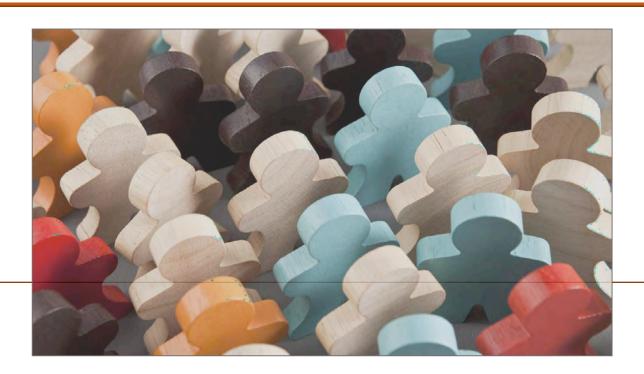
Intensive Case Management in the City of Kawartha Lakes

Final Evaluation Report





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EXECUTIVE SUMMARY

What is Intensive Case Management (ICM)?

"Intensive case management is more than a brokerage function. It is an intensive service that involves building a trusting relationship with the consumer and providing on-going support to help the consumer function in the least restrictive, most natural environment and achieve an improved quality of life" (Government of Ontario, 2006, Intensive case management service standards for mental health services and supports). Intensive Case Managers provide wrap-around support for clients who have complex needs, such as severe mental illness, substance abuse, and/or a history of chronic housing instability.

How does ICM operate in the City of Kawartha Lakes?

Two Intensive Case Managers (ICMs) are employed in the City of Kawartha Lakes. The ICMs each have their own caseloads, but also are supported by Housing Support Workers. ICMs are employed by the Four Counties Addiction Services Team (Fourcast) and are based out of an office located in A Place Called Home (APCH). Over the three years of this evaluation, the ICM program has supported 45 clients collectively.

How was the ICM program evaluated?

The Intensive Case Management program in the City of Kawartha Lakes was evaluated over three years, from 2016 – 2019. The methodology combined longitudinal and cross-sectional data collection by repeatedly sampling individuals over time from two groups: (1) clients receiving intensive case management support, and (2) general community members who were clients of A Place Called Home, but not receiving intensive case management. This approach allowed for comparisons to be made from baseline (i.e. the first survey) to follow- up (i.e. the last completed survey) within each group. This approach also allowed for comparisons to be made between groups.

SUMMARY OF FINDINGS

The following charts summarize the statistically significant findings in the evaluation. Intensive Case Management (ICM) specific findings are highlighted in peach and general community findings are shown in blue.

	p < .01	p < .05	p < .10
Demographics		The ICM program had less black individuals than the general community	
Education	Schooling was more difficult for ICM clients because of learning disabilities and/or mental illness		ICM clients were less likely to have finished high school
Finances			Community members reported higher use of Personal Needs Allowance over time
Parenting	No sig. findings		

	p < .01	p < .05	p < .10
		ICM clients reduced homelessness by 36%, improved their type of housing, and length of housing	Over 3 years, community homelessness decreased by 23%
Housing		ICM clients valued proximity to health care and social service agencies in housing more than community members	ICM clients had experienced more chronic homelessness; community members were more episodically homeless
Η			ICM clients and community members felt their housing met more of their needs at follow- up than baseline
			Having private outdoor space, being allowed pets, and being in a city of their choice was more important in housing for ICM clients than community members
Technology	No sig. findings		

	p < .01	p < .05	p < .10
sion	Community members were more likely to spend their time volunteering	ICM clients felt they did not fit in at baseline (but not at follow-up)	ICM clients spent more of their time with case workers than did community members
Social clusion		Community members had more certainty a friend could lend them money if needed	At baseline ICM clients were more likely to say their life had no meaning. This improved during the program, to levels equal with the community.
Stress	ICM clients had considerably more stress about their lack of finances, physical health status, and emotional/mental health at baseline.	ICM clients remained stressed about their physical health at follow-up	ICM clients remained stressed about their lack of finances at follow-up
	When first surveyed (but not at follow-up), community members were very stressed about their current jobs and schooling		When first surveyed, ICM clients were more stressed about personal relationships than were community members. This stress decreased during the program

	p < .01	p < .05	p < .10
Mental Health		ICM clients reported less anxiety after being in the program	ICM clients reported higher rates of depression at baseline. After being in the program, their rates of depression leveled to those of the community rates.
		ICM clients became less physically active while in the program	ICM clients reported a reduction in coughing up phlegm/blood over time
cal Health			At baseline, ICM clients rated their health to be worse, reported more pain, and had more difficulty taking medication than community members. By follow-up these were all par with community levels.
Access to Care	The cost of ICM clients' hospital use decreased, resulting in an estimated expenditure reduction of \$809,532 over 3 years	ICM clients had more hospital visits and admissions at the time of the first survey. By follow-up they were more likely to have a health care provider	At follow-up ICM clients had reduced hospital visits and admissions from their baseline levels

SUMMARY OF RECOMMENDATIONS

- 1. Continue to operate and expand the Intensive Case Management program in the City of Kawartha Lakes. Funding should be the joint responsibility of the health care sector, such as the LHIN, and the Municipal government.
- **2.** Expand the Intensive Case Management program in the county.
- 3. Increase lower-intensity case management support to extend Intensive Case Management program capacity.
- **4.** Research the optimal caseloads for Intensive Case Managers in the City of Kawartha Lakes.
- 5. Continue to build affordable housing and cultivate relationships with landlords to facilitate rapid housing for Intensive Case Management clients.
- 6. Review initial assessments for the Intensive Case Management program to determine whether the under-representation of Black clients reflects a real difference in need or is the result of potential bias in the assessment.
- **7.** Consider opportunities to incorporate paid Consumer Providers into the support team.
- **8.** Ensure housing meets the factors clients identify as being important to them, to increase the chances they will remain satisfied with their housing in the long-term.
- Intensive Case Managers should work with clients to track their levels of exercise and/or make referrals to organizations that can provide fitness support.
- **10.** Increase the scope of financial resources that are available to Intensive Case Management clients.

BACKGROUND

INTENSIVE CASE MANAGEMENT

Intensive Case Management (ICM) is an approach to supporting clients with complex needs that first emerged over 30 years ago in response to the deinstitutionalization of patients living in mental health facilities. In an early review of community support programs Rog, Andranovich, and Rosenblum (1987) defined ICM as:

"...an aggressive, comprehensive approach to accessing and securing basic health, and mental health services. It involves the functions common to most case management efforts – identification and outreach, assessment, service planning, service linkage, monitoring of service delivery and advocacy. However, two of the functions – outreach and advocacy – receive relatively more emphasis within intensive case management."

In its early development, First, Rife, and Kraus (1990) wrote that "although there is no single way of measuring the complex work of case management activity," the two critical functions that ICM is expected to perform are to (1) successfully link clients with needed housing and community services, and (2) ensure clients receive a continuum of necessary services and support through timely monitoring and follow-up.

