

Implementing Housing First Across Sites and Over Time: Later Fidelity and Implementation Evaluation of a Pan-Canadian Multi-site Housing First Program for Homeless People with Mental Illness

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Abstract This article examines later fidelity and implementation of a five-site pan-Canadian Housing First research demonstration project. The average fidelity score across five Housing First domains and 10 programs was high in the first year of operation (3.47/4) and higher in the third year of operation (3.62/4). Qualitative interviews (36 key informant interviews and 17 focus groups) revealed that staff expertise, partnerships with other services, and leadership facilitated implementation, while staff turnover, rehousing participants, participant isolation, and limited

vocational/educational supports impeded implementation. The findings shed light on important implementation “drivers” at the staff, program, and community levels.

Keywords Housing first · Implementation · Mixed methods · Evaluation · Fidelity

Later Fidelity and Implementation Evaluation of a Multi-site Housing First Program for Homeless People with Mental Illness

Pathways Housing First (HF) is an evidence-based approach to ending homelessness for people with serious mental illness (Tsemberis 1999). The provision of a rent subsidy in HF enables formerly homeless people to obtain permanent, independent housing, typically in normal market apartments, at no more than 30 % of their income. Housing is combined with mobile support services, typically Assertive Community Treatment (ACT) or Intensive Case Management (ICM), for people with high and moderate needs, respectively (Tsemberis 2010). ACT and ICM provide a similar range of supports. The models differ, however, in that ACT works on a team-based approach and provides support directly through specialists on the team, who provide concurrent psychiatric and addictions treatment, illness self-management support, peer support, and supported employment. ICM provides similar supports, but works on an individual case management model, where case managers often broker (or refer) participants outside the team.

HF emphasizes self-determination, community integration, recovery, and quality of life (Salyers and Tsemberis 2007). By giving people choices and the opportunity to engage with mental health and addiction services at their own pace, the HF approach stands in contrast to the “treatment

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first” model that requires sobriety and engagement in treatment prior to offering housing (Tsemberis et al. 2004).

Housing First Fidelity and Implementation

The Pathways HF model has been adopted across the US (Tsemberis 2010), western Europe (Greenwood et al. 2013), Australia (Johnson et al. 2012), and Canada (Goring et al. 2011). Despite the spread of HF, concerns have been expressed about program drift (Johnson et al. 2012), in which HF practices are compromised. As evidence of the effectiveness of HF on outcomes for homeless people with mental illness has grown (Rog et al. 2014), attention has shifted towards identifying its core principles and program activities. Furthermore, results from the US Evidence-Based Mental Health Services project suggest that effective implementation of community mental health programs is associated with better outcomes (Bond et al. 2009).

Recently, HF fidelity scales have been developed that measure consistency of implementation with core intervention principles, such as housing choice, delinking housing from support, no housing readiness, harm reduction, and a recovery-oriented treatment philosophy (Gilmer et al. 2013; Stefancic et al. 2013). Another important principle is individualization and comprehensiveness of supports, in the areas of concurrent disorders, supported employment, and peer support, whether these are provided directly through an ACT team, or brokered using the ICM approach. A growing research base has shown that high fidelity HF programs produce better participant outcomes, such as superior housing retention (Davidson et al. 2014; Gilmer et al. 2014).

Given the desire to move effective programs into practice and to guard against program drift, the emerging field of implementation science seeks to delineate the factors that contribute to high fidelity implementation of evidence-based practices. Two systematic reviews of the field (Damschroder et al. 2009; Greenhalgh et al. 2004) have synthesized the numerous factors that influence implementation, including, for example, the attributes of the adopters (i.e., skills, values, preferences) the surrounding program context (e.g., a supportive organizational culture), and the “outer context”, relating to the surrounding service delivery and community context. Durlak and DuPre (2008) have differentiated between two sets of factors that influence implementation: service delivery system factors and support system factors. Service delivery system factors include staff, organizational, and community capacities, while support system factors include training and technical assistance facilitating the implementation strategy. Fixsen et al. (2009) suggest that the support system factors embodied by a comprehensive implementation strategy should

include specific implementation “drivers,” such as leadership, training, coaching, quality assurance data, and effective management.

Applied to the specific context of mental health services and systems (Kimberly and Cook 2008), there is much that needs to be learned about the factors that facilitate or hinder high fidelity implementation of specific evidence-based interventions (Torrey et al. 2012), including HF. It is also important to understand how implementation unfolds at various stages of the process. While Aarons et al. (2011) identify distinct exploration, preparation, and implementation phases, Fixsen et al. (2009) make a distinction between early implementation (or “installation”) and later implementation. This distinction between early and later implementation is important for HF, because its initial goal is to get participants stably housed and to promote engagement with program staff, while later goals and intervention work focus more on individualized recovery plans.

