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Health-Related Social Needs Among Families in a Level IV Neonatal Intensive Care Unit: Prevalence, Response, and Gaps in Identification

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Abstract

Background: Health-related social needs (HRSNs) contribute to adverse neonatal outcomes, yet the prevalence of HRSNs, consistency of documentation, and effectiveness of referral practices remain incompletely characterized in neonatal intensive care units (NICUs).

Methods: We retrospectively reviewed social work intake documentation for 254 infants admitted to a Level IV NICU to assess HRSN prevalence, documentation, referral patterns, and associations with patient characteristics.

Results: HRSNs were highly prevalent. Lower gestational age and longer hospitalization were more strongly associated with identification of needs than traditional sociodemographic factors. Documentation varied considerably across domains, with transportation, housing, and mental health frequently documented, while food insecurity and health literacy were often omitted. When needs were identified, referral rates exceeded 90% across most domains.

Conclusions: HRSNs are common regardless of traditional demographic risk factors. Universal standardized HRSN screening could improve equitable identification of unmet needs, complement existing social work practices, and strengthen family-centered care.

I. INTRODUCTION

Medical institutions prioritize optimizing medical outcomes; however, often, less emphasis is placed on the non-medical factors that strongly impact health and development—namely, social determinants of health (SDOH) and/or health related social needs (HRSN) (ref. 1). SDOH represent the broad, community-level environmental conditions in which people are born, work, and age, such as neighborhood safety, systemic poverty, or local economic stability. In contrast, HRSN refer to the immediate, individual-level practical challenges that arise from those broader drivers—such as a specific person's lack of stable housing, food insecurity, or lack of reliable transportation (ref. 1,2). Systemically identifying and addressing these overlapping social and structural barriers is vital for optimizing health outcomes and achieving health equity.

Infants admitted to the neonatal intensive care unit (NICU) represent one of the most vulnerable populations in pediatrics. NICU families often face disproportionate economic strain, unstable living conditions, and are disproportionately low-income, placing them at risk for unmet needs that can affect infant health (ref. 3–5).

Many NICUs lack a systematic approach to identifying these unmet needs (ref. 6,7). As a result, critical family needs may go unidentified until late in the hospital stay or sometimes not at all. Furthermore, lack of population-level understanding of HRSN prevalence limits ability to improve or design effective interventions to support families. Non-uniform methods risk unconscious bias or under-screening of certain groups, and important domains are often neglected.

Many NICUs in low resource settings rely on ad hoc identification of families at risk for having one or more HSRN to identify which families would benefit from a

referral for an individualized SW assessment (ref. 7,8). In practice, each social worker may use a different interview style and focus, leading to variability in data collection. As one mixed-methods study found, NICU staff infrequently assessed basic needs beyond employment: housing was asked in only 38% of cases, food insecurity in 7%, and childcare or transportation in 3% (ref. 4).

The purpose of this study was to leverage existing workflows in a level IV NICU with near universal social work evaluation of families to understand the systems-level prevalence of families' HRSNs (specifically those related to housing, transportation, food security, accession of benefit programs, health literacy, and caregiver mental health) and to evaluate the comprehensiveness and consistency of social needs assessments documented in the electronic medical record (EMR). To do this, we retrospectively applied a standardized framework for documentation to semi-structured social work intake notes, with intention to use this data to inform integration of a standardized screening tool into existing social work workflows. We also sought to characterize the consistency of response via resource referral to identified HRSNs.

II. METHODS

Study Design and Setting

We performed a retrospective cohort study of infants cared for in the NICU at Cincinnati Children's Hospital Medical Center (CCHMC), a quaternary care pediatric academic medical center in Cincinnati, Ohio. This 108-bed, Level IV NICU serves a diverse urban and suburban community across a regional service area, providing care for critically ill preterm infants and those with complex congenital anomalies. As a

specialized regional referral center, the CCHMC NICU population reflects a broad tri-state catchment area spanning Southwestern Ohio, Northern Kentucky, and Southeastern Indiana, rather than isolated municipal boundaries (ref. 9). A substantial proportion of the cohort comprises out-born infants transferred for subspecialty care from community hospitals across the primary service area. A smaller proportion of infants are born in the special delivery unit or admitted from home through the emergency department. This geographic distribution introduces distinct structural and logistical challenges for families, including significant residential distance from the medical center, prolonged travel times, and acute transportation barriers. Roughly 60% of the CCHMC NICU population has public insurance or self-pay as a primary payor for hospitalization.