In recent years, the objectives of the ICM approach have been more clearly communicated. For instance, the "Housing First Standards of Practice" published by Social Housing in Action (2018), reaffirms that ICM involves assertive outreach but also states more clearly that this approach entails:

- ✓ One on one case manager to participant relationships using a recoveryoriented approach
- ✓ Brokering access to mainstream services which the participant identifies as important in obtaining goals (not determined by the case manager)
- ✓ Often accompanying participants to meetings and appointments in support of their goals and needs
- ✓ Being available to the participant on a regular schedule.
- ✓ Case manager to client ratio is usually one case manager for up to 20 participants
- ✓ Duration of the supports is determined by the needs of the participant with a goal of reducing supports and transitioning to mainstream services as soon as possible.

Accordingly, "Intensive case management is more than a brokerage function. It is an intensive service that involves building a trusting relationship with the consumer and providing on-going support to help the consumer function in the least restrictive, most natural environment and achieve an improved quality of life" (Government of Ontario, 2006).

CASE MANAGEMENT APPROACHES

Intensive Case Management is often compared in the literature to two other approaches.

Standard Case Management differs from ICM in that case managers support larger caseloads, have less frequent contact with clients, and may have fewer credentials (Cauce et al., 1994). Standard case management is tailored to lower acuity clients, who require support but do not have complex and/or multiple support needs.

Assertive Community Treatment (ACT) is more consistently defined than ICM and is more widely used in the United States (Smith & Newton, 2007). Similar to the ICM approach, ACT is a recovery-oriented model but has a more clinical focus, involving team members such as psychiatrists, doctors, nurses, rehabilitation specialists, occupational therapists, housing specialists, mental health specialists, and substance abuse specialists (SHIA, 2018). Both approaches offer comprehensive support but ACT operates on a team or shared-caseload model, whereas ICMs work as individual case managers (Nelson, Aubry, & Lafrance, 2007; Smith & Newton, 2007), albeit in collaboration with other community support workers.

The success of Housing First, as evidenced by the At Home/Chez Soi (Chung et al., 2018; Goering, et al, 2014; Macnaughton et al., 2015) and other studies (Cherner et al., 2017; Patterson et al., 2013) clearly demonstrates that with appropriate and sustained supports, individuals with complex needs can achieve and maintain stable housing (Hwang et al., 2011; Waldbrook, 2015) and reduce problematic substance use (Kirst et al., 2015).

According to a literature synthesis conducted by Hwang and Burns (2014), there are multiple health interventions for people experiencing homelessness that have been found to be effective. While the academic literature is still developing, evidence suggests that overall, ICM and ACT are more effective than standard case management (Smith & Newton, 2007) particularly for decreasing institutional service usage, such as hospitalizations for psychiatric difficulties (Nelson et al., 2007).

Components of ICM/ACT that have been found to be most effective in the literature include

- Providing clients with a combination of housing and support interventions, including access to housing subsidies (Nelson et al., 2007)
- Intensive outreach services as part of the core support (Doré-Gauthier et al., 2019)
- Involvement of Consumer Providers, who are those with severe mental illness but are further along in their recovery that they can be part of the team for peers (Wright-Berryman et al., 2011)

CITY OF KAWARTHA LAKES

Two Intensive Case Managers (ICMs) are employed in the City of Kawartha Lakes through the funding streams of (1) Community Homelessness Prevention Initiative (CHPI), and (2) the Homelessness Partnering Strategy (HPS). The ICMs each have their own caseloads, [with the recommended ratios being 1:10 and 1:12 respectively] but also are supported by Housing Support Workers. ICMs are employed by the Four Counties Addiction Services Team (Fourcast) and are based out of an office located in A Place Called Home (APCH). Over the three years of this evaluation, the ICMs have supported 45 clients collectively.

Identifying clients for Intensive Case Management support

The City of Kawartha Lakes uses a coordinated entry system, which includes administering the Vulnerability Index Service Prioritization Decision Assistance Tool (VI-SPDAT) to individuals who are identified as having experienced homelessness for at least two consistent weeks without resolution. The VI-SPDAT is used to calculate an acuity score, with those receiving eight or higher meeting the threshold for intensive support. As clients transition out of the ICM program and new spaces become available, incoming clients are selected based on acuity score rather than by time since assessment.

ICM and Housing First

The primary focus of the ICM program is to support clients in finding and maintaining housing while developing stability. The ICM program developed in the City of Kawartha Lakes follows the evidence-based philosophy and practice of Housing First as its model of care. ICMs are responsible for providing clinical assessments and care planning, while the Housing Support Workers are described as serving an equally important role in facilitating assessments and helping to enact these plans.

ICM Supports

ICMs work with clients to assess 15 different life areas that might have an impact on their housing. The results of the assessment are used to create an individual service plan that focuses on proactively preventing issues that may disrupt housing stability. As these areas are identified, ICMs may seek additional support for their clients, such as through direct referral or by inviting other community agencies to participate in a case conference.

Clients in the ICM program may qualify for supports that are offered more broadly in the community as well, such as a housing subsidy, first and last month's rent, funds applied to the purchase of a new bed, and transportation support through Community Care.

Intensive Case Management in the community

Clients receiving ICM support have complex needs that often require collaboration between multiple community agencies. A large part of the ICM role is to help support clients in developing and maintaining positive relationships with community services, and advocating for clients when previous support relationships have broken down. ICMs work with clients and partners across the City of Kawartha Lakes, including Lindsay and its more rural county.

Transitioning out of the Intensive Case Management program

While clients may see their ICM daily upon intake into the program, their frequency of contact gradually decreases over time as their level of need is reduced. Clients in the ICM program are regularly assessed for acuity and stage of housing. As clients become more stable, ICMs engage in ongoing conversations about transitioning and exit planning. The intent is that as clients become more secure, they are able to be supported by less-intensive services offered in the community.

EVALUATION

The Intensive Case Management program in the City of Kawartha Lakes was evaluated over three years, from 2016 – 2019. The methodology combined longitudinal and cross-sectional data collection by repeatedly sampling individuals over time from two groups: (1) clients receiving intensive case management support, and (2) general community members who were clients of A Place Called Home, but not receiving intensive case management. This approach allowed for comparisons to be made from baseline (i.e. the first survey) to follow-up (i.e. the last completed survey) within each group. This approach also allowed for comparisons to be made between groups.

Research Ethics

This study was reviewed and approved by the Ethics Board for Research Involving Human Participants at Trent University. All participants signed an informed consent document prior to completing the survey and were given a \$20 gift card to Tim Horton's as an honorarium for their time. All data has been encrypted and is being securely stored without identifying information associated to individual responses. Student research assistants working on the project received specialized training and signed a confidentiality agreement. A copy of the ethics certificate has been filed with the City of Kawartha Lakes and is available upon request to the author.

Evaluation Instrument

A dedicated survey was created for this evaluation, based on a review of the academic literature. A copy of the survey instrument is available upon request. The survey was intended to be thorough and allow enough variables for statistical significance testing. The survey was comprised of four main sections, each with their own set of sub-questions. These sections included: (1) Background, (2) Education and Employment, (3) Housing and Community, and (4) Health, Wellness, and Supports. The survey took approximately 20 minutes to complete, and was administered through paper by the researcher, trained research assistants, or a trained member of the Intensive Case Management team.

