Drug Treatment Funding Program 2013-14

Best Practice Screening and Assessment Project Final Report

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1.0 Background and Rationale in 2013-2014

In 2008 Health Canada announced the Drug Treatment Funding Program (DTFP), a key element of the National Anti-Drug Strategy. The focus of the DTFP was on enhancing the systems of services for people with substance use problems in Canada, emphasizing three broad target areas for investment: implementation of evidence-based practices; strengthening evaluation and performance measurement; and knowledge exchange.

Each province and territory was invited to submit proposals for system enhancement. The Ontario submission included the current project, Best Practice Screening and Assessment Procedures; the objectives being to assess the acceptability and utility of a new common package of screening and assessment tools and procedures for addictions treatment services in Ontario. The selection and pilot testing of these various screening and assessment tools was to culminate in a set of recommendations going forward to refresh or replace the current set of tools known as Admission and Discharge Criteria and Assessment Tools (ADAT). The project built upon other work undertaken for the Ministry of Health and Long-Term Care (MoHLTC) in the past few years on screening and assessment tools and processes in Ontario. This included an evaluation of the ADAT tools and related processes by Rush and Martin (2006), which called for a refresh or, if needed, a full replacement of the ADAT tools based on the feedback received.

The screening and assessment procedure implemented in this project was based on the framework for the stages of client engagement across screening, assessment and recovery monitoring developed by Rush and Castel (2011) and subsequently recommended in an international textbook on substance use treatment (Rush, 2015). In this framework, the process of screening and assessment is divided into the following stages: Stage 1 and Stage 2 Screening, and Stage 1 and Stage 2 Assessment. The staged approach works to ensure a progressive and efficient use of screening and assessment resources to guide treatment planning and eventually, recovery monitoring. In the current project, the scope of the implemented procedure included the two stages of screening and the first stage of assessment in the framework. Stage 2 Assessment was not implemented in the project because this more complex and longer duration assessment

process was seen as more agency-dependent and not feasible or appropriate to standardize across the treatment system. In addition, the two-stage screening process focused on screening for mental health challenges in light of the past decade of research and development related to co-occurring disorders among clients with substance use problems.

With support of the DTFP Advisory Committee, as well as the Screening and Assessment and Recovery Monitoring Working Group, the project team reviewed, selected, and successfully pilot tested a set of staged screening and assessment tools during the first phase of the project in 2011-2013. These included a set of two-stage screening tools with a focus on mental disorders (the Global Assessment of Individual Needs - Short Screener – CAMH Modified (GAIN-SS – CAMH Modified), the Psychiatric Diagnostic Screening Questionnaire (PDSQ), the Modified Mini Screener (MMS), and the Problem Oriented Screening Instrument for Teenagers (POSIT)), and a stage-one assessment tool, the GAIN Quick v3 - Motivational Interview (GAIN-Q3 MI). All the selected tools have been shown to be reliable and valid for application in the addictions population based on empirical research, and are described in further details below.

Stage 1 Screener: Global Appraisal of Individual Needs - Short Screener (GAIN-SS) – CAMH-modified

The version of GAIN-SS used in this pilot work is a brief, 3-5 minute screening tool comprised of 20 items divided into four subscales. This tool can either be clinician- or self-administered, completed via paper and pencil or electronically, and is used to quickly and accurately identify clients that require a more thorough assessment. The instrument is comprised of 5 items on internalizing disorders; 5 items on externalizing disorders; 5 items on substance use problems; and 5 items on crime/violence problems. A modified version of the GAIN-SS that includes 7 additional items was administered in this study[1]. This modified version was developed by CAMH (with permission from Chestnut Health Systems) and is widely used across Ontario.

The seven supplementary items cover eating disorders (2), traumatic experiences (1), psychotic symptoms (2) and problem gambling (2) (Cormier, 2011). Note that the seven CAMH-added items have not been validated *as an index*. Rather, all items are individually scored using an

[1] The Chestnut tool has since been revised to incorporate 3 new items; one of which was drawn from the CAMH-added items.

ordinal scale of the last occurrence of the events/symptoms. The GAIN-SS (CAMH-modified) is available in French (validated), is low cost ($100 site license per agency for five years of unlimited use of paper assessments of GAIN family of instruments), and appropriate for use in a wide age range (12 years and older). The tool has been shown to have excellent psychometric properties (Dennis et al., 2006; Rush et al., 2013a).

Stage 2 Screener: Modified Mini Screener (MMS)

The MMS is a 22-item tool that covers 11 mental disorders in three areas. It is clinician-administered and takes approximately 15 minutes to complete, and less than 5 minutes to score. The MMS has been validated for use in different ethnic groups and in a variety of settings, including corrections, shelters, outreach programs and substance use treatment services. The MMS uses a dichotomous yes/no scale and the time period for reporting ranges from lifetime to the past two weeks. The three areas covered by the MMS include anxiety/mood disorders, trauma/PTSD, and non-affective psychoses. The scoring of the MMS is additive, where every 'yes' answer receives a score of 1. The MMS is available for use at no cost and is appropriate for clients 18 years and older. The instrument has good sensitivity (63% – 82%), specificity (61% - 83%) and overall accuracy (70% – 75%) (Alexander, Haugland, Lin, Bertollo, & McCorry, 2008).

Stage 2 Screener: Psychiatric Diagnostic Screening Questionnaire (PDSQ)

The PDSQ is a 126-item tool that covers 13 of the most common DSM-IV disorders. The tool generally takes 15-20 minutes to complete, is self-administered or clinician-administered via paper and pencil, and is appropriate for use in adults aged 18 and up (Zimmerman & Chelminski, 2006). A pay-per-use cost is associated with the PDSQ -approximately $2 per client when the cost of the instrument, manual, scoring sheets, etc. are all factored in. The instrument uses a dichotomous yes/no scale, and the time period for reporting varies by item set, with time ranging from the past two weeks to six months. The disorders covered by the PDSQ include: mood (major depressive disorder); anxiety (post-traumatic stress disorder, obsessive-compulsive disorder); psychosis; substance use disorders; eating disorders; and somatization disorders. The PDSQ has undergone extensive psychometric testing including assessments of reliability and validity (Zimmerman &

Chelminski, 2006; Zimmerman & Mattia, 2001), as well as validation in a large Ontario substance abuse treatment sample (Rush et al., 2013a).

Stage 2 Screener: Problem Oriented Screening Instrument for Teenagers (POSIT)

The POSIT is a 139-item tool and used for younger participants in the study (aged 12 to 17). The POSIT is a valid and reliable instrument designed to identify potential problem areas that require further in-depth assessment (McLaney, Boca & Babor, 1994). Specifically, it was developed to identify problems and potential needs for treatment or support in 10 areas including substance abuse, mental and physical health, and social relations. It is validated for adolescents 12 through 19 years of age with 5th grade reading level and widely used in the United States and elsewhere. The POSIT takes approximately 20-30 minutes to administer and 2-5 minutes to score. The tool can be administered by paper, computer, or audiotape. There is no cost for the use of the tool.

Stage 1 Assessment: Global Appraisal of Individual Needs-Quick 3 (GAIN-Q3) – Motivational Interviewing (MI)

The GAIN-Q3 MI is a multi-purpose targeted assessment tool used to identify and address a wide range of life problems among both adolescents (aged 12 – 17 years) and adults (aged 18 years and above) in diverse settings. The overall aim of the GAIN-Q3 MI is to fairly quickly sort individuals into three groups: a) those who do not appear to have problems in need of attention; b) those who appear to have mild problems that can be addressed in a brief intervention; and c) those whose results indicate the need for a more detailed assessment and/or specialized treatment. Domains covered in the GAIN-Q3 MI include school problems, work problems, physical health, sources of stress, risk behaviours for infectious diseases, mental health, substance use, crime and violence and life satisfaction (Lighthouse Institute, 2011).

