A Tale of Two Countries: A Comparison of Multi-Site Randomised Controlled Trials of Pathways Housing First Conducted in Canada and France

Tim Aubry[1], Maryann Roebuck[1], Sandrine Loubiere[2], Aurélie Tinland[3], Geoff Nelson[4], and Eric Latimer[5]

[1] School of Psychology and Centre for Research on Educational Services, University of Ottawa, Ottawa, Canada

[2] Aix-Marseille University, School of Medicine, La Timone Campus, and CEReSS – Health Service Research and Quality of Life Center, Department of Clinical Research and Innovation, Epidemiology and Economic Evaluation Unit, Assistance Publique – Hôpitaux de Marseille, APHM, Marseille, France
CEReSS – Health Service Research and Quality of Life Center, Marseille, France

[3] Aix-Marseille University, School of Medicine, La Timone Campus and Department of Psychiatry, Sainte-Marguerite University Hospital, Marseille, France

[4] Department of Psychology, Wilfrid Laurier University, Kitchener, Canada

[5] Department of Psychiatry, McGill University and Douglas Research Centre, Montreal, Canada

Abstract_ *The paper compares the results from the large multi-site trials that examined the effectiveness and cost-effectiveness of Pathways Housing First (HF) in Canada and France. Findings from the two trials on programme fidelity, housing, service utilisation, and other outcomes, and of cost-benefit and cost-effectiveness analyses are presented. Both trials showed Pathways HF to be far superior to treatment as usual in ending homelessness for people with a serious mental disorder. Economic analyses found cost offsets for a portion of the cost of HF programmes in Canada and for the whole cost in France as a result of reduced use of health care, social services, and justice-related services. Findings from the trials have contributed to the scaling up of HF in both countries.*

Keywords_ *Housing First, homelessness, randomised controlled trials*

ISSN 2030-2762 / ISSN 2030-3106 online

Introduction

Over the past 20 years, the Pathways model of Housing First (HF) has garnered the most research attention as an evidence-based approach to ending chronic homelessness (Aubry et al., 2020). The well-defined Pathways approach includes a set of principles, structures, and processes on how housing and support are combined to end chronic homelessness (Tsemberis, 2015). In particular, Pathways programmes provide rent assistance and intensive community support that assist people who are homeless to move immediately into regular housing, which can be in the private market or social housing (Padgett et al., 2016).

The provided rent subsidy facilitates this move by ensuring that individuals pay a maximum of 30% of their income towards rent. The community support is delivered in the form of Assertive Community Treatment (ACT) or Intensive Case Management (ICM). Both support approaches on their own are considered evidence-based with extensive research supporting their effectiveness (Ponka et al., 2020). The objective of the paper is to compare the findings of the two large multi-site trials of the Pathways HF approach conducted in Canada and France.

In response to a major study conducted by the Senate of Canada on mental health highlighting the large number of people with mental health problems who were homeless (The Standing Senate Committee on Social Affairs, Science, and Technology, 2006), the Federal Government of Canada commissioned the Mental Health Commission of Canada, through funding from Health Canada, to conduct research, testing the most promising approach for ending homelessness for single adults with a serious mental disorder. The $110 million study, known as the At Home/Chez Soi (AHCS) demonstration project, was launched in 2008 and included funding for both the delivery of HF programmes and research focused on their implementation, effectiveness, and cost-effectiveness over four years (Goering et al., 2011). AHCS entailed a pragmatic randomised controlled trial conducted with 2 148 individuals in five cities, evaluating the Pathways model of HF with people with a serious mental disorder who were homeless or precariously housed.

The French Government launched Un Chez Soi d'Abord (UCSA) in 2011, a multi-city trial of Pathways HF, in response to a report to the Minister of Health that highlighted the significant health issues faced by people who were chronically homeless and the lack of effectiveness of crisis services available to them (Girard et al., 2010). Aided by Canadian researchers involved in the AHCS project, the multi-city trial was coordinated by DIHAL (Délégation Interministérielle pour l'Hébergement et l'accès au Logement), a government organisation created in 2010 and mandated to address homelessness in France. UCSA was also a pragmatic randomised controlled trial conducted with 703 participants in four French cities testing the Pathways model of HF (Tinland et al., 2013). UCSA had virtually the same objectives

as developed by the Canadian research team (i.e., evaluation of implementation, effectiveness, and cost-effectiveness analysis). A notable difference in the two trials involved the Canadian trial testing HF with ICM for people with moderate needs in addition to examining HF with ACT for people with a high level of needs (Goering et al., 2011).

In comparing the two trials, the paper presents a description of the research design, findings from the assessment of programme fidelity to the Pathways HF model, programme outcomes, economic analysis results, and the use of the results to scale up HF in each of the two countries. The paper focuses on the findings from the two trials related to HF with ACT for people with a high level of needs

Research Design

At Home / Chez Soi

The research design for AHCS comprised a pragmatic, multi-site trial of the effectiveness of HF using mixed methods that also included an implementation evaluation and economic analyses (Goering et al., 2011). It was intended to provide policy-relevant evidence on the extent Pathways HF was effective in real-life conditions in five Canadian cities of different sizes and population, namely Moncton, Montreal, Toronto, Winnipeg, and Vancouver. The demonstration project provided funding for the development and delivery of HF to existing community agencies, including rent supplements for participants. To facilitate agency buy-in and develop programmes that fit with local circumstances, each city had the option to have a third intervention arm involving an adapted HF program.