At CCHMC NICU, there is a robust process for social work screening with near universal consultation, but limited systems to understand population-level needs. A social work consultation by a NICU-specific social worker is automatic upon admission for all families, with the clinical goal of a formal intake evaluation occurring within 14 days of admission. Most intakes are completed within 7 days of admission. Documentation of consultation is via a semi-structured, primarily free text template, as shown in Supplemental Figure 1. With respect to personnel, there are 6 NICU specific social workers whose dedicated time represents 5 full time equivalents.

Inclusion/Exclusion Criteria

Electronic medical records (EMR) were screened for all infants admitted to the CCHMC NICU during a six-month period from January 1, 2025, to June 30, 2025. Inclusion was restricted to patients with a length of stay (LOS) greater than 7 days to ensure adequate sample size. While institutional policy allowed a 14-day window for social work intake

documentation, standard clinical practice optimized early screening, resulting in the completion of most assessments within 7 days of admission. Of note, LOS was calculated strictly from the date of admission to our facility to discharge; consequently, this metric may not fully capture the total duration of hospitalization of outborn infants transferred from external centers.

Figure 1: Methods

Social Work Intake Documentation

Social work intake evaluations at CCHMC are documented in the EMR using a semi-structured format, as shown in supplemental figure 1. These notes begin with specific section headers that capture basic demographic information and family structure. Following these structured fields, the intake concludes with a free-text section where social workers provide a narrative assessment of psychosocial history, active concerns, and clinical impressions. A summary section at the end of each note includes recommendations and any referrals/further actions. It is also worth noting that the recommendations are semi-standardized and may lack true personalization; for instance, the system might generically advise to 'add the patient to insurance' rather than addressing specific situational barriers, such as a family awaiting a Medicaid decision for over 30 days.

At the time of this study (January 2025–June 2025), there was a semi-standardized format for the assessment of unmet basic needs. While the headers ensured

baseline data was gathered, the free-text format at the bottom of the intake note resulted in variability in how HRSN were explicitly documented and addressed.

Data Extraction and Variables

Patient and maternal demographic data were extracted from the EMR using a combination of automated data retrieval and manual verification. To validate data quality, we performed a quality control check by comparing the automated demographic report data against the manual social work intake documentation. Any conflicting data points across the two sources were manually reviewed and reconciled using the self-reported primary medical record. Demographics included: gestational age at birth (in weeks), corrected gestational age at admission, birth weight (in kilograms), maternal age, maternal gravidity, maternal parity, date of admission, race, ethnicity, primary language, LOS, and primary payor category for infant hospitalization. Due to a systematic data-entry artifact, maternal parity was occasionally recorded as zero despite a live admission to the neonatal intensive care unit. To maintain dataset integrity, these values were retained as zero in the raw dataset but were excluded from the final demographic calculations to prevent statistical skew.

We reviewed the social work intake notes to identify the presence of six specific HRSN domains: housing, food security, transportation, benefits, mental health, and health literacy. For each domain, we extracted data to determine if:

1. A specific need was **documented** as having been assessed.
2. A need was **identified** (screened positive).

3. A specific **referral or action** was recorded by the social worker in response to that need.

For our data collection, a need was "documented" as having been assessed if the medical record included evidence of a family's current status, perspective, or concerns regarding that specific domain. If there was no documentation of discussion or identification of individual family needs in a specific domain, the need was considered not addressed and qualified as "Not Documented."

Following the data extraction from the initial social work intake note, a standardized SDOH screener was completed for each patient using only information contained in the intake note to evaluate completeness and comprehensiveness of the current process and to inform possible screener implementation. Each of the six SDOH domains was specified as either "need identified," "no need," or "not documented" based on the information in the initial SW intake note.

Statistical Analysis

Descriptive statistics were utilized to characterize the maternal and neonatal clinical demographics, as well as the prevalence of documented social needs within the cohort. Continuous variables, such as gestational age and birth weight, were summarized using means with standard deviations or medians with interquartile ranges (IQR), depending on the normality of the distribution. These variables were also categorized into clinically relevant tiers to assess the distribution of social risk across neonatal acuity levels. Categorical variables, including insurance type, race, and ethnicity, were summarized using frequencies and percentages.