In addition, the GAIN – Cognitive Impairment Scale (GAIN-CIS), a separate tool from Chestnut Health Systems, may be included as part of the GAIN assessment process prior to the administration of the GAIN-Q3 MI. This procedure is needed to assess whether the client possesses the necessary cognitive and literacy skills to complete the GAIN-Q3 MI and is mainly comprised of questions about when and how often things have happened in the past. Sometimes clients might be experiencing some degree of cognitive impairment and such impairment may be the result of current intoxication or temporary or permanent mental health challenges. As impairment is often a

matter of degree and it is not always clear when someone is too impaired to go through the interview process, the GAIN-CIS can be used to help assess if the client is impaired cognitively. The client has to score 10 or less on the GAIN-CIS to be deemed “stable”, i.e., not cognitively impaired, to complete the GAIN-Q3 MI.

The tools were pilot-tested in five addiction agencies across Ontario. The overall feedback about the staged approach to screening and assessment was very positive. It showed that the staged approach was seen as an efficient way to proceed through a screening process (i.e. longer tools held in reserve until needed) and provided good coverage of both substance use and mental health issues. In particular, the strength of the information on mental health was highly valued and said to improve referrals to, and relationships with, required services. The staged approach was also seen as well-linked conceptually to both treatment planning and subsequent recovery monitoring. The tools were subsequently put forward by the DTFP Advisory Committee and project Working Group as the recommended replacement for the ADAT tools package. This recommendation received keen interest among stakeholders in the addiction sector and beyond. Importantly, while the tools in the ADAT package were to be replaced, the new package going forward retains the emphasis on motivation-based treatment matching on the basis of the assessment results, as in the ADAT decision tree.

Along with the generally positive feedback received, there were a few challenges noted with the overall staged approach and the use of the tools during the first phase of the project in 2011-2013. Staff from pilot agencies provided feedback around the perceived redundancy in some of the tools (e.g., the GAIN SS and the GAIN-Q3 MI which also includes the screening items). There was also a perceived need for a well-established response protocol to be in place so as to facilitate concrete referrals and follow-up. The requirement that the GAIN-Q3 MI needs to be clinician as opposed to self- administered also posed challenges around group-intake processes at the selected agencies and potential increase in waiting time. An important perceived disadvantage in the new suite of tools compared to ADAT was the apparent loss of the detailed substance use history and current patterns of use provided by the Drug History Questionnaire.

In March 2013, Health Canada announced a one-year renewal for the Drug Treatment Funding Program. In this year of renewal funding (2013-2014), the Best Practice Screening and Assessment Procedure Project focused its effort on:

- examining data collected from the pilot test,
- refining the staged approach and the use of tools for screening and assessment based on the feedback and analyses results from phase I, and
- planning provincial dissemination of the tools and protocol, pending additional funding.

Specifically, the project team engaged in discussions and planning with the Program Advisory Committee and other stakeholders regarding provincial roll-out of the GAIN-Q3 MI within the Ontario addiction system, as well as how this tool may integrate with other provincial initiatives, such as Central/Coordinated Access, the Integrated Assessment Record (IAR), and the Ontario Common Assessment of Need (OCAN). The team also invested in the development of summary reports and additional data collection tools to further improve screening and assessment for both the clients and clinicians. This included incorporation of the Substance Use (SU) Grids for the GAIN-Q3 MI assessment and development of additional clinical reports in ABS, the web platform of administration of the GAIN Q3 MI which is synchronized with Catalyst. The French translation work of the GAIN-Q3 MI Ontario version was also completed in the past year. The project team also evaluated the use of technology for self-administration of the screening and assessment tools and consulted with First Nations, Inuit and Métis stakeholders to explore the potential for cultural adaptation of screening, assessment and outcome-oriented tools.

This report documents in detail the work accomplished by the project team in the renewal year of DTFP in 2013-14, as a continuation of Phase 1 and provides a foundation for the implementation phase of the project as part of another iteration of Health Canada's DTFP in 2016-18. This report on the work conducted in 2013-14 is organized in three sections:

- Description of clients based on the staged model of screening and assessment
- Results of self-administration versus clinician-administration of the GAIN-Q3 MI
- Other highlights including dialogue with First Nations, Inuit and Métis and central/coordinated access

We conclude with a brief overview of the implementation plan to be initiated in 2015-16.

2.0 GAINing Insight on Clients Accessing Services through Screening and Assessment Data

During the pilot test of the staged approach to screening and assessment in 2012, the project collected valuable data on symptom severity regarding mental health and substance use problems, as well as level of functioning in multiple domains in the life of clients who are accessing services in publicly-funded addiction agencies in Ontario. With the one-year extension of DTFP, the project team took the opportunity to examine these data in more depth. This section starts by noting questions of interest to the team from the outset of the project and follows by providing relevant findings.

a. What is the pattern of substance use among clients accessing services?
b. What are the severities of problem areas assessed in the GAIN-Q3 MI assessment tool among clients accessing services?
c. What is the proportion of clients with co-occurring mental disorders?
d. What is the pattern of service utilization among these clients? And what is the cost to society of clients utilizing these services?

The staged screening and assessment protocol and the associated tools were pilot tested across five addiction agencies in Ontario: Addiction Services of Thames Valley (ADSTV) in London, Fourcast in Peterborough, Manitoulin Community Withdrawal Management Services in Little Current, Addictions Centre in Belleville, and Rideauwood Addiction and Family Services in Ottawa. Details about these five addiction agencies and study recruitment process are presented in the Phase I final report for this project (Rush et al., 2013b). However, the analyses described in this section are based on a sample of 150 participants, who completed the assessment tool, the GAIN-Q3 MI, from ADSTV, Fourcast and the Addictions Centre in Belleville. Participants from Manitoulin Community Withdrawal Management Services, and Rideauwood Addiction and Family Services represented a special client population within Ontario addiction services. After careful consideration, the research team decided to analyze the data from these two sites independent from the rest of the study sample to highlight the uniqueness of their client populations.

Table 1A shows the demographic characteristics of the sample of 150 participants from the pilot work used in this analysis. These data were extracted from the mandatory intake form that is

completed by all clients accessing services in Ontario and collected through Catalyst, a software platform utilized by the Drug and Alcohol Treatment Information System. Sixty-four percent of the sample was male. Three quarters of the participants were between 25 and 55 years of age and close to 40% were married. Three quarters of the participants completed high school and about 40% had some employment. Almost all participants had a fixed address and the majority did not have any legal problems. Analyses have shown that this sample is reasonably representative of the demographics of clients in the Ontario substance use treatment system. There is a general trend, however, for the clients engaged in the project to be somewhat more stable. For example, compared to the overall treatment population in community treatment services, our participants were more likely to be married/partnered, have at least a high school degree, and present only with an alcohol use problem (i.e., less involvement of other drugs). Clients in our sample were also less likely to use substances on a daily basis. These results are not unexpected as they may be related to consent to participate in the project. More details on examination of representativeness of this study sample are outlined in the final report of Phase I, cited above.

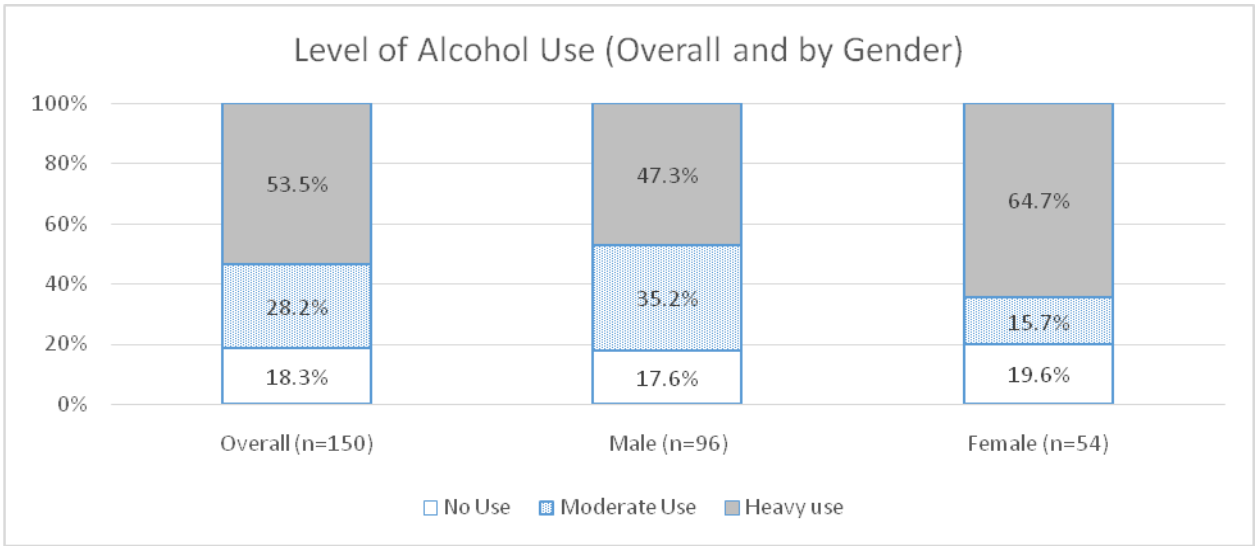
Table 1A. ***Demographic Characteristics of Clients (n = 150)***

