

An Evaluation of the *Connectivity* Situation Tables in Waterloo Region: Service User Experiences and Impact on Use of Emergency Services

March 2017

PREPARED FOR

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CONSULTING

About Taylor Newberry Consulting

Taylor Newberry Consulting (TNC) is community based research and evaluation organization located in Guelph, Ontario. We have extensive experience in program and system level evaluations, needs assessments, program and system design, organizational capacity building, and facilitation and training. Our projects range from small and local to large and national in scope. At TNC, our goal is to help organizations and communities generate the information, tools, and resources they need to improve their work and create strategic change. At TNC, we believe that:

-  Information should be useful and should inspire clear actions.
-  We share responsibility in the change process.
-  Complex social issues require collective action. Our projects build meaningful connections between individuals, organizations, and communities.

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Dr. Jaime Brown uses her high level of expertise in research and facilitation to help bring clarity to the work of non-profit organizations, utilizing research and evaluation evidence as tools for organizational learning, strategic planning and action. Jaime earned a Ph.D. in Applied Social Psychology from the University of Guelph, with a focus on health and social justice issues. She has over 10 years of experience working - both regionally and nationally - with not-for-profit organizations, government, grant-making organizations, and universities on issues related to health systems, health equity, disability rights and supports, public health and health promotion, food security, family relations, and child and youth development. Jaime's research has won awards from the Canadian Institutes of Health Research (2011) and the U.S. National Council on Family Relations (2014).

For more information, please visit www.taylornewberry.ca

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Executive Summary

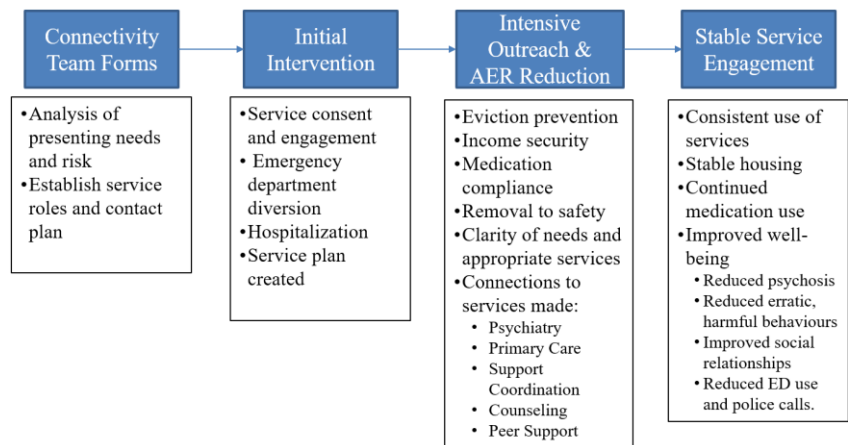
In January 2014, the Waterloo Regional Police Service (WRPS), in partnership with Langs, adapted and implemented *Connectivity*, a “Situation Table” in Cambridge-North Dumfries (CND). In partnership with Carizon Family and Community Services, a second Situation Table became operational covering Kitchener, Waterloo, Wellesley, Wilmot, and Woolwich (KW4) in October 2014. Together, these two tables are known as Connectivity Waterloo Region (WR). Connectivity is based on a Community Mobilization Hub Model originating in Prince Albert, Saskatchewan. The model is a multi-disciplinary, interagency approach to addressing situations of acutely elevated risk on a case-by-case basis. Locally, each table brings health, social, and justice services together at a weekly meeting to collaboratively and proactively address situations of risk. This approach enables organizations to be immediately responsive to acute needs in the community.

After a Phase 1 evaluation that examined the operations and collaborative practices of Connectivity¹, the leadership requested a Phase 2 evaluation that was more heavily focused on outcomes. Taylor Newberry Consulting (TNC) was contracted to continue this evaluation work. The following key evaluation questions guided Phase 2:

- *To what extent do individuals engage with the supports and services developed and implemented by Connectivity?*
- *What new services and supports do individuals access to meet their needs?*
- *What are individuals’ experiences with new supports and services? Are they experienced as beneficial and helpful? In what ways? How can services be improved?*
- *What changes are observed in people’s lives? To what extent are stability and wellness promoted? How is risk mitigated or removed?*
- *To what extent have interventions by Connectivity influenced the frequency and duration of emergency department visits and hospital admissions among Connectivity users?*
- *To what extent have interventions by Connectivity influenced the frequency of police service calls among Connectivity users?*

The Connectivity Outcomes Framework

An outcomes framework, at right, was developed to provide focus to the Phase 2 evaluation of Connectivity. The content was derived from Phase 1 findings and consultation with the tables. It is noted that the activity of the tables may cease after basic needs are met, or even prior, if the individual has been successfully connected to local services in the



¹ Brown, J. & Newberry, J. (2015). *An Evaluation of the Connectivity Situation Tables in Waterloo Region*. Evaluation report submitted to Waterloo Region Connectivity Partnership. Guelph, ON: Taylor Newberry Consulting.

community. The success of the tables beyond immediate risk mitigation is largely determined by the actions and activities of the broader service system.

Evaluation Design and Methods

The following evaluation methods were employed.

1. **8 key informant interviews** with Connectivity members (4 from each Table) and 3 key informant interviews with external providers. Interviewees were each asked to provide two situation examples, one that represented successes and one that represented challenges.
2. **3 service user interviews** with 4 individuals (one interview was a parent/youth dyad) whose situations had been brought to Connectivity, to gather firsthand experiences regarding Connectivity interventions and their impact.
3. Compilation of **hospital service usage data** associated with Connectivity users, covering emergency department use, in-patient admissions, and length of stay. Data was provided by Cambridge Memorial Hospital (a CND Table member) and Grand River Hospital (a KW4 Table member) in fully anonymized form for analysis by TNC. Analysis examined trends and changes in these indicators before and after Connectivity interventions.
4. Compilation of **police call data** associated with Connectivity users. Analysis examined trends and changes in police calls before and after Connectivity interventions.

Summary of the Findings

In summary, the following findings emerged:

- Ongoing success of the tables relies on assembling multi-disciplinary teams that have a **strong outreach capacity to access individuals in the community**, as well as a tenacious, “whatever it takes” commitment to addressing needs. Table members need support and endorsement from their parent organizations to overcome recurring service barriers.
- **Strategic collaboration of particular organizations and resources appeared to be effective in a number of situations – the coordinated intervention of police, housing services, community mental health services, and hospital intervention.** Specifically, the ability of Connectivity to work proactively with hospitals to ensure admission and the mobilization of community supports and, often, psychiatry, was important.
- Qualitative interviews provided **numerous examples of success**, where individuals moved from serious risk contexts to ongoing service connections, stability and functioning, and improvements in quality of life. Below is an example of risk context, intervention characteristics, and outcome observations (note: these are quotes are slightly paraphrased from our interviews to remove identifying information, including personal pronouns)

Risk Context	Intervention Characteristics	Outcome Observations
<i>Significant mental health issue with drug use but was not engaging in any service. Brought to Connectivity because of the high involvement of police in daily life, multiple times a day, hundreds of times a year.</i>	<i>Had a lengthy hospitalization. The doctors, because of Connectivity, they understood that the situation was more serious and that there were a lot of people involved. Able to get a lot of assistance in the hospital that would not have got otherwise. Previous attempts to go to hospital had resulted in quick discharges because of drug use.</i>	<i>There has been absolutely no more contact with police, no more issues in the community, complete stability, housed, healthy, still on medication, and still followed by a lot of the supports that were put into place as a result of coming to Connectivity.</i>

- The general success of Connectivity is qualified by **ongoing challenges in engaging individuals presenting with drug addictions**. Table members identified use of crystal methamphetamine as particularly challenging risk factor. About 50% of individuals whose situations were closed as “Connected” had drug use as a risk factor; in comparison about 80% of individuals whose situations were closed as “Still At-Risk”, had drug use as a risk factor.
- A **range of service and system barriers continue to persist in Waterloo Region**, hampering the efforts of Connectivity in mitigating risk and fostering longer-term positive outcomes. These include early discharge from hospital (especially when addictions are presenting), poor access to detox services and long wait lists for addictions treatment, a lack of discharge planning out of prison, lengthy wait lists for longer term supports and services (e.g., mental health support coordination, addictions treatment), and a lack of affordable housing options.
- Analysis of data provided by Cambridge Memorial Hospital (CMH) and Grand River Hospital (GRH) showed **14% and 69% decreases, respectively, in emergency department visits after Connectivity interventions**. Length of stay increased 31% at CMH and decreased 44% at GRH (however, the absolute number of in-patient days was quite small at GRH both before and after Connectivity intervention, which strongly qualifies the percent decrease). **The drop in ED visits represents \$40 thousand of diverted costs.**
- Analysis of data provided by Waterloo Regional Police Services (WRPS) shows **46% decrease in repeat police calls between 90-day periods, before and after Connectivity**. Conservatively estimated, this represents just under \$100 thousand available for other allocations.

Challenges of the Evaluation Design

A number of challenges and limitations were confronted in the evaluation design and remain relevant to the evaluation of Situation Tables in general:

- Because the evaluation required accessing clients who were currently receiving services from member organizations, **research ethics, privacy, and other related issues needed to be addressed with each organization separately**. In some cases this type of research requires a formal request, application, and/or ethics oversight process. While this was expected and appropriate, it is resource and time intensive.
- Many **individuals are transient and difficult to locate** thereby making client interviews difficult to achieve. Initial connections with providers may be lost. Additionally, many individuals approached will **decline to participate**, or agree but fail to show up for an interview.

- The evaluation by design is **biased to recruit individuals who are generally doing better** than others – they are actively engaged with services and are motivated to tell their story.
- Providers sometimes had professional concerns about involving individuals in the research who they **assess as experiencing too much difficulty, vulnerability, or disability to participate**. There were concerns about client decompensation, confusion, and/or discomfort. In some cases, providers may feel that an individual would be unable to recall or speak coherently about the period in which there was an intervention.

Recommendations for Future Evaluation

Based on the findings of this evaluation and the experience of implementing the chosen design, we offer several recommendations to improve and expand the evaluation capacity and learnings of Connectivity WR.

Recommendation 1: *The tables should continue their development of protocols and inter-organizational agreements to ensure consistent collection of individual information to be held confidentially by member organizations that lead or assist in a situation.*

Recommendation 2: *An evaluation advisory committee that is representative of table membership should be assembled to guide and direct future evaluation projects.*

Recommendation 3: *Build an ongoing case-study methodology to be implemented by the tables that assesses post-Connectivity outcomes as described in the Outcomes Framework.*

Recommendation 4: *Implement an updated evaluation of secondary data to assess the longevity of outcomes **such as?***

Recommendation 5: *Consider tracking additional service usage indicators to examine trends associated with Connectivity interventions.*

Recommendation 6: *Focus future evaluation efforts on key transitions experienced by Connectivity clients.*

Recommendation 7: *Focus future evaluation efforts on promising practices to and barriers to effectively supporting individuals with serious addictions who are at acutely elevated risk, including beyond the closure of the situation.*

Part 1 – Introduction and Background

“Connectivity” brings health and social service agencies together at a weekly meeting to collaboratively and proactively address situations of elevated risk associated with mental health and addictions, physical health challenges, homelessness, family dysfunction, and other risk factors. Connectivity was adapted from the Community Mobilization Model implemented in Prince Albert, Saskatchewan, which is characterized by a multi-disciplinary, interagency approach to addressing situations of acutely elevated risk in a community on a case-by-case basis. The approach enables organizations to be immediately and collaboratively responsive to acute needs in the community. In Ontario, these models are known as “Situation Tables”.

In January 2014, Langs adapted and implemented the Connectivity Situation Table in Cambridge and North Dumfries (CND), in partnership with the Waterloo Regional Police Service (WRPS). In October 2014, Carizon Family and Community Services partnered with WRPS to adapt and implement a second table, called Connectivity KW4 (covering Kitchener, Waterloo, Wellesley, Wilmot, and Woolwich). Together, these two Tables are known as Connectivity Waterloo Region. In September 2015, Connectivity Waterloo Region was announced as a recipient of *IACP/Motorola Webber Seavey Award*. The award, given by the International Association of Chiefs of Police, was established to recognize a standard of excellence that exemplifies law enforcement’s contribution and dedication to the quality of life in our communities.

As the initiative has developed and evolved, the leadership identified a need to build an evaluation and knowledge function that could reflect on promising practices, the reach and focus of the tables, inter-organizational partnerships, and outcome measurement, with the overall goal of improving and expanding the model. In 2015, Taylor Newberry Consulting was invited to design and lead this evaluation function. Thus far there have been two interrelated evaluation phases. Phase 1, completed in mid-2015, focused on the development and implementation of the two tables in Waterloo Region.² The present report documents Phase 2 of the evaluation, which focused on the impact of the tables on the community members who have used these services. We begin with a quick summary of Phase 1 findings, followed by the evaluation design

About Langs

Langs is a neighbourhood-based organization that began as a community development project close to 40 years ago. Today, the organization provides a wide range of social, recreational and health services for all ages including a Community Health Centre. Langs also operates a Community Hub with more than 20 co-located partners under one roof. The Langs Community Health Centre, WRPS, and their partners were recognized as the *Association of Health Care Centres’ 2015 Innovator of the Year* for championing the development of Connectivity Tables in Waterloo Wellington. For more information about Langs please see www.langs.org.

About Carizon

Carizon helps families find solutions to challenges. At Carizon, individuals and families receive coordinated, wrap-around services and supports to ensure that they obtain the breadth of help needed to embark on a healing journey. Carizon’s four pillars of service consist of: children’s mental health, counselling, community services, and education and school-based programs. Carizon is a recognized leader in trauma, family violence, youth engagement, settlement support, financial education, and community development. Operating in five business locations, Carizon services are delivered to numerous locations throughout Kitchener, Waterloo, Cambridge and the Townships of Wellesley, Wilmot, Woolwich and North Dumfries.