To evaluate the association between clinical demographics and the presence of identified social needs, univariate analyses were performed. Fisher's Exact Tests were utilized for categorical comparisons to account for small sample sizes within specific high-acuity sub-cohorts (e.g., infants <500g). A composite outcome variable, "Any Need," was used to compare families with at least one identified HRSN against those with no documented needs.

Furthermore, we quantified the frequency of "Not Documented" domains to evaluate the consistency of the current non-templated intake process. All statistical analyses were conducted using R for data manipulation and figure/table generation. Statistical significance was defined as a two-sided p-value of < 0.05.

III. RESULTS

Characteristics of the Cohort

A subset of 20 families, characteristics of which are demonstrated in Supplemental Table 1, was excluded because a standard intake note was absent from the electronic record. This exclusion does not reflect a gap in clinical care or a violation of protocol; due protocol was consistently upheld across all patients, but unique circumstances precluded standard template completion. While alternative documentation (e.g., progress notes) was frequently maintained to ensure continuous support, these progress notes are not textually comparable to the comprehensive intake notes required for our study's data extraction pipeline. The 20 excluded cases fell into five categories:

- **Communication & Contact Barriers (n = 6):** Caregivers were unreachable, missed appointments, or had incorrect contact information.

- **Complex Legal/Alternative Care (n = 4):** Cases involving CPS, foster care, or adoption, which route workflows through specialized legal protocols instead of standard parental intakes.
- **Parental Absence & Logistics (n = 3):** Caregivers were physically absent from the unit due to systemic barriers like lack of transportation.
- **Alternative/Abbreviated Documentation (n = 5):** Care was provided but documented via a separate assessment tool, or was truncated by rapid discharge.
- **Patient Acuity & Mortality (n = 2):** Cases where the neonate passed away early in the hospitalization, truncating the 14-day window.

These categories demonstrate that the social work team actively engaged or attempted engagement with 100% of the cohort, maintaining equitable care standards.

The final analytic cohort consisted of 254 infants (figure 1), the demographics of which are included in Table 1. The demographic profile was predominantly White (75%, n=190) and non-Hispanic (92%, n=232), with Black infants representing 12% (n=31) of the population. English was the primary language for 94% (n=238) of families, followed by Spanish (4.7%, n=12). 50% (n=127) of the cohort utilized Medicaid, while 46% (n=117) had private insurance, suggesting a high level of financial strain within this high-acuity population.

Clinical characteristics varied across the cohort. While 55% (n=140) of infants were born at >36 weeks gestation, a portion were born extremely premature including those born at <24 weeks (2.4%, n=6) and 24–28 weeks (10%, n=26). Similarly, while 56% (n=142) of the cohort had a birth weight >2500g, 15% (n=39) were categorized as Very Low Birth Weight (VLBW, <1500g), including 14.6% (n=37) weighing <1000g.

The majority of infants (55%, n=138) had a length of stay between 7 and 30 days, though 45% (n=115) remained hospitalized for over 30 days.

Table 1 also shows the distribution of needs identified across demographic subtypes. Of the total 254 families screened, 59% (n=150) were identified as having at least one social need ("Any Need"). Univariate analysis revealed that gestational age at birth was a statistically significant predictor of social need identification ($p = 0.012$). Families of infants born at earlier gestational ages were significantly more likely to have a documented social need; for instance, 83% (n=5) of families with infants born at <24 weeks were identified with a need, compared to 52% (n=72) of those born at >36 weeks.

Several other indicators of medical complexity were marginally associated with social needs, including birth weight ($p = 0.055$) and LOS ($p = 0.052$).

In contrast, traditional demographic and socioeconomic markers did not show significant associations with identified social risk. Insurance type ($p = 0.7$) showed nearly identical identification rates in HRSN between Medicaid (61%) and Private insurance (56%). No significant correlations were found for maternal age ($p = 0.6$), primary language ($p = 0.8$), race ($p = 0.068$), or ethnicity ($p = 0.2$).

