Evaluating Postpartum Social Determinants of Health at Mary's Center in Maryland and Washington, D.C.

Lindsay Kaufman, MPH(c), PA-S, Howard Straker EdD, MPH, PA-C
Milken Institute School of Public Health, School of Medicine and Health Sciences

Introduction

The postpartum period represents a critical transition marked by significant physical, emotional, and psychological changes. The American College of Obstetricians and Gynecologists (ACOG) recommends a comprehensive postpartum visit within 4 to 6 weeks to address mental, physical, and social health. These visits are essential for preventing adverse outcomes such as maternal mortality and postpartum depression, particularly given that over half of maternal deaths occur within the first year after birth. Despite their importance, postpartum visits in the United States have notably low attendance rates, with up to 40% of women lacking follow-up. This population represents a majority underserved, where targeted interventions and social support could be instrumental in health promotion.

Federally Qualified Health Centers (FQHCs) play a vital role in supporting low-income and disadvantaged populations through accessible, subsidized care. These clinics reduce barriers with services such as sliding fee scales, quality assurance, and community governance, making them uniquely positioned to improve maternal health outcomes. Many incorporate social determinants of health (SDoH) screenings to understand and address the broader challenges impacting attendance and wellbeing.

Sociodemographic factors—such as age, income, education level, race/ethnicity, and financial status—strongly influence postpartum care attendance. Women who are younger, have lower educational attainment, or are economically disadvantaged are less likely to follow-up. FQHCs have increasingly leveraged SDoH-focused research to tailor interventions, improve care continuity, and support long-term maternal health.

Mary's Center is a FQHC with five locations across Maryland and Washington, D.C., serving over 65,000 diverse and underserved patients annually. To improve outcomes in obstetric care, Mary's Center collects annual postpartum data on patients who received at least one prenatal visit. Standard postpartum visit times are at one, two, and six weeks. Previous analysis has demonstrated that there remains a substantial number of patients who do not complete a postpartum visit at any Mary's Center site. Further investigation was needed to explore barriers to follow-up, leading to this study's research question:

"What relationship do social determinants of health have on postpartum visit completion by patients receiving care at Mary's Center in Maryland and Washington, D.C.?"

Methodology

Project Design
This retrospective observational study analyzed 1,263 women's health pregnancies seen for perinatal care at five Mary's Center sites in Maryland and Washington, D.C. between January 1 and December 15, 2023.

Types and Sources of Data
Data variables include the following: *unique patient ID, patient age, city, state, zip code, county, ethnicity, race, Mary's Center site where the patient completed most of their obstetric visits, completion of a follow-up postpartum visit, and Mary's Center site where the postpartum visit was held*. Upon initial intake, patients are offered the option to fill the PRAPARE (Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences) screener, a 21-question SDoH tool to assess needs of vulnerable patient populations. The PRAPARE screener clusters social determinants into *"Personal Characteristics", "Family and Home", "Money and Resources", "Social and Emotional Health"*, and *"Optional Additional Questions"*. Mary's Center adapted this screener for their patient population, narrowing down to 13-items of interest. Only patients who completed the entire 13 questions were included in the data analysis.

Project Activities

Data was analyzed using Excel and SPSS. Initial univariate analysis was followed by chi-square tests to compare demographics between SDoH responders and non-responders. Descriptive statistics were used to quantify SDoH responses. Logistic regression was then used to assess the relationship between postpartum follow-up (dependent variable) and PRAPARE screener domains (independent variables):

1. ***Family and Home*** (e.g., housing, household size)
2. ***Money & Resources*** (e.g., education, employment, transportation)
3. ***Social and Emotional Health*** (e.g., support, stress)
4. ***Optional Additional Questions*** (e.g., incarceration, safety, refugee status)

Significance between SDoH factors and postpartum follow-up were identified through analysis.

PRAPARE
Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences

Specific Aims & Objectives

1) Gain an understanding of the sociodemographic factors affecting postpartum follow-up for women's health patients at Mary's Center in Maryland and Washington, D.C.

2) Analyze the influence of sociodemographic variables as contributors towards postpartum follow-up completion between January 1, 2023, and December 15, 2023.

3) Support the use of SDoH screening tools in FQHCs to identify barriers experienced by women's health patients for completing a postpartum appointment.

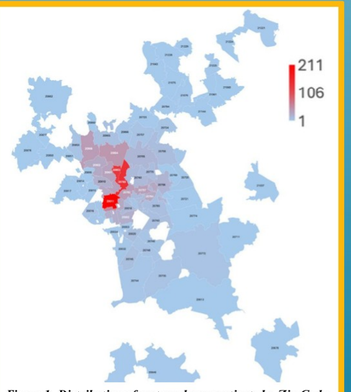

Figure 1. Distribution of maternal care patients by Zip Code

Results

Table 1. Cross-tabulation of Mary's Center patients and SDoH screener responders

	Perinatal Patients	PRAPARE Responders
Sample Size	1261 (100%)	396 (31%)
Completed postpartum appointment	1229 (97%)	390 (98%)
State of Residence	Maryland 802 (63%) Washington D.C. 461 (37%)	Maryland 225 (64%) Washington D.C. 141 (36%)
Ethnicity: Hispanic or Latinx	987 (78%)	325 (82%)

