Enhancing Students' Understanding of Social Determinants of Health Through Interprofessional Hotspotting

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Background

- High-need, high-cost patients (HNHC) account for 5% of the population, but incur 50% of healthcare expenditures (Figure 1).
- Atlanta Interprofessional Student Hotspotting (AISH) is a multidisciplinary volunteer organization partnered with Grady Health System, Atlanta's public safety-net hospital, that trains interprofessional teams of students to address HNHC patients' social determinants of health.
- We have proposed new outcome measures for assessing the program's efficacy, and have developed innovative leadership teams to better **mitigate healthcare costs**, **improve patient outcomes**, and provide a more **comprehensive service-learning platform** for students over the course of this 6-month intervention.

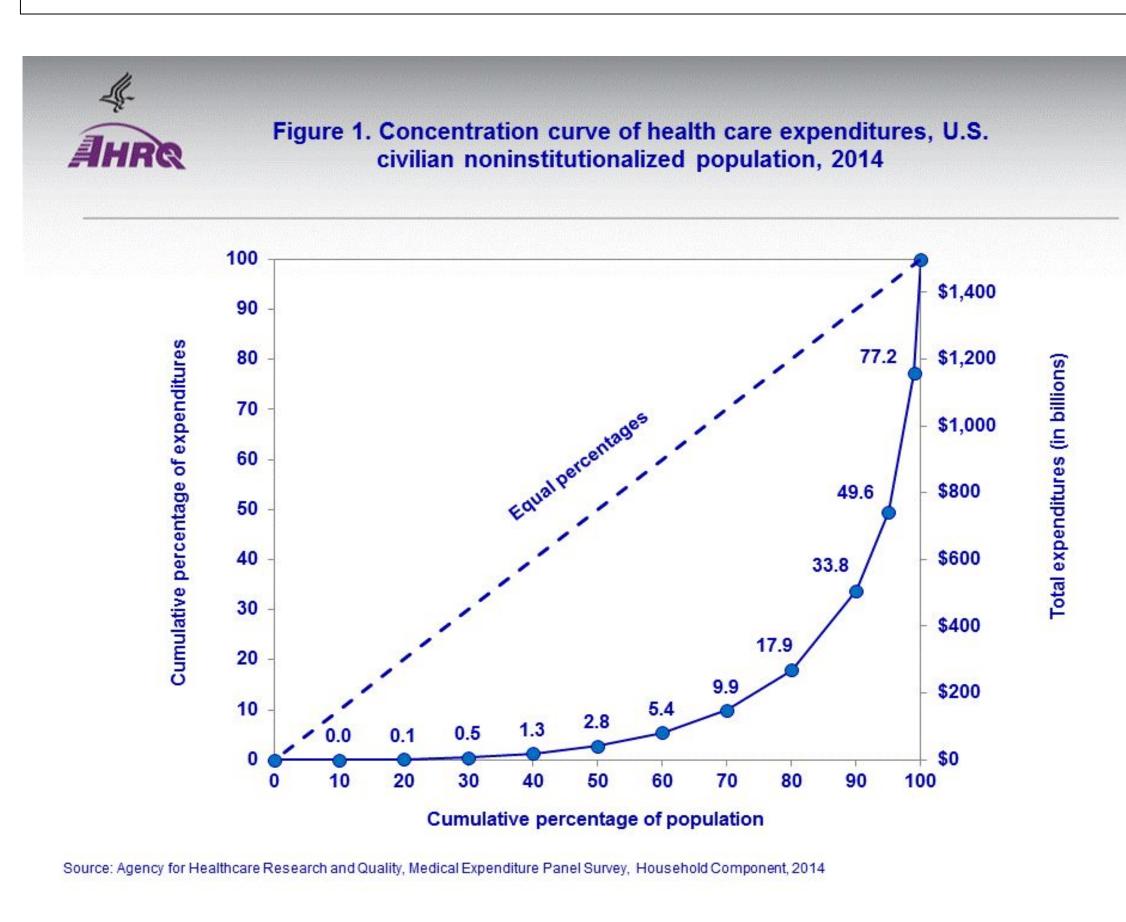
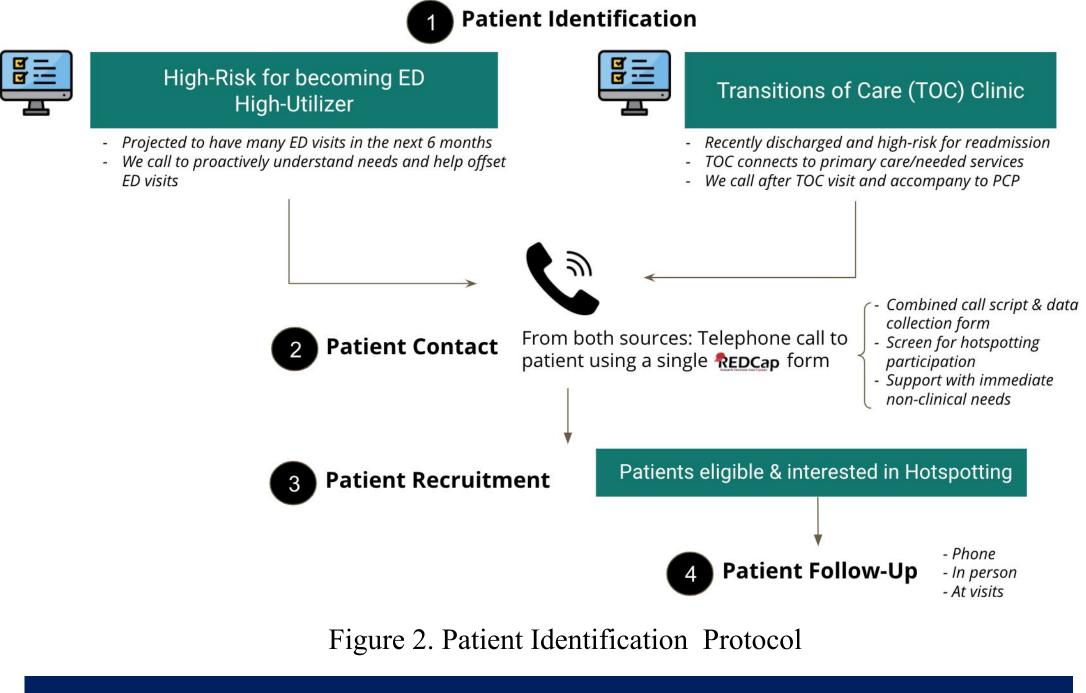