Data Collection

The survey was administered on a four month cycle, every February, June, and October. At the beginning of these months the researcher would deliver paper copies of the survey to A Place Called Home, and be onsite to administer as many as possible. The surveys would remain onsite for the entirety of the month and trained shelter staff would continue to administer them. Clients who were receiving Intensive Case Management support were surveyed by their ICM or another trained member of the support team, as there was a pre-existing relationship that helped facilitated survey administration. At the end of the month, the researcher would collect all surveys and a research assistant would input the data into Qualtrics, a secure online survey program.

Participant Samples

Surveys were conducted with participant anonymity. Only initials and dates of birth were collected on each survey to track which participants had taken the survey more than once. Only those who completed 2 or more surveys were included in this evaluation, to allow for longitudinal analysis (i.e. to identify changes over time). In total, 28 ICM clients and 31 general community members were included in the evaluation. It should be noted that given a known population of 45 clients supported over the course of the ICM evaluation, a sample size of 28 corresponds with a 90% confidence level and 10% margin of error, assuming 50% response distribution.

As previously stated, the survey was administered three times a year over three years. This resulted in nine survey collection periods. Some participants completed more than two surveys over the nine periods. In these cases, their first survey was used as the baseline and their last survey was used as the follow-up. Both groups (those in the ICM program and those in the community) had similar amounts of time between baseline and follow-up as a whole. From the time of the first survey to the last, just over one year had past [3.14 collections on average for ICM clients and 3.10 collections on average for community members]. This means that taken as a whole, just over three four-month cycles had passed between when they were first surveyed and when they were last surveyed within the evaluation timeframe.

Data Analysis

Statistical analysis was conducted using SPSSv26. Longitudinal analysis was conducted on both groups (ICM clients and community members) to determine whether there were any significant changes within the groups over time. Cross-sectional analysis was also conducted to determine whether there were any significant differences between the groups at baseline and follow-up. Where bivariate analysis was required, chi-square was the primary test conducted, however t-tests were used as appropriate. This report provides the p-values of these tests and indicates where they are significant at p < .01, p < .05, and p < .10. In the social sciences, a value of p < .05 or p < .10 is commonly used to determine statistical significance. The level of significance is indicated with a footnote, from 1 to 3, with 1 indicating the finding meets the most significance. threshold level and 3 indicating it meets the lowest threshold for significance.

Limitations

The data used in this evaluation was collected through self-report and was not externally verified. Some questions asked participants to reflect on the previous three months, and responses may have been impacted by recall issues. Clients in the ICM program were surveyed by a member of their support team, which may have impacted their responses in unknown ways. Participants were provided the option of responding 'prefer not to answer' and as such not all reporting will add to 100% of the samples.

RESULTS

DEMOGRAPHICS



There was only one statistically significant demographic difference between those in the program and those in the general community.

There were comparatively fewer individuals who identified as Black in the ICM program, than in the general community.

DEMOGRAPHIC COMPARISON

	COMMUNITY	ICM CLIENTS	Sig.
Age	Range: 17 – 61 Mean: 43.07 SD: 15.35	Range: 19 -72 Mean: 38.87 SD: 13.83	.273
Sex	26% Female 75% Male	36% Female 57% Male 4% Transgender	.306
Sexual Orientation	97% Straight 3% Bisexual	86% Straight 11% Lesbian 4% Bisexual	.128
Ethnicity	52% Black 42% White 3% Additional	25% Black 64% White 4% Additional	.044 ²
Indigenous	23% Indigenous 74% Not	14% Indigenous 64% Not	.653
Citizenship	97% Canadian	93% Canadian	N/A
Military Service	90% no history 7% enlisted	89% no history	N/A

EDUCATION

ICM clients were significantly less likely to have finished high school than those in the general community.

This lower educational attainment could be attributed to significantly higher reporting of learning disabilities and mental illness as self-identified barriers in school.



HIGHEST LEVEL OF ATTAINMENT

ICM clients were significantly less likely to have completed high school than those in the general community (p=.053).³

Community 55% completed, 45% not

ICM Clients 39% completed, 57% not

Community	Highest grade completed	ICM Clients
7%	Grade 8 or lower	11%
10%	Grade 9	4%
10%	Grade 10	14%
19%	Grade 11	29%
26%	High school or GED	18%
13%	Some higher education	14%
16%	Degree or diploma	7%

BARRIERS TO EDUCATION

43% of ICM clients and 10% of community members indicated a

Learning disability led to difficulties in school (p=.004).¹

29% of ICM clients and 3% of community members indicated **mental illness** led to difficulties in school
(p=.007).¹



Community	ICM Clients	Non-statistically significant differences in school
19%	25%	Physical disability
16%	21%	Conflicts with teachers / principals
32%	21%	Conflicts with other students
26%	29%	Being bullied
19%	18%	Homelessness
7%	11%	Family / home life

FINANCES

The majority of ICM clients and general community members were unemployed, and no significant changes were found for either group in employment status from baseline to follow-up.

There were no significant differences between the groups in sources of income, but the general community did significantly increase their use of personal needs allowances over time.



EMPLOYMENT STATUS

75% of ICM clients and 74% of community members have worked for at least one year consistently in the past (p=.822).

COMMUNITY	ICM CLIENTS	Avg. across baseline and follow-up
68%	61%	Unemployed
6%	21%	ODSP
-	7%	CPP
13%	4%	Employed part-time
6%	4%	Employed full-time

There was no significant change in employment status for general community members (p=.867) or ICM clients (p=.734) between baseline and follow-up reporting.



SOURCES OF INCOME

There were no statistically significant differences in sources of income between the ICM clients and general community groups.

The only observed change over time was a significant increase in personal needs allowance reporting by community members from 6% at baseline to 23% at follow-up (p=.082).³

Sources of income	Community Average (B/F)	Sig.	ICM Client Average (B/F)	Sig.
Ontario Works	71%	1	63%	.120
Salary	53%	.477	46%	1.00
Friends / family	35%	.350	46%	.682
ODSP	23%	.501	45%	.870
Illegal Acts	19%	.717	20%	.310
Needs Allowance	15%	.082 ³	18%	1.00
Pension	10%	.942	14%	.927
Panhandling	6%	.287	11%	.843
Sexual Acts	3%	1.00	9%	.142

PARENTING



There was no statistically significant change in the number of children reported between baseline and follow-up.

ICM clients and general community members showed no statistical difference in the number of children reported. The majority of children in both groups do not live with the parent who was surveyed.

PARENTING

Community	# of children at baseline	ICM Clients
32%	0	39%
19%	1	11%
13%	2	29%
32%	3+	14%

No significant difference was found in the number of children reported between baseline and follow-up for community (p=.581) or ICM clients (p=.607). There was no significant difference between the number of children reported in both groups at baseline (p=.678).



67% of ICM clients and 60% of community members live apart from their children.

HOUSING



Over the 3 year study homelessness was significantly reduced in the City of Kawartha Lakes.

Despite having a history of significantly more chronic homelessness than the general community group, ICM program clients significantly improved their type of housing and length of housing tenure, where community members did not.

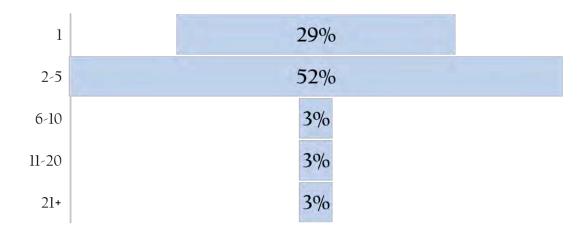
CHILDHOOD LIVING SITUATION

ICM clients and community members did not significantly differ in household finances while growing-up (p=.456). The modal community description of their family's finances was 'average' and the modal ICM response was to describe their family's finances as being 'poor'.

