

## Striving for Consistency Among Change and Uncertainty: A Year of Interprofessional Student Hotspotting



Tracey Earland, PhD,  
OTR/L



Megan Hershman, MS



Samantha Burke, OTD

*\*This paper analyzes student assignments submitted between October 2019 - March 2020, prior to the COVID-19 pandemic and its implications.*

### Abstract

In Student Hotspotting, interprofessional teams provide hands-on, individualized interventions to patients with high healthcare utilization to address underlying social determinants of health (such as education, economic stability, or neighborhood safety), promote interprofessional collaboration, and reduce unnecessary hospital admissions for patients with complex health and social needs. While these patients only make up a small percentage of those hospitalized at a given moment in the United States, they contribute disproportionately to the nation's healthcare expenditures and may be hospitalized frequently. In health profession education programs, students are increasingly expected to graduate with an understanding of how to address the social determinants of health. At Thomas Jefferson University, students in the Hotspotting program are able to spend six to seven months working in interprofessional teams with one to three patients, and are trained to address factors that can improve the health outcomes and experiences of their patients. Throughout the 2019-20 program, the 16 student teams (eight Jefferson and eight from external institutions) each submitted five reflection assignments (for a total of

80 assignments) detailing how their interprofessional teamwork and patient goals were progressing. The assignments were then thematically analyzed by the researchers. After the content analysis was completed, four main themes emerged,

which students repeatedly addressed: Interprofessional Collaboration, Building Authentic Relationships, Transforming Frustration, and Maximizing Time. While these data captured just one year of student perspectives on the Hotspotting program, the reflections demonstrated how students balanced a desire for consistency in the program with the constant realities of uncertainty and change for their patients.

### Introduction

In the United States, patients with complex health and social needs make up a small percentage of the population; however, they comprise a large percentage of healthcare utilization and costs to the healthcare system (Long et al., 2017; Bates et al., 2014). Individuals in this population are likely to have comorbid conditions (often mental health or substance use disorders in addition to physical ailments), report negative perceptions of healthcare experiences (Collins et al., 2019) and be negatively impacted by factors related to the social determinants of health that strongly influence healthcare outcomes (Blumenthal et al., 2016).

Researchers have also noted the potential benefit of student collaboration in the context of interprofessional teams for helping patients to problem-solve (Bedoya et al, 2018). In an effort to generate better health outcomes for individuals with

complex health and social needs, along with lower healthcare costs, institutions are designing educational models for interprofessional care (IOM, 2015; Bedoya et al, 2018). One such model is the Interprofessional Student Hotspotting Learning Collaborative (originally developed by the Camden Coalition of Healthcare Providers) at Thomas Jefferson University. This annual program facilitates teams of interprofessional students who learn about the challenges faced by patients with complex health and social needs during their interactions with the current healthcare system. Hotspotting interventions are created in collaboration with individual patients to address their specific needs and goals; they are established over time through the development of consistent, caring relationships with patients and aim to promote patient engagement in the process. While this process avoids a "one-size-fits-all" fix, the lack of a standardized approach can be challenging for students. Prior programmatic feedback from students suggested that while they appreciate the need for tailoring interventions to individual patients, they feel they need a more structured framework to guide their efforts.

With countless variables that can alter the team experience or impact patient goal-setting throughout the year, students in the Hotspotting program have noted in assessments that they strive for consistency as a pillar of efficiency (such as a consistent time to meet with their patient or consistent progress toward a patient goal). To better understand the students' experiences with Hotspotting, we analyzed the monthly reflection assignments that the student teams wrote and submitted during their year in the program. Our qualitative look examined the uncertainties students can face in this program, as well as how they persist despite these ambiguities. These firsthand accounts can help administrators guide interprofessional and complex care curricula

CONTINUED ON NEXT PAGE

development forward, and prepare students for careers in working with complex patients.

## Background

The Interprofessional Student Hotspotting Learning Collaborative (hereafter, Student Hotspotting or Hotspotting) is an educational curriculum originally developed by the Camden Coalition of Healthcare Providers in 2014. Camden Coalition's initial efforts (by trained clinicians) with their first 36 patients back in 2007 cut hospital bills in half and ED visits by 41% in the first year (Vaida, 2017).

Thomas Jefferson University (hereafter TJU or Jefferson) has been part of Student Hotspotting since the program's inception in 2014; in 2017, TJU was selected by the Camden Coalition of Healthcare Providers, Association of American Medical Colleges (AAMC), Primary Care Progress, Council on Social Work Education (CSWE), National Academies of Practice (NAP) and American Association of Colleges of Nursing (AACN) as one of four Hotspotting Hubs in the country, allowing the program to scale up and expand its reach. Interprofessional student teams of approximately five or six members engage with one to three patients over the course of six to seven months. The Student Hotspotting program at Jefferson supports several internal teams, as well as additional regional teams each year.

