Homeless At-Risk Prenatal Program: A Formative Program Evaluation

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Executive Summary

Introduction and Background

Homelessness is a noteworthy social and public health problem. Homeless individuals experience poorer health than the general population, and women are particularly vulnerable. In addition to a greater risk of premature mortality, the risk of pregnancy among homeless women is high. Factors contributing to increased risk include victimization, economic survival, lack of access to birth control, desire for closeness and intimacy, uncertain fertility, and hope for the future. Homeless women often do not have access to basic needs, and many experience poor access to preventive care. In response to the growing prevalence of homelessness among pregnant women and the death of a five-week old infant living in a shelter, Toronto Public Health (TPH) piloted the Support for At-Risk Homeless Pregnant and Parenting Women (SARHPPW) project.

The SARHPPW pilot project provided services to the homeless pregnant population in downtown Toronto and Scarborough. The Homeless At-Risk Prenatal Program (HARP) evolved from the pilot and was implemented in January 2007 as part of TPH's Healthy Babies Healthy Children (HBHC) service. HARP provides nursing and dietetic services to homeless[1] pregnant women across the City of Toronto; program components include client service delivery, internal activities and supports, outreach and collaboration.

A formative evaluation of the client service delivery component (nursing) was initiated in September 2008 to gather information for program planning, internal monitoring, and future evaluation. The evaluation addressed questions to improve understanding of program reach, the profile of the clients receiving service, nursing interventions provided to address client needs, and effective interventions for homeless pregnant women.

Methods

A mixed methods approach was used to address the evaluation questions. Methods were pilot-tested during phase 1 (Pilot Phase) to ensure feasibility of the approach, and data collection was completed during phase 2 (Evaluation Phase). Using a retrospective design, data were collected on clients who had a Brief Assessment completed and received service between September 2007 and December 2008. The study consisted of four main data collection components: 1) ISCIS data extraction, 2) client record review, 3) interviews with HARP Public Health Nurses (PHNs), and 4) a focus group with HARP PHNs. A literature review was conducted concurrently throughout the project.

Integrated Services for Children Information System (ISCIS) Data Extraction: ISCIS data were extracted by the Healthy Families – ISCIS Manager to examine the client profile (e.g., demographic characteristics, reproductive characteristics), program reach, and HARP services received during the study period (i.e. September 2007 – December 2008). The ISCIS sample included 126 clients (n=126).

[1] Homelessness is defined as: living on the street with no stable address; being homeless and living in transient housing (e.g., lives temporarily with friends and/or family and may alternate between them); or living in a shelter.

Client Record Review: Detailed review of the nursing record was conducted to gather information regarding the client profile and program reach, and provide an in-depth understanding of a sample of HARP clients and the interventions received. A purposive sampling method was used, and a total of 24 (n=24) client records were selected.

Interviews with HARP PHNs: Data collected during interviews validated and expanded upon the findings of the record review, and explored client service delivery in greater depth. All PHNs were invited to participate in an interview; a total of four PHN interviews were completed.

Focus Group with HARP PHNs: The focus group explored the PHN experience with HARP service delivery and other service providers, and gathered contextual information to support interpretation of the ISCIS and record review data. One focus group was conducted and five HARP PHNs participated in the discussion.

Literature Review: A literature search, using health information databases, was conducted to gather information on interventions available to homeless pregnant women. Articles were reviewed for relevance to the study, and informed the interpretation of evaluation findings.

Data Analysis: Both quantitative and qualitative analytic methods were used to interpret the data and address the evaluation questions. A profile of clients was generated from a descriptive analysis (e.g., frequency counts) of the record review data. Analyses of the intervention data included descriptive analyses (e.g., frequencies and measures of central tendency) of the duration and frequency of contact, types of contact and interventions delivered, and duration of the service period. General principles of qualitative descriptive content analysis were used to guide analyses of the record review, interview and focus group data. A content analysis was conducted to identify major themes and concepts that were both descriptive ("code driven") and interpretive ("context driven"). This information was used to enrich understanding of the clients served and the interventions and services delivered to meet client needs. All data were triangulated to summarize key findings and develop evaluation recommendations.

It was anticipated that ISCIS data could be used to generate a profile of all clients served. However, limitations associated with the ISCIS dataset precluded the planned approach and ISCIS data were not used to generate the reach or profile of clients served.

Findings

Program Reach – Profile of HARP Clients

The profile reports on a sample of 24 clients who received service during the study period. The profile describes a population with multiple risk factors and complex, wide-ranging needs. Although presented as discrete variables, clients experienced multiple risk factors concurrently, increasing the complexity of their lives.