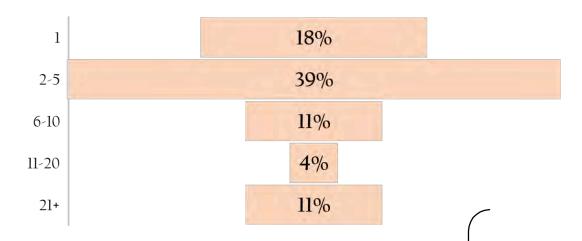
Community	Family growing-up	ICM Clients
0%	Well-off	0%
13%	Above Average	18%
53%	Average	32%
19%	Below Average	14%
23%	Poor	36%

HOMELESS EPISODES

Community



ICM Clients



ICM program clients had experienced significantly more chronic homelessness, whereas those in the general community experienced almost entirely episodic homelessness (p=.078).

HISTORY OF HOMELESSNESS

The age at which ICM clients and general community members first experienced homelessness was not significantly different (p=.745).

Community Range: Mean: SD:

13-60 29.65 15.45

ICM Clients Range: Mean: SD:

9-72 31.22 19.04

ICM clients and general community members did not significantly differ in the number of places they had lived in their lives (p=.862).

64% of ICM clients and 55% of community members had been evicted or thrown-out of housing.

This is not a statistically significant difference (p=.333).



DECREASED HOMELESSNESS

From baseline to follow-up, homelessness significantly decreased in the City of Kawartha Lakes.

Among the general community, homelessness declined by 23% (p=.089)³ and among ICM clients homelessness was reduced by 36% (p=.036).²



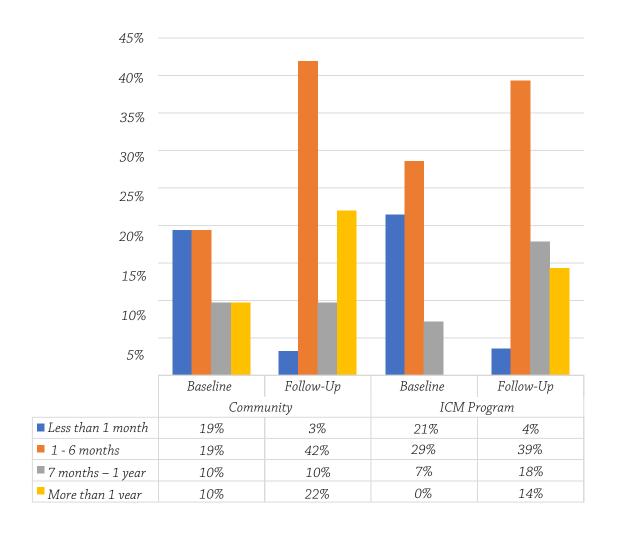
It should be noted that while this was a three year study, the average time between baseline and follow-up reporting was just over one year. This suggests that ICM intervention significantly reduced homelessness, beyond the rates of the more stable general community, in a relatively short period of time.

TYPE OF HOUSING

Those in the ICM program significantly improved their type of housing (p=.019)² from baseline to follow-up. No correspondingly significant improvement was found in the general community (p=.826). The largest contributing factors to the significant change in ICM housing was an increase in apartment and house-based placements, and a decrease in rooming house and shelter living.

Community			ICM Program	
Baseline	Follow		Baseline	Follow
29%	39%	Apartment	21%	46%
6%	6%	House	4%	21%
23%	32%	Rooming House	39%	11%
32%	23%	Shelter / not housed	36%	18%

LENGTH OF HOUSING TENURE



Those in the ICM program significantly improved the length of tenure in their current housing, from baseline to follow-up (p=.018).² No correspondingly significant improvement was found in the general community (p=.189).

HOUSING FACTORS

Participants in both groups identified the factors that were important to them. The following is a rank order averaged across baseline and follow-up.

COMMUNITY	ICM CLIENTS
1. Affordable / supplements (73%)	1. Affordable / supplements (77%)
2. Private kitchen (65%)	2. Close to support agencies (68%)
3. Allowed to decorate (58%)	3. Approachable landlord (68%)
4. Close to public transit (53%)	4. Private kitchen (66%)
5. Approachable landlord (53%)	5. Allowed to decorate (61%)
6. Close to friends / family (45%)	6. Private outdoor space (57%)
7. Enough room for guests (45%)	7. Allows pets (57%)
8. Close to support agencies (42%)	8. Close to friends / family (55%)
9. Environmentally friendly (39%)	9. Close to public transit (52%)
10. Allows pets (35%)	10. Close to health care (52%)
11. Private outdoor space (31%)	11. In city of choice (48%)
12. In city of choice (29%)	12. Enough room for guests (46%)
13. Close to health care (23%)	13. Environmentally friendly (30%)

Community and ICM program participants both reported that their housing met the criteria important to them significantly more at follow-up than at baseline (p=.079³ and p=.081³ respectively).

HOUSING FACTORS

Five factors were significantly more important to ICM clients than to general community members in their housing.



TECHNOLOGY

There was no significant difference found in cell phone ownership between groups, or over time from baseline to follow-up.

There was no statistically significant difference in the amount that ICM clients and community members used the internet for email and information seeking.



CELL PHONES

No significant differences were found in cell phone ownership from baseline to follow-up for the community (p=.985) or ICM clients (p=.599).

Averaging between time periods indicates that

65% of Community

46% of ICM Clients

own a cell phone.

This is not a statistically significant difference (p=.126).



INTERNET USAGE

Internet use in the 30 days preceding the survey was not statistically different for community and ICM clients. It also did not significantly change from baseline to follow-up.



Community	used internet for:	ICM Clients	Sig.
53%	Email	45%	0.735
48%	Skype	30%	0.679
32%	Government websites	34%	0.869
26%	Health information	32%	0.557
21%	Education	21%	0.848
37%	Employment	27%	0.740
37%	Housing	36%	0.531

SOCIAL INCLUSION



General community members were more likely to volunteer in their free time and felt more able to obtain financial support from friends or family if needed.

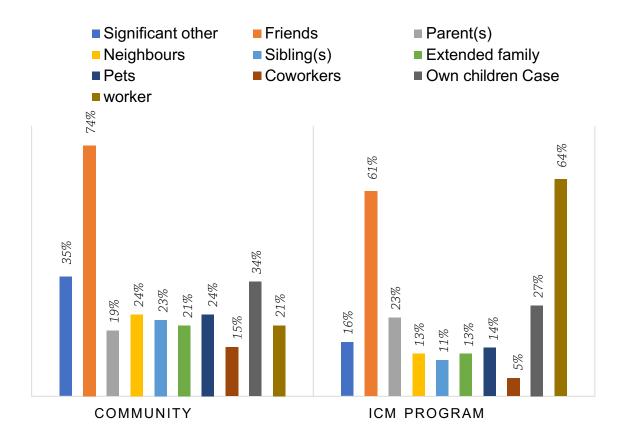
At baseline ICM clients reported not fitting in and feeling their life never had a sense of meaning, more than community members. After involvement in the program, these reported levels improved.