² Brown, J. & Newberry, J. (2015). An Evaluation of the Connectivity Situation Tables in Waterloo Region. Evaluation report submitted to Waterloo Region Connectivity Partnership. Guelph, ON: Taylor Newberry Consulting.

employed in Phase 2, a summary of the findings, implications for practice, recommendations, and ideas for future evaluative work in the field of community safety and well-being.

1.1 Summary of the Phase 1 Evaluation

The Phase 1 evaluation of Connectivity focused on the development and implementation of community risk reduction strategies delivered by both tables. The goal was to understand how organizations and front-line providers began coordinating their work to address acutely elevated risk (AER). Utilizing focus groups and key informant interviews, 74 service providers and management representatives contributed to the findings. These were augmented by a database of situations that detailed identified risk factors, table actions, and situations in which risk was mitigated. Some highlights from the evaluation were as follows:

- The two tables reflected cross-sectoral representation from education, police and justice services, primary health care, community health and hospital services, community mental health and addictions, child protection services, housing and homelessness support services, sexual assault and victim support services.
- A key factor in the successful implementation of Connectivity has been the strategic recruitment and engagement of members who are perceived as leaders in their home organizations, although there were variations in the extent to which table representatives were able to make organizational level decisions.
- 35-45% of the services represented at each Table have been responsible for bringing situations to Connectivity. Police services alone had referred almost three-quarters (73%) of the situations to the CND Table, and over half (56%) of the situations to the KW4 Table.
- Service providers reported that Connectivity has enabled them to reach vulnerable client populations they have had difficulty connecting with or finding through other community outreach strategies.
- Service providers reported that the new relationships with each other developed through the work of the table, enabling them to work more collaboratively, effectively, creatively, and efficiently.
- Organizations involved in Connectivity are seeing great value in participating and are committed to sustaining and enhancing engagement at the Tables.

While Phase 1 was primarily focused on table operations and cross-organizational collaboration, the availability of an internal Connectivity database for each table and a snapshot of police call data allowed the evaluation to comment on some key outcomes.

- Connectivity has been successful in connecting individuals and families in situations of acutely elevated risk with services in over three-quarters (76%) of the situations they have addressed and closed.
- Case examples shared by Connectivity representatives suggested that individuals served experienced an increased sense of trust in service providers and increased levels of stability and wellness as a result of their involvement with the initiative.

- Police call data collected 90 days before and after Connectivity interventions in Cambridge-North Dumfries showed a 74% reduction in calls for police service. Nearly 30% of the situations showed a 100% decrease in associated calls for service.

The findings of Phase 1 were encouraging, suggesting the collaborative Connectivity model was being implemented as planned, and capable of reaching people exhibiting elevated risk and connecting them to needed services. A Phase 2 evaluation was requested by the evaluation steering committee to move beyond implementation to examine the impact of the tables on the lives of people served by Connectivity.

1.2 Project Purpose and Key Questions

In Phase 2, the Connectivity leadership was interested in learning from service users themselves about how they have experienced the interventions and what changes they have experienced in their lives since this connection was made. There was also interest in exploring the impact of Connectivity on emergency department visits and hospital admissions, and further updating the Phase 1 findings regarding police service calls. A subarea of interest was to understand the extent to which Connectivity service users were also flagged as Health Link patients, i.e., individuals who exhibit high degrees of complexity in their needs and care requirements.

The following key evaluation questions guided the evaluation:

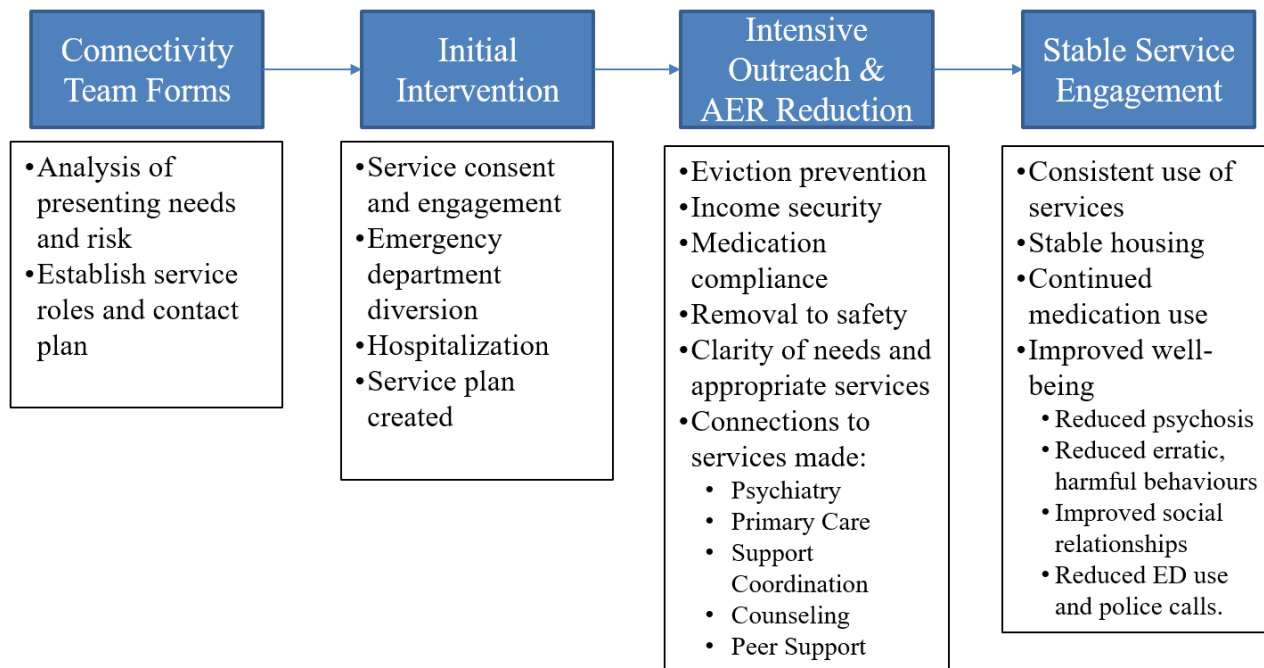
- To what extent do individuals engage with the supports and services developed and implemented by Connectivity?
- What new services and supports do individuals access to meet their needs?
- What are individuals' experiences with new supports and services? Are they experienced as beneficial and helpful? In what ways? How can services be improved?
- What changes are observed in people's lives? To what extent are stability and wellness promoted? How is risk mitigated or removed?
- To what extent have interventions by Connectivity influenced the frequency and duration of emergency department visits and hospital admissions among Connectivity users?
- To what extent have interventions by Connectivity influenced the frequency of police service calls among Connectivity users?

1.3 Outcomes Framework

To achieve greater clarity regarding the achievement of outcomes, we developed an outcomes framework, pictured on the next page. These outcomes were developed based on the findings of Phase 1 which documented presenting risk at the table alongside provider reports of the sorts of interventions and expected outcomes following the involvement of Connectivity.

Across the top of the framework, four sequential phases of the intervention process are listed: The formation of an appropriate team, an initial intervention, meeting basic needs, and facilitating stable service engagement. Note that the role of the tables, per se, ceases once AER has been reduced and connection to services has been made or if services have been refused.

Connectivity Waterloo Region Outcomes Framework



successfully connected to local services in the community. It should be emphasized that the success of the tables beyond immediate risk mitigation is largely determined by the actions and activities of the broader service system over which the table has little control. Nonetheless, Connectivity WR deemed it important to begin examining the experiences of people after reduction of AER.

The outcomes listed under the first category “Connectivity Team Forms” are not true outcomes in that they do not reflect changes experienced by service users. Rather, these are more like “implementation checks” related to the expected procedures of Connectivity tables, which are well documented in our Phase 1 report. However, we were interested in the types of risk that were commonly exhibited by individuals using the service.

At the “Initial Intervention” stage, the outcomes of interest focus on the immediate actions of providers and the related engagement of individuals experiencing risk, especially in relation to ED diversion or, if necessary, hospitalization. “Intensive Outreach and Basic Needs” represent the numerous actions providers could take after initial risk reduction, including eviction prevention, medication compliance, and range of service connections. The final phase is “Stable Service Engagement”, representing the period after initial service connections have been made in which individuals begin, it is hoped, to consistently use services and supports and to exhibit improved wellness.

Part 2 – Project Design and Methodology

The evaluation employed a mix of key informant interviews, client interviews, secondary data from hospitals and police services, and the Connectivity databases that captured risk data and associated interventions.

2.1 Key Informant Interviews with Service Providers

Phase 1 of the evaluation used interviews with Table members to understand program processes and activities. We repeated member interviews again in Phase 2, but with a focus on their observations of impact among the people they helped. In advance of the interviews we asked table members to think about at least two situations reflecting the following:

1. A situation in which the table member observed a degree of success in mitigating risk, achieving stability, and connecting the person to needed supports and services.
2. A situation in which the table member and their partners experienced difficulty in mitigating risk, making it challenging to achieve stability and get the person connected to supports and services.

For the latter scenarios, we asked interviewees to think of situations in which they were also somewhat aware of the person's status after making contact (as opposed individuals who did not participate and dropped out of sight). A total of 8 members were interviewed, 4 from each Table.

To provide some balance to the interviews, we thought it was useful to also interview providers who operated *externally* to the Tables, but who were familiar with Connectivity through a range of community interventions. This allowed for an external, and possibly more objective, account of the impact of Connectivity on the people they support. Three external providers were interviewed, one linked to the CND Table and two linked to the KW4 Table. These individuals were nominated by table members as having detailed experience with Connectivity interventions.

Following a reflective case-level approach, the interviews asked providers to describe the situations in which they were involved, the main risk factors involved, organizations involved in the response, the types of interventions and strategies employed, the ways in which risk was reduced (or not reduced), and the impact of the intervention on the person in question. Interviewees were told to avoid providing any detail about situations that would be potentially identifying and that the interviews were confidential. In our results section, quotes have been edited to remove any information that is overly specific and potentially identifying, including personal pronouns.

Since each interviewee offered at least two case examples, and many offered more than two examples, we were able to hear over 25 situations across the two tables.

2.2 Service User Interviews

Our design also attempted to gather the first-hand experiences of service users. The data gathering process began with a presentation to Table members about the our evaluation purpose and an invitation to nominate service users they currently serve to participate in a face to face interview with a member of our evaluation team. Phone-based and written surveys were offered as alternatives if face to face interviews were not possible or undesirable. The goal was to access 5 service users from each table for interviewing.

The request and consent process needed to be carried out by table members who have direct access and service relationships with potential interviewees. The evaluation team provided members with a script to conduct recruitment

and obtain verbal consent. This script instructed table members to review the function of Connectivity and remind them of the situation in which they were connected. They then explained the purpose and context of the interview, summarized below:

- The interview will be conducted by researchers from Taylor Newberry Consulting.
- The purpose of the interview is to find out:
 - How Connectivity is working and the things we can do to improve the ways we help the community.
 - How you felt about the supports or advice we gave to you and if you found that interaction to be helpful.
 - Ways we can improve the kinds of help we provide.
- The interview is completely voluntary and not in any way required.

Written consent was established at the time of the interview. It was also necessary to ensure service users were aware that some minimal information about their situation would be provided to TNC in advance, to ensure that the interview was properly focused on the specific situation that was brought to the table.

Limitations of this Method

Despite intensive efforts to access individuals to participate, the resulting sample was extremely low. One individual, one parent, and one parent and their teenage son, participated in the interviews, representing 3 situations and 4 people. This sample size does not allow for meaningful generalizability of the findings; that said, the interviews were still useful when considered in combination with the provider interviews.

There were a number of reasons identified by table members as to why recruitment was challenging:

- Individuals were transient and lost touch with specific service connections necessary to make contact (although this does not necessarily suggest that they were not connected to any community services).
- Individuals declined (or in some cases, agree and then decline or fail to show up to the interview).
- Table members had professional concerns that individuals were experiencing emotional fragility, vulnerability, or AER that would prevent participation.
- Table members worried that the interview process risks communicating elements of the Connectivity process that may be unfamiliar, threatening, or misunderstood by service users. This may in turn damage the trust, rapport, and therapeutic relationship established by Table members.

These points require some explanation and careful consideration. It is important to recognize that Connectivity serves to mitigate acutely elevated risk. Quite often individuals' life circumstances continue to be extremely challenging, even though AER has been mitigated. In this context, individuals may be cognitively impaired or exhibiting serious psychosis, or otherwise experiencing vulnerability. Relationships with providers may be tenuous and fragile.

Introducing the request for a research interview may put this relationship in jeopardy and threaten the therapeutic alliance that has been carefully built. The ability of individuals to comprehend the full details of what Connectivity is and how it operates may be challenging, yet some discussion of the table is required to put the interview request into context. To request a research interview may not match well with timing and complexity of person's situation. It was our sense that providers felt that an interview "about Connectivity" that is out of their direct control could be met with apprehension, confusion, and possibly withdrawal from supports. Given the delicate context of elevated risk, we find this concern reasonable.

To address these concerns, we provided assurances that the interview would be conducted only in reference to the situation in which certain providers were involved, without describing the nuances of Connectivity's protocol. It might be the case that these assurances were not enough to gain sufficient recruitment. We do not wish to suggest that this issue was the primary reason we had low recruitment, although it likely played a role.

Going forward, the two tables need to make some clear decisions about evaluation through firsthand feedback of service users in relation to these perceived risks. It is our position that all citizens have a right to provide service feedback and autonomy in consenting to such discussions, including in the presence of disability and vulnerability. Simultaneously, the concerns of providers are legitimate and must be recognized. We will address potential solutions in the recommendations section.