The At Home/Chez Soi Project

The At Home/Chez Soi project was a multi-site HF research demonstration project that took place between 2009 and 2013 in five cities across Canada: Moncton, Montreal, Toronto, Winnipeg, and Vancouver. The project was based on the Pathways HF model and was funded by Health Canada through the Mental Health Commission of Canada. At Home/Chez Soi adopted a specific implementation strategy that included cross-site and local training conducted by Pathways trainers, fidelity assessments using a validated scale at two time points (early and later implementation), and a qualitative examination of factors that facilitated or hindered fidelity (Macnaughton et al. 2012). Another important contextual consideration is that At Home/Chez Soi was a time-limited research demonstration project in which rapid recruitment of participants into the study was necessary, and in which the community-level planning phase had to be done relatively quickly and effectively, in consideration of the RCT timelines, and in consideration of the importance of ensuring that the planned program model respected local context and stakeholder preferences (Nelson et al. 2013).

The evaluation of early implementation demonstrated strong fidelity to the HF model, as has been described extensively in a previous publication (Nelson et al. 2014). Qualitative data provided information that helped to explain the numerical fidelity ratings. The findings showed that both service delivery system factors (i.e., local leadership) and training and technical assistance facilitated high fidelity implementation. On the other hand, the limited availability of affordable housing, limitations in the array of services available in some of the communities, and staff

turnover and burnout were some of the factors that impeded high fidelity implementation.

Research Objective/Questions

The purpose of this study was to explore later implementation of the At Home/Chez Soi project. A mixed methods design was used to compare quantitative fidelity ratings of adherence to the HF model in the early (first year) and later implementation stage (third year) and to understand factors that facilitated or hindered implementation. The specific research questions are:

- (1) To what extent and how well was the HF model implemented both across sites and over time (from early to later implementation), according to fidelity ratings?
- (2) What factors facilitated fidelity to the HF model during later implementation?
- (3) What factors impeded fidelity to the HF model during later implementation?

Methodology

Mixed Methods Approach

A sequential mixed methods approach, QUAN → QUAL (Cresswell and Clark Piano 2011; Padgett 2012; Palinkas et al. 2011; Watson et al. 2014), was used to evaluate fidelity and factors that influence fidelity. An external Quality Assurance (QA) team used a quantitative fidelity scale to evaluate adherence of the program to the core principles of HF at early (first year) and later implementation (third year). Following the quantitative assessment of later implementation fidelity, local site researchers conducted a qualitative evaluation. The purpose of this design was to use the qualitative data to explain the quantitative fidelity ratings, by understanding the factors that promoted or impeded fidelity. The fidelity ratings were used to answer the first research question, while the qualitative data were used to answer the second and third research questions.

Quantitative Fidelity Evaluation

Fidelity Scale

The 38-item Pathways HF Fidelity Scale was used to assess program fidelity for ACT and ICM programs at each of the five sites (Stefancic et al. 2013). Two versions of this scale were developed—one for ACT and one for

ICM. These two versions are identical except for some items related to the array of services provided; the ICM version of the scale uses slightly different terminology to reflect the fact that this array of services is brokered, rather than provided directly. There is also a small difference in the part of the ICM scale which measures program structure; this is to reflect the fact that this model uses individual rather than team-based case management. The 38 items are grouped into five domains: (a) Housing Choice and Structure, (b) Separation of Housing and Services, (c) Service Philosophy, (d) Service Array (i.e. comprehensiveness of support), and (e) Program Structure. Each item is rated on a 4-point scale with a high score indicating a high level of fidelity. Half-point increments (e.g., 3.5) are permitted and the benchmark for “high” fidelity is 3.5.

Stefancic et al. (2013) reported good to excellent Cronbach’s alpha coefficients for the first four domains: Housing Choice and Structure (.80), Separation of Housing and Services (.83), Service Philosophy (.92), and Service Array (.71). The domain of Program Structure encompasses a number of different facets of good programming and was not intended to be homogenous. The scale’s construct validity has been established through a comparison of the At Home/Chez Soi programs and a more heterogeneous sample of California programs that did not explicitly follow the HF model. The At Home/Chez Soi HF programs ($n = 10$) scored significantly higher on three domains than the California programs ($n = 20$) that did not explicitly follow the HF model (Gilmer et al. 2014): Housing Choice and Structure, $t(29) = 7.88$, $p < .01$, Separation of Housing and Services, $t(29) = 5.75$, $p < .01$, and Service Philosophy, $t(29) = 2.21$, $p < .05$. There were no significant differences between the Canadian and California programs on the domains of Service Array or Program Structure.