Table 1: Demographics and comparison of needs by demographic group

Identification of Needs

Table 1 demonstrates the distinct variation in how consistently different need domains were identified, further represented in Supplemental Tables 2 and 3. Overall, there were 240 total discrete social needs identified across the entire cohort with 150

families (59%) identified with at least one social need. As depicted in Figure 2, assistance with government benefits was the most consistently identified need [29.5% of families (n=76)]. Similarly, housing insecurity and mental health difficulties were the next most commonly identified needs, with 22.4% (n=57) and 22.8% (n=58) of families reporting a need in each of these domains, respectively.

Despite the high overall prevalence of needs, the retrospective review revealed substantial variability in the documentation of each domain, as show in Supplemental Figure 2. While housing (98.8%) and mental health (95.7%) were nearly universally documented, other domains showed significant assessment gaps: food insecurity was only explicitly documented in 25.6% (n=65) of cases, and health literacy was addressed in only 4.3% (n=11) of the cohort. Considering only domains that were documented as discussed, assistance with benefits and food insecurity had the highest rate of a need being identified with 40.2% and 40.0% of families reporting a need, respectively (Figure 2).

Response to Identified Needs

There were very high levels of referral for identified needs across most domains. For families with identified needs related to government benefits, 96% (73 of 76) received a documented referral. Health literacy needs demonstrated only a 50% referral rate, although this value was complicated by small sample size of families with needs identified (n=2). The remaining 4 social needs domains (transportation, housing, mental health, food insecurity) all resulted in a referral rate of greater than 84.6% for families with a documented need. Clinical documentation indicated that the identified needs

without a documented referral were due to combination of family preference—such as declining support groups or behavioral health services—and resources limitations, such as a lack of local food assistance program beyond providing immediate inpatient meal cards.

Figure 2: Sankey Diagram

Intersectionality of Health-Related Social Needs

To evaluate the cumulative burden of social complexity, we utilized a stepwise identification analysis to quantify the number of concurrent HRSN impacting each family (Figure 3). The distribution followed a tapering "upstep" pattern: 34% (n=86) of all families faced a single need, 17% (n=44) faced two, and 7.8% (n=20) navigated between three and five simultaneous domains.

The most significant overlaps in needs identified occurred between housing, benefits, and mental health, which together formed the primary cluster of social complexity in the unit. Within the 57 families that were identified with housing needs, 27 (47.3%) of these families also required assistance with government benefits, and 14 (24.5%) families had mental health needs. Additional intersection was seen between benefit assistance and mental health needs; 19 (25%) of the 76 families who required benefit assistance also identified mental health needs.

Figure 3: UpStep diagram (ref. 10)

IV. DISCUSSION

In our retrospective review of social work intake notes in a NICU with near universal social work assessment, we found that HRSNs were highly prevalent across all demographic groups. 59% of families had at least one need documented. Among families assessed for specific needs, 3 out of 5 had at least one identified unmet need. Nearly 1 in 4 families had documented housing concerns, while approximately 2 in 5 families screened for benefits or insurance support were found to need assistance. However, these proportions should be interpreted in the context of variable screening rates across domains. For example, food insecurity screening was documented in only 26% of families, suggesting the true prevalence of need may be underestimated. There were no significant differences observed by insurance status or primary language, underscoring the limitations of relying on traditional "red flags," such as Medicaid coverage, to identify at-risk families. These findings reinforce that systematic assessment of HRSN is essential to optimizing identification, reinforcing previous studies (ref. 3). Moreover, the substantial overlap of identified needs highlights that these factors rarely occur in isolation; rather, they cluster in interconnected ways that compound risk. This pattern supports the need for a multidisciplinary, integrated intervention approach that addresses these clusters holistically, rather than targeting individual social determinants in isolation.

Markers of clinical vulnerability, including extremely premature and VLBW infants, were associated with a higher burden of social need. The marginally significant association between longer hospitalizations and an increased burden of reported social needs, while not causal in relationship, is notable. This finding highlights the importance of early identification of family needs during the hospital course, as timely intervention

may help mitigate the compounding challenges that arise over time. The dynamic nature of social needs is particularly relevant in this context, as families with prolonged NICU stays may experience the emergence or worsening of existing vulnerabilities, exacerbating disparities. Furthermore, the association between LOS and social needs may be bidirectional; families with higher needs frequently face complex discharge hurdles that inadvertently prolong hospitalization.