In 2019-2020, Jefferson hosted eight internal teams (with 40 students and 16 advisors) and eight external teams (with 42 students and 23 advisors), for a total of 121 participants. The regional teams were students and faculty from the Geisinger School of Medicine/University of Scranton (Northeast Pennsylvania/NEPA team), Harvard University, Johns Hopkins University, LaSalle University, Rutgers University, Temple University, Uniformed Services University of the Health Sciences, and The University at Albany. Teams consisted of two to three advisors as well as five or six interprofessional students in the medicine, social work, nutrition, nursing, pharmacy, physical therapy, occupational therapy, couple and family therapy, population health, and physician assistant degree programs. Throughout the program,

students complete a Hotspotting curriculum consisting of a fall Kickoff orientation meeting, monthly "Essentials Workshops," monthly preceptor-facilitated Case Conference Calls, written assignments, team meetings, and a spring Wrap Up session. Teams also received support and direction from the student Hotspotting staff, regarding patient education materials and resources.

This paper addresses the findings of the student team-written monthly reflection assignments, including the final written assignments at Wrap Up 2020. These assignments provided students with the opportunity to discuss a variety of complex care topics, including how they identified and engaged patients, how members worked as an interprofessional team,

Interprofessional Practice and Education, conducted a research analysis of student reflections which were written in the students' own words.

The researchers utilized an inductive, conventional style of content analysis. This method is typically deemed appropriate when pre-existing literature or theory about phenomena is limited (Hsiegh & Shannon, 2005). Methodology included immersing in the data through reviewing write-ups four to five times in their entirety, reaching agreement between researchers, creating a chart to define emergent categories (e.g. communication, teamwork, etc.), grouping together like statements in categories, and coding the text for recurring themes.

After considering the overlap in topics,

two of the original five themes were consolidated, and four main themes emerged: Interprofessional Collaboration, Building Authentic Relationships, Transforming Frustration, and Maximizing Time. Figure 1 depicts the four themes and their dynamic interplay as identified by the researchers.

## Findings

With 16 student teams and five opportunities for students to submit these assignments, 80 reflection assignments were collected and analyzed.

### Interprofessional Collaboration

According to the World Health Organization

(2010), interprofessional collaboration "happens when multiple health workers from different professional backgrounds work together with patients, families, caregivers and communities to deliver the highest quality of care" (p.7). In the 2019-2020 Hotspotting academic year, students submitted periodic reflection assignments in which they referenced how working with other professions helped them see value in each profession's unique skillset and its respective contribution to improving care for the patient. A Jefferson team indicated that this interprofessional program characteristic "...allowed each of us to... see first hand [sic] how each of our training benefitted the patient in different ways." Even with setbacks or slower progress than anticipated, students

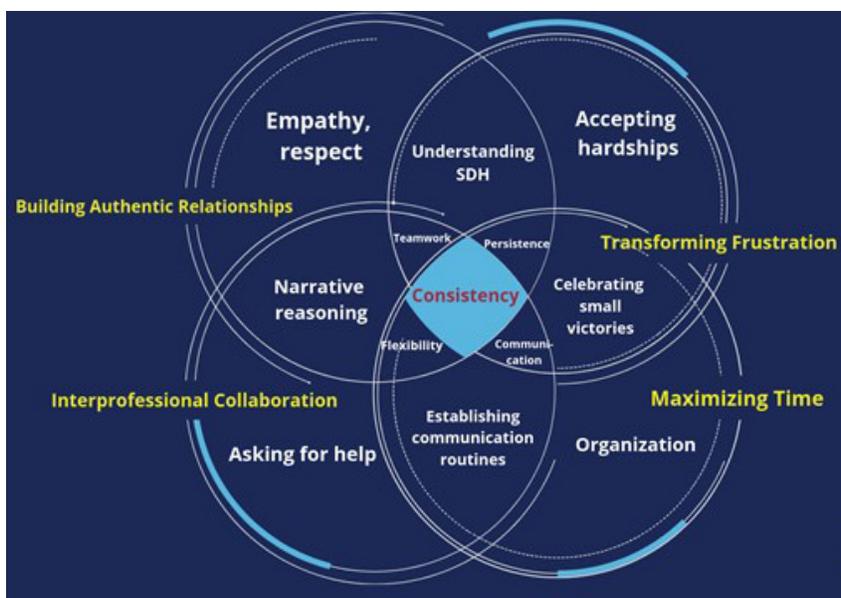


Figure 1. Student Hotspotting Themes 2019-2020

and the goals they set in collaboration with their patients. The aim of reviewing these reflection assignments was to comprehensively understand the student experience in the Hotspotting program, including successes and barriers that teams encountered. Our analysis was an effort to build upon program successes as well as change elements that may be less beneficial for student outcomes and patient care.