Procedure and Sample

Fidelity assessments were conducted twice (early and late) with five ACT teams and five ICM teams at the five At Home/Chez Soi sites by an eight-member Quality Assurance (QA) team. Early assessments were conducted between August and November, 2010 when teams had been operating for 9–13 months, while later fidelity evaluations were conducted between December, 2011 and May, 2012, at 24–29 months of program operation (see Table 1). Data used to score the dimensions of the scale were obtained from multiple sources. The fidelity evaluations consisted of a full-day site visit to each program by 4–6 QA team members and included observing program staff meetings, interviews with program staff, focus groups with housing participants, and chart reviews. Two QA team members

Table 1 Information on the sample for the fidelity evaluation and qualitative evaluation of implementation

Type of implementation evaluation	Type of data collection and sample size
Early fidelity evaluation (T1)—conducted between August, 2010 and November, 2010, when teams had been operating for 9–13 months	84 staff interviews 10 consumer focus groups 100 chart reviews
Later fidelity evaluation (T2)—conducted between December, 2011 and May, 2012, when teams had been operating for 24–29 months	89 staff interviews 11 consumer focus groups 102 chart reviews
Qualitative implementation evaluation—conducted between January, 2012 and July, 2012, when teams had been operating for 25–31 months	36 key informant interviews 17 staff focus groups
Total sample size	209 individual interviews 38 focus groups 202 chart reviews

reviewed each data source. Semi-structured interviews with staff (e.g., clinicians, housing team staff) lasted roughly 45 min, while consumer focus groups lasted approximately 1–1.5 h with 8–12 participants. For the chart review, the QA team reviewed a random sample of 10 charts that included progress notes and treatment plans, for each program. See Table 1 for information on the sample sizes. It should be noted that in most sites many of the same individuals were interviewed for both the early and later fidelity evaluations.

The final scores for each item on the Pathways HF Fidelity Scale were reached through QA team discussion and consensus (see Torrey et al. 2012 for a similar approach). The QA team met to review all the data obtained in the site visit. For each item, the team members shared their independent ratings, followed by a discussion until consensus was achieved for the rating for each item. After this process, the QA team conducted a feedback session with each program and provided a written report that included detailed feedback on the program's strengths and challenges, and recommendations for improvement. Input and feedback on these reports were obtained from staff that was incorporated into final versions of the fidelity reports. Thus, there were two fidelity reports for each program, one for early implementation and one for later implementation.

Data Analysis

The scores for each of the five fidelity domains were averaged for each program as well as across the 10 programs at both the early and later time periods. Statistical tests comparing the early and later time periods were not

computed because of the small sample sizes, the fact that scores were near the ceiling of the scale at the early assessment, and the research team's judgment was that descriptive statistics would be sufficient for the purposes of this study.

Qualitative Evaluation of Implementation

Data Collection

Common key informant and focus group protocols were used across sites and focused on issues identified in the fidelity reports (e.g., maintained and emerging strengths and challenges). All interviews were audio-recorded and transcribed verbatim. Site researchers also reviewed the early and later fidelity reports prior to conducting the interviews. Finally, site researchers took field notes on the QA team's feedback meetings with the program staff.

Procedure and Sample

Individuals who played a key role in program implementation (e.g., Site Coordinators, team leads) were interviewed individually. Front-line project staff members (i.e., ACT team members, case managers) were interviewed in focus groups. Site researchers conducted these interviews between January and July 2012, shortly after the later fidelity evaluations were completed. Many of the individuals who were interviewed were also interviewed for the fidelity evaluations. In addition, eight national key informants, including the members of the QA team, were interviewed by members of the National Qualitative Research Team, using a similar interview guide to that used with staff at each of the sites. See Table 1 for information on the sample for the qualitative evaluation.

Data Analysis

The approach to data analysis at each site involved thematic analysis (Padgett 2012). Site researchers identified "common threads" throughout the data, moving from a process of open coding to thematic coding (Charmaz 2006). Each site conducted member-checking with people who were interviewed for the site reports to establish the trustworthiness of the data. Each site produced a report on their local implementation evaluation (Aubry et al. 2012; McCullough et al. 2012; Patterson 2012; Stergiopoulos et al. 2012; Vallée et al. 2013).

For the cross-site analysis, members of the National Qualitative Research Team read the 20 early and later program fidelity reports, the five qualitative implementation evaluation site reports, and the national key informant interview transcripts. Matrix displays were constructed using site and issue (e.g., factors that influenced fidelity) as

the main axes. A cross-site report was prepared and shared with site researchers, who were invited to read and review it along with their teams. Comments from the sites were incorporated into the final version of the cross-site report.

Findings

Housing First Fidelity Across Sites and Over Time

Changes in the fidelity scores were examined from the early fidelity evaluation (T1) to the later fidelity evaluation (T2). Overall, 71 % of the fidelity scale items at T1 and 78 % of the items at T2 were rated as 3.5 or higher on a 4-point scale, indicating high levels of fidelity at both time periods. Moreover, as is shown in Table 2, the average fidelity scores for all domains but one, which stayed the same, increased from T1 to T2. Average fidelity ratings for the five domains are also very similar across sites, despite some notable variations in fidelity within sites that are not reflected in Table 2, but which we address within the qualitative results.

