Reducing Clinician Administrative Burden through Automated Patient Referrals

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Background and Problem

- The Family Birth Center (FBC) delivers about 2500 patients annually and the Obstetric Emergency Department (OB ED) sees approximately 400 patients per month. 30% of patients are unregistered, meaning they do not have established prenatal care with UCM or an affiliated Federally Qualified Health Center.
- UChicago Medicine's primary service area is ~73% Non-Hispanic Black compared to 28% citywide. In the United States, Black women are 3-4x more likely to die from pregnancy-related causes than white women and 2.1x more likely to experience severe maternal morbidity; thus, there is a disproportionate number of UCM patients at risk for morbidity and mortality, stressing the need for linkage to prenatal care and resources.
- Over 80% of FBC patients complete Social Determinants of Health (SDOH) screening on admission to identify need for resources.
- Opportunity existed for unregistered patients and those with positive SDOH screenings to be connected to resources through the Liaisons in Care ("LinC") Community Health Worker (CHW) program, but manual referral by clinicians was falling short and a burden on clinician workload.
  - LinC connects patients to healthcare and resources via the provision of a culturally competent care model that centers the patient's individual needs and goals.

Goal

- Refer 100% of patients who are unregistered and/or screen positive for select SDOH to LinC immediately after intervention implementation while reducing clinician administrative burden and human error seen in manual referral processes.

Strategy

- The FBC quality improvement team recognized the need for improved linkage to resources after initiating SDOH screening in the FBC. The team connected with the Liaisons in Care Program Director, to define criteria for patient referral to LinC.
- Epic's Stork Team created an automated system-wide Patient List in UCM's EMR to capture patients who present to the OB ED, meet defined criteria, and could benefit from the services provided by LinC.
  - Criteria include:
    - "Unregistered" OB provider **OR**
    - Positive SDOH screening for food insecurity, social isolation, housing instability, or financial resource strain
    - **AND** zip code in LinC's service area
- Patients remain on the list for 7 days after discharge with a goal of LinC contact within 48-hours. LinC attempts to contact patients 3 times.

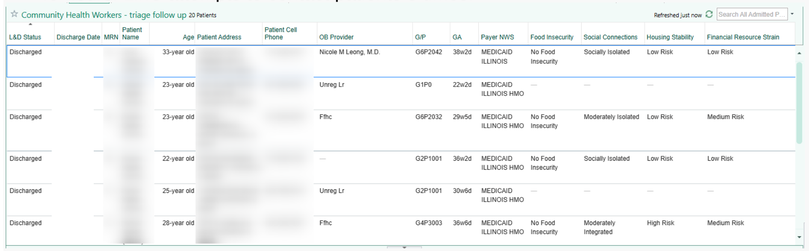

***Fig 1**. EPIC Patient List, "Community Health Workers – triage follow-up" created with LinC, FBC, and the Epic Stork Team to generate referrals appropriate for LinC services*

Results

- With the institution of the automated Patient List in December 2023, the FBC was able to **refer all patients who met inclusion criteria** with complete **elimination of the administrative burden** to clinicians of manually referring patients **and the potential for human error** in forgetting referral criteria, how to refer, or forgetting to refer patients.
- Referrals to LinC from FBC increased by **956.5%** from baseline (1-year pre-launch) to follow up (1-year post-launch).
- The number of *all* resources provided to FBC-referred patients increased **797.9%** with the implementation of the automated patient list. Additionally, the number of SDOH resources *corresponding to the four automated list referral criteria* (food insecurity, social isolation, housing instability, or financial resource strain) increased **1346.7%**.