No statistically significant difference in ethnicity or race between responders and non-responders; however, ***state was significant among non-responders (p=0.013), indicating a possible relationship between state of residence and screener non-completion.***

PRAPARE Screener Responses

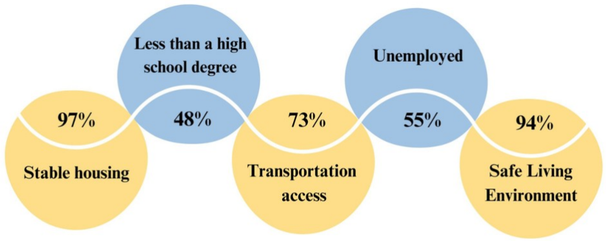

Table 2. Logistic Regression of SDoH screener responses against postpartum follow-up

Cluster	df	p-value
Family & Home		
Family Members	8	0.963
Housing Status	2	1.000
Housing Loss	2	1.000
Money & Resources		
Education	1	0.351
Employment	1	0.487
Needs	1	0.451
Transportation	1	0.931
Social & Emotional Health		
Social Support	1	0.396
Stress	1	0.071
Optional Additional Questions		
Incarceration	1	0.512
Refugee	1	0.373
Safety	1	0.060
Relationship Wellbeing	1	0.469

Note: p-value < 0.05

Discussion

This study examined the relationship between postpartum follow-up and social determinants of health at Mary's Center, using a modified version of the PRAPARE screener to assess multiple domains. 396 patients completed the screener, with the majority being Hispanic or Latinx and located in Maryland and Washington D.C. zip codes. Overall postpartum follow-up rates were high (97%), and logistic regression did not find a significant association between SDoH screener responses and follow-up attendance. This was likely due to the limited number of completed screeners and the low variance in reported SDoH risks. State location was the only demographic variable linked to screener non-completion.

Most patients who completed the screener did not indicate SDoH-related challenges. Across all clusters—*Family and Home, Money and Resources, Social and Emotional Health, and Optional Additional Questions*—respondents largely reported housing stability, access to food and transportation, regular social interaction, and low stress. Additionally, most denied history of incarceration, refugee status, or intimate partner violence. However, it is plausible that patients who did not complete the screener or did not follow-up postpartum may face more significant social challenges that were not captured in this dataset. Literature demonstrates that Hispanic or Latinx ethnicity, low education, and unemployment—all prevalent in this cohort—are linked to worse maternal outcomes. Thus, although not strong enough to demonstrate statistical significance in this trial, the population from Mary's Center represents those who are evidentially linked to SDoH disparities, and collection of modified PRAPARE screener responses may yet prove useful.

Conclusion

The modified PRAPARE screener may remain a valuable tool for identifying individual-level social risk. In a cohort where 78% identified as Hispanic or Latino, 48% of screener respondents had less than a high school education, and 55% reported unemployment, the presence of underlying social vulnerability is evident as supported by research. National studies have shown that PRAPARE scoring systems can be used to classify patients by risk level, predict delays in perinatal care, and identify opportunities for earlier intervention. At Mary's Center, these findings support continued use of the screener as a personalized clinical tool to guide services, rather than a predictor of follow-up behavior.

To strengthen the screener's utility, Mary's Center may consider implementing a risk-scoring approach and administering the screener at multiple time points during pregnancy. This would allow care teams to better capture evolving social risks and identify patients in need of targeted interventions before the postpartum period. Further study is also needed to understand why some patients decline or partially complete the screener, with attention to language, literacy, and cultural perceptions of sensitive topics like stress and social support.

Selected References

Attanasio, L. B., Ranchoff, B. L., Cooper, M. I., & Geissler, K. H. (2022). Postpartum Visit Attendance in the United States: A Systematic Review. *Women's health issues: official publication of the Jacobs Institute of Women's Health, 32*(4), 369–375. https://doi.org/10.1016/j.whi.2022.02.002

Cole, M. B., Nguyen, K. H., Byhoff, E., & Murray, G. F. (2022). Screening for Social Risk at Federally Qualified Health Centers: A National Study. *American journal of preventive medicine*, *62*(5), 670–678. https://doi.org/10.1016/j.amepre.2021.11.008

Luzius, A., Dobbs, P. D., Hammig, B., Kirkish, R., & Mojica, M. (2022). Using the PRAPARE Tool to Examine Those Tested and Testing Positive for COVID-19 at a Community Health Center. *Journal of racial and ethnic health disparities*, *9*(4), 1528–1535. https://doi.org/10.1007/s40615-021-01091-8

National Association of Community Health Centers (NACHC). (2019). The Protocol for Responding to and Assessing Patients Assets, Risks, and Experiences (PRAPARE) Implementation and Action Toolkit. https://prapare.org/

Wang, E., Glazer, K. B., Howell, E. A., & Janevic, T. M. (2020). Social Determinants of Pregnancy-Related Mortality and Morbidity in the United States: A Systematic Review. *Obstetrics and gynecology*, *135*(4), 896–915. https://doi.org/10.1097/AOG.0000000000000376