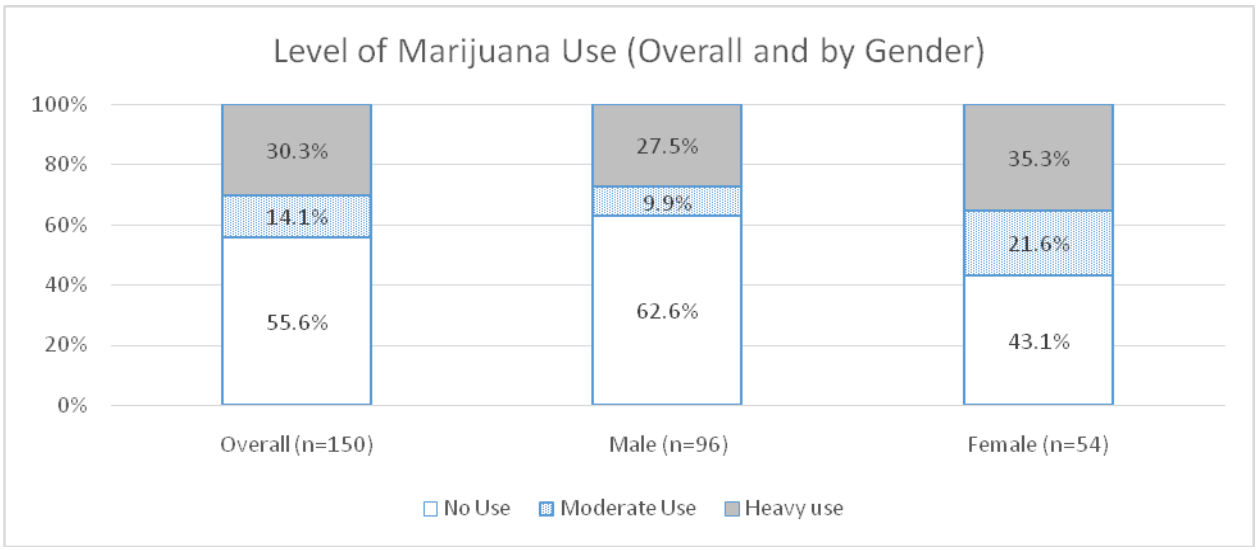
	n	%
Gender		
Female	54	36.0%
Male	96	64.0%
Age		
<= 24 years	16	10.7%
25 - 34 years	45	30.0%
35 - 44 years	36	24.0%
45 - 54 years	33	22.0%
55 + years	20	13.3%
Ethnic groups		
Canadian	144	96.0%
Non-Canadian	6	4.0%
Relationship status		
Married/partnered/common law	56	38.1%
Single (never married)	62	42.2%
Separated or divorced	29	19.7%
Employment status		
Employed full time	47	31.3%
Employed part time	15	10.0%
Unemployed	45	30.0%
Other	43	28.7%
Education		
< High School	36	24.0%
Completed secondary or High School	46	30.7%
Some post secondary	25	16.7%
Completed College or University	43	28.7%
Legal status		
No problem	101	67.3%
Awaiting trial or Sentencing	25	16.7%
Probation	21	14.0%
Total	150	
Fixed address (postal code)		
No fixed address	5	3.3%
Unknown	2	1.3%
Fixed address	143	95.3%
Presenting Problem Substance		
None	1	0.7%
Alcohol only	71	48.0%
Other substance(s) only + no alcohol	42	28.4%
Alcohol and other substance(s)	34	23.0%
Frequency of Substance Use		
Did not use	30	20.3%
1-3 times monthly	7	4.7%
1-2 times weekly	20	13.5%
3-6 times weekly	27	18.2%
Daily	49	33.1%
Binge	15	10.1%