ICM clients also reported they spent significantly more time with a case worker than the community group.

RELATIONSHIPS

There was no significant change in relationship status between baseline and follow-up for ICM clients (p=.256) or general community members (p=.292).

One significant difference was identified in whom participants spent time with weekly, as shown in the graph below. ICM clients spent significantly more time on average with a case worker than did those in the general community (p=.093).³



SOCIAL INCLUSION & SUPPORT



On average, 35% of community members and 20% of ICM clients reported having a valid driver's licence. There was no significant change in this reporting from baseline to follow-up (p=.622).



At baseline, 82% of ICM clients said they often or sometimes felt like they did not fit in with others. This was significantly higher than the 49% of community members who said the same (p=.013).² By follow-up, 32% fewer ICM clients reported feeling like they did not fit in, resulting in no significant difference between the groups (p=378).



No significant changes in the activities participants engaged in from baseline to follow-up in either group were found for attending movies or concerts (p=.188), meeting a friend for coffee (p=.441), attending community events (p=.193), or going to the library (p=.977). One significant difference that did emerge was that community members were significantly more likely to spend their time volunteering than were those in the ICM program (p=.000).1

SOCIAL INCLUSION & SUPPORT



At baseline 32% of ICM clients felt that their life never had a sense of meaning; by follow-up only 4% felt that way (p=.052).³



General community participants were significantly more likely to say they had someone in their lives who could provide financial support in an emergency. On average 63% of community members but only 36% of ICM clients said they had one or more individuals who could lend them \$100 (p=.027).²



There were no significant differences between community and ICM members in social support related to having someone who could: listen (p=.878), offer suggestions (p=.669), attend an appointment (p=.829), provide a safe place to spend the night (p=.964), help with chores (p=.650), or make the participant feel wanted (p=.721).

STRESS

Clients entering the ICM program reported significantly more stress in their lives than community members related to a lack of financial resources, physical health problems, personal relationships, and their emotional / mental well-being.

By follow-up, ICM clients remained stressed about their finances, physical health, and mental well-being but had less stress about their personal relationships.



EQUAL STRESS FACTORS

There were no significant differences in stress levels between ICM clients and community members, at baseline or follow-up, related to:

BA BA	SELINE SELINE	FOLLOW-UP FOLLOW-UP				
Community	ICM	Sig.	Community	ICM	Sig.	
Unemployment						
29%	43%	.268	55%	54%	.398	
Caring for childr	Caring for children or others					
58%	43%	.243	16%	25%	.398	
Discrimination						
6%	4%	.615	3%	7%	.494	
Police contact						
19%	21%	.843	26%	25%	.943	

WORK / SCHOOL STRESS

At baseline community members were significantly more stressed about their jobs (p=.004)¹ and schooling (p=.077)³ than were clients in the ICM program.



By follow-up, no significant differences were reported in stress levels pertaining to jobs (p=.895) or schooling (p=.494).

FINANCIAL STRESS

100%

90%

80%

70%

60%

50%

40%

30%

20%

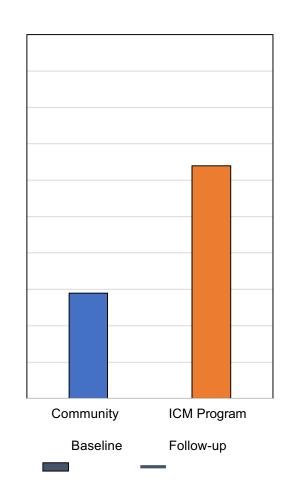
10%

0%

At baseline ICM clients were significantly more stressed about a lack of financial resources (p=.007)¹ than were general community members.

At follow-up, despite an increase in community reporting of financial related stress, ICM clients remained significantly more stressed about their financial situation (p=.077)³ compared to community members.

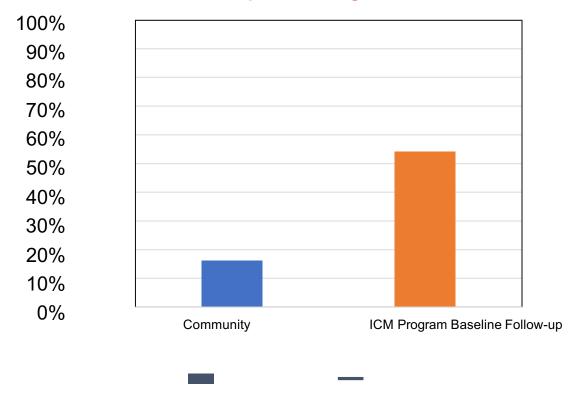
% who reported being stressed



HEALTH RELATED STRESS

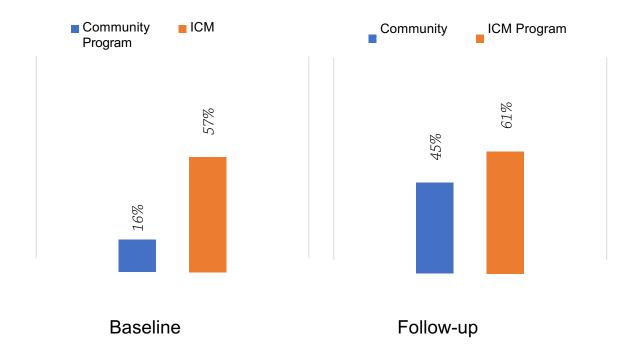
At baseline ICM clients were significantly more stressed about physical health problems (p=.002)¹ than were general community members. At follow-up, ICM clients remained significantly more stressed about their physical health problems compared to community members (p=.014).²

% who reported being stressed



MENTAL HEALTH STRESS

ICM clients entered the program with significantly more stress about their emotional and mental health (p=.001)¹ than those in the general community.



By follow-up, the ICM clients' level of stress remained consistent but the general community level increased by such a wide margin that there no longer was significant difference in the two groups' reporting (p=.232).

The reason for the increase in mental health related stress among community members is unknown, but it should be noted the cause of the stress did not impact ICM program clients in the same way.

RELATIONSHIP STRESS

ICM clients entered the program with significantly more stress about their personal relationships (p=.086)³ than those in the general community. By follow-up, the ICM clients no longer reported significant stress in this area (p=.746).



Baseline

42% of community stressed about relationships

64% of ICM clients stressed about relationships

Follow-up

39% of community stressed about relationships

43% of ICM clients stressed about relationships

MENTAL HEALTH

At baseline ICM clients reported significantly higher rates of depression than community members. By follow-up their reports of depression decreased to the level of the general community and were no longer significantly worse.

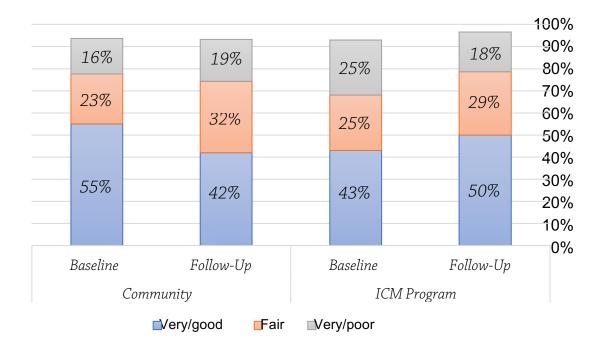


Reported generalized anxiety levels also significantly decreased for ICM clients from baseline to follow-up.