Finally, it is acknowledged that even a healthy sized sample of service users would still introduce significant biases. Individuals able and willing to participate will almost uniformly be individuals who remain connected to services and likely doing fairly well. This is to the exclusion of people who remain disconnected and more likely to be experiencing continued difficulty in their lives. This will likely remain an intractable bias in all evaluations of this type.

2.3 Hospital Usage Data

A primary objective of this research was to access secondary hospital data to examine potential changes in emergency department (ED) visits and in-patient stays. The indicators of interest were as follows:

- # of hospital emergency department visits
- # of in-patient admissions
- Number in-patient days at hospital (i.e., Length of Stay – LOS).

Two hospitals participated: Cambridge Memorial Hospital and Grand River Hospital. These two hospitals service the geographic areas covered by the CND Table and the KW4 Table, respectively.

Sample Selection and Anonymous Data Management

In order to access the required indicators, it was necessary to supply the hospital with names of Connectivity service users. The tables themselves only collect and store de-identified data; only individual members that bring situations to the tables hold identifying information, subject to the independent privacy protocols of their home organizations. Some organizations do not record any identifying information. Other organizations securely record names so that they can, as a part of care planning, be linked back to table situations as needed. It should be noted that the tables do not direct, require, or expect any particular approach to linking client names to the Connectivity intervention and risk databases. It was serendipitous that two organizations, Canadian Mental Health Association - Waterloo Wellington (CMHAWW) and WRPS did in fact hold names securely with their organizations, and also had brought forward the majority of situations at both tables.

While all data was anonymized for the evaluation, it was still ensured that data sharing remained within the circle of care operating at the Table. This meant that only situations that included CMHAWW and/or WRPS and the relevant hospital would be included in the data set. This constraint was in place in order to adhere to Connectivity's privacy protocols on data sharing.

CMHAWW and WRPS Table representatives were provided with situation codes³ for individuals fitting the above criteria. The representatives in turn attached names to the situation codes and submitted a resulting password protected file to the hospitals' research departments. Hospital representatives generated the indicator data and returned it directly to TNC's evaluation team with *names removed*. This left us with two data files (one for each hospital) that contained the situation codes and corresponding indicator data.

The above design and a request for assistance was submitted in advance to management at each organization to gain approval. In the case of Grand River Hospital, a formal data sharing agreement was completed and approved in relation to their internal privacy protocols. Additional details pertaining to the analysis of these indicators appear in the results section.

Subsequent to the data analysis, a total of 4 emergent/primary care representatives linked to both hospitals were interviewed to discuss possible interpretations of the pattern of results. Of these 4 interviewees, 3 were table members of Connectivity WR.

2.4 Police Call Data

Phase 1 included an examination of police service call data, 90 days before and after Connectivity interventions at the CND Table. With the help of WRPS representatives, we replicated this analysis. Constable representatives at both tables used situation codes to extract the number of police calls in 90 day periods before and after Connectivity interventions. Deidentified data was then submitted to the evaluation team for analysis.

2.5 A Note on Privacy, Connectivity, and Evaluation

The Connectivity WR leadership and its partners have been steadily addressing the definitions and practical application of privacy and related issues. The 4-filter process of the Table ensures information sharing is done so as to systematically remove unnecessary sharing of personal information sharing. The practices of the tables have been reviewed by the Information and Privacy Commissioner of Ontario (IPC) on an ongoing basis, with general endorsement and an appetite for the Connectivity (and Situation Tables in general) to inform privacy related policy in the sphere of contemporary health and social services. Langs has recently secured a content expert to complete a review of privacy protocols of the CND Table. Connectivity WR continues the enhance alignment with policies and expectations of the IPC.

We bring privacy concerns up here because there were potential implications in relation to evaluation research. A potential concern from the outset was that the Connectivity Table should not be communicating with service users outside of the particular risk event – once risk to self or others ends, any and all information sharing should cease. To address this issue, we ensured the following:

- a) Contact about the evaluation research was always made by a table member who currently held a service relationship with the person who used Connectivity.
- b) Taylor Newberry Consulting never made initial contact with the person.
- c) A consent process was followed as explained in Section 2.2.
- d) All secondary data pertaining to hospital service usage and police calls were de-identified and completely anonymous.

³ "Situation codes" are unique identifiers used in the table databases, in place of identifying information.

With these measures in place, we felt comfortable that the research design fully protected anonymity and, pertaining to interviews, allowed for full and informed consent of individuals in sharing their experiences.

Part 3: Evaluation Findings

The evaluation findings are reported in two major sections. In the first section we review the qualitative findings associated with the interviews with service providers and service users. In the second section we summarize the findings of the secondary data pertaining to hospital service usage and police call data.

3.1 Qualitative Findings from Interviews

The interviews were structured to focus on a) observational perspectives from providers who worked closely with service users during periods of elevated risk and then, quite often, in an ongoing service relationship afterwards; and b) the lived experience of service users as it related to the Connectivity intervention and supports and services that followed.

We analyzed the interviews according to a first iteration of the outcomes framework described in Part 1. We also expected specific observations and experiences to emerge in our interviews, which in turn could provide richer detail to the outcomes framework and our understanding of the model. For example, we fully expected to hear about hospitalizations as an initial intervention to address elevated risk, but we learned much more about the process of how that happens differently when a Connectivity intervention is mobilized.

All interviews were recorded and transcribed into password protected text files. Responses were thematically coded using the outcomes framework and its sequencing as a guide, focusing on descriptive reports of change and benefit and, importantly, explanatory narratives as to how and why intervention types were effective or ineffective. In addition, the analysis paid close attention to contextual information associated with risk. For example, do Connectivity actions, challenges, and successes appear to vary as a function of risk-types or other differences (e.g., the presence of substance use as a precipitating risk factor)?

3.1.1 Presenting Risks and Challenges Among Service Users

In our Phase 1 evaluation, an analysis of the Tables' risk database showed that the top 3 common risk factors for CND/KW4 were mental health (89%/95%), criminal involvement (80%/95%), and substance use/abuse (53%/72%). Other prominent risk factors were homelessness/precarious housing (42%/46%), physical health (30%/41%), and suicidal behaviour (38%/26%).

Connectivity Team Forms

- Analysis of presenting needs and risk
- Establish service roles and contact plan

In our interviews we asked respondents to describe the risks associated with the individuals whose situations they described, to ensure we had a good representation of service users in our narratives. The most common risk factors were well-represented and repeated throughout the examples. Invariably there were mental health concerns and very often coupled with substance use and criminal involvement. Respondents also discussed the following precipitating risks in their examples, aligning with the main risk categories in the databases:

- Homeless and risk of eviction

- Victimization of physical and sexual abuse and neglect
- Suicidality
- Physical illness and impairment

Additional factors were also described by respondents, representing combinations of risk factors or symptoms/behaviours that coalesce around the main risk factors. These appear in Table 1, alongside associated risk categories used by Connectivity.

Table 1 – Descriptions of Risk and Related Connectivity Risk Categories

Risk Descriptions from the Interviews	Associations with Connectivity Risk Categories
<ul style="list-style-type: none"> • Exhibiting drug induced psychosis and/or polysubstance use. • Drug abuse combined with mental illness. 	<ul style="list-style-type: none"> • Drugs • Mental Health
<ul style="list-style-type: none"> • Developmental disability 	<ul style="list-style-type: none"> • No clear categories
<ul style="list-style-type: none"> • Non-compliance with medication or a lack of needed medication to manage mental illness 	<ul style="list-style-type: none"> • Mental Health (note: “not following prescribed treatment” is a subcategory of Mental Health in the database).
<ul style="list-style-type: none"> • Erratic and bizarre behaviour, with risk to self or others. 	<ul style="list-style-type: none"> • Drugs • Mental Health • Threat to Public Safety • Anti-Social Negative Behaviour
<ul style="list-style-type: none"> • Unsafe and unhygienic home environments and hoarding behaviour. 	<ul style="list-style-type: none"> • Mental Health • Basic Needs
<ul style="list-style-type: none"> • Isolation 	<ul style="list-style-type: none"> • (possibly) Antisocial/Negative Behaviour
<ul style="list-style-type: none"> • Family dysfunction 	<ul style="list-style-type: none"> • Parenting • (possibly) Emotional Violence
<ul style="list-style-type: none"> • High hospital emergency department use 	<ul style="list-style-type: none"> • Drugs • Mental Health • Physical Health

The current main database of risk categories and risk factors was adopted from Prince Albert, Saskatchewan.⁴ The additional descriptions of risk described above, and a number of others, are being tracked in the Connectivity databases as “study flags”. A list of study flags can be found in Appendix A. With the assistance of the Ministry of Community Safety and Correctional Services (MCSCS), there are plans to provide an updated database for use by tables across the province.

These additional descriptions of risk provide more context to the experience of people served by Connectivity. An interesting example is “hoarding”, which is described as a growing problem among mental health service providers.

⁴ See Nilson, C. (2014). *Risk-Driven Collaborative Intervention: A Preliminary Impact Assessment of Community Mobilization Prince Albert's Hub Model*. Saskatoon, SK: Centre for Forensic Behavioural Science and Justice Studies – University of Saskatchewan.

As a unique mental health presentation, interventions must be conducted carefully and sensitively. Medication non-compliance a sub-category of risk that suggests a fairly focused intervention – access to psychiatry and medication to address deteriorating mental health. “Isolation” is currently not represented in the main risk database and can add to our understanding of risk.

3.1.1.1 Protective Factors

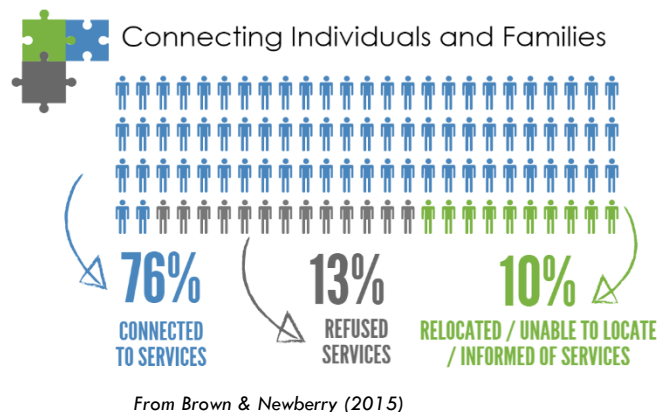
In collaboration with MCSCS, Connectivity WR has taken a leadership role in helping to identify protective factors as an important counterpoint to risk factors. Protective factors are potentially useful in addressing situations because they help inform what strengths and assets can be leveraged by interventions, and areas where the tables are seeing resilience at individual, family, and community levels. The CND Table is currently collecting protective factor data in relation to new situations and KW4 Table will be following suit in the near future. While the data regarding protective factors has not progressed enough to allow a fulsome review, the conceptual details have been formulated. Protective factors fall into the following categories:

- Financial Security and Employment
- Housing and Neighbourhood
- Family Supports
- Education
- Social Support Network
- Pro-social/Positive Behaviour
- Physical Health
- Mental Health

Like risk factors, protective factor categories are each further described by a number of more specific sub-categories.⁵ A current list of protective factors is available from MCSCS.

3.1.2 Success Factors at the Period of Initial Intervention

The effectiveness of Connectivity hinges on the ability of Connectivity teams to successfully engage with the person early on in the situation. This requires assertive outreach (“door-knocking”) within a sensitive and strategic plan to get the person connected to the supports that are needed. The Phase 1 evaluation demonstrated significant success in engaging individuals, reducing risk, and closing situations upon connection to services – over three-quarters (76%) of situations were closed in this way from the beginning of Connectivity in February 2014 to August 2015.



⁵ Please contact Kerry-Lynn Wilkie at Langs for an up-to-date list of protective factors and subcategories, kerry-lynn@langs.org.

Initial Intervention

- Service consent and engagement
- Emergency department diversion
- Hospitalization
- Service plan created

Extending the data to cover 2014 to 2016, it was found that 63% of situations were closed based on reduced risk and a connection to services being made. The remainder of situations were closed because individuals either refused services (9%) or because they relocated, could not be located, or were informed of services they could access (26%). It is not clear why the closure rate has decreased 13%. Table representatives have suggested that the first year of operations focused on individuals that were well-known to police and social service providers and who they expected would be amenable to receiving help. Over time, the table members started outreaching to individuals who were less known to providers and more difficult to connect with. The 13% decrease in successful closures seems to be associated with a higher proportion of people that have left the region or cannot be found. It is interesting to note that service refusal decreased by 4%.

We asked table members to comment on the factors that contributed to successful engagement at these early stages. Members first suggested that there are subset of individuals who lack self-awareness and insight and are therefore extremely resistant to accepting help and support. In our subsample of hospital data (to be discussed in 3.1.2), we found that 80% of people who refused services and remained at elevated risk had drug use as a risk factor, as compared to 51% of those who accepted supports. The influence of drug addiction on service refusal was echoed by a few table members in our interviews. For example:⁶

“Severe chronic polysubstance abuse disorder, diagnosed with substance abuse psychosis and chronically presents to the ER via police due to bizarre and threatening behavior in the community. Basically comes to hospital and doesn’t want to be here, and is kept until cleared enough to not be having psychotic symptoms, and then discharged. Has never in the past few years agreed to or expressed any desire to get treatment or had no desire to stop using. Worked really hard the whole admission to get out, and didn’t engage in any program or have any meaningful conversations with the psychiatrist or with the concurrent disorders specialist.” – Table member

A table member echoed the challenges associated with engaging individuals with addictions.

