

# Evaluation of a Social Determinants of Health Screening and Intervention Framework within an Integrated Health System Specialty Pharmacy Care Model using a Closed-Loop Referral Process

Irfana Lakada, PharmD; Andrea Idusuyi, PharmD; Shreevidya Periyasamy, MS HIA  
Martha Stutsky, PharmD; Carolkim Huynh, PharmD



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### DISCLOSURES

The authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation

## BACKGROUND

Social Determinants of health (SDOH) are non-medical factors that impact patients' medication use and health outcomes.

Integrated health system specialty pharmacies (HSSPs) and clinical pharmacists are uniquely positioned to identify and address barriers to SDOH, however there is a lack of published evidence supporting the impact of these programs. A SDOH screening and intervention framework was previously developed for a HSSP model.

## METHODS

**Process development:** A standardized workflow for the SDOH framework was developed:

- Development of standardized SDOH screening questions based on Centers of Medicare and Medicaid Services Accountable Health Communities Screening Tool
- Development of personalized action plans to mitigate barriers
- Development and utilization of comprehensive resource guide
- Follow-up assessments conducted one-two months post-screening

### Inclusion Criteria:

- Actively filling medication for:
  - HIV with viral load > 200 copies/ml
  - Rheumatoid arthritis (RA) with RAPID3 score indicating high disease activity
  - Hyperlipidemia with LDL >100 mg/dL.

**Primary Outcome:** Acceptance rate of pharmacist recommendations for the enrolled population

**Secondary Outcomes:** Social barriers for which pharmacists made the largest impact, patient perceived helpfulness of interventions, proportion of patients requiring ongoing support, and pharmacist time required per intervention.

## RESULTS

The SDOH framework was piloted at four health systems with 50 patients not meeting outcomes in HIV (n=6; mean viral load: 218,810 copies/mL), RA (n=27; mean RAPID3 Score: 17.3), and hyperlipidemia (n=17; mean LDL: 114.4 mg/dL). Patient demographics and clinical characteristics are summarized in **Table 1**. Of the 50 patients enrolled, 28 (56%) completed screening. Of the 28 patients screened, 22 (79%) accepted the pharmacist recommendations. Follow up assessments were completed on 15 of 22 patients, and 10 (67%) found the intervention beneficial. **Figure 1** showcases the most impactful interventions. Seven (70%) did not require ongoing support while three (30%) needed additional assistance. New barriers were identified in one patient (5%) during follow-up, necessitating further intervention (**Figure 3**). The average pharmacist time spent per intervention was 60 minutes (range: 15-180 minutes).

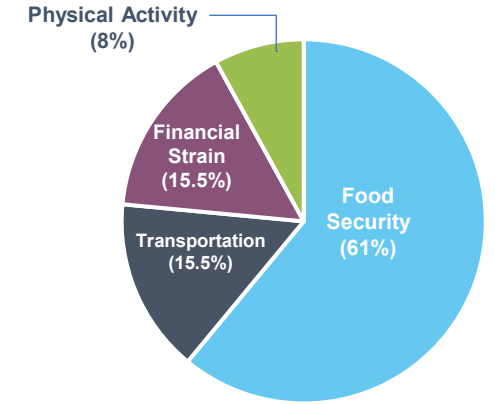
## RESULTS

**Table 1: Demographics and Clinical Characteristics**

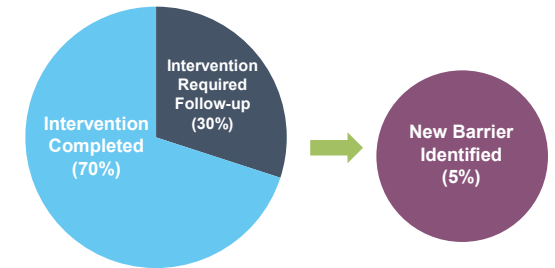
Measure		N=50
Age (years) <sup>1</sup>		56
Sex (n, %)	M	14 (28)
	F	36 (72)
Race/ Ethnicity (n, %)	American Indian or Alaska Native, non-Hispanic	1 (2)
	Black/African American alone, non-Hispanic	6 (12)
	White/Caucasian alone, non-Hispanic	35 (70)
	Hispanic/Latinx	7 (14)
	Unknown, non-Hispanic	1 (2)
Geographic Location (n,%)	MA	24 (48)
	MI	26 (52)
Insurance Type (n,%)	Commercial	10 (20)
	Medicare	20 (40)
	Medicaid	14 (28)
	Others	6 (12)
Comorbidities (n,%)	Hypertension	19 (38)
	Hyperlipidemia	14 (28)
	Heart Disease	9 (18)
	Diabetes	6 (12)
	Pulmonary Disease	6 (12)
BMI (kg/m <sup>2</sup> ) (n,%)	≥ 30	21 (42)
	25–29.9	15 (30)
	18.5–24.9	11 (22)
	< 18.5	2 (4)
	Unknown	1 (2)
Interventions per patient <sup>1</sup>		2.1

<sup>1</sup> Mean

**Figure 1: Top Intervention Categories**



**Figure 3: Follow-up Support**



**Figure 2: Screening Outcomes**



## CONCLUSIONS

Our SDOH framework highlights the critical role of HSSPs in addressing social determinants of health barriers through tailored interventions, as most patients accepted pharmacists' recommendations, particularly for food security/nutrition and financial strain barriers. While interventions were largely helpful, nearly a third required ongoing support or identified new barriers during follow-up. The findings underscore pharmacists' potential to enhance medication use, health outcomes, and patient well-being by mitigating social barriers through comprehensive education and facilitated community and social service connections. It also emphasizes the importance of maintaining follow-up. Future research evaluating pharmacists' impact on clinical outcomes, satisfaction, adherence, and absenteeism highlights the commitment to optimizing holistic patient care by overcoming social barriers.

### REFERENCES

1. World Health Organization. Social Determinants of Health. Accessed December 6, 2022. [https://www.who.int/health-topics/social-determinants-of-health#tab=tab\\_1](https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1).
2. United States. Supporting the Shift to Whole-Person Care: Measuring the Impact of Social Determinants of Health. Accessed February 17, 2023. [https://global-uploads.webflow.com/64e4e9107776220a001852a569/620a39931168211644f100a6\\_United\\_States\\_2.pdf](https://global-uploads.webflow.com/64e4e9107776220a001852a569/620a39931168211644f100a6_United_States_2.pdf)
3. Moose J and Branham A. Pharmacists as Influencers of Patient Adherence. Pharmacy Times Oncology Edition. 2014. <https://www.pharmacytimes.com/view/pharmacists-as-influencers-of-patient-adherence>