MENTAL HEALTH STATUS

There was no significant difference in how ICM clients and community members rated their mental health overall. This was true at baseline (p=.596) and at follow-up (p=.870) comparisons.

There was also no significant change in overall mental health rating between baseline and follow-up, for either group (p=.663 for community / p=.954 for ICM clients).



MENTAL HEALTH CONDITIONS

From baseline to follow-up ICM program clients reported a 21% decrease in diagnosed or suspected generalized anxiety disorder, from 64% to 43% (p=.016).²

COMMUNITY		Conditions	ICM CLIENTS	
Average of B/F	Sig. Change	(Diagnosed or suspected)	Average of B/F	Sig. Change
58%	.754	Depression	64%	.355
45%	.745	Generalized anxiety	54%	.016 ²
23%	.457	PTSD	36%	.298
10%	.711	Bi-polar disorder	27%	.400
23%	1.00	Obsessive compulsive	23%	.272
8%	.837	Eating disorder	20%	.802
3%	.132	Schizophrenia	5%	.614
24%	.373	Anti-social personality	5%	.609
10%	.223	Paranoid personality	2%	.323

ICM clients reported significantly higher rates of suspected or diagnosed depression at baseline (75%) compared to general community members (52%) (p=.093).³ By follow-up, the rates of depression among ICM clients had decreased to general community levels and were no longer significantly different.

PHYSICAL HEALTH

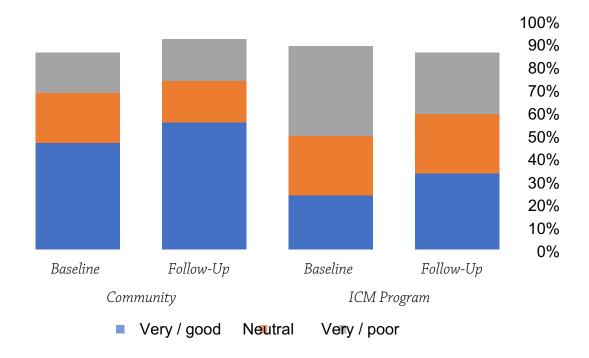
At baseline ICM clients significantly rated their physical health to be worse, reported more severity of pain, and had more difficulty taking medication than the general community. By follow-up all of these issues had been resolved and no significant differences were found between the groups.



Of note, the groups reported no difference in how physically active they were at baseline, but at follow-up ICM clients were significantly less physically active than community members.

GENERAL HEALTH STATUS

At baseline, those entering the ICM program rated their physical health to be significantly worse than did those in the general community (p=.063).³



By follow-up, the ICM program clients had increased their self- evaluated health status, such that there was no significant difference between the group ratings (p=.330).

PAIN

At baseline clients entering the ICM program reported significantly higher rates of moderate to severe pain (61%) compared to those in the general community (29%) (p=.029).2



By follow-up, ICM client reports of moderate / severe pain had decreased (54%), resulting in pain levels that did not significantly differ from those reported in the general community.

PHYSICAL CONDITIONS

From baseline to follow-up there was only one statistically significant change in the reporting of diagnosed or suspected physical health conditions. ICM program clients reported coughing up blood or phlegm significantly less at follow-up (3.57%) than baseline (28.57%) (p=.008).¹ Coughing up blood / phlegm was also the only significant difference in physical health conditions between the two groups (p=.049).²

COMMUNITY		Conditions	ICM CLIENTS	
Average of B/F	Sig. of Change	(Diagnosed or suspected)	Average of B/F	Sig. of Change
56%	.694	Back problems	59%	.480
39%	.932	Fatigue	52%	.568
45%	.878	Dental problems	45%	.737
32%	.346	Arthritis	41%	.302
26%	.589	Foot problems	39%	.955
27%	.342	Night sweats	38%	.370
13%	1.00	High blood pressure	23%	.794
8%	.613	Asthma	18%	.369
29%	.866	Coughing blood / phlegm	16%	.0081
11%	.519	Skin problems	16%	.432
8%	.603	Hepatitis A,B,C	14%	.635
7%	1.00	Ulcer	13%	.315
7%	.491	Heart disease	11%	1.00
N/A	N/A	Cancer	11%	N/A
21%	.748	Bronchitis or emphysema	7%	.431
13%	.310	Traumatic brain injury	7%	N/A
11%	.639	Diabetes	5%	.543

MEDICATION

At baseline, those entering the ICM program reported significantly more difficulty taking their medication (32%) than did those in the general community (10%) (p=.055).³

By follow-up, the ICM program clients reported taking their medication was less challenging than before (11%) and their level of difficulty taking medication did not significantly differ from those in the general community group (6%) (p=.564).



PHYSICAL ACTIVITY

At baseline there was no significant difference in the levels of physical activity reported by clients entering the ICM program and those in the general community (p=.140). By follow-up, those in the ICM program were significantly less physically active than those in the community (p=.040).²

As individuals become securely housed, they may become less active throughout the day. This requires consideration to ensure clients are not isolated or confined to their home.



NUTRITION

There were no statistically significant changes from baseline to follow-up for either group. The table below represents those who said 'somewhat true' or 'true' for each statement.

COMMUNITY			ICM PROGRAM	
55%	52%	I ate 3 balanced meals a day	57%	46%
68%	58%	I worried my food would run out	50%	64%
39%	45%	I was hungry	57%	43%
45%	42%	I skipped meals, as I could not get food	46%	50%
58%	35%	I went a whole day without eating	50%	61%
35%	39%	I went a whole day without clean water	21%	18%
68%	74%	I cooked my own meals	61%	68%
84%	84%	I ate at home	71%	79%
61%	52%	I got food from food banks/agencies	64%	68%
58%	48%	I got food from family or friends	54%	64%

ACCESS TO CARE

At baseline ICM clients visited and were admitted to hospital significantly more than general community members. After being in the program their hospital use significantly declined.

Costs associated with hospital use declined for ICM clients and increased for community members from baseline to follow-up. The estimated reduction in hospital expenditure for all ICM clients over the three-year evaluation was \$809,532.

At follow-up ICM clients had significantly more health care providers than those in the general community.



HEALTH CARE PROVIDERS

At baseline there was no significant difference in the percentage of ICM clients and community members who reported they had a regular health care provider (p=.501). By follow-up, significantly more ICM clients reported having a health care provider (p=.046).²

At Baseline

71% of community membershad a health care provider68% of ICM clients had a health care provider

By Follow-Up

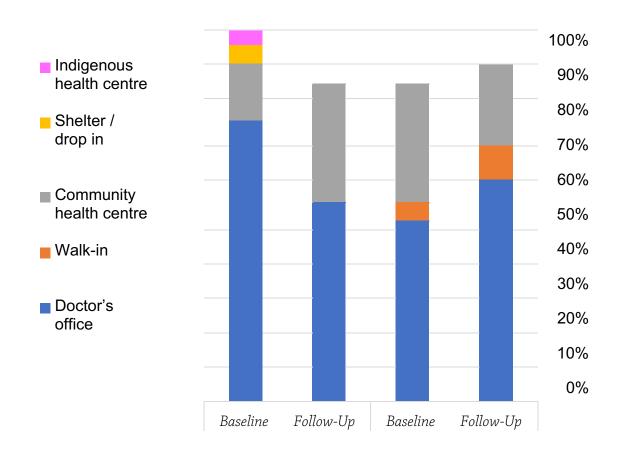
68% of community members had a health care provider

82% of ICM clients had a health care provider



CARE PROVIDER LOCATIONS

Of those who reported they had a regular health care provider, no significant change in location was identified from baseline to follow-up for ICM clients (p=.848) or community members (p=.406). Health care providers were located almost exclusively in a doctor's office or community health centre for both groups.