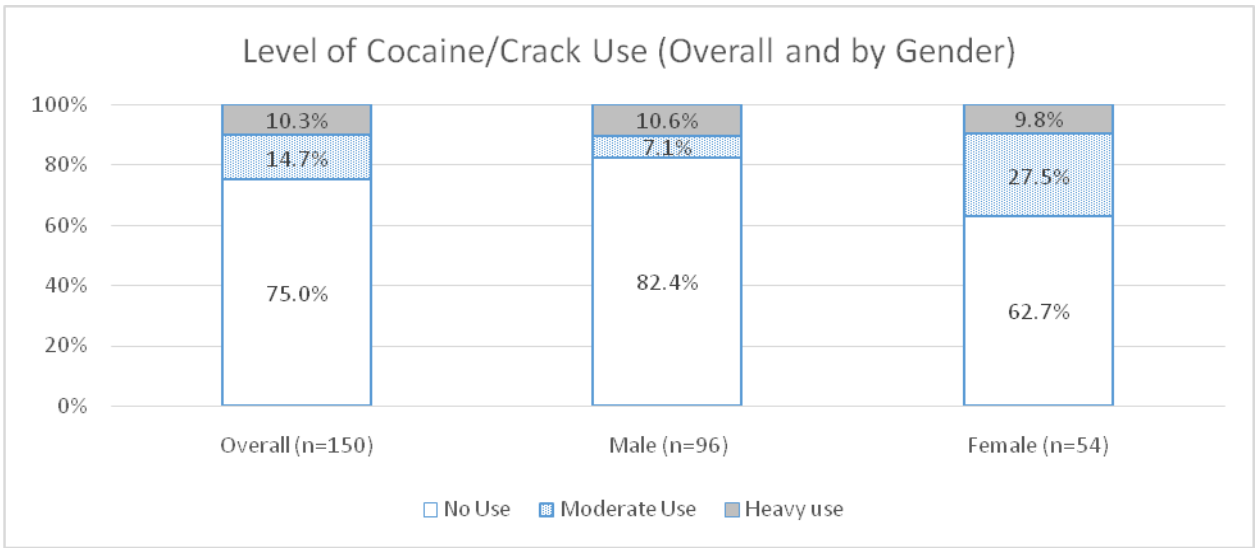
2.1 Substance Use Profiles

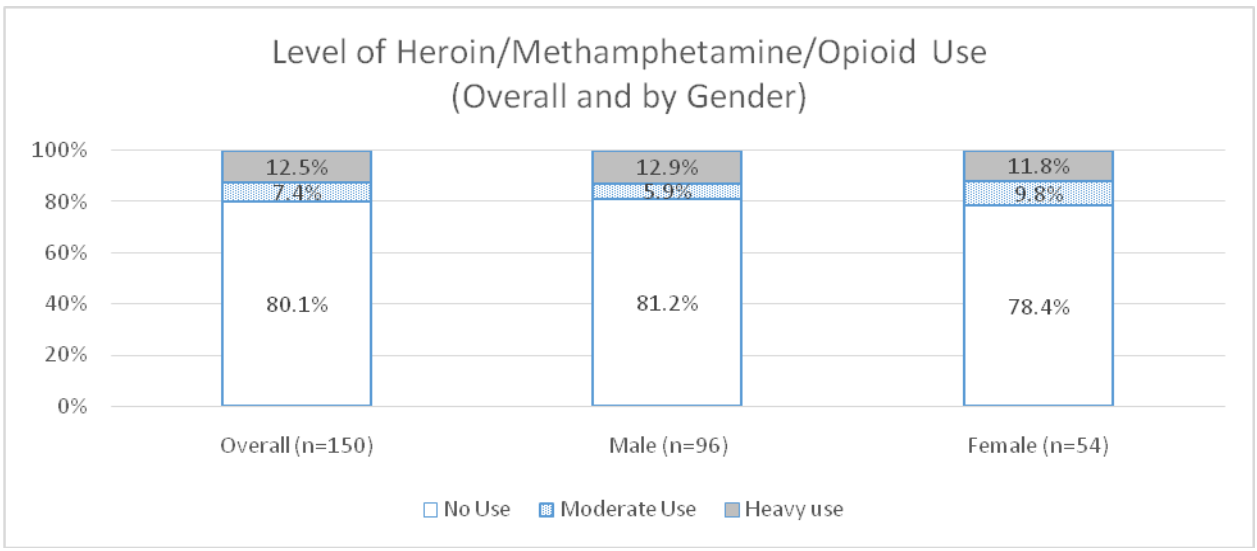
One important question answered by the data collected through the GAIN-Q3 MI is the level of use of different types of substances, and the pattern of heavy use of substances. This report highlights the use of alcohol, marijuana, cocaine/crack, and heroin/methamphetamine/opioids, reported in the 90 days prior to assessment data collection. The project team categorized use of substances into three levels: "No Use" (no use in the 90-day period), "Moderate Use" (used less than 20% of the 90-day period), and "Heavy Use" (used 20% or more of the 90-day period) and examined the percentages of the levels of use across the full sample and for males and females separately (Figure 2.1A). Looking across the different substances, the one with the highest percentage of heavy users is alcohol, 53.5% compared to about 30% for marijuana, 10% for cocaine/crack users and about 12% for heroin/methadone/opioid users. Gender differences are observed, with a higher percentage of heavy and/or moderate users among women for all drug classes except heroin/ methadone/opioid.

Figure 2.1A. *Levels of substance use in the past 90 days by substance type*




Level of Marijuana Use (Overall and by Gender)
100%
80%
60%
40%
20%
0%
30.3%
14.1%
55.6%
27.5%
9.9%
62.6%
35.3%
21.6%
43.1%
Overall (n=150)
Male (n=96)
Female (n=54)
No Use
Moderate Use
Heavy use


Level of Cocaine/Crack Use (Overall and by Gender)
100%
80%
60%
40%
20%
0%
10.3%
14.7%
75.0%
10.6%
7.1%
82.4%
9.8%
27.5%
62.7%
Overall (n=150)
Male (n=96)
Female (n=54)
No Use
Moderate Use
Heavy use


Level of Heroin/Methamphetamine/Opioid Use
(Overall and by Gender)
100%
80%
60%
40%
20%
0%
12.5%
7.4%
80.1%
12.9%
5.9%
81.2%
11.8%
9.8%
78.4%
Overall (n=150)
Male (n=96)
Female (n=54)
No Use
Moderate Use
Heavy use

It is also interesting to examine the combined pattern of use across different substances and Table 2.1A shows the combination of heavy alcohol/drug use across four combined substance use categories. Cleary, heavy use in any of the drug categories is often combined with Heavy Alcohol use, for example, 48.8% of Heavy Marijuana users and 71.4% of Heavy Cocaine/Crack users also reported Heavy Alcohol use, respectively. Heavy use of Cocaine/Crack or Heroin/Methadone/Opiates is combined with Heavy Marijuana use in about a third of clients. These patterns were consistent when males and females are compared (data not shown).

Table 2.1A. Combination of heavy substance use (>20% of the past 90 days) for the overall sample (n=150)

	Heavy Alcohol Use (n=76, 53.5% of sample)		**Heavy Marijuana Use (n=43, 30.3% of sample)**		**Heavy Cocaine/ Crack Use (n=14, 10.3% of sample)**		**Heavy Heroin/Methadone/Opioid Use (n=17, 12.5% of sample)**	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Heavy Alcohol Use			21	48.8%	10	71.4%	12	70.6%
Heavy Marijuana Use	21	27.6%			4	28.6%	6	35.3%
Heavy Cocaine/Crack Use	10	13.5%	4	9.5%			2	11.8%
Heavy Heroin/Methadone/ Opioid Use	12	16.2%	6	14.3%	2	14.3%		

2.2 Severity of Problem Areas among Clients Accessing Services

Domains covered in the GAIN-Q3-MI include school problems, work problems, physical health, sources of stress, risk behaviours for infectious diseases, mental health, substance use, crime and violence and life satisfaction. Composite scores are available in the GAIN-Q3 MI to measure the severity of these problem domains as well as the different aspects of these domains. When conducting analyses and based on input from stakeholders, the project team identified 10 specific problem areas of interest and examined the severity of these problem areas among clients in the sample. The project team measured severity based on the number of days a client experienced problems in each of these areas in the past 90 days. The numbers of days were grouped into three

categories (i.e., 0 days, 1-12 days and 13+days) according to the recommendations from Chestnut Health Systems, the developer of the GAIN suite of tools. Clients who had problems for 13+ days in the past 90 in an area were considered to be in the group of high severity. Analyses in this section focus on clients who fall in the high severity groups.

Table 2.2A outlines the percentage of clients in the highest severity group in each of the 10 problem areas. Clients often fall into the severe category in multiple problem areas. Drilling down by problem areas in the 90-day period before assessment, one sees the high percentage with severe mental health-related challenges (internalizing 73.3%, externalizing 44.5%, stress 47.3%, and trauma 41.4%). Physical health (42.6%) and victimizations (34.0%) are also moderate to high. This shows the high level of co-occurring challenges, being higher for women in all categories.

Table 2.2B shows that, overall, 29.5% of clients fall into the severe category for 6 or more of the 10 problem areas examined, and about a third with between 3-5 severe problem areas. In particular, the percentage having high severity in 6-10 problem areas is significantly higher for female clients (46.3%) compared to male clients (20.0%). The higher percentage for females is consistent with the earlier data showing a high percentage of heavy users among females in treatment.

With respect to age, clients under the age of 35 tended to have higher levels of trauma, victimization, and risky behaviours in the past 30 days, as well as a higher percentage with high severity in 6-10 problem areas (45.0% of clients under 35 compared to 19.1% of clients 35 or older) (data not shown in Tables 2.2a or 2.2 b). Additionally, approximately 40% of all clients with high severity in 6-10 problem areas are female under the age of 35.

Table 2.2A: *Number and percent of clients in the severe category for 10 specific problem areas, overall and by gender.*

	Problem areas (number and percent in the highest severity group for each Screener/Measure in the GAIN Q3 MI Baseline assessment)																			
	Substance Use		Internalizing (MH)		Externalizing (MH)		Physical Health		Work		Stress		Risk Behaviour		Crime/ Violence		Past 90 days Trauma		Past 90 days Victimization	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
All, n=149	102	70.3%	107	73.3%	65	44.5%	63	42.6%	16	10.7%	70	47.3%	41	28.3%	6	4.3%	60	41.4%	49	34.0%
Gender																				
Male, n=95	59	62.8%	61	64.9%	36	38.3%	34	35.8%	7	7.4%	41	43.2%	16	17.2%	2	2.2%	30	32.3%	25	26.9%
Female, n=54	43	84.3%	46	88.5%	29	55.8%	29	54.7%	9	16.7%	29	54.7%	25	48.1%	4	8.3%	30	57.7%	24	47.1%

Table 2.2B. *Clients categorized by the number of severe problem areas that they experience, overall and by gender.*

	Number of Severe Problems									
	0 problems		1-2 problems		3-5 problems		6-10 problems			
	n	%	N	%	n	%	n	%	Total	Chi-Square
All	16	10.7%	37	24.8%	52	34.9%	44	29.5%	149	n/a
Gender										
Male	14	14.7%	26	27.4%	36	37.9%	19	20.0%	95	13.32, df=3, p<.005
Female	2	3.7%	11	20.4%	16	29.6%	25	46.3%	54	
Total	16	10.7%	37	24.8%	52	34.9%	44	29.5%	149	

2.3 Co-occurring Disorders – Staged Approach Case Finding

Results shown below indicate high co-occurrence of substance use and mental health-related challenges. In this section, we further examine co-occurring conditions using the results of the two-staged screening process. First, the internalizing disorders sub-scale of the GAIN-SS and then, for those who met the cut off, the percentage scoring positive for needing further mental health assessment based on the Modified Mini-Screener (MMS) or Psychiatric Diagnostic Screening Questionnaire (PDSQ) are used to examine rates of co-occurrence.