“But if it’s more purely addictions, then sometimes it doesn’t matter what kind of convincing you can try. It doesn’t matter what kind of sales pitch you give them, the addiction is too deep actually for them to willingly go for help... It’s refreshing now when we have a complicated case that doesn’t include crystal meth, because we know it’s just such a major hurdle and we have very rare success when it’s one of our high-needs crystal meth users out there. We rarely have long-term success.” – Table member

Individuals clearly have the right to refuse services and may elect to do so for a variety of reasons. In this context, Connectivity and Situation Tables in general need to continue to develop strategies about how to more successfully engage individuals who initially refuse and resist help.

Providers provided some perspectives on the ingredients that seem to work in getting people engaged within Connectivity interventions. Respondents emphasized the importance that the lead agency has a very strong capacity

⁶ In this quote and in those that follow, personal pronouns and additional situation-specific information have been removed to ensure anonymity.

and mandate to engage in outreach – assertive⁷ door knocking and willingness to meet people in community spaces in which they live. There also must be full buy-in, tenacity, and creativity of the team members in contacting the individual and arranging supports.

“We do have a lot of people in our community who won’t actually be helped if you don’t have somebody going to the door...The point of Connectivity isn’t just to give them a business card and say, call me if you want some help. It’s to grab a hold of their arm and look at them in the eye and tell them, “you need help and here it is”. There aren’t too many agencies out there who do that sort of work, so for us to round up in groups and go do that, I think is very unique. – Table Member

“[Interventions are successful when] they’re actually able to go to where they are; in other words, my personal belief is that if every social service agency had the capability to go to people’s homes, or if they happen to be homeless to meet them where they’re at in the community, that’s where social services has to move towards. The sense that individuals are going to meet you where your building is, where your office is, in my mind, such a colossal misuse of resources. It’s a significant falsehood that that’s going to be an effective way of serving people in our community who are at risk. So when I think of the successes, it’s because there is an outreach worker that is able to go back to that home, or an outreach worker that is able to go back out in that community” – Table Member

Providers also suggested hospitalization was a key initial outcome of Connectivity, a turning point in mobilizing supports. To be clear, it is not hospitalization per se that is important; many individuals use emergency department services and/or are admitted to in-patient units independent of Connectivity’s involvement. What appears to be important is the activation of a Connectivity team and a more strategic and customized approach to hospitalization, stabilization, and transitional supports. We heard several examples wherein individuals were suffering from serious psychosis and often co-occurring substance abuse problems, in absence of appropriate medication. In such situations, people exhibited erratic and potentially violent behaviour that indicated risk to self or others and/or put them at risk of eviction from their homes. Such situations were typically brought to the Table by police, and in three examples we heard, at the behest of external housing providers. The Connectivity team formed with a mental health and addictions provider as the lead that was embedded in hospital or had a direct, advance communication with the hospital.

What is particularly important in these situations is the ability of the team to advocate with the hospital to ensure there is an admission. Too often individuals are discharged from emergency departments (or too early from in-patient units) upon achieving stability, but without access to psychiatry, detailed assessment, medication compliance, and the formulation of a comprehensive transition plan and follow up supports. In short, Connectivity can help put a stop to the often revolving door of emergency department use. Here are three separate examples of this strategic connection to hospital at the time of initial intervention.

⁷ “Assertive” should not be taken to mean “aggressive”. This term has been used in the outreach field as a counterpoint to conventional services that expect clients to be independently “motivated” to engage. Assertive outreach reflects the philosophy that people need multiple opportunities to engage and that providers should be at once sensitive and tenacious in their efforts to provide help.

“We went through involuntarily hospitalization. It was the connection of getting them to the hospital, and so that’s where police then helped us out through the table, where we were able to all work together. Often what happens, they get to the hospital and then they say, I’m fine, and they go home. But it’s that connection with the hospital, that they know somebody is coming in and what the situation is.” – External Provider

“One client in particular, was actually phoning the police with mental health issues. Was seeing things in her unit and would tear unit apart. Would be in the hallway screaming, walking up and down, disturbing other tenants. Really isolated. That’s where it’s really difficult when they don’t recognize they have an issue and there are no supports there. So we connected with police, who was able then through Connectivity to get that mental health connection and get the connection with the hospital, that we were all able to work together to have transfer into the hospital.” – External Provider

“Once the client had to be taken to hospital forcibly, but was subsequently just released the next day. The police at the Connectivity Table became involved. We all met and [Connectivity Team] were able to find a doctor to come, and there was a decision to hospitalize. They had a psychiatrist waiting to provide treatment and medication.” – External Provider

3.1.3 Intensive Outreach and Meeting Basic Needs

Intensive Outreach & AER Reduction

- Eviction prevention
- Income security
- Medication compliance
- Removal to safety
- Clarity of needs and appropriate services
- Connections to services made:
 - Psychiatry
 - Primary Care
 - Support Coordination
 - Counseling
 - Peer Support

The initial interventions of Connectivity may include hospitalization, as above, or may include the engagement with one or two primary workers – essentially securing an agreement to participate in supports and planning out what those supports look like. The next phase in our outcomes model focuses on the practical and fairly immediate supports that Connectivity attempts to link individuals to, via intensive outreach. In many cases, with initial risk mitigated, many of these actions are continued by service providers in the community after the situation has been closed. In general, the focus here is meeting basic needs and warm hand-offs, if possible, to longer term and more stable supports.

While a conventional evaluation lens may deem this level of intervention as a collection of “outputs” (i.e. documentation of service delivery), we suggest that these should also be understood as potentially very important immediate outcomes. Engagement with services, especially among this vulnerable population, can truly represent attitudinal and behavioural changes; or alternatively, are compelling proxy indicators of change in the lives of such individuals. A hoarding intervention, for example, is not merely an instance of service delivery. It in fact represents an individual’s consent to change their entire environment (something that is usually met with severe resistance) and an indicator of improved safety. Even agreeing to see a primary worker represents a certain “readiness to change” that is completely new for individuals who have been chronically disconnected from services.

“The most successful situations are the ones that an outreach worker from a given agency is able to take them on as a long-term client, and long-term, I would say just means that they’re more than just a couple months, and

that that's a part of their mandate, is that they are allowed to put them on their caseload for a period of time, or at least somebody else within their agency is allowed to pick them up as an ongoing client." – Table Member

We asked providers to describe what these interventions look like, and asked service users what supports they experienced. We heard that some very simple and straightforward interventions, although sometimes difficult to put in place initially, could greatly improve the situations of people with difficult and complex problems. For example:

- Establishing a primary worker who works intensively with the person/family.
- Providing a clear service pathway and navigation support for individuals and families who have had difficulty accessing services.
- Connecting to counseling, case-management, peer support and other supports.
- Accessing psychiatry for assessment, diagnoses, and medication management.
- Accessing physicians for primary care.
- Connecting to and working with family members as key sources of support.
- Connecting to shelters, temporary housing, and housing supports.
- Working directly with landlords and housing providers to prevent eviction.
- Instituting basic environmental and behavioural safety measures.
- Removing individuals from threat of violence and exploitation.
- Obtaining identification and securing sources of income.

In our interviews, these actions provided much needed stability and room for the person to address their issues more effectively.

3.1.4 Stable Service Engagement

Stable Service Engagement

- Consistent use of services
- Stable housing
- Continued medication use
- Improved well-being
 - Reduced psychosis
 - Reduced erratic, harmful behaviours
 - Improved social relationships
 - Reduced ED use and police calls.

The longer-term outcomes of Connectivity are not well understood. The interventions themselves are designed to reduced elevated risk and connect individuals to more stable and consistent supports. These outcomes are therefore beyond the direct control of the tables and rely heavily upon the coordinated responses of the broader social and health systems. That said, Connectivity has a deep interest in understanding the extent to which stability is achieved over time. The organizations represented at Connectivity play a large role in providing these supports and, in many cases, table members and their programs continue to support individuals whose situations of AER have been mitigated. Through our qualitative interviews we had an opportunity to ask providers to provide their observations regarding longer-term impacts of the initiative. Though limited in number, interviews with service users could also shed light on these questions.

The interviewees all had examples of successes of Connectivity. In summary, providers reported the general outcomes of “successful situations”, listed at left, which speak to consistent service connections, stability, reduction of problematic behaviours, and improved well-being.

To gain a richer understanding of the narratives communicated by interviewees, we provide (in Table 2, next page) a selected set of situation examples from the interview data that provide the risk context, the

nature of the intervention, and perceptions of outcomes. These are slightly paraphrased interview quotes that omit overly specific information and personal pronouns to protect anonymity.

The commonalities of these situations demonstrate how collaborative efforts in the face of co-occurring complex needs have led to a series of important outcomes: Consistent and stable service connections; the meeting of basic needs; reduced psychosis, crisis and harmful behaviours; medication compliance; and stable housing.

Table 2 – Situations from the Tables: Risk Context, Intervention Characteristics, and Outcomes

	Risk Context	Intervention Characteristics	Outcome Observations
1	<i>Significant mental health issue with drug use but was not engaging in any service. Brought to Connectivity because of the high involvement of police in daily life, multiple times a day, hundreds of times a year.</i>	<i>Had a lengthy hospitalization. The doctors, because of Connectivity, they understood that the situation was more serious and that there were a lot of people involved. Able to get a lot of assistance in the hospital that would not have got otherwise. Previous attempts to go to hospital had resulted in quick discharges because of drug use.</i>	<i>There has been absolutely no more contact with police, no more issues in the community, complete stability, housed, healthy, still on medication, and still followed by a lot of the supports that were put into place as a result of coming to Connectivity.</i>
2	<i>Suffering from mental illness, was evicted, was living on the street. Children were subsequently removed from care, and then provided housing. Had very bad hallucinations and different things like that, that were causing disruptions to everybody else in the housing complex.</i>	<i>We all met and [Connectivity Team] were able to find a doctor to come, and there was a decision to hospitalize. They had a psychiatrist waiting to provide treatment and medication.</i>	<i>Now doing exceptionally well. I think the other neighbours understand that that there was suffering from an issue, so now they're very accepting because they are a changed person now, right? Oh my gosh, it's like night and day.</i>
3	<i>Had just shut down. Adult child had gone away to school to another province, and since then hadn't been leaving the unit. Somehow we connected, but it turns out that rent hadn't been paid for several months, hydro was disconnected. Would only answer the door if [family member] was there with groceries.</i>	<i>We went through involuntarily hospitalization. It was the connection of getting to the hospital, and so that's where police then helped us out through the table, where we were able to all work together. Often what happens, they get to the hospital and then they say, I'm fine, and they go home. But it's that connection with the hospital, that they know somebody is coming in and what the situation is.</i>	<i>On medication, everything is going so well with, everything. It's been again a year or more that everything's been stable. And the family, I still hear back from the family once in a while. Actually called me from the hospital with a social worker, thanking me for everything that we did.</i>

Table 2 (cont.) – Situations from the Tables: Risk Context, Intervention Characteristics, and Outcomes

	Risk Context	Intervention Characteristics	Outcome Observations
4	[Service user with dual diagnosis]: <i>It was regarding issues around the house, and eventually I ended up moving out. It was more revolving issues because I was getting in a lot of fights with my mom at the time.</i>	<i>I ended up going into the hospital, and they pretty much did everything while I was in hospital.</i>	<i>Well, strongly what I believe was I just wasn't taking my medication when I lived with my mom. I was skipping some meds I probably shouldn't have skipped, which I realized after I moved out how much they actually help and how much they don't actually hurt me.</i>
5	<i>Victim of sexual abuse and repeated current sexual assault and violence. Known to have been diagnosed with depression and ADHD, but it was suspected that there were some more serious mental health issues going on: alcohol abuse, suicidality, and self harm.</i>	[Intensive outpatient supports and case management, with counselling]	<i>Engaged in time really well with myself and psychiatrist, and still does. Started on new medication to reduce the episodes, which has been working quite nicely. Regularly assessed for risk of suicide and the risk continues to be low. Never really escalated; it's improved.</i>
6	<i>Young person who had been stable with dual diagnosis, had ups and downs. Within the last year and a half, mental health started declining because of a medication change, and then after that it went bad really quickly. Lost employment and showing very erratic behavior in comparison to before. Service we tried to access, mental health, a local psychiatrist, the hospital, they were saying that it was not mental health, that it was developmental disability. They weren't listening. Psychiatrist decided not to provide services anymore, medication was not appropriate, and deterioration continued.</i>	<i>Through Connectivity, between CMHA and the hospital, we received a mental health forensic assessment. This determines complex needs and brings you to another level of responses from the mental health sector. They did that and within two weeks. Hospitalization was then needed, but by then they already knew about the situation because they had taken part at the Connectivity table.</i>	<i>The psychiatrist immediately started new treatment, and the treatment worked, so was able to be discharged from the hospital. Then moved back in the community to a transitional home, and is slowly reconnecting to community and coping really well with new medication. Has a psychiatrist available as needed, versus once a year. There's actually follow through.</i>
7	[Advanced degenerative disease, neglect, basic needs not met, victimized sexually, precariously housed and exploited]	[Police, Community Care Access Centre, CMHAWW, Sexual Assault and Domestic Violence Team collaborated to rescue individual, and remove to long-term care bed]	<i>Getting medical care, getting three meals a day, has a bed, and they're working on physiotherapy and trying to help with physical symptoms, so in a good state that way. And there's no way it would have happened without Connectivity.</i>

It should be noted that these success stories should be tempered by the fact that many individuals involved in Connectivity may refuse services, drop off the radar of services, and/or may remain or re-enter AER.⁸ This is expected to a degree, as Connectivity is dealing with risk issues that are entrenched and persistent and therefore difficult to mitigate. With this in mind, the Connectivity model continues to refine and strengthen collaborative service responses in order to combat these more difficult situations.