- **Demographic Characteristics:** The mean age at entry into HARP was 23 years, ages ranged from 16 to 37 years. Level of education completed varied across the sample; few clients had advanced education and almost half had less than high school (n = 8/18). Country of birth was documented for six clients. These clients were born outside of Canada, and some indicated immigration within

the past five years. Almost half (n=10/24) of clients received social assistance, and the source of income was missing for other clients.

- **Health History:** The majority of clients were primigravidas (n=15/23) and eight were multigravidas. None of the multigravida clients was actively parenting at entry into HARP. About half of clients (n=10/21) entered HARP in the second trimester, and although more than half (n=14/20) of clients identified a primary care provider at entry, it is unknown whether these women were routinely accessing antenatal care.

  Clients in the sample were cognitively functioning at varying levels, and four had cognitive impairments, such as developmental delay and fetal alcohol spectrum disorder. Eight clients had mental health issues, including schizophrenia, bipolar disorder, depression and anxiety. Less than half of clients (n=7/19) reported smoking cigarettes and nine clients were either currently using or had histories of substance use. The reported drug use in the sample was lower than expected, and PHNs estimated that all clients used some sort of substance. The majority of clients were referred to (n=19/24) and accessed (n=12/19) the Healthiest Babies Possible (HBP) Program.

- **Social Determinants of Health:** All clients had housing concerns at the time of entry into HARP. Two clients (n=2/24) were reported to be living on the street with no stable address, half (n=12/24) were identified as homeless and living in transient housing, and ten (n=10/24) were living in a shelter. Half of the sample had recently become homeless (i.e., within the last year) (n=12/24), and the remaining clients had longer histories of chronic homelessness (n=12/24). Transiency during the service period was common.

  More than half of clients (n=14/24) were identified as having unreliable or negative social supports. Many did not identify extended family support, and those who did were generally not supportive. Seven clients (n=7/24) reported a history of abuse and violence. Five women (n=5/24) were involved with child protection services as children.

- **Linkages to Services:** Half of clients (n=12/24) had child protection services involved in their current pregnancy. Among the multips, four clients had child protection involved in their previous pregnancies. Five women had direct (i.e., personal history of incarceration) or indirect (i.e., partner incarcerated) involvement with the criminal justice system. Seven clients were receptive and motivated to receive HARP services, and ten were identified as unreceptive to service at referral.

- **Profile by Duration of Homelessness:** A comparative analysis by duration of homelessness was conducted to better understand the client profile. Acute homelessness was defined as clients who had recently become homeless or precariously housed within the last 12 months. Chronic was defined as clients with a history of homelessness, transiency, or frequent shelter use over a period greater than 12 months. In general, clients who had longer histories of homelessness (i.e., chronic) experienced more risk factors and a greater severity of risk factors than those who were more recently homeless (i.e., acute).

Understanding HARP Services

Clients' needs influenced the overall goals for service and how interventions were delivered. This section examines the findings related to HARP program goals, clients needs and goals, type and frequency of contact, and frequency and location of service delivery.

- **HARP Program Goals:** HARP PHNs consistently articulated that the overall goal of HARP is to support a healthy pregnancy. This perceived goal established parameters for client service goals and interventions provided to clients. Linking clients to community supports and building a trusting relationship with the client were also identified as important goals for the program.

- **Client Needs and Goals:** Client needs and goals were identified through nursing assessment, yet formal assessment tools (e.g., Family Assessment Instrument (FAI)) were rarely used to set goals or plan care. The process for identifying client needs and setting goals was ongoing, yet not always collaborative with the client. Each client's capacity to participate in goal-setting influenced the level of involvement in service planning.

  PHNs commonly identified priorities or needs for service including lack of prenatal care, substance use, housing, untreated mental health issues, nutrition, and lack of social support. These needs were used to establish goals, which were often limited by the duration of service. Clients most often identified housing and food security as needs, and their goals were not always well articulated. Although client goals were often long-term, HARP was limited to the duration of the pregnancy and the six-week postpartum period. HARP helped clients to focus on their pregnancy and birth.

- **Type and Frequency of Contact:** Clients were contacted weekly, and with increasing frequency towards delivery and among those with mental health or cognitive function issues. Although weekly contacts were seen as important, PHNs were sensitive towards finding the right balance for each client. The mean number of contacts documented in the records between the PHN and client alone was 19. The majority of contacts (62%) were made by telephone and 37% were face-to-face contacts. The majority (86%) of face-to-face contacts were completed successfully. Telephone contacts were often made to locate, schedule or confirm visits. Almost half of contacts occurred in the absence of clients. These were most often contacts between service providers and PHNs, 94% of these contacts were by telephone.

