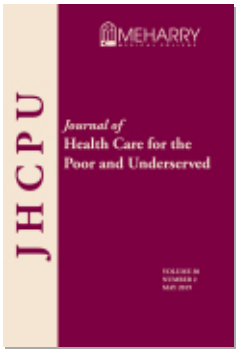
A Mobile Clinic Care Coordination Program: Enhancing Patient Care with Innovative Roles for Undergraduate Students



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Journal of Health Care for the Poor and Underserved, Volume 30, Number 2, May 2019, pp. 510-518 (Article)

Published by Johns Hopkins University Press

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Summary: The University of Florida Mobile Outreach Clinic's Care Coordination Program uses trained undergraduate volunteers to provide vital services; these include patient intake, recording vital signs, scribing first drafts of clinic notes, and making follow-up phone calls. The program and its benefits are replicable as demonstrated by our systematic implementation plan.

Key words: Mobile clinic, care coordination, volunteer, undergraduate students, underserved community.

Care coordination, increasingly recognized as an effective component of health care delivery, allows members of health care teams to work together to benefit the patient.[1] In traditional care coordination models, the care coordinator (CC) role is assigned to the primary care physician or nurse.[2–5] However, with increased pressure

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for providers to see more patients in less time, some clinics have trained volunteers to fulfill important clinic functions, providing both cost-savings and education.

Current literature describes limited roles for undergraduate students in health clinics, including the University of California Berkeley Suitcase Clinic, the University of California Los Angeles Mobile Clinic, and the Albert Einstein College of Medicine Community Health Outreach Clinic.[6–8] These clinics train undergraduate students for roles similar to those of medical assistants. Duties may include conducting standard intake procedures and observing graduate students and physicians without emphasizing long-term relationship cultivation and patient follow-up.[9–11]

In addition to care coordination programs, mobile clinics have become more common in delivering accessible and affordable care to vulnerable communities. According to the Mobile Health Map,[12] an estimated 2,000 mobile clinics nationwide provide seven million or more visits annually.[13,14] The University of Florida (UF) combines these trends, creating a care coordination program for patients in a mobile clinic setting that meets the needs of vulnerable populations.

At the University of Florida Mobile Outreach Clinic (MOC), undergraduate students not only conduct standard intakes, but also scribe the first draft of clinic notes and make follow-up phone calls, serving as liaisons between patients and medical providers. Relationships between patients and care coordinators (CCs) assist patients in overcoming barriers to accessing needed social and health care services. This report describes the history of the MOC and outlines the Care Coordination program framework, which is centered around the undergraduate volunteers who are vital to the sustainability of the program.

History: University of Florida Mobile Outreach Clinic

The MOC started in 2010, after faculty at the UF College of Medicine performed a study of health care disparities using hotspot mapping in Gainesville, FL. Through collaboration with the Alachua County Commission, Palms Medical Group (a federally qualified health center, which provided a nurse practitioner to the clinic), the library system, and the Legal Aid Society, the clinic started to bring health care directly to vulnerable neighborhoods.[15,16]

The clinic was initially staffed by undergraduate volunteers (not serving as CCs at the time), a clinic assistant, a registered nurse manager, and volunteer medical providers. As the undergraduate students returned year after year to the clinic, their training and skills expanded. A Masters in Public Health student evaluated the program for her thesis and recommended expanding the undergraduate role to include care coordination. This recommendation arose after observations that some patients returned to clinic with unresolved complaints because of barriers (e.g., finances, transportation, operational hours) that impeded their attempts to follow the recommendations and treatment plans of medical providers.