3.1.5 Persistent Barriers to Successful Interventions

Key to understanding outcome achievement is the identification of factors that serve to limit, prevent, or undo the efforts of Connectivity. Providers identified a range of service and system level barriers as recurring and persistent in Waterloo Region. Some of these barriers have been overcome by the efforts of Connectivity during specific situations, suggesting that certain system improvements could prevent risk situations from arising in the first place. In our discussions, barriers included the following:

- People may be discharged too early from emergency departments when a longer in-patient stay may be of benefit.
- Hospitals may sometimes not admit individuals with underlying mental health difficulties who present with addictions, referring instead to detox services.
- There is great difficulty accessing detox services in a timely way; in turn, there are long wait lists out of detox into addictions treatment programs.
- Discharge planning is poor or absent discharge planning when leaving prison.
- There is a general difficulty in accessing long-term and specialized supports due to waitlists, after short-term gains are made. Some programs are unable to meet the needs of people with co-occurring needs.
- A range of affordable and supportive housing options is sorely lacking.

These barriers are not newly identified and have been documented by other initiatives, research, and planning initiatives in Waterloo Region. What is underscored is that even collaborative, cross-sectoral efforts can still be thwarted by these system challenges. The work of Connectivity, and social and health services in general, can benefit from determined actions in these areas.

3.2 Secondary Data Pertaining to Hospital Use

Alongside the principled goal of mitigating risk and improving the lives of vulnerable individuals, Situation Tables have also been created to stem the inefficient use of resources and improve the flow of individuals to the services that they need. Across Ontario we know that significant portions of police resources are dedicated to managing mental health crisis calls. In Waterloo Region, 80% of police calls are non-criminal in nature. This evaluation wished to examine external data supplied by community partners – namely two local hospitals and police – to see if there is a relationship between Connectivity interventions and a reduction in emergency department use, in-patient admissions, and police service calls. We begin by discussing the first two indicators in relation to the CND and KW4 tables.

⁸ From 2014 to 2016, it was found that 63% of situations were closed based on reduced risk and a connection to services being made. The remainder of situations were closed because individuals either refused services (9%) or because they relocated, could not be located, or were informed of services they could access (26%).

3.2.1 Hospital Usage Data Relating to the Cambridge and North Dumfries Table

We examined hospital usage of 58 people involved with situations presented at the CND Table that involved the cooperation of Cambridge Memorial Hospital (CMH) and Waterloo Regional Police Service (WRPS) or Canadian Mental Health Association Waterloo Wellington (CMHAWW). Table members representing each of these organizations identified the first and last names of individuals within this sample on a password protected list. This list was shared with the data department at the hospital, with oversight by management responsible for research and data requests.

We asked CMH to pull the following indicator data for each of these 58 individuals, for the time period of our study – January 1, 2013 (1 year prior to the start of the CND Table) to August 27, 2016:

- the number of visits to the emergency department (ED)
- the number of hospital in-patient admissions
- the length of stay for each admission, in days.

After compiling the data, CMH provided a de-identified dataset to TNC, organized by Connectivity situation numbers. No names or identifying information were shared with TNC at any point in this process.

TNC completed the analyses from this point forward. To examine the impact of Connectivity interventions on hospital usage, we were interested in those interventions that successfully resulted in a “connection to services.” Such situations accounted for 74% of our sample, yielding a total of 43 individuals. Attempted interventions that did not result in “connection” (15 individuals) were filtered out and examined separately as a natural comparison group.

Interventions Resulting in Connection to Services: Impact on Hospital Usage

In situations in which more than one intervention was provided to a service user (i.e., their situation was “re-opened”), we considered the first intervention that resulted in a “connection” as the point of intervention. Hospital visits prior to this situation closing date were considered “pre-test” data; hospital visits after this situation closing date were considered “post-test” data. Our analyses examined all ED visits, hospital admissions, and length of stay for those admissions, in the time period preceding the first successful intervention and following the first successful intervention. To examine changes pre- to post- intervention across the sample, we adjusted hospital usage indicators to 1-year prior to the intervention (pre-test) and 1-year following the intervention (post-test) to correct for variance in intervention dates across the sample.

Emergency Department Visits

Across the sample, there were 151 ED visits prior to Connectivity and 130 ED visits afterwards, **representing a 14% reduction**. At an individual level, the number of visits in the pre-test period varied from 0 to 23, with an average of 3.5 visits per individual. In the period following situation closure, the number of ED visits ranged from 0 to 16, with an average of

Comparing hospital usage 1 year prior to and 1 year following Connectivity intervention, amongst individuals who were successfully connected to services through Connectivity (43 people):

- a **14% reduction** in # of Emergency Department visits
- The rate of in-patient admissions did not change after a connectivity intervention.
- a **31% increase** in the # of in-patient days (“Length of Stay”)

3 visits across the sample.

There was a high degree of variation across the sample. Over 60% (26 patients) of the sample showed a decrease in ED visits following Connectivity intervention. The largest impact was seen in one individual who demonstrated a reduction in ED visits from 17 pre-intervention to 0 visits post-intervention. However, there were 17 individuals whose ED visits increased after intervention. The greatest increase exhibited by one individual was 12 ED visits from pre- to post-intervention.

In-Patient Admissions

Across the sample, there were 41 in-patient admissions prior to Connectivity interventions and 40 admissions afterwards. On average, this works out to about 0.96 and 0.93 admissions per person, respectively. The maximum number of admissions associated with one individual was 4.5 in the pre-test period and 5.2 in the post-test period; the minimum number of admissions was 0 at both pre- and post-intervention.

A total of 47% (20 patients) decreased hospital admissions following Connectivity intervention; 40% (17 patients) increased the number of hospital admissions after intervention and 6 individuals exhibited no change in their frequency of hospital admission from pre- to post-intervention.

Length of Stay (LOS) in the Hospital In-Patient Unit

Across the sample, there was a total of 398 days of in-patient services used by individuals served by Connectivity, prior to the intervention. After situation closure there were 521 days of in-patient services. **This represents a 31% increase in LOS following Connectivity intervention.** The maximum number of days a patient was admitted to hospital for was 75.4 days in the pre-test period and 105.6 in the post-test period (the minimum LOS was 0 days at both pre- and post-intervention). The average Length of Stay (LOS) increased from pre- to post-intervention (9.3 days to 12.1 days).

While the aggregate (and average) days in in-patient increased, there was significant variability in the data. Of the total sample, only 35% (15 of 43) of individuals showed an increase in LOS; and 3 individuals were responsible for just over half (55%) of the post-Connectivity in-patient days. In comparison, **51% of Connectivity users showed a decrease in in-patient days** (the balance – 14% – is made up of individuals who had no in-patient days in either time period).

The increase in the number of in-patient days among a third of the sample may suggest that Connectivity is compelling longer stays in hospital for these people. This interpretation, though conjectural, aligns with our interview findings in which teams have advocated for longer stays to ensure stabilization and improved connection to transitional supports. A major concern of providers has been that individuals are routinely discharged too early. Because Connectivity is aimed to link people to more appropriate and stable supports to address their complex needs, it makes sense that we would see, from pre- to post-intervention, a reduction in use of emergency services, and perhaps a longer stay for some individuals who require it.

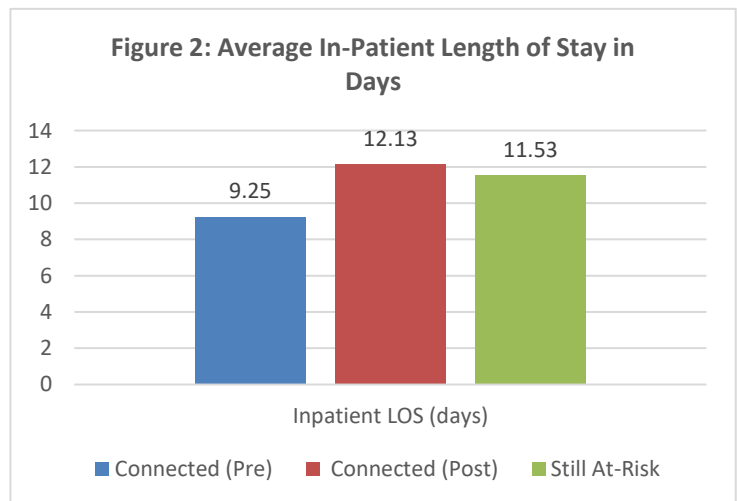
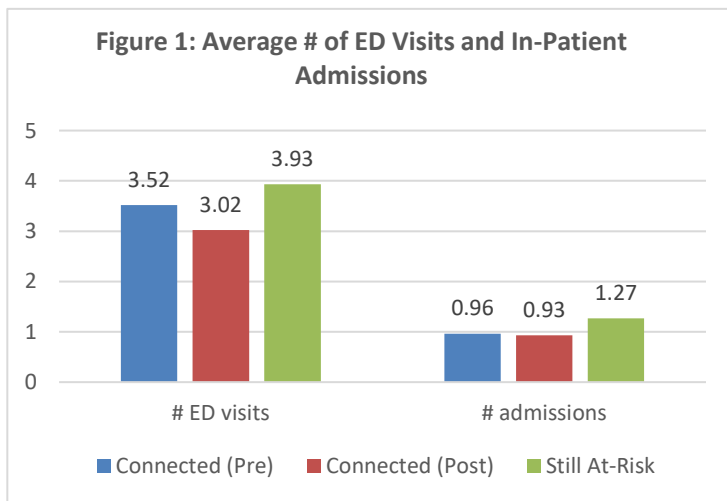
Notably, individuals whose use of ED services increased after Connectivity intervention also tended to experience increased hospital admissions; 76% of those who visited the ED more frequently after intervention were also admitted to hospital more frequently after interventions. In all but one of these cases, the length of stay while admitted was also longer than they had experienced pre-Connectivity. Close examination of these cases reveals that all individuals

who experienced an increase in ED visits and in-patient admissions following their Connectivity intervention had 1 or 0 ED visits or admissions in the year prior to intervention. This evidence suggests these individuals were likely unconnected to any services and supports prior to Connectivity and that the intervention, itself, may have helped them to become appropriately connected to hospital services to address their needs.

Comparison of Successful Interventions to Attempted Interventions that Failed to Connect Individuals to Services: Impact on Hospital Usage

We also compared hospital service usage amongst those who were successfully connected to services through Connectivity (43 people) and those for whom Connectivity attempted to intervene but were unable to (e.g., refusal of services, unable to locate) and remained at acutely elevated risk (15 people). For the “Still At-Risk” group, we examined hospital usage indicators during a one year period covering 6 months prior to and the 6 months following the first attempted Connectivity intervention. This one year period could then be compared to the one-year periods before and after the Connectivity intervention for successfully connected individuals.

Figures 1 and 2 show hospital usage indicators for those still at-risk compared to pre- and post- indicators for people who were successfully reached through Connectivity intervention. We anticipated a higher number of ED visits and hospital admissions amongst those Still At-Risk (i.e., who did not receive the intervention) compared to the post-



intervention data from connected individuals. As Figure 1 illustrates, the group of *people still at acutely elevated risk* had more ED visits (by 23%) and more hospital admissions (by 27%) than people who were successfully connected to services through Connectivity. Those who were unconnected by the table (Still At-Risk) were also higher on these indicators than connected individuals were at pre-test. This suggests that individuals who Connectivity failed to access and engage are also the highest users of hospital services and likely the most complex. We will return to this group shortly.

Figure 2 shows that individuals Still At-Risk experienced a slightly **lower** average length of stay while admitted (by 5%) than individuals who were linked to supports through Connectivity. We do not wish to overstate this difference, which is small, but simply note that it aligns with the previous conjecture that Connectivity may compel longer in-patient stays for individuals who are successfully engaged, which is a bit longer than those who do not engage. All that said

Still At-Risk individuals LOS was notably longer than Connected individuals at pre-intervention, suggesting, again, that these are different groups.

Relationship Between Drug Use and Success in Connection to Services

In our interviews with service providers, drug use (crystal methamphetamine use, in particular) was described as a suspected barrier in connecting people to services through Connectivity. Utilizing documentation of risk factors in the Connectivity database, we were able to examine whether drug use may be a factor that contributes to the Connectivity's success in connecting with individuals at risk.

Our analyses revealed that 80% (12) of service users who were Still At-Risk after Connectivity's intervention attempt were involved in situations with drug use as a risk factor. In comparison, 51% (22) of service users who were successfully connected to services were involved in situations with drug use as risk factor. These results do not lead to a conclusive interpretation, and the sample sizes are small, but there is alignment service provider interviews suggesting that drug use can be a pernicious barrier to successfully engaging at-risk individuals.

Relationship Between Health Link and Connectivity Situations Involving Hospital Usage

There was an interest amongst the Connectivity lead partners and Steering Committee in Cambridge and North Dumfries in understanding the potential overlap between the population served by Connectivity and the population identified as eligible for Health Link in Cambridge. Cambridge Memorial Hospital (CMH) maintains a list of patients who fit the eligibility criteria for the local Health Link, indicating complex health needs. The CMH data analysts cross-referenced patient names on the Health Link eligibility list with the list of Connectivity service users who used hospital services between January 1, 2013 and August 27, 2016.

The criteria for Health Link eligibility are patients with four or more chronic/high cost conditions, including a focus on mental health and addictions conditions, palliative patients, and the frail elderly. From our total sample (n=58) of Connectivity service users who used hospital services, 25% (15 people) were identified as fitting the criteria for Health Link services. This suggests, albeit using our limited sample size, that there is some degree of cross-over in the target populations for these two initiatives.

3.2.2 Hospital Usage Data Relating to the Kitchener (KW4) Table

We examined hospital usage across 35 people involved with situations presented at the K4W Connectivity Table that involved the cooperation of Grand River Hospital (GRH) and Waterloo Regional Police Service (WRPS) or Canadian Mental Health Association (CMHAWW). Connectivity table members representing each of these organizations identified the first and last names of individuals associated with 57 situation numbers drawn for this sample on a password protected list. This list was shared with the data analysts at the hospital. The resulting dataset included 35 GRH patients that were successfully matched to Connectivity situations.