Before being randomised in the study, participants were stratified according to the severity of their psychiatric problems and their level of functioning into High Need or Moderate Need groups. In all of the cities except Moncton, those in the High Need group were randomised to receive HF with ACT or treatment as usual (TAU), while those in the Moderate Need group were randomised to receive HF with ICM or TAU. There were not enough participants in Moncton to stratify based on need, and as a result, all participants received HF with ACT. TAU was composed of all other health and social services available in the community except for HF. The focus of the current paper is on the findings on participants with High Needs in AHCS because they were most similar to the participants in the French trial who also received HF with ACT.

Referrals for AHCS were received from a wide range of community agencies in the five cities, including shelters, drop-in centres, outreach teams, inpatient and outpatient hospital programmes, and criminal justice programmes. Participants were

followed for two years after their enrolment. Face-to-face interviews, focused on housing history, health status, functioning, quality of life, and health and social service use, were conducted at baseline, 6, 12, 18, and 24 months. Telephone interviews were also conducted at 3, 9, 15, and 21 months and focused on housing history and employment status.

Un Chez Soi d'Abord

The research design for UCSA consisted of a prospective multi-site randomised trial of the effectiveness of HF using a combination of quantitative and qualitative methods (Tinland et al., 2013). The trial was conducted in four major cities in France, namely Lille, Marseille, Toulouse, and Paris. The primary objective of the trial was to assess the impact of HF relative to TAU on the use of high-cost health services, notably emergency department visits and hospital stays. A secondary objective was to evaluate the impact of HF on health, housing, and psychosocial outcomes. Similar to AHCS, funding for UCSA covered the cost of the delivery of HF programmes and the research. For the study, an HF programme with ACT, that could serve 100 clients, was developed in each of the cities.

Referrals for the study originated from mobile outreach teams, community mental health services, general hospitals, and health care and public service teams. Face-to-face quantitative interviews, focused on health care use, health status, quality of life, and functioning, were conducted at study entry and 6, 12, 18, and 24 month follow-up. A combination of focus groups, interviews, and observations of programmes was conducted to evaluate the implementation of the programmes and inform their scalability to other communities in France.

Study Participants

At Home / Chez Soi

The criteria for inclusion in the AHCS study were the following: (1) Legal adult status (18 years old or older/19 years old or older in British Columbia); (2) homeless (no fixed place to stay for seven nights or more and no immediate prospect for ending homelessness) or precariously housed (primary residence is single room occupancy unit, rooming house, or hotel/motel and having had two or more episodes of being homeless in the past year); and (3) presence of a mental disorder with or without a co-existing substance use disorder as determined by DSM-IV criteria on the Mini International Neuropsychiatric Interview (MINI [Sheehan et al., 2008]) at study entry (Goering et al., 2011). Exclusion criteria were the following: (1) Not receiving services

from an ACT or ICM program; (2) not having legal status as a citizen, landed immigrant, refugee, or refugee claimant; and (3) being relatively homeless (living in inadequate housing, long-term institutions, or temporarily homeless).

The current paper focuses on HF programmes with ACT, which was delivered in AHCS to people with a high need level. The criteria for participants to be identified as being in high need were the following: (1) Diagnosed on the MINI as having a psychotic disorder or bipolar disorder at study entry; (2) assessed on the Multnomah Community Ability Scale (MCAS) as having a score of 62 or less, which falls in the moderate to severe level of disability (Barker et al., 1994); and (3) had two or more hospitalisations for mental illness in any one year in the past five years, or a comorbid substance use disorder, or arrest or incarceration in the six months before study entry (Goering et al., 2011).

Un Chez Soi d'Abord

The inclusion criteria for UCSA mirrored those of the Canadian trial arm focused on people with high need. In addition, to be eligible for UCSA, individuals had to have French health insurance coverage and be able to speak French. Exclusion criteria were: (1) Being unable to provide informed consent; (2) having dependent children or being pregnant; or (3) having a DSM-IV Axis I diagnosis other than schizophrenia or bipolar disorder.

Comparison of the AHCS and UCSA samples

Table 1 presents the demographic and clinical characteristics of the samples for the Canadian and French trials. The sample showed significant differences in gender, education level, housing status at study entry, lifetime duration of homelessness, physical and mental health, and community functioning. In particular, the Canadian sample had a lower proportion of male participants, high school graduates, and participants with diagnoses of major depressive episode, - panic disorder, manic / hypomania episode, mood disorder with psychotic features, and psychotic disorder, compared to the French sample. On the other hand, the Canadian sample had a higher percentage of participants who were absolutely homeless and with a diagnosis of post-traumatic stress disorder and the presence of substance-use problems.

Compared to Canadian participants, French participants reported higher levels of physical health functioning on the SF-36 and recovery on the Recovery Assessment Scale and lower levels of mental health functioning on the SF-36. French participants were also assessed as having lower levels of functioning on the MCAS than Canadian participants. Overall, in line with their eligibility criteria for participants, the sample of individuals in both studies presented with significant mental health difficulties.

Table 1. Baseline Characteristics of Study Participants in the Two Trials

	Canada: At Home / Chez Soi (ACHS; N=950)		France: Chez soi d'abord (UCSA; N=703)		
Characteristic	N	%	N	%	*p*-values[1]
Age – Mean (M, SD)	39.4	11.03	38.7	10.00	.17
Male sex	648	68	580	83	<.001
Not a high school graduate	561	59	490	73	<.001
Housing status at study entry					
Absolutely homeless	731	79	463	66	<.001
Precariously housed	219	21	238	34	<.001
Current psychiatric conditions					
Major depressive episode	412	43	388	55	<.001
Manic/hypomania episode	153	16	168	26	<.001
Post-traumatic stress disorder	256	27	109	16	<.001
Panic disorder	203	21	230	35	<.001
Mood disorder with psychotic features	194	20	274	42	<.001
Psychotic disorder	492	52	418	59	.002
Substance use problems	692	73	443	64	<.001
SF PCS[2] (M, SD)	44.3	12.1	50.1	11.6	<.001
SF MCS[2] (M, SD)	37.8	12.4	34.6	10.0	<.001
MCAS total score (M, SD)	54.3	7.3	51.1	7.2	<.001
RAS total score (M, SD)	79.2	13.6	81.5	17.1	.003