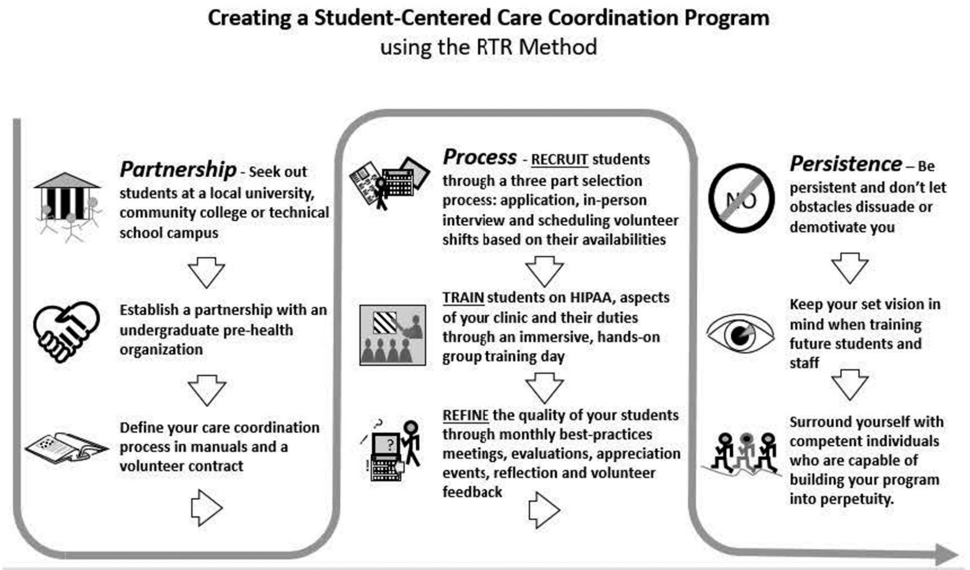

Figure 1. RTR (Recruit, Train, and Refine) method infographic. Developed by Yunfai Ng (former Volunteer Coordinator) and Sherice Stewart (Clinic Administrator).

Care Coordination Program

In 2012, the MOC Care Coordination program formalized volunteer selection, training, and leadership development guidelines for both the mobile clinic and the Equal Access Clinic, another medical school sponsored free clinic in Gainesville led by medical students. This structured process is illustrated in Figure 1.

Recruit

Undergraduate students at the University of Florida are eligible to apply to the MOC Care Coordination program. Information is disseminated through established relationships with existing pre-health organizations, such as Alpha Epsilon Delta and the American Medical Student Association. Minimal advertisement is required, as the clinic is well known to pre-health career students. Volunteer selection consists of two phases: application and interview. A completed application is accompanied by a resume and reference letter. Application materials are reviewed and scored by veteran CCs, under the guidance of the Volunteer Coordinator, a leadership role popular among students taking gap years between undergraduate and graduate studies. Scores are determined based on the applicant's ability to follow instructions, past volunteering experiences, and service leadership qualities. Students' previous demonstrated commitment to working with the underserved is also considered. Those with the highest scores are invited to an interview with the student leaders of MOC, which includes a hypothetical case scenario aimed to elicit demonstration of critical thinking. Applications are then ranked in descending order of combined application and interview scores. The cutoff for accepted scores varies with each application cycle, depending on the needs of the clinic, as vet-

eran CCs move on to endeavors such as medical and physician assistant school. Some of our most successful applicants have been those with demonstrated commitment to community service, previous leadership or teaching experience, and/or prior clinical exposure. The qualities one should seek in applicants include professionalism, humility, cultural awareness/competency, and capacity for growth. Our strongest volunteers are also attentive to the needs of their patients and dedicated to connecting their patients to resources so those needs can be met. Freshmen through senior students have been accepted to the program, but a good balance of talent, enthusiasm, and potential length of commitment must be considered in the recruitment of CCs.

Train

Training of CCs is essential and is repeated each semester for volunteers. Training consists of a day-long orientation, workshop series, and day-to-day peer-assisted learning. Topics include HIPAA and confidentiality regulations, patient intake and vital signs, basic medical terminology and transcribing, use of the electronic medical record, a tour of the clinic bus, and orientation to educational materials and community resources. Care Coordinators also role-play to develop communication skills, cultural humility, and the demonstration of empathy.

Refine

The third and final step in the method focuses on quality improvement of the individual CC performance and overall program operations. Volunteer performance is assessed by volunteer faculty, administrative staff, and student leaders. The CC program utilizes multiple approaches for quality improvement, including monthly best-practice seminars called Huddles. Attendance at Huddles is compulsory as they facilitate a culture of commitment to continuous improvement, while freeing CCs to share their creative ideas. After providers and administrative leaders consider volunteer input, updates and feedback are provided to CCs. In addition, MOC invites community leaders to speak on health topics affecting our patients.

Impact and evaluation reports provide qualitative assessment of two areas of the program: patient satisfaction and student reflection. Care Coordinators conduct end-of-visit surveys with each patient to ensure that the clinic addressed all concerns and the visit was satisfactory. Patients continually demonstrate and express their gratitude for attentive and professional CCs and the services of the clinic. They seldom complain, but on the rare occasions they have, patients were frustrated by the lengthy clinic wait times, never by any CCs. Patients whose schedules prevent them from waiting for our services are advised by CCs to arrive before our clinic opens or directed to our other clinic sites that are historically less visited with shorter wait times. Student volunteer experience is assessed at the end of each semester through a Reflection, Experience, Assessment, and Plan essay submitted to administrative leaders. In these essays, CCs describe the impact the clinic has had on them, and formulate a plan for future patient interactions and health care practice.