The strongest fidelity ratings were reported for the domain of Separation of Housing and Services, which achieved near perfect fidelity ratings at both early (3.90) and later (3.95) implementation. For the domain of Housing Choice and Structure, the items of permanent housing tenure, affordable housing, integrated housing, and privacy were rated a 4 at all of the sites at both time periods. Also in this domain, the item of housing choice increased from a mean of 3.32 at T1 to 3.50 at T2. The majority of items of the Service Philosophy domain were also rated quite high,

as was housing support for the Service Array domain. Most of the items for the Program Structure domain were also rated quite high.

Several fidelity challenges were noted across the five sites. Regarding the domain of Housing Choice and Structure, the housing availability item was a problem at all sites at both time periods (mean of 2.16 at T1, dropping to a mean of 1.53 at T2). In the domain of Service Philosophy, the items dealing with person-centered planning (mean of 2.74 at T1 and 2.96 at T2) and motivational interviewing (mean of 2.91 at T1 and 3.10 at T2) were challenges at most of the sites. For the domain of Program Structure, participant representation in the programs was a challenge at all of the sites (mean of 1.94 at T1 and 2.32 at T2).

By far, the most challenges were observed for the Service Array domain. The items of psychiatric services (mean of 3.12 at T1 and 2.76 at T2), substance abuse treatment (mean of 2.86 at T1 and 3.20 at T2), employment and educational services (mean of 2.94 at T1 and 3.26 at T2), social integration (mean of 3.00 at T1 and 3.10 at T2), and 24-h coverage (mean of 3.0 at T1 and 3.1 at T2) were challenges for most of the sites. While these scores were relatively low compared with items from other domains, the scores were generally around 3 out of 4, and the Service Array items improved from a mean of 2.88 at T1 to a mean of 3.39 at T2.

Factors that Promoted Fidelity

Service System Factors

Commitment and Growing Expertise of the Housing and Service Teams One particularly striking theme repeatedly

Table 2 Scores on the fidelity scale domains by site and time period averaged across ACT and ICM programs

Fidelity domains (number of items)	Time period	Site 1	Site 2	Site 3	Site 4	Site 5	Average across sites
Housing choice and structure (6)	T1	3.75	3.33	3.63	3.67	3.55	3.59
	T2	4.00	3.38	3.50	3.72	3.33	3.59
Separation of housing and services (7)	T1	3.86	3.93	3.90	3.97	3.83	3.90
	T2	4.00	4.00	3.97	4.00	3.79	3.95
Service philosophy (10)	T1	3.50	3.63	3.41	3.78	3.53	3.57
	T2	3.55	3.58	3.68	3.87	3.49	3.63
Service array (8)	T1	2.50	2.98	3.13	2.81	2.98	2.88
	T2	3.38	3.19	3.64	3.64	3.10	3.39
Program structure (6)	T1	3.50	3.38	3.08	3.67	3.58	3.44
	T2	3.67	3.25	3.30	3.92	3.43	3.51
Total (37)	T1	3.42	3.45	3.43	3.58	3.49	3.47
	T2	3.72	3.48	3.62	3.83	3.43	3.62

T1 = early implementation, T2 = later implementation. Team approach and peer specialist on staff are items on the program structure domain, and they are only rated for ACT programs. Thus, these two items were removed from these analyses. Scores are averaged across ACT and ICM programs for all sites except for Moncton, which is based only on ACT program scores

mentioned was the high degree of staff's continued commitment to the project and its values, despite the difficulty of the work. As one key informant said: "I've never seen such a large group of people take to an idea and just do this ... their strength of commitment to this way of doing work is profound." This commitment provided a base for the growing expertise of the teams. Across sites, stakeholders described what was commonly termed the "maturing" and growing skill of the staff, despite problems with burnout seen in early implementation and to some extent continuing into the second round. Reflecting the sentiment of many, one key informant commented: "I was impressed by the growth and competency of the staff." This person went on to say:

I think that initially there was a lot of feeling of, 'this may be impossible' ... and it was really interesting to go back and to hear [people's] ability to work with individuals that other's would not have been able to, because they had learned... through really being very dedicated and persistent that there was success with people, that they initially thought were impossible.

Sites were also able to draw in new expertise to their teams, finding staff who were more suited to practicing HF, and who could innovate. One important example common to a number of sites was "finding the right psychiatrist who actually embraces and can actually do this kind of work." As one key informant observed: "Sometimes this took some time, but boy... just watching them in action is a really different kind of practice, with how they relate to the team and how they relate to the participants." At later implementation, the ICM teams had developed better access to psychiatric support. Another site made the innovative addition of a home economist to the ACT team, who helped participants develop tenancy skills, and improve their nutrition and quality of life.

Learnings Regarding the Housing and Re-housing Process Despite low vacancy rates and a lack of affordable housing at most sites, all reported maintained or emerging success with specific aspects of housing and re-housing participants. For instance, the fidelity ratings indicate that the sites showed strong and improved ability to facilitate housing choice. As an example, one site reported successful, high quality housing procurement as a result of forming collaborative relationships with landlords and property management companies, and creatively matching participants with housing units that were secured. All sites learned the value of providing consistent support for landlords. Providing prompt responses to problematic tenancy issues, paying for any unit damages, and guaranteeing rent payment were all strong incentives for landlords to participate in the project. A team member stated that:

Compared to other landlords, those in our project get a great deal of support... We initially underestimated how important that support is. It's like an extra set of hands helping them do their job.