[1] p-values for results of independent samples t-test or chi-square test;

[2] AHCS based on SF-12;

[2] UCSA based on SF-362

Programme Fidelity

At Home / Chez Soi

Two fidelity assessments were conducted by an external team as part of implementation evaluations of 10 HF programmes in AHCS (Nelson et al., 2014; MacNaughton et al., 2015). Five of the programmes provided HF with ACT and the other five programmes delivered HF with ICM. The external team conducting the fidelity assessments was made up of clinicians, researchers, housing experts, and a consumer representative with expertise in HF. The fidelity assessments occurred over a full day and included observation of programme staff meetings, interviews and focus groups with programme staff, chart reviews, and focus groups with programme participants.

The first fidelity assessment was conducted 9-13 months after the launch of each of the HF programmes (Nelson et al., 2014). Table 2 presents the scores on the fidelity scale domains and items for the HF with ACT programmes in AHCS from this first assessment. Overall, 71% of the items making up the fidelity assessment measure were rated at 3.5 on a 4-point scale, reflective of high fidelity. Average

scores indicative of high fidelity were evident on items in the domains of Separation of Housing and Services (3.9), Service Philosophy (3.0), and Housing Choice and Structure (3.6). Lower average scores were apparent on the items in domains of Programme Structure (3.1) and Service Array (2.8).

The second fidelity assessment was conducted on HF programmes in AHCS after 24-29 months of operation, at which time programmes were at full capacity (MacNaughton et al., 2015). Programmes showed improvements in fidelity since the first assessment with 78% of the items across the programme averaging 3.5 or more. The average score increased on the items in four of the five domains, namely Separation of Housing and Services (3.9), Service Philosophy (3.6), Programme Structure (3.5), and Service Array (3.4). The average score of items in the Housing Choice and Structure (3.6) domain remained the same.

Un Chez Soi d'Abord

Fidelity assessments of the UCSA programmes located in four cities were conducted as part of a study of 10 HF programmes in nine countries located in Europe and North America (Aubry et al., 2018). The assessments occurred in 2016 after the UCSA trial was completed (Estacahandy et al., 2018). In three of the sites, programmes had been in place for five years. The HF programme at the fourth site had been implemented for four years. The methodology for the fidelity assessment entailed having programme staff complete, independently, a self-administered fidelity measure. Subsequently, programme staff at each of the sites reviewed their responses and worked together to achieve a consensus rating on each of the items.

Table 2 presents the scores on the fidelity scale domains and items across the sites from this assessment of UCSA programmes. The average total score for the four sites was 3.6, falling in the high fidelity range (Estacahandy et al., 2018). Overall, 70% of the items making up the fidelity assessment measure were rated at 3.5 on a 4-point scale, reflective of high fidelity. The average scores of the sites ranged from 3.4 to 3.7, with one of the programme's average scores falling under the high fidelity cut-off. Average scores on the fidelity measure showed high levels of fidelity (i.e., 3.5 or more on a 4-point scale) on the items in three of the five domains. The domains were Housing Process and Structure (3.7), Separation of Housing and Services (3.9), and Service Philosophy (3.8). For the other two domains, Service Array (3.1) and Programme Structure (3.2), average item scores indicated moderate fidelity.

Table 2. Average Fidelity Scores on Domains and Items across Sites in the Two Trials

Canadian Trial [a]		**French Trial** [b]	
Fidelity Domains and Items	**Avg.**	**Fidelity Domains and Items**	**Avg.**
Housing Choice and Structure	**3.6**	***Housing Process and Structure***	**3.7**
Housing Choice	3.4	Choice of Housing	3.8
Housing Availability	2.0	Time from Enrolment To Housing	3.5
Permanent Housing Tenure	4.0	Assistance with Furniture	4.0
Affordable Housing	4.0	Affordable Housing with Subsidies	3.3
Integrated Housing	4.0	Types of Housing	4.0
Privacy	3.9	Choice of Neighbourhood	3.5
		Proportion of Income Required For Rent	4.0
Separation of Housing and Services	**3.9**	***Separation of Housing and Services***	**3.9**
No Housing Readiness	3.9	Requirements to Gain Access to Housing	4.0
No Programme Contingencies of Tenancy	4.0	Requirements to Stay in Housing	4.0
Standard Tenant Agreement	3.9	Lease or Occupancy Agreement	4.0
Commitment to Re-house	3.9	Effect of Losing Housing on Client Housing Support	3.8
Services Continue Through Housing Loss	4.0	Effect of Losing Housing on Other Client Services	3.8
Off-site Services	4.0	Proportion of Clients with Shared Bedrooms	4.0
Mobile Services	3.6	Provisions in The Lease or Agreement	4.0
Service Philosophy	**3.7**	***Service Philosophy***	**3.8**
Service Choice	4.0	Choice of Services	3.5
No Requirements for Participation in Psychiatric Treatment	4.0	Requirements for Serious Mental Illness Treatment	4.0
No Requirements for Participation in Substance Use Treatment	4.0	Requirements for Substance Use Treatment	4.0
Harm Reduction Approach	3.9	Approach to Client Substance Use	4.0
Absence of Coercion	3.9	Promoting Adherence to Treatment Plans	3.5
Person-Centred Planning	3.0	Elements of Treatment Plan And Follow-Up	3.8
Interventions Target a Broad Range of Life Goals	3.6	Life Areas Addressed with Programme Interventions	4.0
Assertive Engagement	3.4		
Motivational Interviewing	3.3		
Participant Self-Determination and Independence	3.6		
Service Array	**3.2**	***Service Array***	**3.1**
Housing Support	4.0	Maintaining Housing	3.5
Psychiatric Services	4.0	Psychiatric Services	3.0
Substance Abuse Treatment	2.8	Substance Use Treatment	2.4
Employment and Educational Services	2.2	Paid Employment Opportunities	2.6
Nursing/Medical Services	3.4	Physical Health Treatment	3.4
Social Integration	3.0	Social Integration Services	3.8
24-h Coverage	3.0	Volunteer Opportunities	2.8
Involved in In-patient Treatment	3.3	Paid Peer Specialist on Staff	3.3
		Education Services	3.4