Care Coordinators: Duties and Responsibilities

Because the clinic offers both screening and primary care visits, the role of the CC varies. Figure 2 details the clinic flow and duties of CCs for each route of care.

During primary care encounters, the patient is evaluated by a prescribing clinician. These encounters, addressing physical and mental health concerns, include physical examination, urgent care, and/or chronic disease management. The health screening encounter focuses on health education and may include testing blood pressure, blood glucose, and STI/HIV status.

The following week, CCs perform follow-up phone calls with their patients, following guidelines that safely restrict the nature of advice provided. Students are trained to refer medical questions to the clinic nurse or other licensed medical provider. Also at this time, the CC reviews notes from the clinic visit to determine the recommended health behavioral interventions (e.g., increase fluid intake, increase exercise, stop smoking), to shape their follow-up call.

The relationship between low socioeconomic status, its associated barriers, and poor health behaviors is well supported empirically,[17,18] thus CCs are trained to help patients overcome some of these barriers. Motivational interviewing techniques are used to assess readiness to change unhealthy behaviors, and if patients verbalize a willingness to change, CCs will continue to follow up with the behavioral change. Care Coordinators facilitate goal-setting with patients, supporting and empowering them to make positive

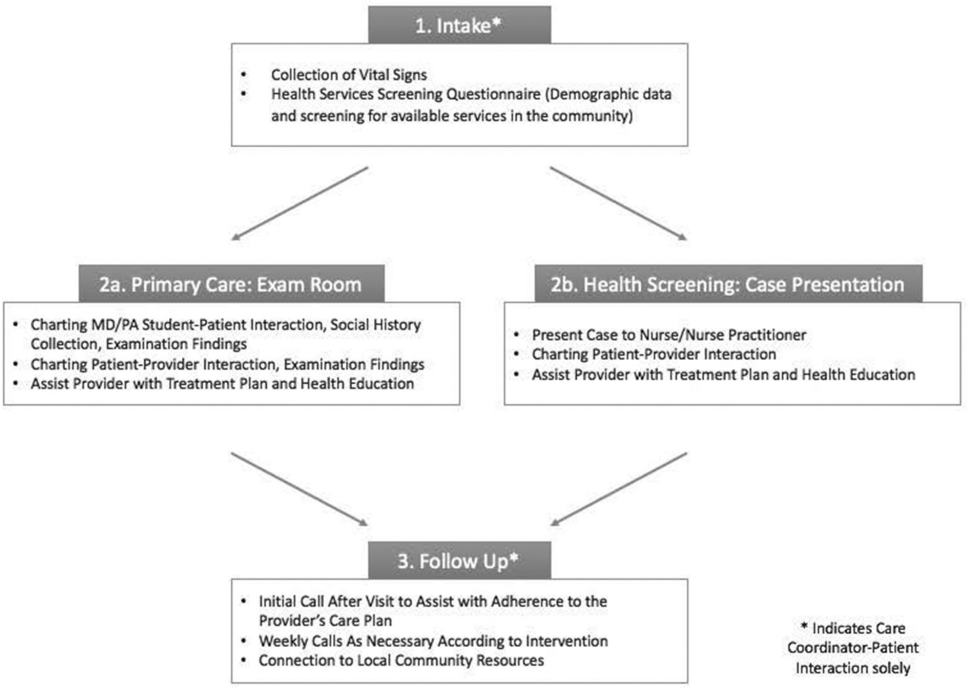

Figure 2. The clinic flow and Care Coordinator duties of primary care and health screening encounters.

lifestyle changes. Care Coordinators also offer referrals to local service providers and assist with overcoming transportation and telephone barriers.

As the Care Coordinator program evolved, a student leadership position called the Lead CC was developed to provide peer support and onsite assistance. Lead Care Coordinators supervise the regular CCs at every clinic session. They also provide information about community resources, help manage patient flow, and assure completion of necessary records and paperwork. Lead Care Coordinators are trained to perform point-of-care laboratory tests such as HbA1c measurement and dipstick urinalysis.