Most sites also emphasized their learning about the re-housing process. They exhibited both dedication and success in creatively re-housing participants. They also helped tenants learn from past experiences (e.g., that inviting people from the street into their apartment was jeopardizing their tenancy) and develop preventative strategies to avoid eviction in the future. Noting the "significant improvement" with this issue, a key informant stated: "Re-housings were more about needing to move and the desire to move, than 'let's just do a quick fix because the landlord's unhappy.'"

Leadership One key informant stated: "Leadership is so critical to implementation ... the immediate team leader on a team and then there's the leadership ... of the organization in which that team is located... individuals that are kind of in behind the scenes mostly." She noted that it was only during later implementation that "we realized the extent to which [host agency leaders] had been a resource to the program and the team leaders." Key informants also noted the importance of the leadership provided by a strong Site Coordinator, especially one who could "hold the space" necessary for bringing in the multiple players (e.g., housing and clinical teams), helping them negotiate differences, and maintain the quality of the program.

Organizational Culture One key informant noted the importance of organizational culture for team dynamics. As he stated, the teams that "gelled" and excelled were housed in agencies where the "value structure" of the agency was "consistent with what the Housing First intervention was all about...you know the attitude of 'we *can* do...we *need* to do anything possible to meet the client's goals' ... that was a good fit and those teams tended to look better on the fidelity."

Partnerships All the sites also continued to form and strengthen relationships with the multitude of community partners outside of the teams that helped provide support for the participants. This included justice system personnel (e.g., police, legal aid), employment and income assistance agencies, and partners within the wider mental health and addictions systems (e.g., hospitals, psychiatry and addiction specialists, etc.). Because of these relationships, which were often mutually beneficial to the project and the external agencies themselves, the host communities at the sites were for the most part seen as developing a sense of "ownership" of the project that was seen as potentially

important for the longer-term project sustainability. As well, there was improvement from early to later implementation in the relationship between the housing and clinical teams (see below).

Support System Factors

Training and Technical Assistance Key informants noted the importance of the implementation support provided through the project's national implementation team. In particular, participants suggested that the training, the fidelity evaluation process, and ongoing technical assistance from the Pathways HF staff QA team were all an essential part of the teams' continued improvement. In general, informants believed that the improvement in team functioning was in part attributable to the fidelity visits, and to feedback and technical assistance that was provided to address challenges.

Witnessed across sites was an "improvement in team dynamics" between the housing and clinical teams, which had struggled to work together during early implementation. This improvement was attributed in part to the recommendations of the QA team during the early fidelity evaluation that the housing specialist meet once a week with the clinical team. As one key informant explained: "once the housing team ... was interacting more with the teams, they had a better understanding of the client" and could thus better negotiate for the client's interests with the landlord. At the same time, the teams gained a better understanding of concerns from the landlord and could intervene earlier since "the housing team would hear things that they needed to tell the team."

Factors that Impeded Fidelity

Service System Factors

Staffing Despite the increased maturity of the staff group discussed above, all sites reported having difficulties maintaining stable staffing levels on service teams. During early implementation, turnover tended to relate to the difficulty of the workload, compounded by the steep learning curve associated with the beginning of the project and initial recruitment. During later implementation, concerns about job security became more of a factor. Key informants believed that turnover throughout may have been more common on teams that did not function as well, had weaker leadership, or were hosted in an unstable organizational context. Key informants also pointed out that the staffing problem "was [in part] because we had some of the wrong people. And it took a little while ... to realize this wasn't the work they wanted to do and for them to leave and then be replaced by individuals who were more suited."

Service Array Despite notable improvement, the fidelity scores indicated that providing a comprehensive service array remained the most challenging aspect of implementation. Two issues regarding service array were identified by the qualitative data. The first was the continuing challenge of meaningfully integrating the peer specialist into the program. As one key informant put it: "you know, coming from that place of seeing 'here's just a junior staff' to 'here seeing an equal member of the team' ... took some time for people to learn that contribution and value it equally." One site noted the importance of properly supporting peers to adopt a full-service role, by making sure that individuals were fully trained and provided with workplace support, noting that people who had experienced trauma may be susceptible to re-traumatization in the course of their work.

A second service array challenge was providing effective supported education and employment. Despite some success, the vocational specialists' work was often dominated by dealing with crises in a significant minority of unstable clients, rather than focusing on supporting more proactive, long-term goal planning with participants who were ready to move further in their recovery. As one key informant put it: "(employment) is a big issue, and I think people really understood the concept, but ... the programs that I've seen do extremely well, they have a separate person just doing job development, not trying to do case management and everything else."