- **Location of Service Delivery:** Services were delivered in the community, such as in shelters, medical clinics or coffee shops; the locations were determined in consultation with the client. Although HARP services are provided city-wide, a majority of the referrals during the evaluation period came from the downtown or central core (40%) and the east end (32%), which may be due to the high number of services and agencies for homeless in those areas, as well as the relationships built with service agencies and providers through SARHPPW pilot project.

- **Service by Homelessness Status:** Duration of homelessness seemed to influence service duration, frequency and the types of contact associated with HARP services. On average, clients participated in HARP for 19 weeks. Although acutely homeless clients tended to enter HARP at a later stage of pregnancy than chronically homeless clients, the mean duration of service among acutely homeless clients was two weeks longer. It may be that acutely homeless clients remained in service longer

during the postpartum period. Chronically homeless clients had more contacts with HARP PHNs (both in-person and by telephone) than acutely homeless clients, and more contacts occurred without the client present.

Nursing Interventions

A range of interventions was provided to clients. Interview and focus group data indicated some interventions (i.e., supportive listening and counselling) may not be documented in the client record because they were not always conceptualized as interventions, but rather they encompass the role of the PHN. Interventions were tailored to clients' needs and situations. Not all types of interventions were delivered to all clients. This may be related to both the duration of service and the needs of individual clients.

Building trusting relationships was seen as the paramount intervention by PHNs; however, there is no quantitative data on the amount of time spent in developing relationships. PHNs used a range of strategies to foster client relationships including: letting client take the lead (client-centered), remaining non-judgemental and open minded, purchasing a meal, keeping track of client's location, listening to client's story, and aiming to keep her relaxed by being informal, and going slowly.

Service coordination was the most commonly documented intervention, and frequency increased with the type and complexity of client risk factors and the number of service providers involved. Service coordination mostly occurred in the absence of the client and by telephone or voicemail. Most HARP service coordination was done informally, and open and effective communication between service providers was critical. PHNs observed that the lack of a formalized communication process sometimes resulted in not all service providers being well informed, and a need for a more formalized and coordinated service planning process was acknowledged.

Outreach emerged as an intervention critical to both individual service coordination and overall service system-level planning. Outreach occurred on two levels: system and client. PHNs were allocated time to conduct system-level outreach, consequently they have developed relationships with a wide range of service providers which helped to facilitate service coordination and referral. Client-level outreach helped to identify potential clients for HARP services.

Scheduling and confirming appointments was a strategy used by PHNs to reduce potential missed visits, and was the second most frequently documented activity.

Nursing assessment was client-centered, ongoing, informal, and not guided by any specific tool or process. The FAI was completed by PHNs, but was used to identify clients as high-risk, rather than a tool to set goals or plan care. PHNs used informal summary notes and sheets to manage follow-up issues. The most common issues assessed were prenatal health, housing, mental health, and social support. Clinical judgement and knowing how and when to ask questions guided the assessment process and PHNs indicated flexibility and an ability to change plans to meet shifting client needs and interests were essential. Assessing clients who were unreceptive to service was challenging and required time and nurturing of the relationship.

Referrals addressed client needs beyond the scope of PHN practice and enabled other risk factors to be addressed. HARP PHNs viewed referrals as a tool for building a team of support for each client. Record

review data indicate the majority of clients (92%) were referred to additional services, and clients received an average of 2.1 internal (within TPH) and 5.9 external referrals. Within TPH, clients were most often referred to HBP. Externally, clients were commonly referred to prenatal support services and programs. PHNs were selective in making referrals to ensure other agencies employed a care philosophy that is similar to HARP. Upon referral, PHNs promoted client access through supportive accompaniment, distribution of transportation supports, positive reinforcement, and follow-up. Location of referral was identified as a barrier for clients living outside the downtown core.

Health teaching and literature were important for changing knowledge and attitudes. Health teaching was tailored to individual client capacity and function, and teaching aids (e.g., models and illustrations) were used to engage and support learning. Health literature was given to support teaching.

Instrumental supports, including food vouchers, cash for food, and TTC tokens, were seen as an important intervention and were useful to supporting relationship development and maintaining client contact. Instrumental supports were selectively given to clients to address their needs, and PHNs used discretion in determining the most appropriate supports for individual clients.

Due to the transiency of many clients, persistence and intensive outreach were required to locate clients and ensure they received services. Relationships with external service providers were also useful for locating clients.