## Methodology

Student teams turned in their reflections for the months of October, November, December, January and March. The team of two researchers, which included a Hotspotting coordinator and a graduate assistant both from the Jefferson Center for



A Hotspotting team meets in Fall 2019 in the JCIPE office to kick off the year and learn more about their patient's story.



Jefferson Pharmacy student Jordan Mak (left) and Couple & Family Therapy student Rachel Smoot meet with their Hotspotting advisor, Dr. Anne Mitchell of Jefferson's College of Nursing, during a lunch workshop in January 2020.

reported that the program's process itself made them feel "ahead of the curve" as it related to the teamwork skills that they would be expected to call upon in their professional lives. One team identified an essential tip to pass on to the next cohort of student Hotspotters, emphasizing "Find a communication method and stick to it." Mutual respect for others on the team, as well as for the professions they represented, was also cited as a key component of an effective Hotspotting team. Students recommended that future participants clearly outline team members' roles to effectively distribute tasks throughout the program duration. Advisors were regarded as important sources of assistance during times of feeling stuck, further solidifying the program's collaborative emphasis.

### **Building Authentic Relationships**

Patients are likely to be more receptive to a healthcare provider or team who understands their unique challenges and viewpoints. They may be more motivated to try to make changes in their lives when surrounded by individuals they perceive to care about them (Grinberg et al., 2016). Students were generally quick to mention the important role of empathy in their assignments, especially when reflecting on why they may have first decided to participate in the program. As a Johns Hopkins student mentioned, "Sometimes the best care we could provide [a] patient was a compassionate, supportive, non-judgmental ear." Part of this authenticity entailed tangible efforts to remain consistent in patients' lives, even when the patients may have been unable to match this consistency. This was often the case when patients had unreliable access to communication, transportation, and/or other supports. Authentic relationships were important between the team members as well as between teams and patients.

### **Transforming Frustration**

The inevitable frustration of not being able to accomplish everything the team might have hoped or envisioned was cited frequently. One team described how the acceptance of this hardship could help practitioners reflect on how their super-utilizing patients may also feel let down by the healthcare system itself. This team elaborated more on this importance of "getting on the patient's level" and familiarizing themselves with patients' unique hardships, stating that "It has been important to become familiar with the systemic barriers and the history of minority and low-income populations that make it difficult to provide continuity of care." Using this mindset, frustration could counterintuitively help create or improve an authentic relationship with the patient and facilitate increased engagement towards achieving health goals. There was one team that was unable to recruit any patient participants over the course of the year, but they articulated how future practice would be positively impacted through the experience: "It's difficult to watch other successful teams share their positive experiences without a success story of our own. Team members felt disappointed and disheartened at times...[but] through it all, we experienced these emotions together, and we believe it brought us closer as a team. This experience has taught us a lot about seeing the patient as a whole and considering their concerns, worries, perspectives and background when coming up with a plan to help them or treat them. As future health care providers, the Hotspotting experience has taught us how to look for patients who would benefit the most from this kind of extra support and we will also be able to better advocate for the patients who need us the most once rapport is established."

### **Maximizing Time**

Student reflections frequently mentioned the busy and conflicting schedules of team members and/or advisors that may have posed a threat to quicker progress. Attempts to mitigate lost time included having flexibility, holding meetings virtually, proceeding with meetings without all members present, or keeping a more ongoing stream of communication on a preferred platform. "It can be helpful to use Excel, Survey Monkey, or [a] Doodle poll to figure out team availability," a Jefferson team noted. "Create a schedule [for] check-in meetings, and stick to it. Use Google to share documents...from each patient encounter." Teams were also at times pressured to strategize ways to catch up. Toward the end of the program, some reported that they would be engaging in more frequent communication or meetings after progress had been slowed or halted for too long. Teams that were more proactive in anticipating certain challenges (such as delays in recruiting patients) and subsequently acting or planning urgently were likely to have met a greater number of program objectives (e.g., working with a second or third patient). Important components of maximizing time effectively also included finding ways to restart or maintain momentum through celebrating small victories, boosting team morale and connections, or framing slow or delayed progress as net gains for the team in order to keep engagement positive. These strategies are also corroborated by recent literature as effective ways to improve care continuity (Hardin, Kilian, & Spykerman, 2017).

### **Future Directions**

Moving forward in the Hotspotting program, we recommend that institutions repeat these reflection assignments for at least another

academic year in order for researchers to explore themes and commentary over a longer period. Since the reflection assignments were submitted by teams rather than individual students, the assignments may have captured less feedback than could be possible in future academic years; individual comments could have been omitted from the assignments if the majority on the team vetoed including them. Reflection activities moving forward could be analyzed alongside quantitative methods of feedback in which students numerically rate or compare aspects of their experience. Institutions might also consider exploring alternative ways to gather qualitative student feedback throughout the Hotspotting program besides email communication with the coordinator, as some students may feel more comfortable or effective using other formats. This could include in-person team-building activities or live focus groups in order to offer some variety in data collection methods.