Housing Availability Most of the sites reported challenges of finding good quality, affordable housing in areas in which participants desired to live. This is consistent with the fact that the average fidelity score for the housing availability item was low and at T1 and T2. Some key informants related the issue of housing availability not just to affordability, but to the unwillingness of some housing agencies to jeopardize established relationships with landlords with the more risky HF clientele. Finally, many units were smoke-free and pet-free environments, which further limited options.

Compounding problems with housing availability was the need to re-house some individuals. As one key informant explains, this may have to do with problems with information-sharing between housing and clinical teams:

Sometimes the only interaction we had with the clients was when there was chaos, when there was a real problem that was going on... I mean the landlords are calling us and complaining... but we have no idea who the person is so that was a disadvantage to me that's going forward.

During later implementation, challenges with re-housing participants became more difficult. With the end of the

project in sight, landlords became more hesitant to sign year-long lease agreements with participants.

Participant Factors

Lack of Engagement and Continued Housing Instability for a Small Sub-Group of Participants Another implementation challenge was dealing with the minority of individuals who remained poorly engaged with the project. This challenging group also included those whose housing remained unstable throughout the course of the project, and for whom the scattered-site model of housing appeared not to work. Key informants suggested that supportive housing with built-in support may be a better fit and preferred by some individuals with high support needs. Certain sites experimented with single-site housing, including a peer-run option, for people whom scattered-site housing wasn't successful, in one case using this as opportunity to learn life skills and subsequently "step up" to independent housing.

A number of informants believed that severe substance abuse was a particularly pertinent contributing factor to continued housing instability. As one person elaborated: "the people who benefit the least [from Housing First] are the people who can't give up the drug use. And it's a particular kind of drug use that involves a lot of other people. It can't be alone, they use other people, people come in and they start staying in the apartment." Like others, this informant emphasized: "that group doesn't do well... but you don't know who they are...ahead of time." Another key informant noted that the problem may also be a service delivery issue, suggesting some teams could have better "embraced their role around the assertiveness side...[instead of operating with a] ... more traditional mindset of ... well if the person shows up, then we'll work with them." She pointed out, however, that HF participants are not often, at least initially, "people who show up."

Isolation and Loneliness A recurrent challenge in implementation for all sites was the need to address consistent feelings of *isolation and loneliness* experienced by some participants. A key informant attributed loneliness to the challenge faced by people trying to leave unhelpful social networks behind, and emphasized that support needed to help people become connected to new networks.

...the person that is addicted lives a life of loneliness... You can't be around your friends, so the drug is your best friend... An agency has to make sure that you can be there to complement that... until they have been able and have had time to build new friends.

Another key informant described the challenge participants faced not in terms of loneliness but of adjustment

to loss, connected with moving from being homeless to being in an unfamiliar living situation. As this informant stated: "It is like an immigration. You are no longer what you were, but you are not yet what you risk becoming."

Discussion

Housing First Fidelity Across Sites and Over Time

At both early and later implementation, all sites achieved a high degree of fidelity to the HF model. Previous research has shown that during early implementation the At Home/Chez Soi program achieved strong implementation (Nelson et al. 2014), which had a higher level of fidelity to the HF model than housing programs for people with mental illness in California (Stefancic et al. 2013). Fidelity scores were high at early implementation, but showed some improvement at later implementation. This improvement was accounted for largely by the Service Array items. On a 4-point scale, there was an improvement over time of .51 on the domain of Service Array. We discuss why this might have occurred in the next section.

In spite of the overall high levels of fidelity, specific challenges were noted for housing availability, participant representation, person-centered planning, motivational interviewing, as well as the service array items of psychiatric services, substance abuse treatment, employment and educational services, and social integration. Many of these challenges pertain to the community context of the sites, which we discuss below.

Factors that Promoted Fidelity

Factors that influence fidelity operate at nested ecological levels, and are collectively referred to by Durlak and Dupre (2008) as "service system factors". Successful uptake also depends on the nature of the strategy devised to actively "drive" implementation at these various levels (Fixsen et al. 2009), using what Durlak and Dupre refer to as an "implementation support system".

Service System Factors

Staff Three themes regarding staff were: (a) specific learnings around housing and re-housing participants, (b) growing expertise with the HF model, and (c) the importance of value congruence between staff and the HF model. All of these themes relate to improved staff competence over time, which may partly explain the improved fidelity ratings from early to later implementation. This fits with previous research that has found that staff competence is important for the successful implementation of other

evidence-based community mental health programs (Bond et al. 2009; McGraw et al. 2010; Rapp et al. 2010; Seffrin et al. 2008).

Findings regarding regarding housing and re-housing learnings provide a specific example illustrating how improved fidelity relates to staff becoming comfortable with and competent in implementing the HF model. As noted, part of the learning curve regarding housing and re-housing participants involved the importance of developing positive relationships with landlords, since they play such a vital role in housing participants in the HF model (MacLeod et al. in press). As the teams became better at developing these relationships, they became better at facilitating good housing choices and at avoiding unnecessary re-housings.