We asked that GRH data analysts pull the following indicator data for each of these 35 individuals, for the time period of study used by GRH – January 1, 2013 (1 year prior to the start of Connectivity Waterloo Region) to April 30, 2016.

- the number of visits to the emergency department (ED)
- the number of hospital in-patient admissions

- the length of stay for each admission, in days.

After compiling the data, the hospital data analysts provided a de-identified dataset to TNC, organized by Connectivity situation numbers. No names or identifying information were shared with TNC at any point in this process. TNC completed the analyses from this point forward. Interventions resulting in a connection to services accounted for 94% of our sample; a total of 33 individuals. Attempted interventions that did not result in “connection” (2 individuals) were filtered out. This eliminated the Still At-Risk comparison group that we were able to examine in the CND Table analysis.

Interventions Resulting in Connection to Services: Impact on Hospital Usage

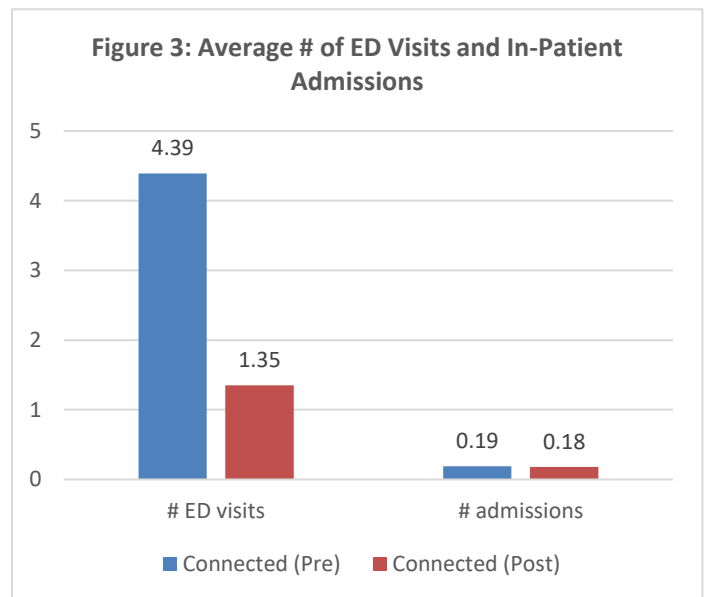
The methods and analysis used in relation to the CND Table were repeated for the hospital data linked to the KW4 Table. Figure 3 displays the average number of ED visits, hospital admissions, and length of in-patient stays (in days) at both pre- and post-intervention.

Emergency Department Visits

Across the sample, there were 145 ED visits prior to Connectivity and 45 ED visits afterwards, representing a 69% reduction. The number of ED visits of individuals within the pre-test period varied from 0 to 26, with an average of 4.4 visits per person. In the period following the closure of the situation, the number of ED visits ranged from 0 to 9, with an average of 1.4 visits per person. There was less variation across the GRH sample – about 71% (25 patients) of the sample showed a decrease in ED visits following Connectivity intervention. The largest impact was seen in one individual who demonstrated a reduction in ED visits from 26 pre-intervention to 2 visits post-intervention. This individual contributes disproportionately to the size of the reduction.⁹ There was one individual who exhibited no change in use of ED services. This person had 0 visits pre- or post-intervention. There were 7 individuals whose ED visits increased after intervention.

In-Patient Admissions

The total number of hospital admissions was quite low across this sample, with no discernible change from pre-Connectivity (6.37 admissions) to post-Connectivity (5.84 admissions). The average number of in-patient stays per person were below 1 at each time period (0.18 and 0.19). The maximum number of admissions associated with one individual was 1.5 in the pre-test period and 2.3 in the post-test period; the minimum number of admissions was 0 at both pre- and post- intervention.



⁹ If this person is removed from the dataset, the overall percent decrease in ED visits drops to 64%.

20% (7) of patients decreased hospital admissions following Connectivity intervention, whereas 63% (22) had no admissions at all in our timeframe of study (Jan 1, 2013 to April 3, 2016). Four people experienced an increase the number of hospital admissions after Connectivity, and these were typically cases of having no admissions to having one admission from pre- to post-intervention.

Length of Stay (LOS) in the Hospital In-Patient Unit

In-patient stays (LOS) were also quite low and much lower than LOS recorded for CMH. Across the sample, there was a total of 25 in-patient days prior to Connectivity and 14 in-patient days afterwards. This represents a 44% decrease. On a per person basis, the average change is very small (0.75 days to 0.42 days). Whether or not a drop in LOS of 11 days over a two-year period for 33 people is meaningful is questionable and hard to discern without a comparison group. It may just represent random variation. What is more interesting is understanding why LOS showed an overall increase after Connectivity at CMH but not at GRH. We address these issues in the next section.

Comparing hospital usage 1 year prior to and 1 year following Connectivity intervention, amongst individuals who were successfully connected to services through Connectivity (33 people):

- a **69% reduction** in # of Emergency Department visits
- a **44% decrease** in the length of stay (# of days) for those who were admitted to hospital.

3.2.3 Summary of Hospital Service Usage Data

In Table 3 (next page) we summarize all the hospital service indicators pre- and post-Connectivity for both CND and KW4 Tables. Overall, it appears that Connectivity is helping to reduce emergency department visits. Combining data from both Cambridge Memorial Hospital and Grand River Hospital **shows a 41% decrease in emergency department use**. Neither hospital indicated any obvious change in rates of in-patient admissions among individuals using Connectivity. Length of Stay varied between the two hospitals: While CMH demonstrated an increase in the number of in-patient days, GRH showed a decrease. What is the nature of this difference?

We interviewed staff/table members that are familiar with hospital services to provide some input into this finding. The initial interpretation of the CMH data was that Connectivity intervention teams were at times influencing decisions to keep individuals in hospital longer than might otherwise be the case, to allow time for improved stability and opportunities to arrange for community based services. This does not, however, explain the decrease in LOS observed at GRH. The difference might be due to relative access to transitional and community based mental health services. CMH has a range of outpatient services but they are mostly provided onsite and have wait lists. GRH has a set of outpatient services that can be accessed immediately, and capable of diverting individuals from the emergency department and in-patient admissions, and reducing time in hospital. Available services include rapid response and short term psychiatric services, day hospital, withdrawal management services, short term community transition support and short term intensive case management. The participation of GRH on Connectivity has ensured that these supports are optimally utilized during presenting situations. It appears that immediate access to community based supports allows GRH to divert more individuals from in-patient admission, and discharge from in-patient services earlier, as compared to CMH. This should not suggest that longer LOS at CMH is negative finding; it actually suggests a more intentional approach in avoiding the problem of “early discharge”, while ensuring the needs of individuals using Connectivity are met. What it might indicate is a gap in Cambridge-North Dumfries regarding community mental health services that are linked to hospital discharge and transition.

Table 3 - A Summary of Connectivity WR and Hospital Service Usage

Indicator	Community	Connected Pre-Test	Connected Post-Test	Still AER/ Disconnected
# ED visits	Cambridge <i>"A 14% decrease in ED visits"</i>	n = 43 Total visits = 151.34 M = 3.52 Range = 0 to 23.11	n = 43 Total visits = 129.75 M = 3.02 Range = 0 to 16.31	n = 15 Total visits = 59 M=3.93 Range = 0 to 13
	Kitchener <i>"A 69% decrease in ED visits"</i>	n = 33 Total visits = 144.82 M = 4.39 Range = 0 to 26.40	n = 33 Total visits = 44.62 M = 1.35 Range = 0 to 8.77	NA*
# In-Patient Admissions	Cambridge <i>"No change in in-patient admissions"</i>	n = 43 Total admissions = 41.12 M = 0.96 Range = 0 to 4.53	n = 43 Total admissions = 39.96 M = 0.93 Range = 0 to 5.15	n = 15 Total admissions = 19 M=1.27 Range = 0 to 8
	Kitchener <i>"No change in in-patient admissions"</i>	n = 33 Total admissions = 6.37 M = 0.19 Range = 0 to 1.55	n = 33 Total admissions = 5.84 M = 0.18 Range = 0 to 2.26	NA*
Length of Stay	Cambridge <i>"A 31% increase in LOS"</i>	n = 43 Total days = 397.84 M = 9.25 Range = 0 to 75.43	n = 43 Total days = 521.39 M = 12.13 Range = 0 to 105.64	n = 15 Total days = 173 M=11.53 Range = 0 to 88
	Kitchener <i>"A 44% decrease in LOS"</i>	n = 33 Total days = 24.76 M = 0.75 Range = 0 to 9.33	n = 33 Total days = 13.78 M = 0.42 Range = 0 to 7.53	NA*

*Only 2 individuals from the Kitchener/GRH sample remained at acutely elevated risk (were not connected to services through Connectivity) and thus were not included in this analysis.

A general hypothesis and expectation was that Connectivity should reduce hospital use. The hospital data suggest that this is not uniformly the case. There may be two broad categories of individuals experiencing acutely elevated risk that are reached by Situation Tables. The first group may be those who are frequent users of crisis and emergency services, but who have not engaged with other types of ongoing community supports. The second group may be those who have remained isolated and disconnected from *all* formal supports and services. Hospital usage might be expected to decrease for the first group but increase for the second group. Limitations in our data (implemented to protect the privacy of individuals served through Connectivity) make it difficult to discern which of these two hypothesized groups an individual aligns with.

3.3 Police Calls for Service

The Waterloo Regional Police Service polled their internal database (Niche RMS) to examine the relationship of Connectivity interventions to police calls, from the initiation of the tables up to November 1, 2016. A reduction in calls

for service after a Connectivity intervention is a proxy indicator of successful risk mitigation as result of service engagement. It should also be emphasized that police calls relating to the population targeted by Connectivity are often more complex and resource intensive than police calls more generally.

The police cross-referenced Connectivity situations to identify calls for service in their database that were associated with individuals involved in situations presented to the CND and KW4 Tables. Situations that were rejected by the Tables were not included in the analysis. Based on available data files, the analysis included both connected and Still At-Risk individuals, so this is a conservative analysis (i.e., if individuals who refused services were excluded, total police calls post-Connectivity would presumably be lower). The analysis examined all calls for service in a 90-day time period prior to, and a 90-day time period following the date that the situation was closed by the Table.

CND Connectivity Situations

The resulting sample included a total of 147 situations. Of these cases, a total of 1443 calls for service were made in the 90 days prior to closure of the situation at the table. Within the 90 days following the closure of a situation, a total of 794 calls for service were logged in relation to the subject of the Connectivity situation. The findings demonstrate a **45% reduction in calls** for service associated with people presenting at the CND Table, during a 90-day period after the situation was closed. Across the 147 situations, 128 (87%) showed a decrease in calls for service after Connectivity. A total of 22 of the situations (15%) had 0 calls for service (i.e., a 100% decrease in calls) after Connectivity. Seven of these 22 situations declined from “double digit” calls to 0 calls. An increase in calls for service was noted in 19 (13%) of the situations.

The overall 45% decrease in calls accounts for a total of **649 fewer calls to police** after Connectivity involvement.

KW4 Connectivity Situations

The resulting sample included a total of 112 situations. Of these cases, a total of 1478 calls for service were made in the 90 days prior to closure of the situation at the table. Within the 90 days following the closure of a situation, a total of 786 calls for service were logged in relation to the subject of the Connectivity situation. The findings demonstrate a **47% reduction in calls** for service associated with people presenting at the KW4 Table, during a 90-day period after the situation was closed. Across the 112 situations, 82 (73%) showed a decrease in calls for service after Connectivity, while 21 situations showed an increase (19%). The remaining 9 situations (8%) had either the same number of calls (4 people) or 0 calls (4 people) before and after Connectivity. A total of 20 situations (18%) had 0 calls for service (i.e., a 100% decrease in calls) after Connectivity.

The overall 47% decrease in calls accounts for a total of **692 fewer calls to police** after Connectivity involvement.

3.3.1 Summary of Police Call Data

The 45% and 47% reductions in police calls associated with the CND and KW4 Tables, respectively, represent a drop off from an earlier analysis – in 2015, calls associated with 89 situations of the CND Table decreased by 74% after the intervention. While reasons behind this drop are speculative, it could be that early Connectivity interventions were more likely to target individuals personally who were known by table members and who may have been more open to engagement; later interventions may have progressed to people who are more resistant to services. Furthermore, the updated, larger sample includes more situations in which service connections were unsuccessful, thereby attenuating the reduction in police calls after interventions. Nonetheless, **across Waterloo region, there was**

a 46% reduction in repeat police calls after Connectivity interventions, a substantial drop in concrete terms, representing 1341 fewer calls attended by police.

3.2.4 Summary of Cost – Hospital Service Use and Police Calls

It was possible for us to apply costing figures to hospital service usage and police call indicators. Per visit and per diem hospital costs were obtained from an unrelated request to the Waterloo Wellington LHIN in 2016.¹⁰ Police call costs were provided by the Finance Branch of Waterloo Region Police Services.

Table 5 summarizes the ED visits and Length of Stay indicators and their associated costs. Expenditures associated with ED visits dropped \$5,829 at CMH for individuals served by Connectivity. This decrease was more pronounced at GRH, with a reduction of \$34,068 expended on ED visits after Connectivity interventions. Regionally these figures total to \$39,897.