With respect to the MMS, the flag for possible mental disorders requiring further assessment can be raised based on scoring in three different scenarios: (1) total score is 10 or higher, (2) endorsement on the item for suicidal thoughts, and (3) endorsement on both items relating to traumatic experiences. A positive screen using PDSQ, on the other hand, means the total score of the screener is 35 or higher across the PDSQ items (Zimmerman & Mattias, 2001). Analyses showed that just over half of the clients from the pilot study (53.7%) screened positive for possible mental health disorders on the Stage 2 Screener (MMS or PDSQ); and almost all clients in this group had at least a score of 4 or more on the GAIN-SS.

Table 2.3A. *Number and percent of clients who screen positive for possible mental health disorders on the Stage 2 screener (MMS or PDSQ), relative to their score on the Stage 1 screener (GAIN-SS IDScr) OVERALL SAMPLE*

		Further assessment needed based on MMS or PDSQ					
		No		Yes			
		N	Row %	N	Row %	Total	Column %
GAIN-SS IDScr Score	**0**	1	-	0	-	1	.8
	1	1	-	0	-	1	.8
	2	10	83.3	2	16.7	12	9.8
	3	14	87.5	2	12.5	16	13.0
	4	22	46.8	25	53.2	47	38.2
	5	9	19.6	37	80.4	46	37.4
	Total	57	46.3	66	53.7	123	100.0

At the time of this writing a decision has been made to narrow the selection of screening tools for provincial implementation for the GAIN-SS (Stage 1) and the Modified Mini-Screen (Stage 2). The reason to exclude the PDSQ was largely on the basis of its cost, length and anticipated challenges having this copywritten tool both computerized into Catalyst and also translated into French. Thus, it was basically a cost issue relative to the MMS and, when considering both the MMS together with the GAIN-SS as the Stage 1 screener, adequate coverage is obtained compared to other less pragmatic options (Rush et al., 2013b).

Given the plan to go forward with only the MMS as the Stage 2 mental health screener, the data were also examined focusing only on the relationship between the results of the GAIN-SS and the MMS. The results are similar to those in Table 2.3A with the MMS and PDSQ combined at Stage 2. One can see that the majority of clients at Stage 1 scored 4 or 5 on the GAIN SS Internalizing Distress Scale. Further, of the 36 clients scoring 4 out of 5 on the GAIN SS, 18 or 50% failed to hit the cut-off on the MMS. At a score of 5 on the short screener, only 21.4% failed to meet the MMS cut-off. The implications of these results for provincial implementation of the staged screening and assessment tools and processes will be addressed in the Discussion section.

Table 2.3B. *Number and percent of clients who screen positive for possible mental health disorders on the Stage 2 screener (MMS only) relative to their score on the Stage 1 screener (GAIN-SS IDScr).*

		Further assessment needed based on MMS					
		No		**Yes**			
		N	**Row %**	**N**	**Row %**	**Total**	**Column %**
GAIN-SS IDScr Score	**0**	1	-	0	-	1	1.0
	1	0	-	0	-	0	0.0
	2	6	85.7	1	14.3	7	7.1
	3	11	91.7	1	8.3	12	12.2
	4	18	50.0	18	50.0	36	36.7
	5	9	21.4	33	78.6	42	43.0
	Total	45	45.9	53	54.1	98	100.0

2.4 Service Utilization and Cost

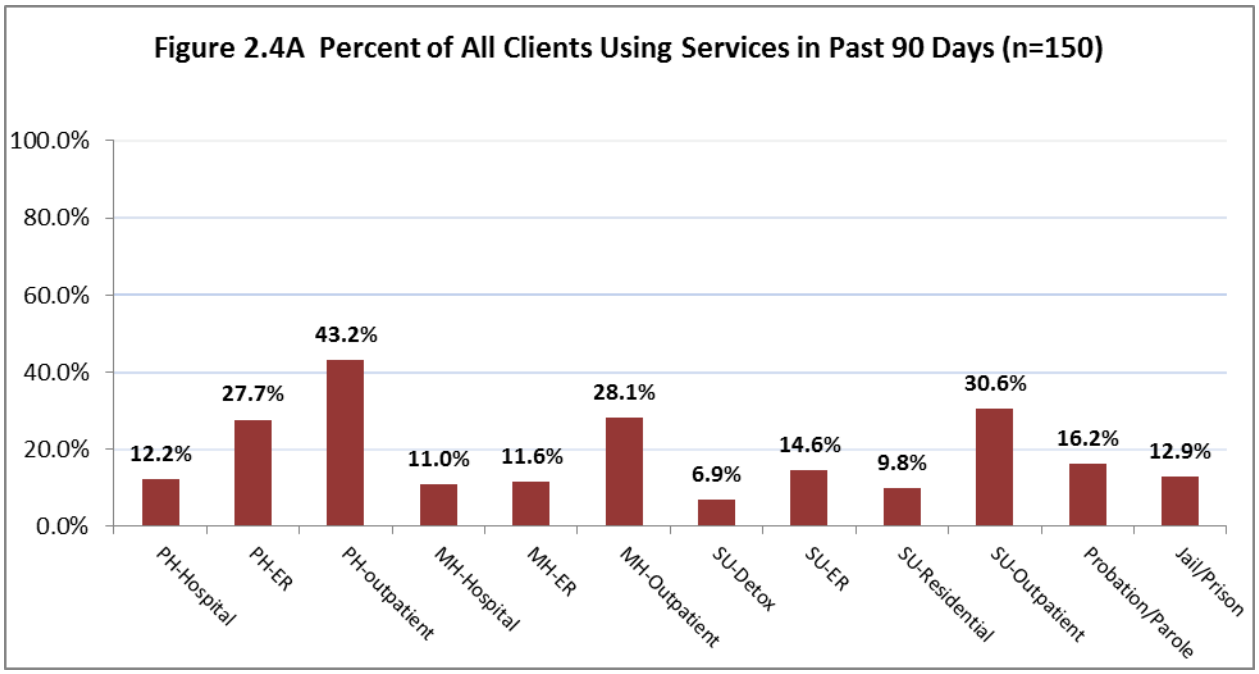
In addition to problem severity in several domains, the GAIN-Q3 MI also captures data on recent service utilization in various domains such as physical health, mental health, substance use, and justice-related. These data not only reflect the percentage and frequency of use of services in the 90 days prior to assessment by clients seeking treatment, but also allow for estimation of costs to society associated with utilizing these services. Findings reported below highlight clients' use of hospitals, emergency rooms (ER), and outpatient services for physical health (PH), mental health (MH) and substance use (SU) problems, as well as probation services. The section also presents estimation of costs to society based on the use of these services.