Key informants talked about this growing HF expertise as learning to go beyond basic knowledge of the model's principles and gaining an ability to exercise judgment in complex situations (see Greenhalgh 2012) and being able to balance competing HF principles, such as choice and engagement. This finding is similar to research that has illustrated the complex staff judgments involved in the practice of harm reduction strategies, in which choice and safety must be balanced (Tidderington et al. 2013).

Damschroder et al. (2009) further suggest that staff capacity entails not only skills, but a strong congruence between staff values and those embodied in the intervention. Our findings affirm that building a strong staff capacity starts with the selection (or self-selection) of practitioners with recovery-oriented values, since these are difficult to influence through training. This accords with the argument of Fixsen et al. (2009) that in addition to training and supervision, careful staff selection is one of the necessary "competency drivers"; it also highlights the importance of values in the selection process. Henwood et al. (2013) found that in contrast to staff from "treatment first" programs, HF staff are more likely to espouse values of tolerance of clients so-called "deviant" behaviors and hold the belief that housing is a right rather than something to be earned. While staff selection and initial training provided an important base, staff expertise began to crystallize in later implementation, after staff members gained considerable experience with the model and actually witnessed the impact of the new way of practicing on the lives of people who had been previously believed to be "impossible." Thus, witnessing HF's "relative advantage" over previous ways of doing business solidified staff's confidence and "buy-in" to the HF model (Damschroder et al. 2009; Damschroder and Lowery 2013).

Organization At the organizational level, leadership and organizational culture emerged as important factors that promoted fidelity. Consistent with previous research (Aarons et al. 2009; Torrey et al. 2012), leadership was

integral to strong implementation. Our findings attest to the importance of both team and host agency leadership. Host agency leadership helped with the logistical aspects of implementation, and could help teams withstand turnover of team leaders. Key informants also noted the importance of having a strong Site Coordinator, especially one who could help team members to develop a shared vision regarding the HF model and its ongoing practice.

Regarding organizational context, Fixsen et al. (2009) argue that "facilitative administration" is an important driver of implementation. During later implementation, key informants pointed to the importance of the host agency having an organizational culture that was conducive to the recovery philosophy of HF. Facilitative administration also entailed having a host agency leader who could establish an attitude that the host agency and the team "can" and "will" do "what it takes" to promote recovery. Such a climate enabled the service teams to "gel and excel."

Community As was shown in the early implementation evaluation, effective implementation at the system level entailed developing partnerships beyond the immediate scope of the program, which drew upon the resources of the wider community. This included partnering with other systems e.g., the justice system, psychiatry. These partnerships were important for all teams, but particularly so for the ICM teams, which worked on a brokerage model. The results also showed how the community became amenable to partnerships once the HF program proved itself to be a resource to the wider system.

There was noticeable improvement in the Service Array domain from early to later implementation. Similar to the findings of Rapp et al.'s (2010) qualitative study, this study illuminated the importance of partnership development for enhancing the service array available to HF participants, and showed how some ICM teams were becoming more ACT-like in nature by capturing resources from the wider system (e.g., psychiatry and addictions specialists). This suggests that ICM team implementation is particularly sensitive to what Damschroder et al. (2009) and Greenhalgh et al. (2004) refer to as "outer context", and that facilitative administration is necessary for identifying resources in the wider service system and for developing the partnerships necessary for gaining access to these for the benefit of HF participants.

Support System Factors

Training and Technical Assistance Consistent with previous research (Seffrin et al. 2008), key informants affirmed the value of the training and technical assistance that was provided. In addition to the training and community of practice calls and meetings, staff appreciated

how the feedback from the two fidelity assessments helped them to improve the programs' functioning. In particular, the fidelity visits and associated technical assistance visits helped facilitate the improvement in "dynamics" between the housing and clinical teams noted earlier. So, the training and technical assistance provided was instrumental in promoting both staff capacity and organizational capacity, which in turn led to high levels of fidelity to the HF program model.

Factors that Impeded Fidelity

Service System Factors

Staff Staff turnover and staff who do not fit well with the HF model impeded high fidelity implementation. Staff turnover was related to the difficulty of the work and the complexity of client needs. This finding regarding turnover in HF ACT is consistent with previous findings in relation to the implementation of regular ACT teams (Rollins et al. 2010); the current finding was particularly acute in early implementation before expertise developed and the "relative advantage" of this relatively complex model became apparent to staff. Greenhalgh et al.'s (2004) review suggests that intervention complexity is a significant implementation barrier that must be considered. As well, staff turnover may also reflect underlying problems with the organizational culture of the host agency.

The findings of this study also indicate that one problem was the need for greater attention to initial staff selection, as key informants believed that staff turnover may involve a self-selection process whereby those less suited to the model are gradually winnowed out. Consistent with this, Henwood et al. (2013) found that HF staff possess or develop a different set of values and competencies than staff in "treatment first" programs, hence the importance of astute recruitment.