Programme Structure	**3.5**	***Programme Structure***	**3.2**
Priority Enrolment for Individuals with Obstacles with Housing Stability	4.0	Client background	4.0
Contact with Participants	3.6	Frequency of face-to-face contacts per month	3.0
Low Participant/Staff Ratio	4.0	Staff-to-client ratio	4.0
Team Approach	3.8	Team Meeting Components	2.7
Frequent Meetings	4.0	Frequency of staff meetings to review services	3.5
Participant Representation in Program	1.8	Opportunity for client input about the program	2.2
Weekly Meetings/Case Review	3.2		
Peer Specialist on Staff	3.8		

Scores are averaged across sites, representing the five sites in Canada (ACT programs) and four sites in France.

[a] Fidelity assessments were conducted by an external team at each of the AHCS sites using the fidelity measure developed and validated by Stefanic et al., (2013).

[b] Fidelity assessments were conducted through conciliation of self-administered of the fidelity measure developed and validated by Gilmer et al. (2013).

Programme Outcomes

Housing outcomes

At Home / Chez Soi

As shown in Figure 1, HF participants in AHCS spent significantly more time stably housed than TAU participants in all of the cities over the 24-month study period (Aubry et al., 2016). At the end of the study, more HF participants were in stable housing and had a longer housing tenure than TAU participants. HF participants also rated their housing quality significantly higher than TAU participants. A large effect was found on housing outcomes in favour of HF when comparing them to TAU (Aubry et al., 2016).

Un Chez Soi d'Abord

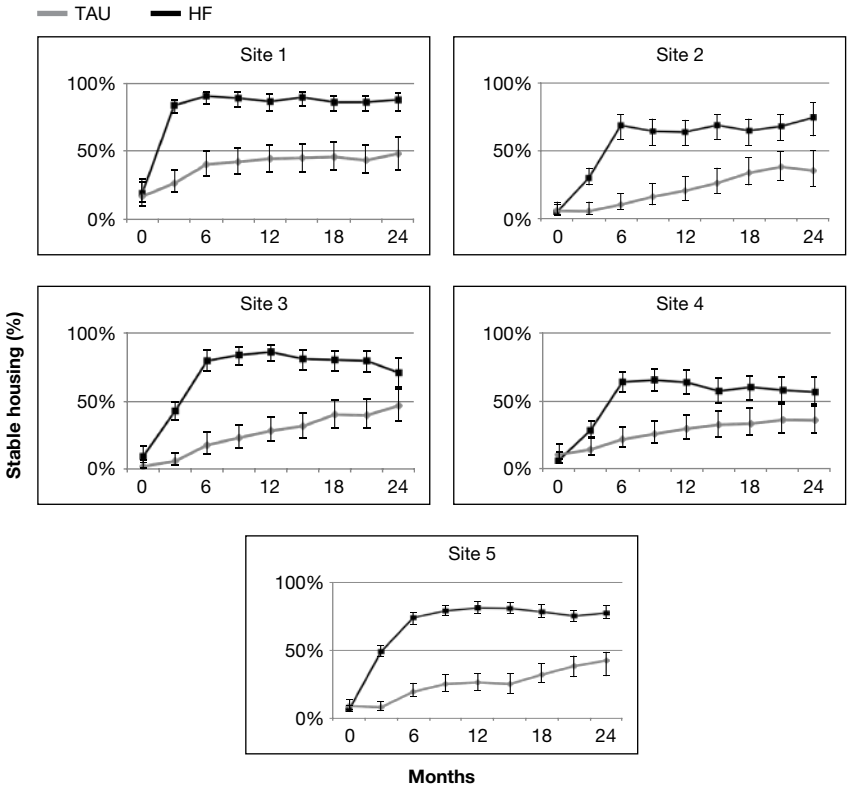
As shown in Figure 2, HF participants in UCSA spent significantly more time stably housed than TAU participants in the four cities over the 24-month study period (Tinland et al., 2020). At the end of the study, more HF participants were in stable housing than TAU participants. The pattern of housing stability at all the sites in the two studies were similar, with proportion of time stably housed for HF participants increasing in the first six months followed by a plateau that remained consistent and was much higher than TAU participants for the remaining time in the study.