One of this model's limitations is the CCs' level of training. Care Coordinators are trained not to provide medical advice or to answer medical questions, but instead to refer patients to a medical provider. They are trained not to ask for medical history or to ask leading questions that may bias the patients' reporting of health behaviors. They do not perform physical examinations, and only those trained and certified by the Health Department perform HIV and STI testing. Another necessary precaution was safeguarding against HIPAA violations—CCs are educated on privacy protocols, restricted to clinic computers for their work, required to update their HIPAA privacy training yearly, and reminded of privacy regulations weekly.

Another barrier we faced throughout the implementation of our care coordination model was the limited availability of CCs because of their rigorous school schedules. Early on in our program, we experienced difficulty with full shift coverage because of conflicting clinic and university exam schedules. It took a few hectic clinic shifts for us to implement a shift-swapping protocol that allowed for a healthy compromise between the CCs' education and the patients' wellbeing.

Discussion

Traditional clinics providing care to the underserved often face sustainability challenges. Undergraduate volunteers trained to serve as CCs help overcome some of these barriers by serving as a long-lasting, cost-effective resource for the clinic and its patients. We have found that undergraduate volunteers develop loyalty and sustained commitment to the clinic and their patients. Since the CC program's inception, more than 250 CCs have been trained with an average duration of volunteer service of four hours a week for 33 weeks. Currently, the clinic relies on 50 active undergraduate volunteers each semester. What the clinic gains from the program is a never-ending pool of enthusiastic, bright, and motivated volunteers who do not require salary support. The patient satisfaction surveys indicate that CCs are well accepted as part of the health care team, with patients often providing anecdotes indicating how helpful CCs have been.

What undergraduate volunteers wish to gain from the program is a genuine interaction with patients and an understanding of health systems and policy. As a bonus, they get opportunities for leadership, gain life-changing experiences in cultural humility, and develop extraordinary skills to recount while applying to health professions schools. Letters of recommendation are provided by faculty who are licensed health professionals.

Some of the CCs matriculate into UF's graduate health programs and benefit from their experience with vulnerable populations in their interviewing skills and through patient interaction. Anecdotally, we have learned that students who interview at other

graduate universities often "jump out of the pile" and gain admission to schools who ask them for details of the program at UF.

The clinic benefits from consistent assessment of patient barriers to health care and updating of local resource information. Additionally, CCs transcribe the first draft of clinic notes on the electronic record. This allows the provider to direct full attention to the patient, leading to a higher quality of care and better patient satisfaction.[19,20] Additionally, through the strength of their relationships with patients, the CCs can bring issues that arise between visits to the provider's attention. Because of the trusting relationships that have formed between patients and CCs, patients have been able to obtain corrective eyeglasses, transportation waivers, and legal assistance, among many other services.

The success of our program depends on the willingness of our licensed providers to render ongoing feedback to CCs in the spirit of continuous improvement. The CC program success also depends upon a continuous high level of peer training and monitoring.

There are few concerns of litigation related to CCs, as every part of the medical record is reviewed, corrected, and signed by the licensed provider. Our privacy protocols are designed in consultation with our privacy office. Our high number of CC applications are assured by the number of students attending a large university. Clinics affiliated directly with or located near colleges and universities could explore a similar care coordination model based on an undergraduate student partnership.

Conclusion

This paper describes a novel method of patient care in a free clinic in which Care Coordinator (CC) responsibilities are assigned to trained volunteer undergraduate students. This substantive involvement of college students within a mobile health clinic can yield benefits for the clinic, its underserved patients, and CCs themselves. Future studies will address the CCs' educational outcomes.

Disclosures

Funding/Support: None.
Other Disclosures: None.
Ethical Approval: Not applicable.

Acknowledgements

We are appreciative of Martin Wegman for his ingenuous leadership in forming the MOC Care Coordination program. We sincerely appreciate all of the MOC nursing staff, Michelle Nall, ARNP, MPH, Busanda Frost, ARNP, and Virginia Bruzzese, RN for their tireless dedication to serving the MOC and its patients. We thank our MOC administrator Sherice Stewart and clinical assistants Herbert Hughes and Jorge Herrera for their tireless work. We thank Daisy Renteria, for her assistance in providing feedback and her service as the liaison between the manuscript authors and the Mobile

Outreach Clinic. We also thank all past and current Care Coordinators whose hard work and dedication have resulted in the success of this program.

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