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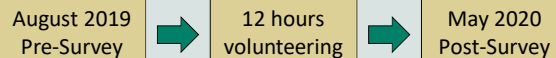
## INTRODUCTION

- Food insecurity (FI) affects 11.1% of households in the US<sup>1</sup> and is associated with negative effects on pediatric behavior and development, increased childhood illness, slower recovery times, increased hospitalization, and increased health care spending<sup>2,3</sup>
- Medical curricula do not routinely address FI, community resources, or screening patients, and fewer than 40% of providers report screening for FI<sup>4</sup>
- Service learning in medical school is beneficial to teach about food security topics in medical education<sup>5,6</sup>
- Aesculapians Honor Society (AHS) partnered with an urban farming organization, the Michigan Urban Farming Initiative (MUF), working to reduce FI in Detroit, MI

## STUDY AIMS

- Does participation in an integrative urban farming program improve medical students' understanding of FI?
- How does AHS members' knowledge of FI compare to the general body of medical students?

## METHODS



- Food Insecurity for Health Professionals (FISHP) survey<sup>7</sup> was sent to AHS volunteers in Aug 2019 and May 2020
- FISHP was also administered to a control group of non-AHS medical students in Sept 2019
- Data was collected with Qualtrics and statistical analysis was performed using StataSE 16
- Significance was determined at a p-value of 0.05

## RESULTS

- 18 AHS volunteers completed pre/post-surveys
- 66 non-AHS student controls completed pre-surveys
- Baseline AHS volunteers had an average of 20.8 hours of prior food security experience and completed an average of 11.8 hours of volunteering at the urban farm
- An independent t-test demonstrated a significant difference between FISHP scores of control group with AHS pre-surveys (p=0.001) and AHS post-surveys (p<0.001)
- A paired t-test between AHS pre- and post-surveys demonstrated an increase in FISHP total score (p=0.035)

Survey Item	Control Group Mean	Pre-Survey Mean	Post-Survey Mean	Paired T-test P-value
FISHP Survey Score (9-45)	29.70	34.28	36.72	<b>0.035</b>
I am knowledgeable about food insecurity and how it can adversely affect health.	3.55	4.17	4.67	<b>0.015</b>
I am knowledgeable about referring patients to resources that address food insecurity (local food banks, food-stamp equivalent programs.)	2.53	2.94	4.00	<b>0.005</b>
"I have worked with resident physicians who asked patients about access to food." (%)	26.56%	44.44%	55.55%	0.312
"I have worked with attending physicians who asked patients about access to food." (%)	29.69%	50.00%	66.66%	0.189
"Estimate the percentage of my patients who have food insecurity."	44.79%	46.88%	42.71%	0.546
"Learning more about food insecurity would be helpful in the curriculum." (%)	81.25%	77.78%	88.89%	0.409

## DISCUSSION

- Our survey demonstrated that knowledge, skills, and attitudes related to FI, as measured by the FISHP survey, improved with a longitudinal urban farming experience
- Knowledge related to health impacts of FI and available community resources also increased
- Clinical experiences continue to demonstrate that physicians do not ask patients about FI
- Students' abilities to estimate FI in their patients improved
- Learning about FI improved but did not achieve statistical significance, possibly due to high baseline levels

## CONCLUSIONS

- Integrative volunteering has the potential to benefit medical students by promoting active learning of food security topics and health disparities
- Medical students can serve as a valuable resource to clinics, hospitals, and patients in screening for FI and connecting patients to resources
- Improved food security in patient populations may contribute to improved individual and population health outcomes and decreased health care spending<sup>2</sup>
- Future research should include community needs assessments that allow medical curricula to be appropriately tailored to serve the community

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