This study highlights several strengths in identifying and addressing HRSN within our NICU. Key domains such as transportation, housing, and mental health are documented at very high rates (>95%), reflecting consistent attention to these critical needs. Additionally, there is a strong "capture" rate once needs are identified, with 98% of mental health needs and 96% of benefits-related needs resulting in appropriate referrals. This suggests that existing systems are highly effective at mobilizing resources when needs are recognized and underscores the value of early identification to ensure timely action. Previous research also demonstrates that when needs are actively identified, response is feasible. In one study, nearly all families requesting help received referrals to resources (98%), and improvements in workflow increased successful connections over time (ref. 3). Is it important to note that our data captures referral initiation rather than outcomes—a documented referral does not guarantee a resolved need or even an effective connection. Even so, these findings may indicate that the bottleneck in care is not the ability of social work teams to respond, but rather the initial detection of social needs, highlighting an important area for improvement in screening and identification processes.

Our findings suggest the addition of standardized HRSN screening tools in addition to current practices could help to eliminate clinical blind spots and ensure health equity. While mental health domains achieve high proportion of documentation (93.4%), critical needs such as health literacy (66% not documented) and food insecurity (55.6% not documented) are frequently omitted, findings which align with previous standardized screening studies (ref. 4,5). Crucially, both limited health literacy and food insecurity independently jeopardize neonatal health outcomes: low health literacy can impair a family's ability to adhere to complex post-discharge care plans and safely manage specialized medical technology, while food insecurity can directly compromise access to specialty nutrition, leaving these vulnerable infants at a high risk for growth faltering (ref. 12,13).

Numerous studies demonstrate that implementation of standardized screening for HRSN in NICUs is feasible and optimizes identification of needs (ref. 3,4,14). This potential for optimization remains even in NICUs with significant social work support. Rather than a replacement for professional expertise, these tools serve to augment the social worker, whose skilled intervention remains the 'gold standard' for care. Such standardization would provide a systematic safety net, ensuring that all families—especially those in NICU settings where universal social work screening is largely absent—are equitably evaluated and connected to necessary resources (ref. 14). The results of this work will be used to inform future implementation of a standardized screener to assist in better identifying HRSN and connecting families with resources to promote excellent, equitable health outcomes.

The strengths of this study lie in the inclusion of universal social work intake notes for all families and a standardized audit methodology, which allowed for an in-depth analysis of systems-level needs for our population. By targeting a high-acuity population within a Level IV NICU, the research provides detailed clinical correlations that carry potential for universal application across other neonatal intensive care settings. However, several limitations must be acknowledged. First, it is possible that some of these needs were discussed on the initial social work intake, but not officially documented in the medical record. Particularly, hospital cafeteria lactation trays are provided for all birthing parents and complimentary meal cards (2/day) were provided to the non-birthing parent/caregiver when a need was identified– a process which addresses food insecurity but may limit documentation of identified needs. This workflow meshes with a recent study showing that universal referrals to resources may promote more robust identification of needs than standardized screeners alone (ref. 15). Additionally, the study's single-center design and retrospective nature may fail to capture social needs that emerge later in a patient's admission. Furthermore, sample size constraints within specific demographic subgroups, such as those categorized by birth weight, may limit the generalizability of certain findings.

V. CONCLUSION

These findings reinforce that HRSN are highly prevalent in a level IV NICU population, irrespective of “traditional” risk factors. Because of the prolonged nature of neonatal hospitalization, the NICU stay represents a critical window for proactive intervention to systematically identify HRSN and streamline high-impact social work

resource allocation. Even in highly-resourced NICU with robust social work support, incorporating a structured, implementation of universal screening tool offers potential to improve this existing framework—turning a good system into a better, more equitable, and highly responsive model of patient-centered care.

Ethics Approval and Consent to Participate

This study was performed in accordance with the Declaration of Helsinki. The need for ethics approval and participant consent was waived by the Cincinnati Children's Hospital Medical Center Institutional Review Board due to the retrospective nature of the study using de-identified data (Reference number: Not applicable).

Consent for Publication

Not applicable. This manuscript does not contain any individual person's data, images, or videos.

Availability of Data and Materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing Interests

The authors declare that they have no competing financial or personal interests in relation to the work described in this manuscript.