HOSPITAL USAGE

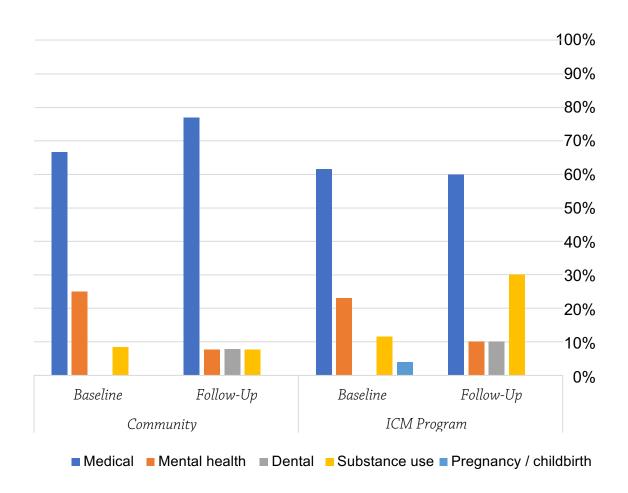
At baseline ICM clients visited and were admitted to hospital significantly more than general community members (p=.047).²

By follow-up, ICM clients significantly reduced their hospital visits and admissions (p=.066)³ such that there no longer remained a significant difference in hospital use between the groups (p=.704).

AT BASELINE		BY FOLLOW-UP	
32% of community members reported visiting hospital in the previous three months	1	This figure remained steady at 32%	
10% of community members reported being admitted to hospital in the previous three months	1	This figure increased to 19%	
54% of ICM clients reported visiting hospital in the previous three months	1	This figure decreased to 25%	
25% of ICM clients reported being admitted to hospital in the previous three months	•	This figure decreased to 18%	

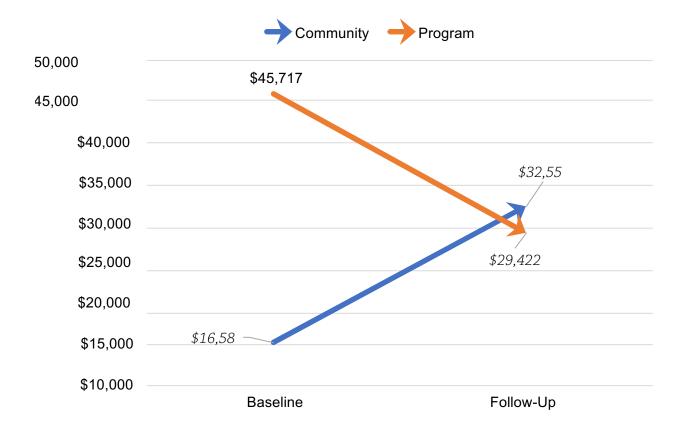
REASONS FOR HOSPITAL USE

At baseline and follow-up those in the ICM program and community groups who used hospital services, did so primarily for medical reasons. There was no significant difference in the reasons for which individuals used hospital from baseline to follow-up for those in the ICM program (p=.356) or general community (p=.543).



MONTHLY HOSPITAL COSTS

The ICM program led to significant reductions in monthly hospital costs (p=.000).¹ As hospital use declined for ICM clients, the monthly cost decreased for the 28 individuals in this analysis from \$45,717 at baseline to \$29,422 at follow-up. Without intervention the general community monthly hospital costs for the 31 individuals in this analysis increased from \$16,582 to \$32,557.



COMMUNITY CALCULATION

	# of times reported	Reported in a 3 month span	Cost Calculation	Total Cost	
Baseline	8	1-3 visits to ER	16 x \$618*	\$9,888	
	2	4-5 visits to ER	9 x \$618	\$5,562	
	3	1-3 admissions	6 x \$5,356	\$32,136	
	9	Emergency transports	9 x \$240	\$2,160	
	\$49,746 / 3 month reporting = \$16,582 estimated monthly expenditure				
Follow-up	8	1-3 visits to ER	16 x \$618	\$9,888	
	2	4-5 visits to ER	9 x \$618	\$5,562	
	5	1-3 admissions	10 x \$5,356	\$53,560	
	1	4-5 admissions	4.5 x \$5,356	\$24,102	
	19	Emergency transports	19 x \$240	\$4,560	
	\$97,672 / 3 month reporting = \$32,557 estimated monthly expenditure				

^{*}Refer to Appendix for notes on how costs were determined and calculated

ICM PROGRAM CALCULATION

	# of times reported	Reported in a 3 month span	Cost Calculation	Total Cost	
Baseline	12	1-3 visits to ER	24 x \$618	\$14,832	
	2	4-5 visits to ER	9 x \$618	\$5,562	
	5	1-3 admissions	10 x \$5,356	\$53,560	
	1	4-5 admissions	4.5 x \$5,356	\$24,102	
	1	6+ admissions	6 x \$5,356	\$32,136	
	29	Emergency transports	29 x \$240	\$6,960	
	\$137,152 / 3 month reporting = \$45,717 estimated monthly expenditure				
Follow-up	5	1-3 visits to ER	10 x \$618	\$6,180	
	1	4-5 visits to ER	4.5 x \$618	\$2,781	
	4	1-3 admissions	8 x \$5,356	\$42,848	
	1	6+ admissions	6 x \$5,356	\$32,136	
	18	Emergency transports	18 x \$240	\$4,320	
	\$88,265 / 3 month reporting = \$29,422 monthly expenditure				

ESTIMATED HOSPITAL SAVINGS

The 28 ICM program clients showed a reduction in hospital costs. Given that these individuals represent 62% of ICM clients [28/45], the total hospital savings can be estimated for the program as a whole using the following formula:

[(Baseline cost – follow-up cost) x % not included] + (baseline cost – follow-up cost) = estimated monthly savings for the ICM program

 \rightarrow [(\$45,717 - \$29,422) x .38] + (\$16,295) = \$22,487

Monthly hospital savings from ICM program:

\$22,487

Yearly hospital savings from ICM program:

\$269,844

Estimated hospital savings over 3 year intervention:

\$809,532

It should be noted that this calculation does not take into account the costs of operating the program and solely represents the reduction in hospital expenditure.