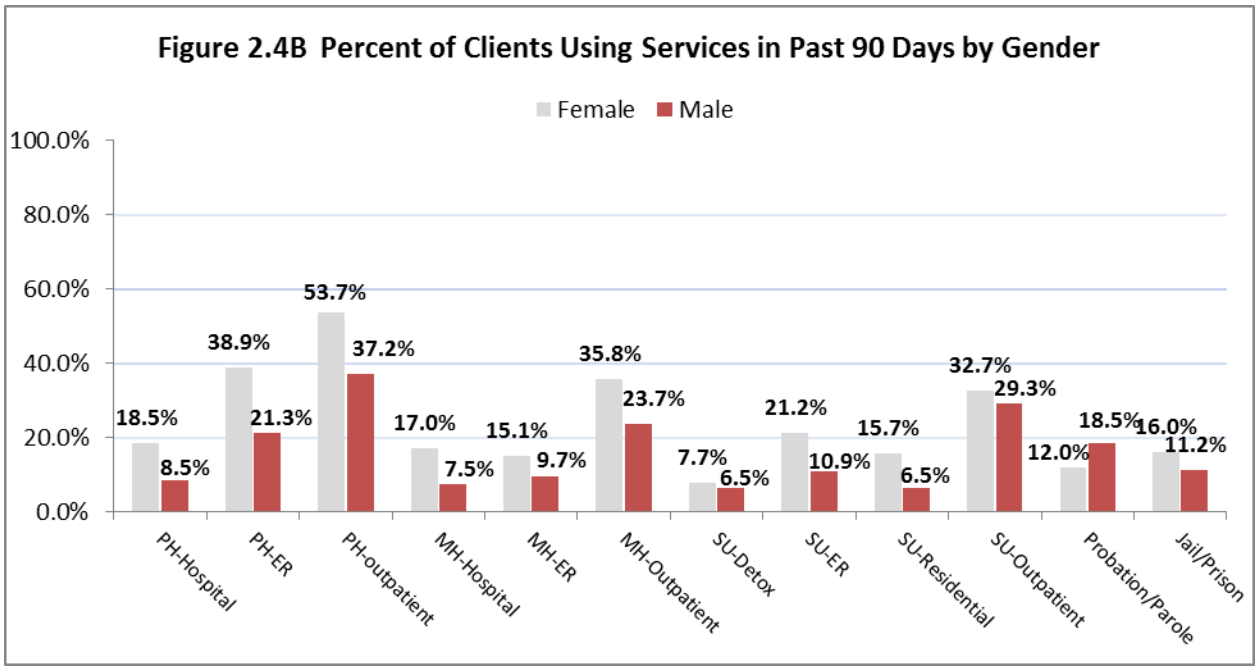
About 43% of the clients in the sample used outpatient services for physical health problems, 28% for mental health problems, and 31% for substance use problems in the 90 days prior to their assessments. Percentages of all clients who received care from hospital programs and emergency services for physical health, mental health and substance use problems were reported to range from 10 to 30% (Figure 2.4A). It is worth noting that higher percentage of female clients reported receiving such services comparing to males (Figure 2.4B). Seven percent of the clients had been in a detoxification program. Sixteen percent of clients had been on probation.

Over three quarters of clients in the sample reported using at least one service highlighted in Figure 2.4A-B in the 90 days prior to assessment. About half of the clients used one or two services and about a quarter of the clients reported using more than two services (Figure 2.4C). When examining the difference between genders in number of services used, a higher percentage of female clients reported using at least one service compared to male clients. Of those who used services, a larger proportion of male clients reported using only one or two services, while a larger proportion of female clients reported using three to five services.

The project team researched Ontario-based costs per day or per visit for all the services or conditions used in the calculation of costs in order to estimate costs to society by clients receiving addiction services in Ontario. The team was able to identify all costs used in an algorithm recommended by Chestnut Health Systems except for costs associated with days bothered by health or mental health problems, days in intensive outpatient treatment for substance use, days absent from school, times arrested or charged, and days in juvenile detention system and jail or prison.

Based on the available cost information, a client receiving the addiction services in the pilot study, on average, used a range of services costing $2,957 in the 90 days prior to assessment. This number would be much higher after taking into consideration all the costs that were not available.





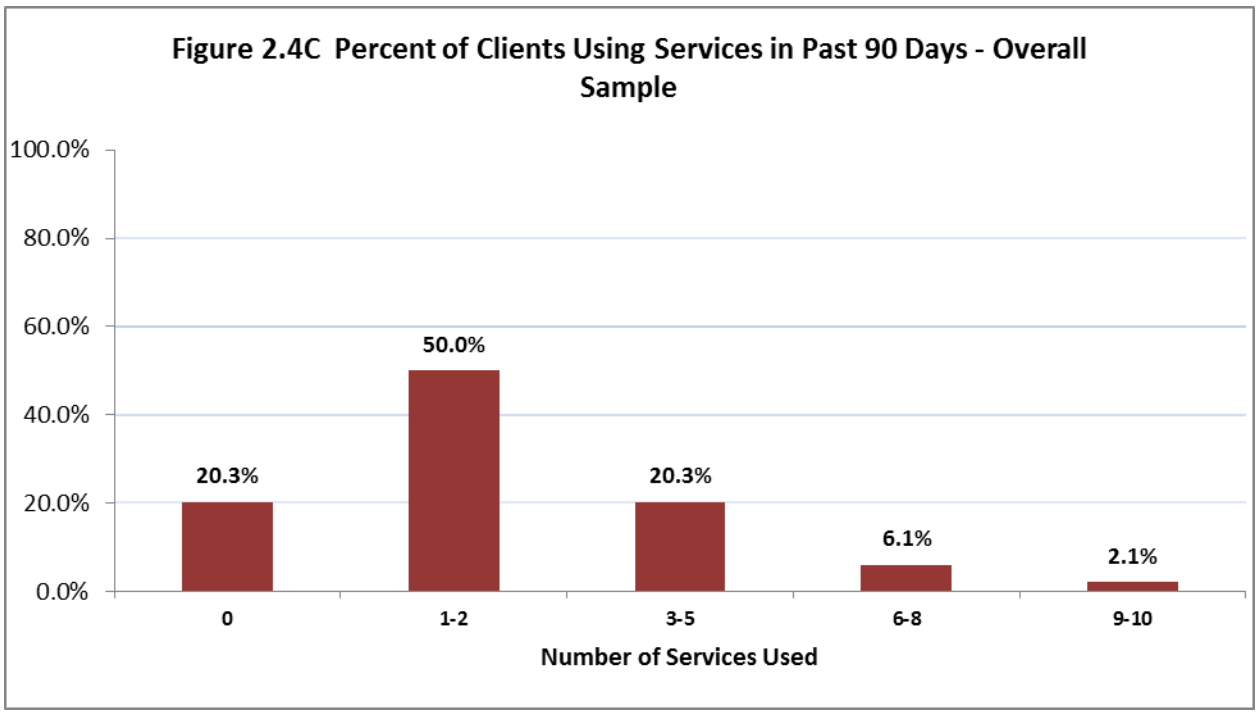


Figure 2.4C Percent of Clients Using Services in Past 90 Days - Overall Sample
100.0%
80.0%
60.0%
40.0%
20.0%
0.0%
20.3%
50.0%
20.3%
6.1%
2.1%
0
1-2
3-5
6-8
9-10
Number of Services Used