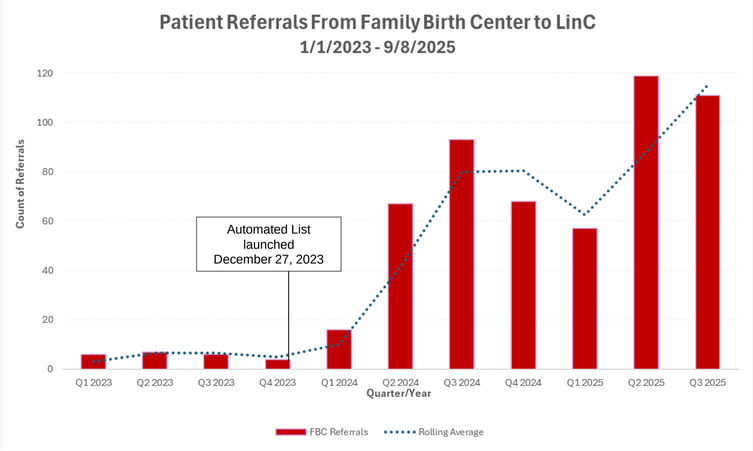

***Fig 2**. Liaisons in Care Community Health Worker Program referrals by quarter from the FBC, overlaid with rolling average*

- The inclusion criteria were successful in creating a **93.97% patient eligibility rate**, outperforming combined other referral types (email or Epic In Basket message to CHW or manager, multidisciplinary rounds, pager, outreach/other).

LinC All Referral Types Process Metrics, 1/1/2023 - 9/8/2025	Epic Pt. Lists	All Other Referral Types Combined	Total All Referral Types
Referrals	547	644	1192
Eligible	514	526	1041
% of referrals eligible	*93.97*	*81.68*	*87.33*
Enrollments	142	144	286
% of eligible enrolled	*27.63*	*27.38*	*27.47*

***Fig 3**. Comparison of eligibility and enrollment rates of automated Epic Patient List referrals to all other LinC MCH referral types*

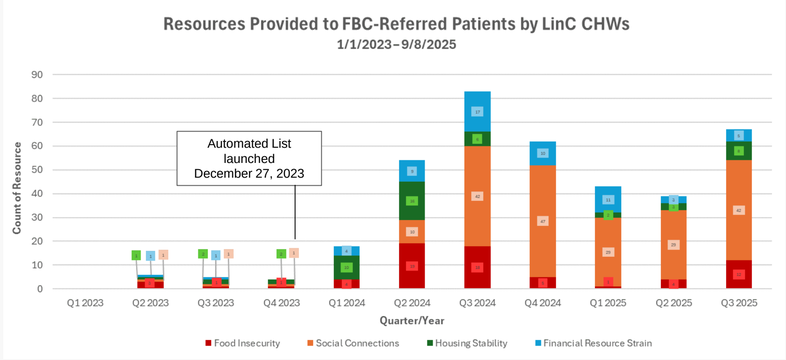

***Fig 4**. Number of resources corresponding to four SDOH criteria on automated patient list provided to FBC-referred patients over time*

- The automated patient list increased the volume of referrals to the LinC program, allowing CHWs to link more patients to healthcare and social resources – the ultimate goal of SDOH screening.

Conclusions and Discussion

- An unintended benefit of the list was reduced CHW administrative burden as a result of the list pre-defining inclusion criteria in filtering out patients outside of LinC's service area. Referrals from the automated list have an eligibility rate of **93.97%** vs. **81.68%** of all other referral types combined. This automated exclusion improves efficiency.
- An important component of evaluating the list's success from the CHW standpoint is the patient engagement rate. Engagement rate is defined as patients enrolled in LinC services with one or more home visits completed. Patients referred through the patient list showed engagement rates of 27.63% from Q1 2023 – Q3 2025. Other referral methods' engagement rates are similar at 27.47%.

Next Steps

- LinC plans to investigate the utilization of automatically generated patient referral lists for other chronic conditions to determine if this method is beneficial for increasing referrals in other patient populations.
- The Family Birth Center will add a message to the patients' After Visit Summary if they have been added to the Patient List, so they are aware the CHW team will be contacting them. We hope this will improve engagement rates from the automated list.
- LinC and the FBC will review data when available for unregistered patients who were connected to FBC obstetricians and delivered at UCM, increasing our patient volume.

Acknowledgements

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