RECOMMENDATIONS



RECOMMENDATIONS

- 1. Continue to operate and expand the Intensive Case Management program in the City of Kawartha Lakes. Funding should be the joint responsibility of the health care sector, such as the LHIN, and the Municipal government.
- **2.** Expand the Intensive Case Management program in the county.
- 3. Increase lower-intensity case management support to extend Intensive Case Management program capacity.
- **4.** Research the optimal caseloads for Intensive Case Managers in the City of Kawartha Lakes.
- **5.** Continue to build affordable housing and cultivate relationships with landlords to facilitate rapid housing for Intensive Case Management clients.
- **6.** Review initial assessments for the Intensive Case Management program to determine whether the under-representation of Black clients reflects a real difference in need or is the result of potential bias in the assessment.
- **7.** Consider opportunities to incorporate paid Consumer Providers into the support team.
- **8.** Ensure housing meets the factors clients identify as being important to them, to increase the chances they will remain satisfied with their housing in the long-term.
- Intensive Case Managers should work with clients to track their levels of exercise and/or make referrals to organizations that can provide fitness support.
- **10.** Increase the scope of financial resources that are available to Intensive Case Management clients.

RECOMMENDATIONS 1 -2

Continue to operate and expand the Intensive Case Management program in the City of Kawartha Lakes. Funding should be the joint responsibility of the health care sector, such as the LHIN, and the Municipal government.

The Intensive Case Management program resulted in many statistically significant outcomes that were positive, not only for clients but for the community as well. Continuing to operate and expand this program in the community should be a priority. Given the results that showed individuals who entered the ICM program were significantly more likely to have experienced chronic homelessness, continuing to fund the ICM program will be an important component of the City of Kawartha Lakes' goal to end chronic homelessness. Further, the results indicated that operating this program reduced hospital costs by \$809,532 over the three-year period for the 45 enrolled clients. Funding the ICM program should be the joint responsibility of the health care sector, such as the Local Health Integration Network, to divert individuals not in need of emergent care out of hospitals and into more suitable, non-acute care settings.

Expand the Intensive Case Management program in the county.

Currently the Intensive Case Managers serve the entire City of Kawartha Lakes, including Lindsay and the broader county. This represents a large geographic area that is widely dispersed and lacking in public transportation options. Dedicated Intensive Case Managers and Housing Support Workers teams should be established in the county to better serve the rural areas of the City of Kawartha Lakes. Locating these teams within the county would allow for greater capacity to serve these clients with ICMs who have local knowledge and the ability to be on-site more regularly.

RECOMMENDATIONS 3- 4

Increase lower-intensity case management support to extend Intensive Case Management program capacity.

Clients in the Intensive Case Management program are supported through a series of steps, with the ultimate goal of exiting the program and no longer needing the intensity of support. However, there is a critical period as the client no longer requires ICM level support, but may not be ready to function fully independently in the community. It is recommended that the City of Kawartha Lakes consider hiring more standard case workers who can support larger caseloads, with less intensity. This approach would provide clients the option to have an extended transition out of the program, while also freeing space and capacity on the ICM caseload for new clients who require greater levels of support.

Research the optimal caseloads for Intensive Case Managers in the City of Kawartha Lakes.

The appropriate caseload for Intensive Case Management is inconsistently defined, sometimes as 1:20 (Social Housing in Action, 2018) and others as 1:15 (Employment and Social Development Canada, 2018). The ability to provide intensive support requires ICMs have manageable caseloads, including clients who are at different stages in their support needs. A local analysis should be conducted to determine what the optimal caseload is for ICMs in the City of Kawartha Lakes. This recommendation also follows from the previous two – implement rural ICM teams and less-intensive transitional case managers – as factors that would impact the optimal caseloads of the ICMs.

RECOMMENDATIONS 56

Continue to build affordable housing and cultivate relationships with landlords to facilitate rapid housing for Intensive Case Management clients.

Increasing the availability of affordable housing is essential for ending chronic homelessness and supporting high-acuity individuals in the community. The City of Kawartha Lakes is encouraged to continue to partner with Federal and Provincial stakeholders to develop new affordable housing stock, and also to cultivate relationships with reputable landlords in the community. Increasing affordable housing helps those who are in the ICM program become more stable and is also a preventive measure to reduce homelessness overall.

Review initial assessments for the Intensive Case Management program to determine whether the under-representation of Black clients reflects a real difference in need or is the result of potential bias in the assessment.

Individuals become eligible for ICM support based on a VI-SPDAT acuity score of eight or higher. There were significantly less individuals who identified as Black in the ICM program than in the general community, creating uncertainty about the cause of this imbalance. The City of Kawartha Lakes is encouraged to review its administration of the VI- SPDAT to determine whether the under-representation is a result of genuine different support needs, a bias in the screening tool, and/or a bias in the administration of the tool.

RECOMMENDATIONS 7 -8

Consider opportunities to incorporate paid Consumer Providers into the support team.

Research has shown the benefit of incorporating Consumer Providers – those with lived experience of housing instability resulting from complex needs – into the support team (Wright-Berryman et al., 2011). These individuals are farther along in their stage progression and can bring a peer support component to complement the professional care planning. The City of Kawartha Lakes is encouraged to consider whether the capacity exists, or could be built, to incorporate Consumer Providers into the ICM model. This approach could have benefits for clients receiving support, as well as for transitioning clients as they move forward. Peer Support Canada is one resource for consideration.

Ensure housing meets the factors clients identify as being important to them, to increase the chances they will remain satisfied with their housing in the long-term.

In this evaluation, clients in the Intensive Case Management program were significantly more likely to state they wanted private outdoor space, permission to have pets, and a choice of location in their housing. Admittedly with limited affordable housing options comes limited ability to match clients with ideal housing. However, making every effort to identify the factors that are most important to the client, and selecting housing options based on those factors, will increase the chances clients remain satisfied with their housing over time.

RECOMMENDATIONS 9 -10

Intensive Case Managers should work with clients to track their levels of exercise and/or make referrals to organizations that can provide fitness support.

After involvement in the program, ICM clients were significantly less physically active than when they entered. This may be the result of obtaining housing and no longer needing to move through the community as much to meet basic needs. As clients progress through the stages towards stability, ICMs are encouraged to discuss physical activity planning with their clients, and to connect them with supports in the community, such as activity groups or services that have free or low-cost fitness programs.

Increase the scope of financial resources that are available to Intensive Case Management clients.

As clients entered the ICM program they indicated significant levels of stress around their financial status; this stress remained significant even after intervention. Additionally, significantly fewer ICM clients indicated they had someone they could turn to for financial assistance if they needed it. Research shows that as a model, ICM is most effective when support is combined with access to financial resources such as housing subsidies (Nelson et al., 2007). While ICM clients have access to the same financial resources as other members of the community, such as rent supplements and first / last month's rent, it is not sufficient to decrease their financial stress. The City of Kawartha Lakes, in consultation with ICMs and ICM clients, should research what additional financial resources could be offered, on a long-term, short-term, and emergency basis, to help reduce this stress among ICM clients.

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APPENDIX

Hospital Cost Calculation Notes

- An average of '2' was used in calculations where participants reported a range of 1-3
- An average of '4.5' was used in calculations where participants reported a range of 4-5
- A conservative estimate of '6' was used in calculations where participants reported 6+
- The value of ER visits was taken from Queensway Carleton Hospital. (2015). <u>Hospital fees</u>
 for patients.
- The value of admissions reflects most recent data (2017-2018) for Ross Memorial Hospital.
 Canadian Institute for Health Information. (2018). Cost of a standard hospital stay.
- The value of EMS transport was taken from MOHLTC. (2012). <u>Understanding health care in Ontario</u>