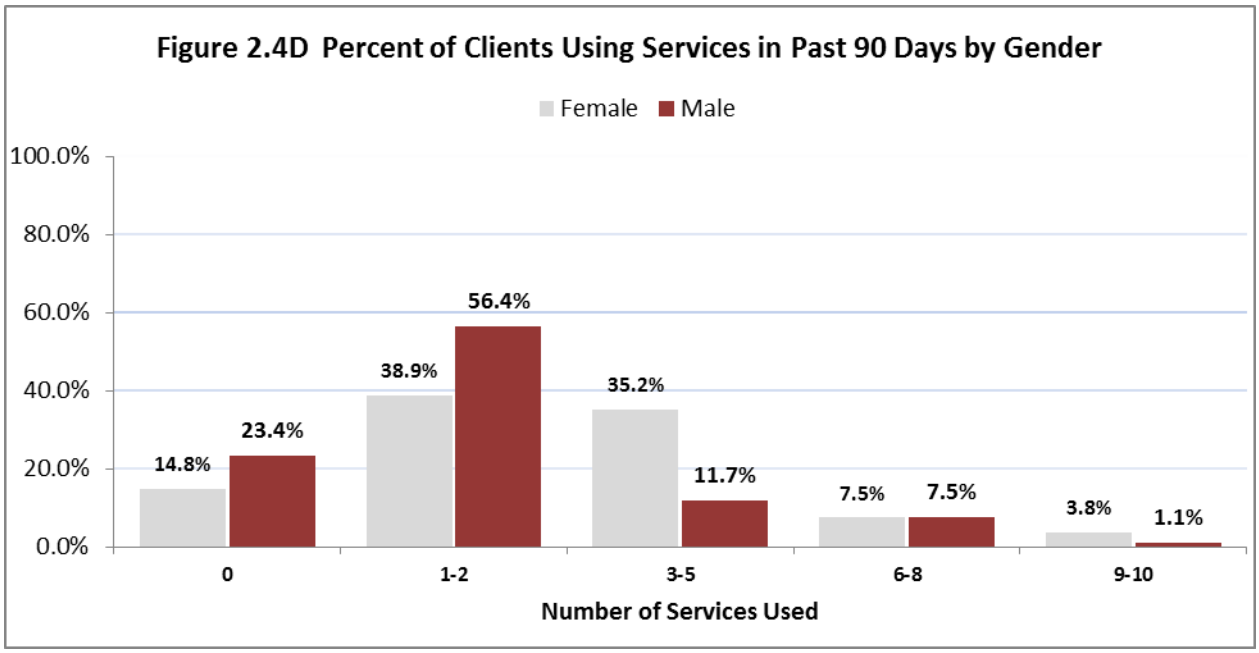


Figure 2.4D Percent of Clients Using Services in Past 90 Days by Gender
Female
Male
100.0%
80.0%
60.0%
40.0%
20.0%
0.0%
14.8%
23.4%
38.9%
56.4%
35.2%
11.7%
7.5%
7.5%
3.8%
1.1%
0
1-2
3-5
6-8
9-10
Number of Services Used

3.0 Assessing Feasibility of Self-Administration of GAIN-Q3 MI ONT

3.1 Rationale and Objectives

Feedback from the agencies involved in the Phase 1 pilot testing of the tools reflected concerns about the impact on agency waiting lists if the provincial treatment network was to move solely to a clinician-administered option for common assessment. In response to this concern, a study was conducted in the renewal year to assess the feasibility of employing computerized, self-administered GAIN-Q3 MI assessments. More specifically, the objectives of the study were:

1. To evaluate the acceptability and value of self-administering the GAIN-Q3 MI via personal computer or laptop.
2. To recommend processes moving forward with provincial implementation *apropos* the self-administration of GAIN-Q3 MI with the use of technology.

3.2 Method

One pilot site participated in the study[2]. Addiction Services of Thames Valley (ADSTV), described in detail below, had participated in the pilot work with the GAIN-Q3 MI and staged screening processes. This site was ideal for this study because all their clinicians had undergone the formal training and certification process to administer the GAIN-Q3 instruments as recommended by Chestnut Health Systems to ensure the validity and reliability of assessment. In addition, because of the success of the pilot work, the site had already enthusiastically adopted the GAIN-Q3 MI as its common assessment tool.

ADSTV is a community addiction agency operating in co-operation with other local addiction and health care agencies, throughout the Southwest Local Health Integration Network (LHIN). ADSTV operates eight programs through which assessment, counselling, support, education, employment and housing services are offered to a wide diversity of individuals involved with substance abuse or gambling problems. ADSTV offers services in London, Strathroy (Middlesex), St. Thomas (Elgin), Woodstock, Ingersoll and Tillsonburg (Oxford). All programs, except those related to education participated in this pilot study. (http://adstv.on.ca/)

[2] Piloting was scaled back to one site rather than the two that were initially planned due to the delay for ethics review and withdrawal of one site (too busy to proceed). The team also experienced delays due to technical issues and consequently, we were left with one month of data collection.

Participants

A total of 117 clients aged 16 years and above, presenting at the pilot site for assessment and treatment, were approached by the intake and assessment staff between February 21, 2014 and March 27, 2014 to participate in the study. Due to time constraints, clients were only screened for eligibility if they were able to stay for the whole duration of the assessment. Clients were eligible to participate if: 1) they were proficient in English; 2) they were not in immediate need of crisis services; 3) they consented to participate; 4) they possessed the necessary cognitive skills to complete the GAIN-Q3 MI based on the GAIN-Cognitive Impairment Scale (CIS); 5) they were not at risk for suicide based on the pilot site's standard procedure for assessing suicidality; and 6) they were not seeking help for another person's addiction problem.

Overall, 24 clients were unable to participate in the study because they could not commit to complete the whole assessment. Out of the remaining 93 clients, 38 were deemed eligible to participate while 55 were deemed ineligible to participate as a result of the study criteria. Of the eligible clients, one withdrew from the study while two others did not complete the surveys, yielding a sample analysis for 35 participants: 18 in the self-administered group and 17 in the clinician-administered group.

Measures

Clients' Experiences Questionnaires

Two questionnaires related to clients' experiences were developed by the project team. The survey "Self-Administration of GAIN-Q3 MI" was developed to obtain feedback from clients about their experiences self-administering the GAIN-Q3 MI via computer or laptop (e.g., clients' acceptance of computer-mediated, self-administered assessment and the barriers faced). Likewise, the questionnaire "Completing GAIN-Q3 MI with a Clinician" was developed to obtain feedback from clients about their experiences completing the GAIN-Q3 MI with a clinician. Suggested improvements were also garnered from clients.

Training of Pilot Agency Staff

A training session delivered by webinar was held with the pilot site, providing information regarding the process of recruiting eligible clients, obtaining clients' consent to participate, and assigning clients to the self-administered or clinician-administered groups. Staff in the training were provided with study materials and manuals which included:

- Guidelines to introduce the study (with recruitment script)
- Guidelines for post-recruitment, i.e., after the clients were deemed eligible for the study
- Guidelines and orientation for computer-based self-administration
- Laminated flowcharts outlining the recruitment and post-recruitment process
- Consent and withdrawal forms
- Eligibility checklist
- Project administration materials

Support to Agency

A Study Lead was assigned in the agency to liaise with the project team. Over the course of the pilot test, ongoing support was provided to agency staff via email and telephone. Any identified issues that occurred during the implementation were addressed.

Recruitment and Consent Process

The intake and assessment staff initiated the recruitment process using the eligibility checklist and recruitment script provided. Clients were provided with a description of the pilot study via the Letter of Information and Consent to Participate form. They were informed that participation in the study was voluntary and that they could refuse to join the study or withdraw from it at any time without having any impact on their current or future services. They were also informed that, in the event they decide to leave the study, they had the right to allow or restrict the use of data that had been collected from them up until their withdrawal.

Once clients provided informed consent and were deemed cognitively competent (assessed using the GAIN CIS), they were randomly assigned to either the self-administered group or clinician-

administered group using a number system[3]. Those given an odd number were assigned to the self-administered group and those given an even number were assigned to the clinician-administered group. Clients assigned to the self-administered group were led to a room to self-complete the GAIN-Q3 MI on a laptop while clients assigned to the clinician-administered group had the GAIN-Q3 MI administered by a clinician.

Randomization Procedures

To reduce potential for clinician bias, a blinded study was applied by labelling envelopes from one to a hundred and having in each envelope a copy of the clients' survey coded with a randomized number. For example, envelope labelled "1" has a self-administered client survey with a randomly generated number of 55. Hence, the clinician had no inclination to which group the client was assigned until he or she opened the envelope. The envelopes were sent to the pilot agency and the Study Lead in the agency was responsible for handing a number of envelopes to each clinician each day. This ensured that no number was distributed twice and if the clinician needed more numbers, they would approach the Study Lead for more envelopes.

Data Collection Procedures

The GAIN-Q3 MI was administered electronically via the GAIN Assessment Building System (ABS) platform, a web-based application that allows the GAIN family of instruments to be administered and summarized by computer. The ABS system is now linked to Catalyst, the software used by Ontario's addiction agencies and the IT infrastructure underlying the Drug and Alcohol Treatment Information System (DATIS).

For the self-administered group, a number of laptops were set up in a room with the electronic interface of the GAIN-Q3 MI already in place (i.e., logged in) prior to arrival of clients. Clients were amply spread out so as to ensure utmost privacy. A clinician trained to administer and interpret the results of the GAIN-Q3 MI was present throughout the administration to guide the clients and provide assistance when needed. For the clinician-administered group, the clinician carried out the usual procedures of administering the GAIN-Q3 MI via the ABS platform.