Emergency department visits and hospitalisations

At Home / Chez Soi

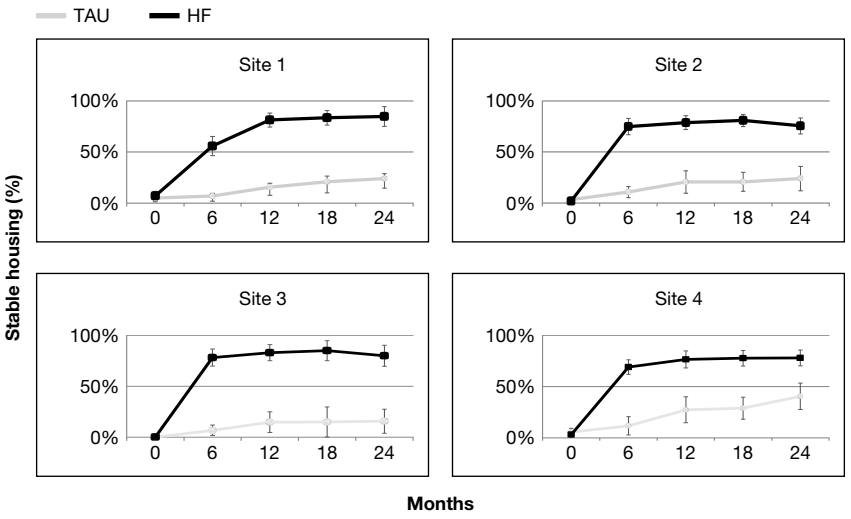
In AHCS, both HF and TAU participants showed significant decreases in days hospitalised (pooled decrease=53%) and in emergency department visits (pooled decrease=62%) over the 24-month study period (Aubry et al., 2016). There were no significant HF and TAU group differences for these outcomes over the 24 months of the study.

Figure 1. Site-specific per cent of time in stable housing in 3-month periods during 24 months of participants in Canadian sites



Site 1=Moncton; Site 2=Montreal, Site 3=Toronto, Site 4=Winnipeg, Site 5=Vancouver

Figure 2. Site-specific per cent of time in stable housing in 6-month periods during 24 months of participants in French sites



Site 1=Lille; Site 2=Marseille; Site 3=Paris; Site 4=Toulouse

Un Chez Soi d'Abord

HF participants in UCSA spent significantly fewer days hospitalised than TAU participants throughout the study (average of 52 days vs. 84 days [Tinland et al., 2020]). Both groups showed similar decreases in hospital admissions and emergency department visits over time (Tinland et al., 2020).

Other outcomes

At Home / Chez Soi

Both HF participants and TAU participants showed substantial improvements in community functioning throughout the AHCS study (Aubry et al., 2016). While HF participants' community functioning improved more rapidly in the first year of the study (Aubry et al., 2015) and improved more throughout the study as a whole, at the end of the study there was no group difference in community functioning due to the TAU group's continued improvement in the second year (Aubry et al., 2016).

The quality of life of both groups showed a moderate to large improvement over the study period (Aubry et al., 2016). Similar to community functioning, HF participants' quality of life improved more rapidly than TAU participants in the first year (Aubry et al., 2015), and they had higher average scores throughout the study period. However, at the end of the study period, the gap had narrowed and the quality of life of the two groups was not significantly different (Aubry et al., 2016).

Both HF and TAU participants showed significant improvements in health status, mental health symptoms, and a significant reduction in substance use problems, and arrests (Aubry et al., 2016). There were no significant differences between the HF and TAU groups for these outcomes except for a small group difference in mental health symptoms at the final follow-up, favouring TAU. Physical integration did not change significantly for either group (Aubry et al., 2016).

Un Chez Soi d'Abord

In UCSA, quality of life improved for both HF and TAU groups from baseline to 24 months, but HF participants showed a significantly higher improvement in two areas: psychological well-being and autonomy (Tinland et al., 2020). These subscale scores on the quality of life measure were significantly higher than the TAU group. HF participants also showed greater improvements in mental health functioning than TAU participants (Tinland et al., 2020).

Both HF and TAU participants showed improvements in recovery, severity of mental health symptoms, and medication adherence over the study period (Tinland et al., 2020). There were no significant differences between the HF and TAU groups for these outcomes. There were also no significant differences between the HF and TAU groups in terms of the presence of substance use dependence and level of physical health functioning (Tinland et al., 2020).

Cost-Benefit and Cost-Effectiveness Results

At Home / Chez Soi

An economic analysis was conducted that entailed comprehensive costing of health care, social services, and justice-related services as reported by participants in study interviews (Latimer et al., 2020). It also included social assistance and disability benefits as costs. Unit costs for different services were identified based on financial reports of organisations. Converting Canadian dollars into euros using the Purchasing Power Parity for France (OECD, 2022), the annual average cost of HF for people with a high level of need in the AHCS project, including rent supplements and community support provided through ACT, was €13 160 (2016). Of this amount, 69% of the HF programme cost was offset through decreases in health care, social, and justice related services. Relative to the TAU participants, cost reductions were the result of a decrease in psychiatric hospitalisations, outpatient health care, emergency shelter stays, and incarcerations. A cost-effectiveness analysis estimated that an additional day of stable housing through HF cost €26.97 (2016).

Un Chez Soi d'Abord

A societal perspective was also adopted in the economic analysis conducted from self-report data on health care, social services, justice services, and welfare benefits collected in the UCSA study (Lemoine et al., 2021; Tinland et al., 2020).

Similar to the Canadian study, service costs at a unit level were estimated based on the financial reports of organisations. The annual average cost of HF for UCSA participants, including rent supplements and ACT support, was €14 000 (2016). More than this entire amount was offset through savings associated with decreased service use – taking all costs into account, HF participants cost €217 less than control group participants over the 24-month study (Tinland et al., 2020). A major portion of the reduced health service use was the result of reduced length of stay in psychiatric hospitals relative to TAU participants. A projection over 35 years, incorporating data from the trial into a Markov model, estimated that each additional day in stable housing cost €5.31 (2017) more compared to standard care. HF was a strictly more effective and less costly intervention over the first 14 years.

Scaling Up of HF Post-Trial

At Home / Chez Soi

The positive results of AHCS led to changes in policy and practice. First, the Government of Canada shifted its funding for homelessness programmes to HF. The 10 largest Canadian cities were to allocate 65% of their federal funding to HF, and smaller and Indigenous communities were to allocate 40% of their funding to HF (Macnaughton et al., 2017). Previously, such mandates did not exist.