Counselling and supportive listening represented 3% and 5% of documented interventions, respectively. Most common issues addressed in counselling were medical/pregnancy-related, mental health and housing. Issues related to supportive listening included relationships, child protective services, housing and mental health. PHNs reported that counselling and supportive listening were likely provided at each visit, but not always documented.

Supportive accompaniment represented 2% of documented interventions; PHNs most often accompanied clients to medical appointments. In addition to providing emotional support, supportive accompaniment provided an opportunity to clarify and interpret information, advocate for clients, and ensure follow through with referrals and treatments. Supportive accompaniment was viewed as a special feature of HARP as most external service providers are unable to accompany clients.

HARP clients were often marginalized and encountered barriers accessing resources. Advocacy provided an objective voice for clients and was delivered as a documented intervention in the record review 1% of the time. Focus group and interview data suggest advocacy may not be well documented in client records.

A comparison of interventions received by duration of homelessness suggests possible differences in patterns of intervention delivery. PHNs tended to more often schedule or confirm appointments, completed assessments, referrals and health teaching and more often distributed literature to acutely homeless clients. Proportionately, chronically homeless clients had more interventions related to service coordination, incentives, supportive listening, locating client, supportive accompaniment, and advocacy.

No published evidence regarding effective interventions delivered within the scope of public health nursing for homeless pregnant women was found. However, the published literature available is helpful to understanding the risks associated with being homeless and pregnant, the complex

characteristics associated with the population, and possible interventions and methods of providing service.

Discussion and Recommendations

Target Population and Client Profile

HARP was designed to address the needs of homeless pregnant women. To be eligible for HARP services, pregnant women must be identified as homeless at entry. All clients included in the record review sample met the housing criteria suggesting HARP is reaching the intended target population. However, HARP may not reach all homeless pregnant women in Toronto. During the study period, the majority of referrals to HARP originated from the central and eastern areas of the city. Although there is no reason to believe homeless pregnant women do not reside in the north or western areas of the city, they seem to be less visible and are not referred for service. There is a need to identify women who could benefit from HARP services across Toronto.

The HARP client profile is diverse; women entered HARP with multiple and complex health and social risk factors. All clients were transient during their service periods, and self-identified housing as a priority. Examining the client profile is important for understanding who receives services and how client characteristics may influence service delivery. Profile characteristics, including duration of homelessness, influence needs and service delivery; implementing interventions specific to the chronically and acutely homeless populations may help to improve service for all clients, and maximize benefits to each group.

Program and Client Goals

Client needs were informed by the presenting characteristics and issues experienced by each client. Common needs across the population included housing, prenatal care, food security, and treatment of substance use. Needs assessment was informal and ongoing; the evaluation identified that existing Healthy Families assessment processes were not structured to systematically and comprehensively gather and document information on key variables over time. Increased flexibility in assessment data-entry protocols may assist PHNs in better using tools for ongoing assessment and may enable comprehensive and systemic documentation of risk factors, and collaborative reflection on client goal setting and achievement.

HARP PHNs indicated the goal of the program is to support a healthy pregnancy; this goal set the parameters for both client service goals and the interventions provided. Interventions were short-term and focused mainly on the pregnancy. Although PHNs hoped for long-term behaviour change and overall improved health and quality of life, the ability to achieve these outcomes was limited by duration of service. Although some clients went on to parent, and many were referred to other service providers to address long-term needs, clarifying and broadening the goals of HARP may be another strategy to prepare nurses to facilitate long-term behaviour change among clients.

Nursing Interventions

Evaluation findings detail the types of interventions delivered and the contexts in which they occur. Building a trusting relationship with clients was of primary importance. Clients were more willing to

receive service, share information about themselves, and follow nurses' advice when they were comfortable in the relationship; as such, PHNs viewed the nurse-client relationship as a key intervention. Conceptualizing the relationship as a series of phases is a useful model for understanding the development and termination of the relationship, and when interventions may be most effectively delivered. Recognizing the importance of the nurse-client relationship and ensuring PHNs have ongoing supports and skill development opportunities to support successful movement through all phases of the relationship are important.

Service coordination was the most frequently documented intervention, and is a critical component of HARP services. Service coordination enables the development of a team of supports that collaboratively address the multiple and complex needs of each client. Referral and effective service coordination rely on collaborative relationships that are established through program-level outreach, and fostered during individual client service. Maintaining and expanding outreach activities, and exploring new and more efficient ways to plan and coordinate services may help to ensure that client needs are met and the responsibilities of each service provider are clear.