Figure 1. Mitchell E. *Concentration of Health Expenditures in the U.S. Noninstitutionalized Population*, 2014. Statistical Brief #497. November 2016. Agency for Healthcare Research and Quality, Rockville, MD.

Aim Statement

Serve as a model for how active, service-learning programs can revamp interprofessional education curricula nationally, all while mitigating health disparities and decreasing healthcare expenditure among HNHC patients.



Methods

Recruit + Train

- Recruit and organize interprofessional students into 7 interdisciplinary teams.
- Train students in Hotspotting principles, interviewing skills, resources available for patients; obtain Grady badges.

Identify and Interview Patients

- Identify patients through Grady Health System's Transitions of Care Clinic or based on risk for ≥1 emergency department (ED) visit/month for multiple months within the next 6 months (Fig. 2)
- Call patients using standardized script and data collection forms, and enroll eligible and interested patients.

Create Care Plan

- Identify root causes of repeated admissions using the "5 Whys" approach and elucidate patient-identified barriers to care and goals to health.

Support Care Plan

- Follow up with patients virtually and/or attend in-person appointments over the 6 months
- Facilitate patient-defined health goals.

Program Evaluation

- Collect and analyze data, gather patient stories, and reflect on patient and student experiences to help outline steps for integrating Hotspotting principles into health professional curricula across institutions.

-6 months	0 month	6	months	12 months
I. Pre-intervention peri		II. Intervention period (0 month to 6 months)		ervention period to 12 months)

Figure 3. Time Course of AISH Intervention

Table 1: 2020-2021 AISH Student Cohort Distribution									
	MD/DO	Pharm	MPH	RN	SW	PT	Total		
Emory	19	0	16	9	0	0	44		
PCOM- GA	14	8	0	0	0	3	25		
Mercer	0	9	0	0	0	0	9		
Georgia State	0	0	0	0	1	0	1		
Total	33	17	16	9	1	3	79		

Results

79 student volunteers come from 8 programs at 4 academic institutions (Table 1).

An overview of the 2019-2020 AISH patient cohort is depicted in Table 2.

The current cohort has built 10 leadership teams dedicated to:

- -Healthcare Utilization
- -Data Monitoring and Analysis
- -Medication Instability
- -Community Resources
- -Interprofessional Education
- -Academic Partnerships
- -Scholarship
- -Treasury
- -Social Events
- -Social Media

Table 2:AISH Patient Cohort Overview from 2019-2020 (N=20)					
Characteristic	N (%)				
Total persons interviewed in '19-'20:	20 (100%)				
Total persons who completed program	5 (25%)				
Total persons lost to follow-up	15 (75%)				
Location recruited from:					
CCC	12 (60%)				
Non-CCC	8 (40%)				
Average age (years):	67				
Race:					
Black or African American	17 (85%)				
White or European American	3 (15%)				
Gender:					
Male	16 (75%)				
Female	4 (25%)				
Most common root cause for readmission:					
Unstable housing	7 (35%)				
Stolen medications	4 (20%)				
Lack of transportation	4 (20%)				
Financial hardship	2 (10%)				
Poor mental health care	2 (10%)				
Wound care	1 (5%)				

Data Measures

Innovative metrics collected for this year's cohort include:

Patient Outcomes:

- Healthcare Utilization: Monthly ED visits, inpatient admissions, and outpatient appointment compliance over the course of the intervention (Figure 3).
- Quality of Life: 20-Item Short Form Survey (SF-20) to evaluate the program's impact on patients' well-being pre and post-intervention.
- Applications for social services, such as stable housing, food stamps, or access to medication.

Student Experience:

- Civic Learning: Interprofessional Collaborative Competencies Attainment Survey (ICCAS) pre and post-participation.
- Student Reflections.

Conclusions

By expanding collaborative service-based learning opportunities, AISH has advanced not only interprofessional education, but also efforts to reduce health disparities and healthcare utilization among Atlanta's HNHC patients.

Future Directions:

- Continue to pilot a **community-level intervention** that **prevents stolen medications**from being a common reason for high health care
 resource utilization and foster partnerships with
 other local organizations.
- Create a **strategic report** outlining the path toward **integrating Hotspotting into curricula** across institutions.
- Expand AISH to graduate programs in law, business, and social work within the next year.
- Explore **program effectiveness** and publish on the progress of our program development.

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