In reference to length of stay, the increase in in-patient days among individuals staying at CMH translated into \$82,655 in expenditures. GRH showed a modest decrease of \$7,093, based on about 11 fewer in-patient days after Connectivity interventions. Totaling the two figures shows a regional outlay of \$75,562 – however, as described in previous sections, it is inappropriate to consider the two hospitals together, as their discharge context appears to be quite different. It is again emphasized that CMH's higher LOS may be considered a positive finding, as it represents attention to the needs of individuals with complex needs who cannot readily access community based services. In such cases, the cost is expected.

Table 5 – Cost Changes Associated with ED visits and Length of Stay (LOS)

Region	ED visits: pre-post difference	Cost per visit	Change	LOS: pre-post difference	Cost per day	Change
CND	↓25.59	\$270	↓\$5,829	↑123.55	\$669	↑\$82,655
KW4	↓100.20	\$340	↓\$34,068	↓10.98	\$646	↓\$7,093
Waterloo Region	↓125.79		↓\$39,897	↑112.57		↑\$75,562

WRPS reports that a citizen generated call is estimated to last 60 minutes on average. The estimated cost per hour is about \$74, assuming pay and operational overhead. Table 6 summarizes the costs of police calls associated with individuals served by Connectivity. The reduction in the number of police calls associated with the two Tables is similar, at 649 for CND and 692 for KW4. Recall, as well, that the percent decrease was also comparable, at 45% and 47% respectively. These decreases translated into available reinvestments of \$48,026 (CND) and \$51,208 (KW4), for a regional total of \$99,234. This diversion of police costs allows WRPS to use their resources where they are most needed.

¹⁰ Requested report: Request 357 - Mental Health Per Diem Costs of Waterloo Wellington (WW) Hospitals (August 12, 2016).

Table 5 – Cost Changes Associated with Police Service Calls and Connectivity Interventions

Region	Police Calls - Difference	Cost/call	Change
CND	↓649	\$74	↓\$48,026
KW4	↓692	\$74	↓\$51,208
Waterloo Region	↓1341	\$74	↓\$99,234

These calculations are also conservative. First, it is common practice to send more than one officer to high priority calls associated with mental health crisis, suicidality, domestic violence, and other serious disturbances. Given the elevated risk addressed by Connectivity table, freed up resources are likely much higher. Second, the change in police calls was observed over 90-day periods before and after the Connectivity interventions. To the extent that Connectivity is effective in mitigating risk over longer periods of time, the resources preserved for other functions would accumulate. In sum, Connectivity appears to be very effective in reducing the resources expended by WRPS. An overall goal of the WRPS is to improve officer deployment to maximize service to the community. Connectivity provides an opportunity to reallocate resources to another priority need in the community.

Part 4: Summary of Findings, Challenges, and Recommendations

This report presented a second phase of evaluation examining the functioning and impact of the Connectivity Situation Tables. Phase 1 focused primarily on table functioning, implementation, collaboration, and improvements to practice. Phase 2 focused more directly on the outcomes of Connectivity interventions from the perspective of table members, external providers, and a small sample of service users. Additionally, Phase 2 compiled indicator data regarding emergency department use, in-patient admissions, length of stay, and police service calls.

In summary, the following findings emerged:

- Ongoing success of the tables relies on assembling multi-disciplinary teams that have a strong outreach capacity to access individuals in the community, as well as a tenacious, “whatever it takes” commitment to addressing needs. Table members need support and endorsement from their parent organizations to overcome recurring service barriers.
- A strategic collaboration of particular organizations and resources appeared to be effective in a number of situations – the coordinated intervention of police, housing services, community mental health services, and hospital intervention. Specifically, the ability of Connectivity to work proactively with hospitals to ensure admission and the mobilization of community supports and, often, psychiatry, was important.
- Qualitative interviews provided numerous examples of success, where individuals moved from serious risk contexts to ongoing service connections, stability and functioning, and improvements in quality of life.

- The general success of Connectivity is qualified by ongoing challenges in engaging individuals presenting with drug addictions, particularly crystal methamphetamine. Engaging with this population and connecting to services has been a struggle. About 50% of individuals whose situations were closed as “Connected” had drug use as a risk factor; in comparison about 80% of individuals whose situations were closed as “Still At-Risk”, had drug use as a risk factor.
- A range of service and system barriers continue to persist in Waterloo Region, hampering the efforts of Connectivity in mitigating risk and fostering longer-term positive outcomes. These include early discharge from hospital (especially when addictions are presenting), poor access to detox services and long wait lists for addictions treatment, a lack of discharge planning out of prison, lengthy wait lists for longer term supports and services (e.g., support coordination, addiction treatment, counseling, etc.), and a lack of affordable housing options.
- Analysis of data provided by Cambridge Memorial Hospital (CMH) and Grand River Hospital (GRH) showed 14% and 69% decreases, respectively, in emergency department visits after Connectivity interventions. Length of stay increased 31% at CMH and decreased 44% at GRH (however, the absolute number of in-patient days was quite small at GRH both before and after Connectivity intervention, which strongly qualifies the percent decrease). The drop in ED visits represents \$40 thousand of diverted costs.
- Analysis of data provided by Waterloo Regional Police Services (WRPS) shows 46% decrease in repeat police calls between 90-day periods, before and after Connectivity. Conservatively estimated, this represents just under \$100 thousand available for other allocations.

4.1 Challenges of the Evaluation Design

Across Canada, there have been a number of evaluations of Community Hub or, in the terminology of Ontario, Situation Tables.¹¹ However, there has been little attention paid to understanding outcomes based on primary data provided by the individuals who receive services. The present research represented such an attempt to gather user voices, but the challenges were considerable and we were only able to reach four individuals representing three situations. The balance of the qualitative data needed to rely on the reports of table members and of external providers in the community. The information we received was rich and useful, albeit lacking a breadth of clients’ firsthand experiences.

Our parallel focus on hospital service usage also created some challenges to overcome. In the sections that follow we discuss a few of the challenges and limitations associated with our two main methods of inquiry. We preface these sections by noting that table members and the organizations they represent are keenly interested in evaluation questions pertaining to Connectivity and have been routinely helpful and supportive in its development and implementation. Nonetheless, Situation Tables represent a complicated cross-organizational and cross-sectoral context in responding to risk, creating a number challenges for evaluation.

¹¹ For a review, <https://www.usask.ca/cfbsjs/research/Hub%20Hub.php>. Dr. Chad Nilson’s body of work pertaining to “risk-driven and collaborative interventions” and Situation Hubs has been instrumental to the development and advancement of evaluation practices in these areas.

4.1.1 General Evaluation Challenges in the Context of Situation Tables

A basic problem we confronted in designing and carrying out the evaluation is the nature of the tables themselves. A Situation Table is not an organization per se, but a collaborative of organizational representatives. The Tables have internal policies regarding its practices, but decisions that fall outside regular operations fall to the 20-plus organizations that have membership. Furthermore, members have differing levels of decision-making authority vis-a-vis their home organizations. When an outcome evaluation design is proposed, decision-making is potentially cumbersome and diffuse. It is up to each organization to decide whether or not to participate. A few challenges arose that can be considered relevant to the evaluation of any Situation Table:

- Evaluation designs could only be communicated in short presentations to the tables, which were otherwise busy and focused on addressing situations of risk. Because evaluation processes were complex in terms of dealing with privacy, consent, roles and responsibilities, etc., it took some time to achieve clarity and buy-in.
- Members without decision-making authority were unable to commit to the evaluation, requiring follow-ups with home organizations across the tables.
- There may have been a sense of “diffusion of responsibility”. Evaluation approaches with this population have some associated risks (to be discussed below) and it may be simpler to allow other table members with sufficient decision-making power to “step up” to participate.
- Because the evaluation required accessing clients who were currently receiving services from member organizations, research ethics, privacy, and other related issues needed to be addressed with each organization separately. In some cases this required a formal request, application, and/or ethics oversight process. While expected, evaluators of Situation Tables must be aware of the actual resources and capacity necessary to meet these organizational requirements. In some cases, there may be little return on the investment, given the difficulty in accessing individuals whose situations have been presented to the Connectivity Tables.

Another specific issue is worth a discussion, not because it presented a particular barrier in the present evaluation, but because it may have implications in the evaluation of Situation Tables more broadly. At a recent conference¹² focused on the evaluation of Community Hubs/Situation Tables, there was some debate as to the proper focus of outcome evaluation: Should outcome evaluation focus on the immediate impact of the table intervention itself or of the supports and services provided afterward by member organizations? If the former, then the outcome of interest should be properly limited to immediate risk mitigation, which is already collected at the time of situation closure. If the latter, then the evaluation is not of the *Situation Table's* interventions, but those of other community organizations.

It is understandable that member organizations may have some trepidations as to how an evaluation is framed and how outcomes are attributed. Given the extremely complex and vulnerable lives of clients, many provider organizations may struggle to support individuals beyond mitigating serious risk, or to even keep them engaged at all. Furthermore, risk is compounded by pervasive service barriers and gaps in many Ontario communities, which are very much out of the control of the organizations providing primary support. An outcome evaluation focused on improved stability, consistent service engagement, and quality of life may be greeted by some organizations as too far removed from table interventions, while inviting the misattribution of poor outcomes to the “performance” of community organizations.

¹² *Measuring Collaborative Risk-Driven Intervention*, National Conference, Toronto Ontario. January 24-25, 2017.

In response, the present evaluation did in fact demonstrate numerous examples of individuals moving to stability and wellness after elevated risk was reduced, findings that are tempered by many other examples of continued vulnerability, service disengagement, and risk. Situation Tables can play a leadership role in communities by advancing the cause of system improvement and cross-sectoral integration. They provide a valuable resource in the collection and distillation of recurring risk factors in communities which can inform system level planning. Evaluation of outcomes beyond the moment of risk mitigation can contribute to this important agenda.

4.1.1 Evaluation Challenges in Collecting Client Experiences

In addition to the general challenges just described, there were a number of challenges associated with accessing clients directly in this evaluation. A basic problem simply involved gaining consent and interest to participate, due to a number of interrelated challenges:

- Many individuals are transient and difficult to locate. Initial connections with providers may be lost (note that this does not necessarily indicate a poor outcome for the client. Needs may have been met and other connections beyond the purview of the table may have been made).
- Many individuals approached will decline to participate or agree but fail to show up for an interview.

An additional issue was that the evaluation had to rely on providers to reach out to individuals, explain the purpose of the evaluation, obtain verbal consent, and make arrangements to meet the evaluators. Several challenges arose:

- The evaluation by design is biased to recruit individuals who are generally doing better than others – they are actively engaged with services and are motivated to tell their story.
- Table members had professional concerns of involving individuals in the research due to continued AER, emotional fragility, and vulnerability. This should not be construed as “gate-keeping” in order to avoid the emergence of poor outcomes. Rather there were legitimate concerns about decompensation, confusion, and/or discomfort. In some cases, providers were certain that the individual would be unable to recall or speak coherently about the period in which there was an intervention.
- The evaluation required providers to do some pre-interview preparation with clients. Because we only wished to talk about the moment of risk in which Connectivity became involved, clients needed to be oriented to that event (“remember the time you went to the hospital and Julie helped you with your housing...?”) in order to provide consent to allow this information be provided to the evaluation team. This was essential to ensure interviews were relevant to Connectivity, but it was also a complicated protocol to manage.

Table members were also concerned that explaining the evaluation would also require a detailed explanation of the Connectivity Table itself, if not by themselves, then by the evaluation team. In situations of acutely elevated risk, gaining consent of services is sometimes not possible or is explained generally rather than specifically. A full explanation of Connectivity after the fact (i.e., prompted by the evaluation) may be disconcerting and/or misunderstood by clients. Some providers worried about this communication diminishing their therapeutic alliance and jeopardizing an already tenuous service relationship. While we made assurances that Connectivity would not be described on a technical level, it could be that this concern limited the pool of clients that providers were willing to approach.

Solutions to these challenges are not simple or obvious. We offer some recommendations for future evaluation practice in Section 4.2. One additional point: While we continue to believe it is essential to hear directly from clients in order to assess outcomes, we found the provider interviews rich and insightful in the sense that they had a more thorough backdrop of the system context applied to the situation. A combination of interviewees is particularly helpful.

4.1.1 Evaluation Challenges in Collecting Secondary Service Data

A good portion of this evaluation involved the examination of secondary data compiled from hospital and police services within the communities of the Connectivity Tables. This design, while simple in its scope and intent, came with its own challenges.

An initial challenge requires the ethical oversight of hospitals. While community organizations certainly require a formal research approval process, hospitals may require a much more in-depth application procedure. There are layers of decision-making to navigate, with communication beginning with a table representative, then to a supervisor, to management levels, to a privacy officer and/or ethics committee, and finally to the department responsible for data extraction. Evaluators must be very careful in communicating the proper procedure of the evaluation design at each step, to ensure quality data at the output stage of the process. Needless to say, simple data requests may be time consuming and resource intensive.

Anonymity was essential from a research ethics perspective, but also placed limitations on our evaluation design. There was no way, for example, to link ED visits, admissions, LOS, or police calls to the experiences of individuals, their subsequent service usage/connections, or any other related outcomes. Data analysis was limited to a description of patterns (e.g., a drop in ED visits). Interpretation and explanation of these patterns was necessarily conjectural, even if substantiated somewhat by other qualitative data that was not directly linked to the indicators in question.

We could, however, link these data back to the Connectivity risk databases, which are also anonymized, allowing us to ascertain the dates of interventions for our analysis and associated risks. Herein was another challenge of our evaluation and a potential difficulty of evaluating Situation Tables in general. There is no internal agreement among table member organizations regarding the confidential linking of situation codes to the individual client files of home organizations. We were fortunate in that two organizations – CMHAWW and WRPS – kept such records and were also either lead or assisting agencies (along with the hospitals) in a majority of situations. The practices of other table members vary based on the directives of their home organizations. The bottom line is that outcome focused research, even if limited to anonymized research, requires the consistent recording of names attached to situation codes within the confidential data management of participating organizations. Without this linkage, outcome evaluation is severely limited.