### Conclusion

Students who participated in Jefferson's Hotspotting Hub for the 2019-20 year repeatedly touched on the four themes of Interprofessional Collaboration, Building Authentic Relationships, Transforming Frustration, and Maximizing Time. Embracing these components through consistent communication and effort appeared to be key to building and maintaining an effective, resilient team that could transform program-related experiences into personal and professional growth, even when overarching plans and goals were subject to a great deal of change and uncertainty throughout the year. Other academic programs that have participants engage with complex patients could benefit from offering their students a variety of opportunities for written reflection,

as these assignments provide insight into potential team barriers, and how change over time/unpredictability can impact a team's progress.

---

**Tracey Earland, PhD, OTR/L**  
*Student Hotspotting Faculty Lead*  
 Associate Professor  
 College of Rehabilitation Sciences  
 Thomas Jefferson University  
 Philadelphia, PA  
[tracey.earland@jefferson.edu](mailto:tracey.earland@jefferson.edu)

**Megan Hershman, MS**  
*Student Hotspotting Program Coordinator*  
 Jefferson Center for Interprofessional Practice and Education  
 Thomas Jefferson University  
 Philadelphia, PA  
[megan.joyce@jefferson.edu](mailto:megan.joyce@jefferson.edu)

**Samantha Burke, OTD**  
 Graduate Student  
 College of Rehabilitation Sciences  
 Thomas Jefferson University  
 Philadelphia, PA  
[sxb357@jefferson.edu](mailto:sxb357@jefferson.edu)

### References

- Bates, D. W., Saria, S., Ohno-Machado, L., Shah, A., & Escobar, G. (2014). Big data in health care: Using analytics to identify and manage high-risk and high-cost patients. *Health Affairs (Project Hope)*, 33(7), 1123–1131. doi:10.1377/hlthaff.2014.0041
- Bedoya, P., Neuhausen, K., Dow, A. W., Brooks, E. M., Mautner, D., & Etz, R. S. (2018). Student hotspotting: Teaching the interprofessional care of complex patients. *Academic Medicine*, 93(1), 56–59. doi:10.1097/ACM.0000000000001822
- Blumenthal, D., & Abrams, M. K. (2016). Tailoring Complex Care Management for High-Need, High-Cost Patients. *The Journal of the American Medical Association*, 316(16), 1657–1658. doi:10.1001/jama.2016.12388

Collins, L., Sicks, S., Hass, R. W., Vause-Earland, T., Ward, J., Newsome, C., & Khan, M. (2020). Self-efficacy and empathy development through interprofessional student hotspotting. *Journal of Interprofessional Care*, 1–4. doi:10.1080/13561820.2020.1712337

Doobay-Persaud, A., Adler, M.D., Bartell, T.R. et al. Teaching the Social Determinants of Health in Undergraduate Medical Education: A Scoping Review. *J Gen Internal Med*, 34, 720–730 (2019). <https://doi.org/10.1007/s11606-019-04876-0>

Grinberg, C., Hawthorne, M., LaNoue, M., Brenner, J., & Mautner, D. (2016). The core of care management: The role of authentic relationships in caring for patients with frequent hospitalizations. *Population Health Management*, 19(4), 248–256. doi:10.1089/pop.2015.0097

Hardin, L., Kilian, A., & Spykerman, K. (2017). Competing health care systems and complex patients: An inter-professional collaboration to improve outcomes and reduce health care costs. *Journal of Interprofessional Education & Practice*, 7, 5–10. doi:10.1016/j.xjep.2017.01.002

Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288. doi:10.1177/1049732305276687

Institute of Medicine (IOM). (2015). *Measuring the impact of interprofessional education on collaborative practice and patient outcomes*. Washington, D.C.: The National Academies Press.

Long, P., Abrams, M., Milstein, A., Anderson, G., Apton, L.K., Dahlberg, L.M., & Whicher, D. (2017). Effective care for high-need patients: Opportunities for improving outcomes, value, and health. Washington, D.C.: National Academy of Medicine.

Vaida, B. (2017). For super-utilizers, integrated care offers a new path. *Health Affairs*, 36(3), 394–397. doi:10.1377/hlthaff.2017.0112

World Health Organization (2010). Framework for action on interprofessional education & collaborative practice. Health Professions Networks Nursing & Midwifery Human Resources for Health, Geneva, Switzerland. Retrieved from <https://hsc.unm.edu/ipe/resources/who-framework-.pdf>.