Second, the Mental Health Commission of Canada, which administered AHCS, created a training and technical assistance programme to expand HF in Canada. A three-year programme was led by HF founder, Dr. Sam Tsemberis, and implemented in 18 communities. The programme in each community included an initial training and consultation, a follow-up training for the team that implemented HF, a fidelity assessment conducted one year from the beginning of the HF programmes, all conducted in-person with periodic telephone consultations (Nelson et al., 2019).

Macnaughton et al. (2018) conducted in-depth case studies to examine the scaling up of HF across Canada following AHCS. A total of 14 new HF programmes were created and nine existing programmes were enhanced in six communities (Macnaughton et al., 2018). The average fidelity score for these programmes across domains was 3.3/4, which is comparable to those found in AHCS (Macnaughton et al., 2018). In addition to increased capacity and coordination related to the development of new HF programmes, a community of interest for the province of Ontario was formed to promote HF education, advocacy, and high-quality implementation (Worton et al., 2019).

Un Chez Soi d'Abord

The positive impacts and large cost offsets of the demonstration project in France led to the consolidation of the DIHAL and to scaling up a plan for HF that the National Government adopted as its five-year strategy (2018 to 2022) to combat homelessness (Estacahandy et al., 2018). The main elements presented in this plan were based on HF principles, including the provision of immediate access to affordable housing and flexible and individualised support, the separation of housing and support, and challenging the notion of a lack of capacity to be able to live independently for this population. For people experiencing homelessness with psychotic disorders, the French Government decided to not only sustain UCSA programmes in the original four sites, but also to create and fund four new sites per year over the five years from 2018 to 2022, resulting in HF programmes in 20 new cities.

Conclusion

Both trials showed HF to be superior to TAU in assisting people with serious mental disorders and a chronic history of homelessness to become stably housed. Moreover, the effect size for housing outcomes in favour of HF is very large in both studies. These findings join the other trials conducted in the United States in clearly demonstrating that HF is more effective than standard care in ending homelessness (Aubry et al., 2020; Baxter et al., 2018). These results showing large impacts in RCTs conducted in three different countries suggest that HF can be adapted to different contexts without losing its potency on housing outcomes.

Both HF and TAU participants in the Canadian trial showed similarly significant decreases in the number of days hospitalised (Aubry et al., 2016). Compared to TAU participants, HF participants in the French trial showed a greater decrease in number of days in hospital but a similar decrease in hospital admissions (Tinland et al., 2020). These different results suggest that participation in HF programmes is leading to shorter hospital stays compared to receiving TAU services in France, but not in Canada. It is possible that HF participants in France are being discharged faster from the hospital because they are more likely to be able to return to their housing to convalesce. In contrast, a lack of community services including accommodation options in France may delay discharges for TAU participants. Deinstitutionalisation of psychiatric hospitals that started in the 1960s in Canada occurred much earlier than in France, resulting in more community services being currently available (Henckes, 2016).

In both studies, HF and TAU recipients showed significant improvements on many of the health and psychosocial outcomes. These findings are in line with other studies that have shown strong effects of HF on housing outcomes relative to

standard care but similar impacts on non-housing outcomes (Aubry et al., 2020; Baxter et al., 2019). These equal improvements for HF and TAU on some outcomes may be reflective of regression to the mean as well as the effectiveness of community services without housing (Aubry et al., 2016).

As well, the fact that the fidelity assessment findings in both studies found HF programmes to have the lowest scores on items in the Service Array domain (i.e., capacity to deliver a wide range of services either by the programme or through community resources) may also play a role in the limited effects of HF on health and psychosocial outcomes. An international study of fidelity on HF programmes located in nine countries found average scores on the Service Array items to have the lowest score, indicating that the issue of providing support that targets the range of HF recipients' needs is a very common challenge faced by HF programmes (Greenwood et al., 2018).

It is noteworthy that HF participants in the French trial reported greater improvements in their quality of life concerning psychological well-being and autonomy compared to TAU participants. This finding joins some previous research that has shown HF to produce greater improvements in quality of life than standard care (Aubry et al., 2020). In contrast, HF participants in the Canadian trial showed greater improvements in quality of life than TAU participants in the first year of the trial (Aubry et al., 2015). However, differences between the two groups were no longer present at the end of the second year (Aubry et al., 2016). The different findings for the two studies may be the result of using different measures of quality of life (AHCS: Lehman's QoL Interview [Lehman, 1996]; UCSA: S-QoL 18 [Auquier et al., 2003]).

Taken together, the two trials provide strong evidence that there are significant cost offsets to the costs of HF programmes as a result of decreases in service use once HF recipients are housed. The calculated costs for HF to produce each additional night of stable housing are very modest in Canada (€26.97).In France, the intervention is cost-saving; a projection over 35 years estimates the additional cost of a day of stable housing is only €5.31. These findings combined with the large effects on ending chronic homelessness for individuals with serious mental disorders have made HF attractive for governments in Europe and North America.

Indeed, the findings of both trials led the Canadian and French Governments to integrate HF into their national housing policies (Laval & Estahacandy, 2019; Macnaughton et al., 2017). In the case of Canada, new HF programmes were created in response to new federal targeted funding in the promotion of the approach (Nelson et al., 2020), and some provinces endorse the approach at least to some extent and fund it accordingly (Alberta Government, 2022; Gouvernement du Québec, 2021). Nonetheless, considerable funding continues to be directed towards non-evidence-based approaches (Nelson et al., 2020). In contrast, the

French Government's decision to systematically scale up and scale out the Pathways model of HF into 20 cities over five years is a shining example of research informing policy (O'Sullivan et al., 2021).