Community Service Array Like Rapp et al. (2010), we found that the lack of a comprehensive array of services in the community for homeless people with mental illness or the lack of partnerships with services that provided such services were barriers to high fidelity implementation. This was particularly a problem during early implementation, particularly for the ICM teams, which relied on a brokerage model. However, this became less of a problem during later implementation as the HF programs formed partnerships that expanded the service array and led to increased fidelity in this domain.

Housing Availability Housing availability was the item in the fidelity scale with the lowest average rating across sites. This item was benchmarked by the percentage of participants who moved into housing of their choice within

6 weeks. Housing availability was constrained by the lack of affordable housing within most of the five communities. In four of the five sites, the vacancy rates of rental properties was 2.8 % or less, and the average costs of rent for a one-bedroom apartment ranged from \$583–\$969 Canadian per month. However, with rent supplements, participants in the project paid no more than 30 % of their income on rent. Moreover, in spite of the challenge of finding affordable housing, the HF participants spent 73 % of their time in stable housing during the 2 years of the study. Adequate rent supplements, having a housing specialist on the teams, and developing positive relationships with landlords enabled the programs to deal with this significant challenge to fidelity of the HF model (Tsemberis 2010).

Participant Factors

Lack of Engagement and Continued Housing Instability for a Small Sub-Group of Participants While high levels of housing stability have been reported in the literature for HF participants (Aubry et al. 2014), there is a sub-group with additional needs, somewhere between 15 and 25 % of HF participants, depending on how housing stability is defined, who have difficulty settling into housing. Key informants believed that these participants have ongoing issues with substance use and difficulties extricating themselves from peers on the streets who use substances, just as Stanhope et al. (2009) have found. These issues point to the need for intervention strategies that are specific to later implementation for a sub-group of participants (Aarons et al. 2011).

Some of the sites experimented with single-site or interim housing alternatives for these participants after they had been evicted several times from independent housing (Zerger et al. 2014). Also, previous qualitative research has found that staff who persevere in connecting with consumers, are kind, and provide one-to-one support that promotes service engagement (Padgett et al. 2008a; Stanhope 2012; Stanhope et al. 2009). These findings suggest that both housing and support measures that may assist participants who have difficulty achieving housing stability.

Isolation, Loneliness, and Desire for Purposeful Activity Participant isolation and loneliness has been identified as an issue in HF and other housing programs serving formerly homeless persons with mental illness. Padgett et al. (2008b) found that isolation of homeless people with mental illness and substance abuse was part of a larger pattern of troubled relationships with family and peers. At the same time, the nature of HF, where participants generally choose independent housing, may exacerbate social isolation. Once participants are successfully housed, and removed from their street lives, participants may lack

purposeful activity, and thus face the question of “What’s next?” Aarons et al. (2011) suggest that different implementation challenges need to be addressed at various stages in the implementation process. During later implementation, staff need to help people who are ready to take the next steps in recovery with evidence-based practices like supported education, employment, and socialization (Ware et al. 2007; Yanos et al. 2012). These types of intervention can help individuals to take on valued social roles that could help them improve the quality of their lives.

Summary and Implications

In a multi-site HF research demonstration project in Canada, we found that 10 HF programs achieved a high degree of fidelity to the HF model during both early and later implementation. Given the high degree of variability across these different communities, this attests to the strength of the implementation strategy and the adaptability of the model to all these different contexts, which included linguistic differences between and within sites, a significant proportion of Aboriginal participants in one site, and a high proportion of participants from diverse ethnoracial backgrounds in another.

While some service delivery system factors and challenges with participants impeded fidelity, staff developed specific strategies to deal with these issues during later implementation. One particular improvement between early and later implementation was the fidelity domain of Service Array, as the sites strived to create partnerships with an array of services for HF participants. In general, both service system factors at the staff, organizational, and community levels and support system factors (i.e., training and technical assistance) influenced fidelity.

The process of fidelity evaluation not only documented programs’ level of adherence to the HF model, but program staff found it be a useful exercise in helping them stay on track and avoid program drift. The research also demonstrated the value of a mixed-methods design, in which qualitative data provides nuanced understanding of both weaknesses and strengths identified through quantitative measurement.

The generalizability of the results of this demonstration project to real-world practice is constrained by some key considerations. The issue of time limitation is one such issue, in both the beginning of the project (where rapid recruitment created challenges for the staff), and at the end (where the project’s impending wind-up created challenges for staff and participants alike). In real world settings, such time constraints would be less of a challenge for implementation. The second issue is that of resources, which in this demonstration project afforded the opportunity for a

comprehensive training and technical assistance strategy, which included fidelity visits during early and later implementation.

The success of the At Home/Chez Soi project suggests, however, that the real-world settings without the resources for external technical assistance develop strategies for developing internal capacity for self-assessing fidelity, at both early and later implementation stages, and on an ongoing basis. The argument for doing so is the demonstrable link between fidelity and improved outcomes for participants with lived experience of homelessness and mental illness.

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