Screening Model: Addressing Social Determinants of Health in Outpatient Clinics

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BACKGROUND

Social determinants of health (SDoH) has garnered such a prevalence due to its massive impact on one's health:

- It is estimated that 80% of a population's health outcomes are dictated by SDoH[1].
- When referring to an individual, SDoH can result in racial disparities in care when looking at a population[2].
- Research has shown that screening has been effective in learning about patients' SDoH in the primary care and family medicine environment [3,4].

University of Connecticut Health Leaders (UCHL) is a program where pre-professional volunteers screen and address SDoH in clinical settings, specifically at the Asylum Hill Family Medicine clinic in Hartford. These screenings are valuable in understanding the SDoH impacting the diverse population in Hartford, Connecticut.

Objective

The University of Connecticut Health Leaders (UCHL) program effectively identifies and addresses social determinants of health (SDoH) in clinical settings through the use of pre-professional volunteers and offers a scalable model for addressing SDoH.

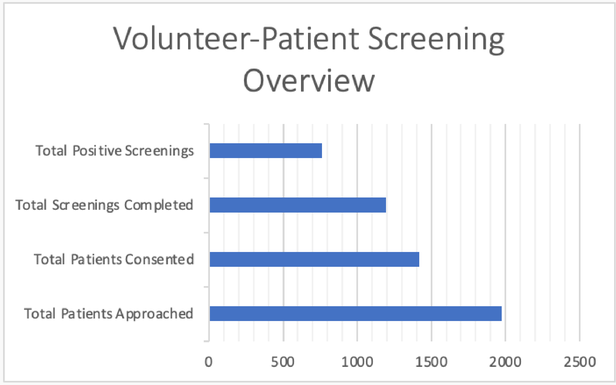
METHODS

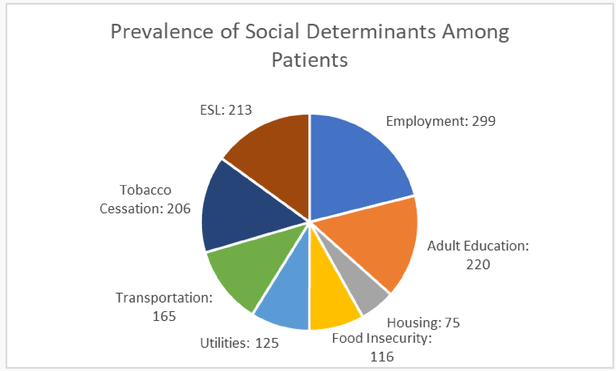
Timeframe: February 22nd, 2022 to June 6th, 2023
Study Type: Prospective cross-sectional study
Procedure: The UCHL program placed 20 volunteers in the Family Medicine Center at Asylum Hill in Hartford, CT. UCHL volunteers approach patients in waiting rooms to conduct resource screenings and connect patients to community partners to address their needs. Data was collected on iPads using RedCap software. Resources could be addressed during the visit or by the phone at a later date.
Survey: Questions were asked regarding: SDoH using the PRAPRE screening tool, including questions on smoking and demographics.

- **Demographics:** education level, ethnicity, race, language proficiency, gender, armed forces status, and correctional facility status
- **Social/Behavioral Risk Factors:** work situation, housing situation, financial concerns, insurance status, transportation status, and tobacco/nicotine use

Analysis: Descriptive statistics were used to characterize positive screening SDOH needs. Chi-square analyses was used to measures the differences between between racial groups.

RESULTS





Graph 1: Volunteer-Patient Screening Overview
1973 patients were approached, 1418 patients consented, 1197 patients completed the screening, 761 patients screened positive

Graph 2: Prevalence of Social Determinants Overview
1419 incidences of social determinants were discovered among 1197 patient screenings completed

Table 1: Demographic Breakdown of Positive Screenings

Race	Screened Positive by Race (n)	Screened Positive by Race (%)
Asian	16	59.26%
Native Hawaiian	1	100.00%
Pacific Islander	9	64.29%
Black/African American	326	60.26%
White American	104	50.49%
Native American/Alaskan Native	3	60.00%
Two or more races	52	77.61%
None of the above	224	73.44%
Patient chose not to answer this question	26	83.87%

Note: majority of the Asian population consists of ethnic Karen refugees from Myanmar/Burma.

Table 2: Difference in Positive Screenings Between Racial Groups

Race 1	Race 2	P-value
White American	Black/African American	0.0157*
	Asian	0.7357
	Two or more races	<0.0001*
Black/African American	White American	0.0157*
	Asian	0.9175
	Two or more races	0.0057*
Asian	Black/African American	0.9175
	White American	0.7357
	Two or more races	0.0719
Two or more races	Black/African American	0.0057*
	White American	<0.0001*
	Asian	0.0719

**indicates ($p < 0.005$)*

CONCLUSIONS

UCHL Program Model

- Offers an adaptable model for identifying and addressing SDoH in clinics, utilizing clinic waiting times without burdening the healthcare system
  - 1197 patient screenings for SDOH were completed
- Pre-health students can effectively identify individuals with SDoH needs and address healthcare access concerns
  - 60% of approached patients were screened

SDOH

- The prevalence of social determinants exceeds the number of patients screened and screened positive over the 15-month period.
  - Demonstrating that the average positively screened patient at Asylum Hill possesses more than one SDoH need

Racial Distribution

- White patients are less likely to screen positive and have identified social risk factors compared to other racial groups
- Patients who identified with two or more races are most likely

FUTURE DIRECTIONS

- The UCHL model can be easily adapted to other clinical settings and is seeking to work with new clinics in Connecticut
- Development of resource programs in Connecticut, expanding the UCHL program to include the social workers to aid in connection to resources

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