References

Alberta Government (2022) *Alberta's Homelessness Response: A Summary of Actions to Address Homelessness in Alberta* (Edmonton, AB: Authors).

Aubry, T., Bernad, R., and Greenwood, R. (2018) A Multi-Country Study of the Fidelity of Housing First Programmes, *European Journal of Homelessness* 12(3) pp.15-29.

Aubry, T., Bloch, G., Brcic, V., Saad, A., Magwood, O., Abdalla, T., Alkhateeb, Q., Xie, E., Mathew, C., Hannigan, T., Costello, C., Thavaom, K., Stergiopoulos, V., Tugwell, P., and Pottie, K. (2020) Effectiveness of Permanent Supportive Housing and Income Assistance Interventions for Homeless Individuals in High-Income Countries: A Systematic Review, *The Lancet Public Health* 5 pp.e342-360.

Aubry, T., Goering, P., Veldhuizen, S., Adair, C. E., Bourque, J., Distasio, J., Latimer, E., Stergiopoulos, V., Somers, J., Streiner, D., and Tsemberis, S. (2016) A Multiple-City RCT of Housing First with Assertive Community Treatment for Homeless Canadians with Serious Mental Illness, *Psychiatric Services* 67(3) pp.275-281.

Aubry, T., Tsemberis, S., Adair, C.E., Veldhuizen, S., Streiner, D.L., Latimer, E., Sareen, J., Patterson, M., McGarvey, K., Kopp, B., Hume, K., and Goering, P. (2015) One Year Outcomes of a Randomised Controlled Trial of Housing First with ACT in Five Canadian Cities, *Psychiatric Services* 66(5) pp.463-469.

Auquier P., Simeoni M. C., Sapin C., Reine G., Aghababian V., Cramer J., and Lancon, C. (2003) Development and Validation of a Patient-Based Health-Related Quality of Life Questionnaire in Schizophrenia: The S-QoL, *Schizophrenia Research* 63(1-2) pp.137-149.

Barker S., Barron N., McFarland B.H. and D.A. Bigklow (1994). A Community Ability Scale for Chronically Mentally Ill Consumers, *Community Mental Health Journal* 30(4) pp.459-472.

Baxter A.J., Tweed E.J., Katikireddi S.V., and Thomson H. (2019) Effects of Housing First approaches on health and well-being of adults who are homeless or at risk of homelessness: systematic review and meta-analysis of randomised controlled trials. *Journal of Epidemiology and Community Health* 73(5) pp. 379-387.

Estahacahandy, P., Agha, A., and Roebuck, M. (2018) Fidelity Study of the "Un chez-soi d'abord" Housing First Programmes in France, *European Journal of Homelessness* 12(3) pp.155-177.

Gilmer, T.P., Stafancic, A., Sklar, M., and Tsemberis, S. (2013) Development and Validation of a Housing First Fidelity Survey, *Psychiatric Services* 64(9) pp.911-914.

Girard, V., Estecahandy, P., and Chauvin, P. (2010) *Plaidoyer et propositions pour un accompagnement des personnes à un rétablissement social et citoyen: La santé des personnes sans chez soi* [Advocacy and Proposals for a Support for People in Social and Civic Recovery: The health of people who are homeless]. (French open access document, HAL Id: inserm-00452211).

Goering, P.N., Streiner, D.L., Adair, C., Aubry, T., Barker, J., Distasio, J, Hwang, Komaroff, J., Latimer, E., Somers, J., and Zabkiewicz, D.M. (2011) The At Home/ Chez Soi Trial Protocol: A Pragmatic, Multi-Site, Randomised Controlled Trial of a Housing First Intervention for Homeless Individuals with Mental Illness in Five Canadian Cities, *BMJ Open* 1(2) p.e000323.

Gouvernement du Québec (2021) *S'allier devant l'itinérance: Plan d'Action interministériel en Itinérance 2021 – 2026.* [Coming together in the fact of homelessness: Interministerial Action Plan on Homelessness 2021-2026] (Quebec, QC: Direction des communications du ministère de la Santé et des Services sociaux).

Greenwood, R., Bernad, R., Aubry, T.**,** and Agha, A. (2018) A Study of Programme Fidelity in European and North American Housing First Programmes: Findings, Adaptations, and Future Directions, *European Journal of Homelessness* 12(3) pp.275-298.

Henckes, N. (2016) *French Deinstitutionalisation or the Irony of Success. Psychiatrists, the State and the transformation of the French psychiatric system, 1945-2010. Deinstitutionalisation and After. Post-War Psychiatry in the Western World, 2016*. (French open access document, HAL Id: hal-01871497).

Latimer E.A., Rabouin D., Cao Z., Ly A., Powell G., Aubry T., Distasio J., Hwang S.W., Somers J.M., Bayoumi, A.M., Mitton C., Moodie, E.E.M., Goering, P.N. (2020) Cost-effectiveness of Housing First with Assertive Community Treatment: Results from the Canadian At Home/Chez Soi trial. *Psychiatric Services* 71(10) pp. 1020-1030.

Laval, C. and Estecahandy, P. (2019) Le Modèle «Un chez-soi d'abord» au Risque de sa Diffusion*,* [Un chez-soi d'abord – the risk of diffusion] *Rhizome* 1(71) pp.101-110.

Lehman, A.F. (1996) Measures of Quality of Life among Persons with Severe and Persistent Mental Disorders, *Social Psychiatry and Psychiatric Epidemiology* 31(2) p.78e88.

