pharmacy residency training programs. Trainees were excused from their other clinical duties to attend the workshop. We hosted the same workshop three to four times each academic year to accommodate trainee attendance despite their busy schedules. We have now hosted the workshop a total of nine times, reaching a total of 329 trainees (99 nurse practitioner graduate students, 67 internal medicine residents, 24 family medicine residents, 24 medicine-pediatric residents, 46 pediatric residents, and 69 pharmacy residents). Initially, the workshops were led by the faculty who developed the materials, but we have now included previous attendees who are now advanced level learners as facilitators for workshops as well.

The facilitator's guide (Appendix A) for workshop includes all of the materials needed as well as content and a detailed flow for the workshop. The guide has explicit speaker notes for the PowerPoint presentation (Appendix B) as well as other necessary instructions. Also included is the administrative tasks

document (Appendix C) which outlines how to set up the workshop from start to finish, and the presenter version of the EAC Workshop agenda (Appendix D) which includes details on which handouts go with which section, which slides correspond with each section, and more.

We arranged for the number of attendees to range between 25 and 40 for each session to allow for small-group work. We used a classroom with tables to promote discussion among groups. We had access to a projector as well as whiteboard space.

We specifically designed the workshop to incorporate active learning elements whenever possible, including role-play, quiz followed by team-based discussion (Appendix E), brainstorming sessions, group activities such as the design of an exam room, and opportunities to discuss cases in pairs or groups. We separated the workshop into three main sections, described in detail below.

Interprofessional Teamwork, Communication, and Conflict Management

This section of the workshop focused on an interactive approach to exploring the roles of various interprofessional team members as well as hands-on practice with communication tools useful during times of conflict. We began with the quiz/team-based discussion to help the learners explore together what they understood about each other's training and scope of practice.

After the quiz/ team-based discussion, trainees participate in a role-play activity (Appendix F) in which each person played the role of a different team member in an outpatient clinic. The goal of the role-play was for the team to have a morning huddle and plan care for the patient. We highlighted the importance of respectful communication and including all team member by placing a sticker (Appendix G) on each participant's forehead which directed other members of the scenario how to regard their input to the team. After the role-play, we debriefed with the learners about how it felt and how the role-play mirrored real-life scenarios they had been a part of in their daily clinical work.

After the clinic huddle role-play, we moved into a discussion of the role of standardized communication and conflict management. Learners again worked through role-plays (Appendix H) to help them practice using standardized communication tools (Appendix I).

PCHCH and Systems Thinking

We then moved into a section of the workshop where we reviewed the model of the PCHCH and introduced the systems thinking approach to health care delivery. We started the first portion of this section with an interactive brainstorm session on what it meant to provide patient-centered care, with participants volunteering examples from their own experience. We then led the trainees in exploration of broad definitions and concepts relating to PCHCH including the National Committee for Quality Assurance standards, as well as competencies and entrustable professional activities for medical residents.

After reviewing the core elements of the PCHCH, we moved into a section on systems thinking, beginning with a review of the Swiss Cheese model to approaching a medical error, which is a familiar concept to many and serves as an introduction to systems thinking. We then invited the learners to consider the patient examination room and its design as a model of systems thinking. We instructed the learners to sketch and then present their version of the exam room for discussion, and reinforced the concept of systems thinking via active learning. We concluded the section with a broader review of the design of an entire clinic, and a broad overview of a patient entering and progressing through the outpatient system of care.

Patient-Centered Communication

We focused the final portion of the workshop on defining, observing, and practicing patient-centered communication skills via the validated teaching tool, the PCOF (Appendix J). After introducing both formal and informal definitions of patient-centered communication, we reviewed the PCOF with the learners and had them pilot it using the form through role-play exercises (Appendix K). We focused on teaching the

learners about time management during the office visit, including the skill of agenda setting at the start, the art of polite interruption in the middle, and the technique of cocreating a plan to close the visit.

We closed each workshop with protected time for learners to write down some brief reflections of the day and then invited them to share their reflections with the group. The end-of-day reflections worksheet (Appendix L) outlines this part of the exercise.

After each workshop we had learners complete an online survey (Appendix M) with a combination of quantitative and qualitative elements, including reflection on their knowledge, skills and attitudes both before and after the workshop. We reviewed the results of the survey after each workshop and used it to adapt the sessions in an iterative fashion.

Results

During the 2014-2015, 2015-2016, and 2016-2017 academic years, we hosted a total of nine full-day workshops for learners at the graduate and postgraduate level from family medicine, internal medicine, internal medicine/pediatrics, advanced practice nursing, pediatrics, and pharmacy training programs. Number of learners at each workshop ranged from 24 to 51, with an average of 36 attendees per session. Each session had learners from each field represented. A total of 329 learners have participated in the workshops from 2014-2017.

The sessions were facilitated by faculty from each of the programs represented, with the addition of advanced level pharmacy trainees as facilitators for the sessions in 2015-2016. The advanced level pharmacy trainees had no prior knowledge of the workshop content and were able to successfully step in and lead portions of the workshop. Over the course of our workshops, we have had a total of 12 different facilitators with varying levels of experience.

We used the same postworkshop survey after each session, with only slight modifications. The results from our 2015-2016 cohort are representative of our typical postworkshop survey results, 75 out of 111 (68%) of trainees completed the online postworkshop survey in that year. We asked learners about their knowledge, confidence in their skills after the workshop, and attitudes toward interprofessional teamwork and outpatient care.