4.2 Recommendations for Improved Evaluation Practices

If there is to be continual evaluation of outcomes associated with Situation Tables, it is essential that table members involved in the intervention securely link individual names to corresponding situation codes within the record keeping of their home organizations. Clearly, the protection of confidentiality and privacy is paramount – internal databases must be fully secure. The benefits are not just to facilitate research; there are numerous practical benefits to this protocol, as it allows organizations the ability to better respond to needs of individuals as they may arise in the

future. We note that the mere recording of individual information does not require later participation of organizations in any given research study.

Recommendation 1: *The tables should continue to develop protocols and inter-organizational agreements to ensure consistent collection of individual information to be held confidentially by member organizations that lead or assist in a situation.*

The context of evaluating Situation Tables is complex. We had excellent oversight and guidance from the Connectivity leadership (Langs, Carizon, and WRPS); however, evaluation invariably implicates other member organizations beyond the leadership. Broader organizational representation would be beneficial in guiding and endorsing evaluation questions, troubleshooting designs, and ensuring that table members and other staff are active in supporting the goals of the evaluation. This may be especially important when trying to assess post-Connectivity outcomes resulting from service connections. The membership of a “Connectivity Evaluation Advisory Committee” could be partially ad hoc, as different questions and designs require.

Recommendation 2: *An evaluation advisory committee that is representative of table membership should be assembled to guide and direct future evaluation projects.*

The challenges of accessing clients for participation in evaluation are difficult. It must be expected that collecting experiences from individuals using services will tend toward individuals that are achieving a degree of success, as they are the ones most likely to participate. But as we saw in the current study, gaining significant participation is problematic across the board. The challenge stems from a concern with privacy, obtaining informed consent, and jeopardizing ongoing to engagement with services. Evaluation practice typically claims that provider-collected information suffers from bias, with the concern that providers paint a more positive picture of outcomes than is warranted, that clients may be led to certain conclusions about their experiences based on the influence of providers asking the questions, and/or clients may feel unable to speak honestly to providers who support them. The alternative is to employ independent evaluations to more “objectively” gather firsthand information. But when this alternative yields very few participants, what is the benefit?

We wish to challenge a few of these assumptions. First of all, we found providers to be forthright in speaking about the negative experiences of their clients, the difficulties in meeting their needs, and failures in keeping individuals connected to services. The assumption that providers are motivated to overstate successes is demonstrably untrue in this context, as they tend to have a realistic view of the very difficult challenges people are facing. Second, it is questionable that the presence of an external evaluator facilitates greater honesty and forthrightness among clients. On the contrary, service relationships with vulnerable, at-risk individuals are very often predicated on a careful building of trust and rapport that is not available to an external evaluator. Participation in evaluations as part of a trusting service connection may actually be more frequent and fruitful.

For these reasons, we suggest that qualitative outcome data be collected directly by providers. For this to be effective, there needs to be attention paid to evaluation buy-in, capacity, and the creation of a consistent design. The formation of an evaluation advisory committee (see Recommendation 2 above) is crucial to this approach. We recommend the development of case-study tools that direct and help table members (or other providers in the

organization) to routinely and consistently collect information about associated risk, protective factors and outcomes, specifically those outlined in our outcomes framework (see Section 1.3). The case-study evaluation design can vary in intensity, from a concentrated effort to assemble a set of anonymized case study narratives to a “lighter” approach where table members provide case information that reflects on outcomes as a regular table function. The latter approach is already part of table processes in some ways. The difference would be a greater intentionality of the information being presented, as it would be more systematic, guided by the case-study lens that focuses on questions to be answered, and a table-level mechanism to capture the information more formally.

We believe the approaches as outlined can protect privacy and confidentiality while still providing rich and informative data.

Recommendation 3: *Build an ongoing case-study methodology to be implemented by the tables that assesses post-Connectivity outcomes as described in the Outcomes Framework.*

4.3 Recommendations for Future Evaluation

Alongside improving evaluation capacity and practice, we have additional recommendations regarding the outcomes that may be evaluated in the future. Below are some key evaluation questions of interest which may be answered through firsthand interviews, provider reports, and the strategic use of secondary service data.

4.3.1 Questions About the Longevity of Outcomes

The evaluation demonstrated encouraging reductions in ED visits and police calls. ED visits were annualized to one-year post-Connectivity (i.e., were corrected to one-year from the time period of intervention to data collection). Police calls were based on a 90-day period after intervention. An important question is the extent to which these reductions persist over a longer stretch of time.

Recall also that LOS at CMH increased, on average. For those individuals (35% of the sample) who showed an increase, do admissions and long lengths of stay persist over time? We conjectured that longer LOS was influenced by Connectivity, because longer stays improved stability and avoided the pitfalls of early discharge. While longer stays may be appropriate, they are not indefinitely appropriate, and they are also expensive – it is expected that improved connections to community supports and services should offset later admissions and/or diminish future lengths of stay. Whether this is true could be examined in a follow up study.

Recommendation 4: *Implement an updated evaluation of secondary data to assess the longevity of outcomes.*

4.3.2 Questions about Additional Service Usage Indicators and Associated Costs

There are many other potential indicators that Connectivity might impact and subsequently reduce the associated costs of social, health, and justice services. These include emergency medical services, court services, probation,

incarceration, foster care, addictions treatments, income supports, and a range of others.¹³ While the specific designs employed will vary depending on the systems and organizations involved, there may be opportunities to demonstrate the role of risk mitigation in reducing service usage and costs.

Recommendation 5: Consider tracking additional service usage indicators to examine trends associated with Connectivity interventions.

4.3.3 Questions about Key Transitions

While the Connectivity risk factors and study flags are quite comprehensive, they are only suggestive of the problems people confront during *transitions* – hospital to community, from hospital to detox and addiction treatment, prison to community, housing to homelessness, youth services to adult services, etc. We know these transition points are often where services and supports may unravel and where people get lost in the system. Risk is heightened during transitions. Connectivity offers an opportunity to examine transitions specifically, as interventions quite often focus around impending transitions and/or their negative impact. Once again, a representative evaluation committee should be instrumental in directing which transitions should be examined.

From the present evaluation, we were intrigued by the collaborative practices that facilitated supportive transitions in and out of hospital. The backdrop of these accounts, of course, is an otherwise general dissatisfaction with the ability of the system to effectively support individuals who discharged from hospital. The Connectivity model may represent an evolving best practice of how to mobilizing transitional supports. A case study approach, described above, may yield important learnings about this key transition.

Recommendation 6: Focus future evaluation efforts on key transitions experienced by Connectivity clients.

4.3.4 Questions about Supporting Individuals with Addictions

Providers have reported that they struggle to effectively support many people with serious addictions challenges, especially when combined with mental health difficulties. Hospital emergency departments tend to discharge individuals once medically cleared. Detox and treatment facilities are difficult to access due to wait times combined with an unwillingness of individuals to enter programs. Police and medical personnel see a revolving door of crises among this subpopulation. We are not suggesting specific solutions, but recommending that future evaluation of Connectivity pay close attention to this issue, to generate some ideas about how collaborative risk reduction can be improved to better help these individuals. We caution, however, that the problems do not lie with the Connectivity intervention itself, but with systemic barriers that operate after situations are closed, alongside the behavioural problems and decision-making associated with addictions. Once again, Connectivity has a leadership role to play in foregrounding this issue as a system-wide problem that needs a cross-organizational response.

Recommendation 7: Focus future evaluation efforts on promising practices of and barriers to effectively supporting

¹³ See Hepworth, H.P. (Summer, 2000). Jack's Troubled Career: The Costs to Society of a Young Person in Trouble. *Prevention*, Issue 2, p. 10-11. Government of Canada: Ottawa, ON. This article presents a fictional account of the costs of services and supports that can be incurred for people at risk.

individuals with serious addictions who are at acutely elevated risk, including beyond the closure of the situation.

4.4 In Conclusion

Connectivity Waterloo Region has taken a leadership role, locally, provincially and nationally, in building an evaluation function to better understand the operation of the two tables and, importantly, to begin to examine client outcomes. This evaluation yielded important findings regarding how some individuals are able to move from acutely elevated risk to greater stability, normalcy, and wellness. These findings are tempered by the recognition that some individuals are more difficult to engage and remain at elevated risk; and others may re-enter situations of risk after a period. The collaborative practices that facilitate the attainment of positive outcomes are gaining greater clarity. Furthermore, the evaluation demonstrated a decrease of key indicators – ED visits and police calls – suggesting that the tables are doing a good job in reducing crisis and freeing up important health and justice resources.

As importantly, the process of developing and implementing this evaluation yielded a number of important learnings about how to design evaluations within the unique context of Situation Tables. Future evaluation research is recommended to further the effectiveness of the model.

Appendix A – Study Flags (Emerging Risk Factors)

Study Flag	Definition
Acquired Brain Injury	Acquired brain injury (ABI) is an injury to the brain, which is not hereditary, congenital, or degenerative. It can be caused by a traumatic blow or injury to the head, severe rotation of the neck or whiplash, or even lack of oxygen
Child Involved	Child is involved in the discussion brought forward.
Cognitive Disability	Dysfunction related to memory, language, orientation, judgment, problem solving etc. Formerly known as organic brain disorders, they include amnesic disorders, Huntington disorder, delirium, dementia, and the formal criteria for mental retardation (this is still a diagnosis in the DSM). Some acquired brain injury can also fit the bill especially as it is seen as declining as one ages. Head trauma or other or declining mental status in the areas first listed due to other physical conditions would be classified as cognitive disorder not otherwise specified.
Cultural Considerations	Culturally appropriate services (e.g. aboriginal, language, ethnicity) should be included in the collaborative response.
Cyber Safety	Addresses the ability to act in a safe and responsible manner on the Internet and other connected environments. These behaviors protect personal information and reputation, include safe practices to minimize danger from behavioral-based rather than hardware/software-based problems.
Developmental Disability	An umbrella term used to describe disorders that impair function that typically onset in childhood prior to the completion of development at age 18. These disorders affect the developing nervous system, resulting in impaired intellectual and/or adaptive functioning. Such children have difficulty with adapting to change, understanding covert social cues, managing abstract concepts like money and other needs based issues. Typically, this also affects their ability to understand and regulate emotions and understand their impact on those around them. This does not automatically capture folks with learning disability unless it is also associated with one of the conditions below or meets the threshold for pervasive developmental disorder. This definition also include children, youth and adults with Autism Spectrum Disorders, Fetal Alcohol Spectrum Disorders and other genetic metabolic syndromes.
Domestic Violence	Violence or abuse that can happen between people who are related to each other or who have relationships with each other. It includes violence, abuse or intimidation by one person over another which causes fear, or physical and/or psychological harm. It may be a single act, or a series of acts forming a pattern of abuse.
Fire Safety	Residence poses a fire hazard to itself and/or neighbours.

Study Flag	Definition
Gaming/Internet Addiction	An excessive, unhealthy amount of playing computer games or being on the internet. Rather than engaging in the real world, an addicted user devotes the majority of his or her time to being on a computer for internet use/gaming. The addicted gamer often isolates him/herself from others and ignores more important responsibilities.
Geographical Isolation	Residing in a remote location with limited access to transportation, services, internet, neighbours, increasing the possibility of victimization or self-harm.
Hoarding	A behavioural disorder characterized by the excessive accumulation of material possessions, the character and quantity of which substantially interferes with an individual's normal social functional and vocational roles. The individual cannot or will not willingly part with these possessions and the individual often lacks insight into the safety risk their possessions can cause.
Homelessness	The situation of an individual or family without stable, permanent, appropriate housing, or the immediate prospect, means and ability of acquiring it. It is the result of systemic or societal barriers, a lack of affordable and appropriate housing, the individual/household's financial, mental, cognitive, behavioural or physical challenges, and/or racism and discrimination.
Homicidal Ideation	Person has expressed thoughts/ideas about homicide.
Human Trafficking	Human trafficking involves the recruitment, transportation, harbouring and/ or exercising control, direction or influence over the movements of a person in order to exploit that person, typically through sexual exploitation or forced labour.
Inappropriate Sexual Behaviour/Hyper-sexuality	Inappropriate dress, actions, etc., for adolescent age group; exhibiting unusual or excessive concern with or indulgence in sexual activity, often being inappropriate.
Language/Communication Barrier	Sight or hearing difficulties, as well as difficulty accessing services in a client's preferred language.
Learning Disability	Refers to a variety of disorders that affect the acquisition, retention, understanding, organization or use of verbal and/or non-verbal information. They range in severity and invariably interfere with the acquisition and use of one or more of the following important skills: oral language, reading, written language and mathematics.
Recent Escalation	Recent increase or change in behaviours and/or circumstances (e.g. number of police calls, ED visits, missing, truancy, physical violence, etc.) which is contributing to the acutely elevated risk of the individual or family.
Recidivism	Chronic tendency towards the repetition of criminal behaviour.

Study Flag	Definition
Risk of Losing Housing/Unsafe Living Conditions	Person is at risk of being evicted or living conditions are not adequate from a health and safety perspective (e.g. hoarding, pest infestation).
Settlement Challenges	Recent immigrants/newcomers/refugees are having difficulty integrating into the community or adjusting to their new living environment.
Sex Trade	Person is involved in the practice of engaging in promiscuous sexual relations or sexual acts in exchange for some type of payment.
Social Isolation	Person does not have access to family or social supports and/or has limited social connections.
Social Media	Individual is engaging in negative/risky behaviours through social media or being negatively impacted by social media.
Transportation Issues	Insufficient/non-existent access to personal or public transportation in order to allow individuals to access services or leave an undesirable situation.
Trespassing	Illegal entry onto private and/or public property.