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Author Contributions

KS served as the corresponding author and developed the study methodology, conceptualized the project, conducted the investigation, managed project administration, and wrote the original draft as well as contributed to reviewing and editing the manuscript. **EW** participated in the investigation, contributed to writing the original draft, and assisted with reviewing and editing. **JF** provided resources, contributed to project conceptualization, investigation, methodology, and project administration, while also supervising the study and participating in writing the original draft, review, and editing. **EM** and **MH** contributed to reviewing and editing the manuscript. **SS** contributed to study conceptualization, writing the original draft, and reviewing and editing the manuscript.

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Citations

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Figure Legends

Figure 1. Flow Diagram of Study Sample Selection. Schematic representation of the screening and selection process for the NICU study population. Of the 394 electronic medical records initially screened, 120 patients were excluded for a length of stay (LOS) <7 days, and an additional 20 patients were excluded due to the absence of a documented social work intake note, yielding a final analytic sample size of 254 infants.

Table 1. Clinical and Demographic Characteristics of the NICU Cohort and Stratification by Social Needs Status (N=254). This table presents the baseline maternal and neonatal demographic variables for the entire study population, with a comparative analysis dividing the sample into those with at least one identified health-related social need (n=150) versus those with no documented needs (n=104). Categorical variables are expressed as frequencies and percentages (n, %). Significance across groups is indicated by p-values.

Figure 2. NICU Social Work Intervention Pipeline Across Social Domains. This Sankey diagram illustrates the operational flow of HRSN evaluation across six key domains: housing, food insecurity, transportation, benefits, mental health, and health literacy. Branch point 1 indicates the documentation rate of each topic during the intake process; branch point 2 illustrates the breakdown of identified family needs versus no identified needs within those documented cases; and branch point 3 displays the subsequent rate of resource referral placement for families with an identified need.

Percentages indicate the proportional flow between consecutive stages of the clinical workflow.

Figure 3. Intersection of Co-occurring Health-Related Social Needs Across Multiple Domains. This UpSet plot visualizes the intersections and overlaps among the six documented social risk domains for the cohort. The lower matrix indicates the specific combinations of social needs, where connected dots represent a concurrent positive screening for those intersecting domains, and single unconnected dots represent isolated needs. The vertical bar chart (Intersection Size) displays the number of families experiencing each specific combination of co-occurring needs, ordered by decreasing frequency.