Knowledge

After the workshop, participants were asked to rate their level of understanding on a 5-point Likert scale (1 = *Very Poor*, 5 = *Very Good*) in each of the core concept areas listed below prior to the workshop and after the workshop (Table).

Table. Learner Pre-/Postworkshop Levels of Understanding Across Core Concepts (N = 75)

Core Concepts	Preworkshop ^a		Postworkshop ^a	
	M	95% CI	M	95% CI
Team-based care	3.91	3.77-4.04	4.45	4.33-4.57
Standardized communication techniques (e.g., SBAR)	3.76	3.53-3.99	4.40	4.27-4.53
Patient-centered health care home	3.33	3.12-3.54	4.07	3.92-4.22
Patient-centered interviewing	3.68	3.51-3.85	4.39	4.27-4.51
Systems thinking in patient-centered care delivery	3.35	3.15-3.55	4.04	3.90-4.18

Abbreviation: SBAR, Situation, Background, Assessment, Recommendation.

^aFive-point Likert scale (1 = *Very Poor*, 5 = *Very Good*).

Confidence in Skills

Sixty-one out of 75 (81%) learners agreed or strongly agreed that “meeting with other members of the health care team at this workshop has increased my confidence in working interprofessionally.” A majority of attendees reported that after the workshop they would use the following workshop concepts in their practice most often or always: team-based care (98.7%), patient-centered interviewing (98.7%), standardized communication techniques (93.3%), systems thinking in patient-centered care delivery (86.7%), and patient-centered health care home concepts (85.3%).

Attitude

Sixty-four out of 75 (90%) learners agreed or strongly agreed that meeting with other members of the health care team at this workshop increased their interest in interprofessional collaboration.

Discussion

Our local primary care faculty have now presented several Essentials of Ambulatory Care workshops to trainees at the University of Minnesota. Generally, learners view the one day workshop as a positive experience. Gains were highest in the knowledge and content areas of systems thinking and patient-centered interviewing, particularly around agenda setting and the art of interruption. Active learning such as role-play and case-based discussions were viewed as positive features. These cases and activities could be modified for the intended audience and/or to emphasize specific learning points. We presented the workshop as a full day session, but it could also be delivered as a three-part series.

Faculty and trainees alike have commented on the strength of gathering together different disciplines and different professions in the same room. Simply observing the interactions, particularly around role definitions and teamwork discussions, has been particularly powerful. Further, having each discipline also discussing their approach to primary care—many similarities, some differences—means that trainees can learn from one another and share ideas, as well as gain new insight and a new respect for what their colleagues are doing. Faculty also enjoyed the roles of presenter and facilitator, having found the material to be interesting and engaging.

From a logistics standpoint, the most difficult piece of organizing and implementing an interdisciplinary, interprofessional workshop is scheduling. Each department and discipline has its own academic calendar resulting in opposing schedules. The five training programs needed to avoid key times of the year such as recruitment and new trainee orientation. Having dedicated administrative support, and scheduling the workshops well in advance will help address this barrier.

Our work does have limitations. One limitation is that hosting a single day workshop as a one-time experience may not be enough to reinforce changes in knowledge, skills, attitudes, or behaviors over time. Additionally, we do not have follow up data to determine if our workshop leads to long term changes in knowledge, skills, or attitude. Our current results are based on the perceptions of learners at the end of the workshop day. Future study should include a follow up survey of trainees at a period of time after the workshop has been completed.

Future Directions

A future opportunity would be to seek out areas where this material can be merged and interleaved with other curriculum over several years of training. This may include additional, more in depth teaching sessions for higher level trainees, site-specific continuity clinic projects, and/or specific pathways designed to assist trainees whose interest is primary care.

Additionally, as a corollary to this workshop, three of our training programs (pharmacy, internal medicine, and nurse practitioner) have begun to use the PCOF in the clinical settings. Since our participating family medicine residency program has already been using the PCOF for several years, this will open up areas for future study to see if the skills being taught at the workshop are put into practice.

Another recommendation is to seek out collaborators across disciplines and to span the undergraduate and graduate medical education continuum. We plan to include social work graduate students in future years. Not only will this enable the sharing of resources and expertise, but will provide unique perspectives and opportunities for engagement and interleaving. This will strengthen learning while also increase the appreciation for both teaching and upholding primary care at large academic health centers,

which often tend to be subspecialty driven. It is our expectation that this workshop will serve as a way to bring key faculty together around this important issue and serve as a way to support a collaborative interprofessional learning environment.

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Acknowledgments

The Interprofessional Minnesota PrimAry Care Team (IMPACT) would like to gratefully acknowledge the crucial contributions made to the development of this workshop by numerous individuals across the University of Minnesota, including the Associate Deans of Education, the facilitators, and especially the learners who have participated in the workshop. We additionally wish to thank the Primary Care Faculty Development Initiative, supported by ABIM, ABP, and ABFM, the Macy Foundation, and the Health Resources and Services Administration, for providing the impetus for our collaboration. Finally, we also would like to thank the 1Health Team and the AHC Office of Education at the University of Minnesota for providing operational support for the workshop.

Disclosures

None to report.

Funding/Support

None to report.

Informed Consent

All identifiable persons in this resource have granted their permission.

Prior Presentations

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Ethical Approval

Reported as not applicable.

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Received: December 12, 2017 | Accepted: April 12, 2018 | Published: May 4, 2018