This study improves our understanding of the range of interventions and activities used to support HARP clients; however, limitations associated with documentation suggest the picture of nursing interventions may be incomplete. There was discrepancy in the types and frequencies of interventions captured by the record review and PHNs' reports during the interviews and focus group. Such discrepancies may reflect the lack of consistent definitions of interventions; clarifying, systematically articulating, and exploring additional interventions available within the scope of PHN practice may benefit the program.

Homelessness has a negative impact on birth outcomes and the reproductive health of homeless women. Although evidence regarding the most effective interventions is lacking, the HARP client profile and program goals align well with published literature. The lack of published evidence highlights the importance of ongoing evaluation and sharing the lessons learned from HARP.

Evaluation findings demonstrate both the complexity of the needs of HARP clients and the interventions nurses used to achieve client goals. These findings informed the development of recommendations to guide overall program planning and service delivery to homeless pregnant women. Recommendations include suggestions to improve strategies for reaching the target population, clarifying program goals, streamlining interventions and services, and implementing program and organization supports to ensure ongoing learning from HARP services.

Recommendations

Goals and Target Population: HARP interventions provide an opportunity to positively influence the lives of homeless pregnant women. The following recommendations address considerations for clarifying program goals and locating the target population.

1. Review HARP goals within the context of the HBHC program. Consider including goals related to:

    - Life course development, including pregnancy prevention, development of positive and informal social supports, education and employment;

- Parenting capacity and continuity of service among clients who go on to parent their children;
- Healthy child development.

2. Upon confirmation of goals, develop a logic model that explicates program goals, objectives measurable outcomes, and activities within the context of HBHC.

3. Work with other community partners to conduct a needs assessment in the north and west areas of Toronto to identify gaps in services available to homeless pregnant women and opportunities to develop a system to support clients in these regions.

4. Collaborate with Surveillance and Epidemiology and Shelter, Support and Housing Administration to develop an approach to better understand the prevalence of pregnancy among homeless and underhoused women across Toronto.

Interventions and Services: Interventions and services provided aim to contribute to healthy pregnancy outcomes. The following recommendations address considerations for strengthening service delivery.

5. Identify strategies and approaches for intervening with acute and chronically homeless pregnant women that recognize and address the diverse characteristics, risks and needs of both groups, while leveraging and coordinating resources. Consider the importance of preventing chronic homelessness and associated health risks in designing interventions and coordinating services for acutely homeless women.

6. Collaborate with other service providers to implement a resource-efficient service coordination process to identify client goals, responsibilities of each agency and monitor the implementation of the plan, including discharge planning that is appropriate to the client population.

7. Explore the use of technology (e.g., web-based shared documentation tools) to facilitate a more efficient service coordination system.

8. Continue and strengthen outreach activities to maintain and build new relationships with service partners across Toronto.

9. Establish a work group with key stakeholders, both within and external to TPH, to support systems-level planning for homeless pregnant women across Toronto.

10. Meet with child protection agencies to discuss strategies to identify and prevent youth formerly in-care from becoming homeless and pregnant.

11. Consult with experts working with homeless pregnant women or in related fields (e.g., addictions and mental health) to identify additional interventions within the scope of PHN practice that could be integrated into the HARP program.

12. Provide learning opportunities (e.g., training, mentoring, shadowing, certification, secondment, research or evaluation projects) for HARP nurses to strengthen and develop new skills with a

focus on interventions that are evidence-informed and related to the goals and outcomes of HARP.

13. Adapt FAI implementation processes to ensure profile and risk characteristics are fully and consistently assessed; use these results to support service delivery.

14. Implement a process for PHNs to more formally involve clients, where appropriate, in identifying clients' needs and goals.

15. Identify and define the range and scope of PHN interventions that support program goal achievement and therapeutic relationships with clients. Interventions should support clients with complex needs to make behavioural changes that promote health (e.g., counselling, joint problem-solving, health teaching and advocacy).

16. Continue to provide PHNs with mobile telephones to enable communication with clients and service providers while away from the office.

Program and Organizational Supports: Accountability is a foundational principle of the TPH Strategic Plan, 2010 – 2014. The following recommendations suggest mechanisms to enhance program monitoring supports and opportunities for sharing lessons learned.

17. Review and revise, as necessary, documentation processes and tools with PHNs to ensure they enable PHNs to efficiently identify clients' needs and goals, develop a plan of care and monitor plan implementation.

18. Implement strategies to improve the quality of ISCIS data so the data may be used for program evaluation and monitoring purposes.

19. Prepare and submit a manuscript for scientific publication that describes the evaluation results and program implications.