Figure 1: Study Methods

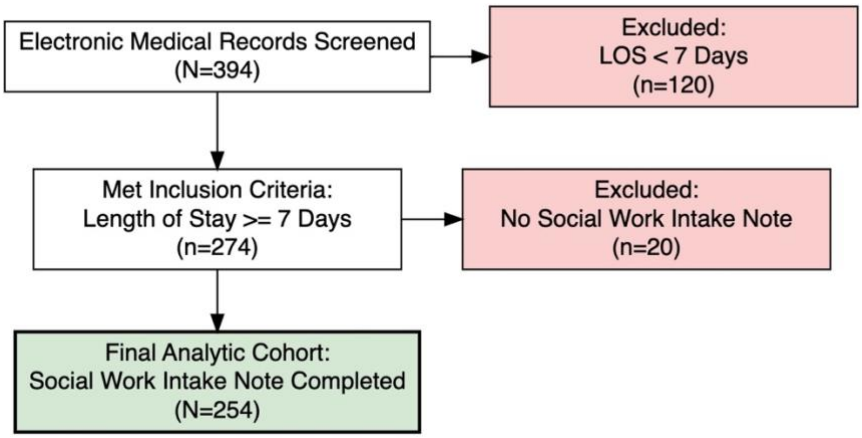


Figure 2: Sankey diagram

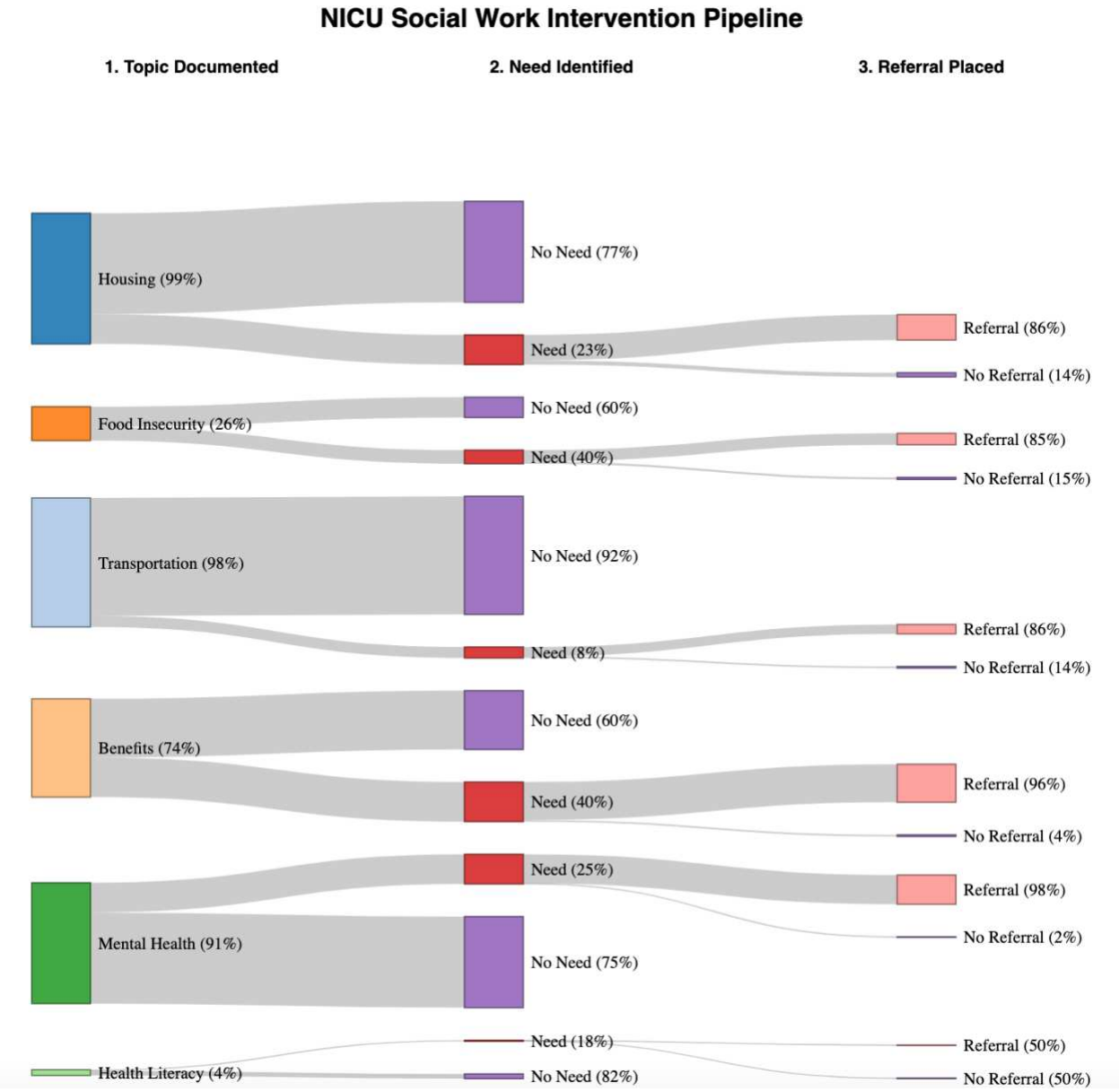


Figure 3: UpStep diagram

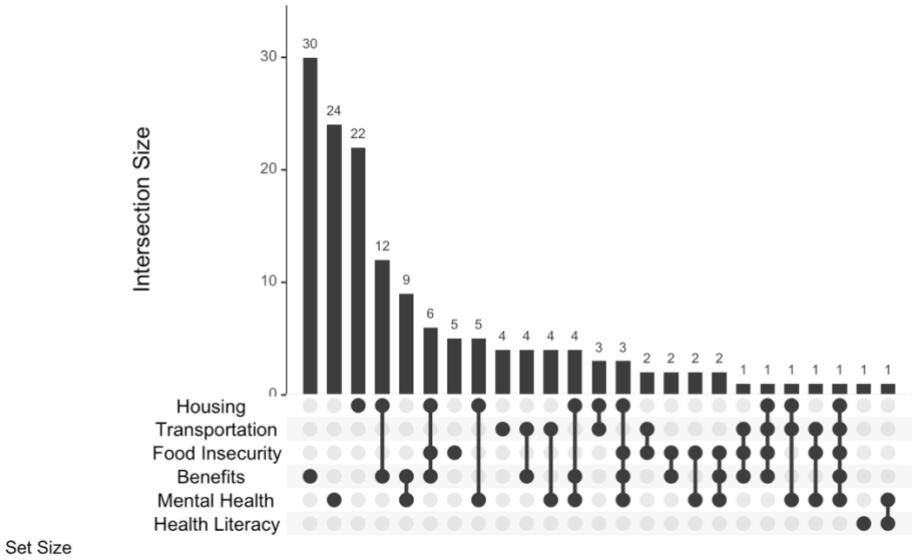


Table 1: Demographics and comparison of needs by demographic group

Clinical & Demographic Variable	Total (N=254)[1]	Any Need N = 150[2]	No Need N = 104[2]	p-value[3]
Maternal Age (yrs)				0.6
<20	15 (6.2%)	9 (60%)	6 (40%)	
20-25	52 (22%)	36 (69%)	16 (31%)	
25-30	66 (27%)	37 (56%)	29 (44%)	
30-35	64 (27%)	35 (56%)	28 (44%)	
>35	44 (18%)	27 (61%)	17 (39%)	
Gravidity				0.4
1 (Primigravida)	95 (38%)	51 (54%)	44 (46%)	
2	59 (23%)	39 (66%)	20 (34%)	
3+	98 (39%)	59 (60%)	39 (40%)	
Unknown	1 (0.4%)	1 (100%)	0 (0%)	
Parity				0.8
0 (Nulliparous)	13 (5.1%)	9 (69%)	4 (31%)	
1	114 (45%)	66 (58%)	48 (42%)	
2+	126 (50%)	75 (60%)	51 (40%)	
Birth Weight (kg)				0.055
<0.5	4 (1.6%)	4 (100%)	0 (0%)	
0.5-1	33 (13%)	25 (76%)	8 (24%)	
1-2	42 (17%)	26 (62%)	16 (38%)	
2-3	98 (39%)	58 (59%)	40 (41%)	
3-4	66 (27%)	31 (47%)	35 (53%)	
>4	8 (3.2%)	5 (63%)	3 (38%)	
Gest. Age at Birth (wks)				0.012
<24	6 (2.4%)	5 (83%)	1 (17%)	

Clinical & Demographic Variable	Total (N=254)[1]	Any Need N = 150[2]	No Need N = 104[2]	p-value[3]