Lemoine, C., Loubière, S., Boucekine, M., Girard, V., Tinland, A., Auquier, P., and the French Housing First Study Group (2021) Cost-Effectiveness Analysis of Housing First Intervention with an Independent Housing and Team Support for Homeless People with Severe Mental Illness: A Markov Model Informed by a Randomised Controlled Trial, *Social Science & Medicine* 272(Suppl. 6): 113692

Macnaughton, E., Nelson, G., Goering, P., and Piat, M. (2017) Moving Evidence Into Policy: The Story of the At Home/Chez Soi Initiative's Impact on Federal Homelessness Policy in Canada and its Implications for the Spread of Housing First in Europe and Internationally, *European Journal of Homelessness* 11(1) pp.109-130.

Macnaughton, E., Nelson, G., Worton, S.K., Tsemberis, S., MacLeod, T., Stergiopoulos, V., Aubry, T., Hasford, J., Distasio, J., and Goering, P. (2018) Navigating Complex Implementation Contexts: Overcoming Challenges and Achieving Outcomes in a National Initiative to Scale Out Housing First in Canada, *American Journal of Community Psychology* 62(1-2) pp.135-149.

Mcnaughton, E., Stefanic, A., Nelson, G., Caplan, R., Townley, G., Aubry, T., McCullough, S., Patterson, M., Stergiopoulos, V., Vallée, C., Tsemberis, S., Fleury, M.-J., Piat, M., and Goering, P. (2015) 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. *American Journal of Community Psychology* 55(3-4) pp. 279-291.

Nelson, G., Aubry, T., Tsemberis, S., and Macnaughton, E. (2020) Psychology and Public Policy: The Story of a Canadian Housing First Project for Homeless People with Mental Illness*, Canadian Psychology* 61(3) pp.257-268.

Nelson, G., Macnaughton, E., Worton, S.K., Tsemberis, S., MacLeod, T., Stergiopoulos, V., Goering, P., Aubry, T., Hasford, J., and Distasio, J. (2019) Systems Change in the Context of an Initiative to Scale Up Housing First in Canada, *Journal of Community Psychology* 47(1) pp.7-20.

Nelson, G., Stefancic, A., Rae, J., Townley, G., Tsemberis, S., Mcnaughton, E., Aubry, T. Distasio, J., Hurtubise, R., Patterson, M., Stergiopoulos, V., Piat, M., & Goering, P. (2014) Early Implementation Evaluation of a Multi-site Housing First Intervention for Homeless People with Mental Illness: A Mixed Methods Approach, *Evaluation and Program Planning* 43 pp.16-26.

OECD (2022) Purchasing power parities (PPP) (indicator). doi: 10.1787/1290ee5a-en (Accessed on 13 January 2022). Available at: Conversion rates – Purchasing power parities (PPP) – OECD Data.

O'Sullivan, E., Nelson, G., Aubry, T., Shinn, M., Laval, C., Estecahandy, P., and Tsemberis, S. (2021) How Social Science Can Influence Homelessness Policy: Experiences from Europe, Canada, and the United States – Part II – Politics and Policy Change, *European Journal of Homelessness* 15(2) pp.89-117.

Padgett, D.K., Henwood, B.F., and Tsemberis, S. (2016) *Housing First: Ending Homelessness, Transforming Systems, and Changing Lives* (New York, NY: Oxford University Press).

Ponka, D., Agbata, E., Kendall, C., Stergiopoulos, V., Mendonca, O., Magwood, O., Saad, A., Larson, B., Sun, A.H., Arya, N., Hannigan, T., Thavorn, K., Andermann, A., Tugwell, P., and Pottie, K. (2020) The Effectiveness of Case Management Interventions for the Homeless, Vulnerably Housed and Persons with Lived Experience: A Systematic Review, *PLoS One* 15(4) p.e0230896.

Sheehan, D. V., Lecrubier, Y., Harnett-Sheehan, K., Janavs, J., Weiller, E., Bonora, L. I., Keskiner, A., Schinka, J., Knapp, E., Sheehan, M.F., Dunbar, G.C. (2008) Reliability and Validity of the MINI International Neuropsychiatric Interview (M.I.N.I.): According to the SCID-P. *European Psychiatry* 12 pp. 232-241.

Stefancic, A., Tsemberis, S., Messeri, P., Drake, R., and Goering, P. (2013) The Pathways Housing First Fidelity Scale for Individuals with Psychiatric Disabilities, *American Journal of Psychiatric Rehabilitation* 16(4) pp.240-261.

The Standing Senate Committee on Social Affairs, Science and Technology (2006) *Out of the Shadows at Last: Transforming Mental Health, Mental Illness and Addiction Services in Canada* (Ottawa, ON: Authors).

Tinland, A., Fortanier, C., Girard, V., Laval, C., Videau, G., Rhenter, P., Graecen, T., Falissard, B., Apostolidis, T., Lançon, C., Boyer, L., and Auquier, P. (2013) Evaluation of the Housing First Programme in Patients with Severe Mental Disorders in France: Study Protocol of a Randomised Controlled Trial, *Trials* 14(309) pp.1-10.

Tinland, A., Loubière, S., Boucekine, M., Boyer, L., Fond, G., Girard, V., and Auquier, P. (2020) Effectiveness of a Housing Support Team Intervention with a Recovery-Oriented Approach on Hospital and Emergency Department Use by Homeless People with Severe Mental Illness: A Randomised Controlled Trial, *Epidemiology and Psychiatric Sciences* 29 p.E169.

Worton, S.K., Nelson, G., Aubry, T., Hasford, J., Macnaughton, E., Vandelinde, C., Tsemberis, S., Distasio, J., Stergiopoulos, V., Yip, A., and Goering, P. (2019) Networking Strategies to Promote the Implementation of Housing First in Canada, *Global Journal of Community Psychology Practice* 10(3) pp.1-19.

Tsemberis, S. (2015) *Housing First: The Pathways Model to End Homelessness for People with Mental Illness and Addiction* (2nd Ed.) (Center City, MN: Hazelden).