24-28	26 (10%)	21 (81%)	5 (19%)	
28-32	31 (12%)	23 (74%)	8 (26%)	
32-36	51 (20%)	29 (57%)	22 (43%)	
>36	139 (55%)	72 (52%)	67 (48%)	
Primary Insurance Type				0.7
Medicaid	127 (50%)	78 (61%)	49 (39%)	
Private	116 (46%)	65 (56%)	51 (44%)	
Self Pay	8 (3.2%)	5 (63%)	3 (38%)	
Primary Language				0.8
English	237 (94%)	140 (59%)	97 (41%)	
Spanish	12 (4.7%)	8 (67%)	4 (33%)	
Other	4 (1.6%)	2 (50%)	2 (50%)	
Race				0.068
White	189 (75%)	103 (54%)	86 (46%)	
Black	31 (12%)	24 (77%)	7 (23%)	
Asian	6 (2.4%)	5 (83%)	1 (17%)	
Native Indian or Native Alaska	1 (0.4%)	1 (100%)	0 (0%)	
Native Hawaiian or Pacific Islander	1 (0.4%)	1 (100%)	0 (0%)	
Other	25 (9.8%)	16 (64%)	9 (36%)	
Ethnicity				0.2
Hispanic or Latino	21 (8.3%)	16 (76%)	5 (24%)	
Not Hispanic or Latino	232 (92%)	134 (58%)	97 (42%)	
Length of Stay (days)				0.052
<10	20 (7.9%)	8 (40%)	12 (60%)	
10-20	71 (28%)	38 (54%)	33 (46%)	

Clinical & Demographic Variable	Total (N=254)[1]	Any Need N = 150[2]	No Need N = 104[2]	p-value[3]
20-30	46 (18%)	26 (57%)	20 (43%)	
>30	115 (45%)	78 (68%)	37 (32%)	

[1]n

[2]n (%)

[3]Fisher's exact test

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- SupplementalFiguresKS.pdf