[3] A list of numbers was generated for the randomization (http://www.randomizer.org/)

Upon completion of the assessment, clients from both groups were asked to complete the feedback questionnaires (via paper and pencil) asking about their experiences on the self-administration of the GAIN-Q3 MI via the laptop or on the clinician-administration of the tool (depending on which group they were assigned to). Clients were informed that completion of the survey was voluntary. However, they were asked to provide reasons for refusal, as this might provide information about the acceptability of computer-assisted assessment from the clients' perspective. In addition, they could choose not to answer any of the questions or withdraw from completing the survey at any time.

Types of Data Collected

Two types of data were collected from the study:

1. Data from the feedback questionnaires
2. Data from the ABS-generated Validity Report[4], which summarizes "possible" and "definite" validity errors found during the course of the GAIN-Q3 MI administration. It presents a list of errors, for example, inconsistencies in the client's responses produced during administration of the GAIN-Q3 MI and whether the errors were resolved or overridden. The clinical purpose of these validity errors is to help increase the overall strength of the client's self-report and ensure proper intervention and referral.

3.3 Results

Demographic Findings

Of the 35 participants, 24 (68.6%) were male, 10 were female (28.6%) and one reported as other gender. The majority of the participants were between 25 and 34 years old (37.1%) followed by 45 and 54 years old (25.7%). All the participants reported having at least some secondary or high school education. Table 3.3A shows the demographic characteristics of the participants. A chi-square analysis was conducted to examine if there was any difference in the distribution of males and females between the self-administered and clinician-administered groups. No significant difference was found ($p = 0.82$). Due to low cell counts, analysis was not conducted for age and education.

[4] Issues identified in the validity report were addressed with the client immediately after the assessment.

Table 3.3A. *Demographic Characteristics of Participants- Self-Administration Sub-Project (N = 35)*

	Self-administered (N = 18)		Clinician-administered (N = 17)	
	(*n*)	%	(*n*)	%
Gender				
Male	13	72.2	11	64.7
Female	5	27.8	5	29.4
Other	0	0	1	5.9
Age				
< 24 years	5	27.8	1	5.9
25-34 years	7	38.9	6	35.3
35-44 years	3	16.7	1	5.9
45-54 years	3	16.7	6	35.3
> 55 years	0	0	3	17.6
Highest Level of Education				
< Secondary or high school	6	33.3	6	35.3
Completed secondary or high school	3	16.7	2	11.8
Some post-secondary	6	33.3	5	29.4
Completed college or university	3	16.7	4	23.5

Self-Administration of GAIN-Q3 MI

Overall, participants in the self-administered group were positive about their experiences self-completing the GAIN-Q3 MI on a laptop and the majority were very satisfied (*n* = 8; 44.4%) or somewhat satisfied (*n* = 9; 50.0%) with their overall experience of the assessment. However, some participants commented that the "For Staff Use Only" questions were rather "confusing" but did not elaborate. Some also felt that the assessment was too long. One participant suggested that breaks and refreshments be provided to the clients.

The majority of participants (*n* = 14; 82.4%) agreed that self-completing the GAIN-Q3 MI on a laptop was a good way for assessment to be conducted. The most common reasons cited included the ability to answer questions at their own pace; being more willing to answer honestly; and privacy. Interestingly, a participant with hearing impairment commented positively on the self-administered

version since an interpreter was not needed. Only one participant disagreed that self-completing the GAIN-Q3 MI on a laptop was a good method and the reason stated was “not comfortable using computer”.

All the participants had some experience using the computer and most of them reported using it on a daily basis. In terms of computer skills, most participants expressed ease with using the computer, for example, using a mouse or touchpad to point and click, typing text and saving a document. 36.8% (*n* = 7) of the participants had completed assessments on a computer before while 52.6% (*n* = 10) had not.

Clinician-Administration of GAIN-Q3 MI

The clinician-administered participants also gave positive ratings about their experience having the GAIN-Q3 MI administered by a clinician. All the participants who responded on the satisfaction scale (*n* = 16) were very satisfied with their overall experience of the assessment.
Fourteen participants (87.5%) agreed that completing the GAIN-Q3 MI with a clinician was a good way for assessment to be conducted. Thirteen of these 14 participants stated that it was a good method because it allowed for one-to-one interaction with the clinician. One recurring comment was that having a clinician administer the tool helped the clients understand and answer questions correctly. An additional comment was that being able to answer verbally was “comforting”.

Time to Completion

In terms of completion time, no statistically significant difference was found between groups ($t(34) = -1.88$, $p = 0.07$), although they did differ by 13 minutes on average. The self-administered participants took an average of 58 minutes to complete the GAIN-Q3 MI while the clinician-administered clients took an average of 45 minutes.

Errors identified via ABS validity reports

There was a small statistically significant difference between groups in the overall errors identified ($t(35) = -2.17$, $p = .037$). As shown on Table 3.3B, these differences between groups were particularly salient in the risk behaviours and trauma domain, especially questions related to trauma.

Table 3.3B. *Average Number of Errors in Each GAIN-Q3 MI Domain by Group*

	Group		
Domains	**Self-administered (N = 18)**	**Clinician-administered (N = 19)**	***t***
School Problems	0.00	0.05	0.98
Physical Health	0.17	0.42	1.37
Sources of Stress	0.22	0.11	-0.95
Risk Behaviours and Trauma	1.06	0.21	-2.77*
Mental Health	1.00	0.58	-1.33
Substance Use	0.56	0.58	0.10
Environment	0.50	0.05	-1.35
Crime and Violence	0.11	0.21	0.81
TOTAL	**3.61**	**2.21**	**-2.17***

Note. **p = <.05*

Possible Reasons for the "Risk Behaviours and Trauma" Inconsistencies

The inconsistencies found in the risk behaviours and trauma domain might be attributed to more vigorous checking of the validity errors in this domain by the tool developer or clients' perception of the severity of traumatic experiences.

A review of the validity report indicated consistent discrepancies in the following questions: In the trauma section, clients were asked questions about the last time they were physically abused; the last time they were sexually abused; and the last time they were emotionally abused (response options ranged from "never" to "more than one year ago"). Subsequently, clients were asked in a single question – "During the past 90 days, how many days been you been attacked with a weapon, beaten, sexually abused or emotionally abused?" A discrepancy was revealed when clients responded that they had been emotionally abused in the past month but subsequently, they recorded "zero" number of days they have been attacked with a weapon, beaten, sexually abused or emotionally abused. One possible explanation for this inconsistency might be clients did not perceive their experiences of being emotionally abused at the same level of severity with physical or sexual abuse. Hence, when "emotional abuse" was grouped together with "attacked with a weapon, beaten, and sexually abused", clients may have responded with "zero" number of days.

Focus Group Findings

A focus group was conducted with the staff of the pilot site to obtain feedback related to the project objectives (page 21). The focus group interview was guided by the following topic areas:

a. Benefits of self-administering the GAIN-Q3 MI via laptop or computer
b. Challenges of self-administering the GAIN-Q3 MI via laptop or computer
c. Support needed from agency and clients to self-administer GAIN-Q3 MI
d. The perceived value-add and value-loss of self-administration over clinician-administration of the GAIN-Q3 MI
e. Integration of the self-administration option into existing services and incorporation into the provincial roll-out of GAIN.
f. Recommendations

The results are summarized below.

a. <u>Benefits of GAIN-Q3 MI Self-Administration</u>

The current practice at the project site requires clients to attend a walk-in intake at the agency and get triaged in a group process with the administration of ADAT tools. In their subsequent visit, i.e., first individual appointment, clients are administered the GAIN-Q3 MI by a clinician. The wait time from group intake to client's first individual appointment was about three to four weeks at the time the study was initiated. Staff predicted that once the Ministry eliminates ADAT and rolls out GAIN-Q3 MI as the mandatory assessment tool, the wait time for clients to get their first appointment would increase significantly to about eight to ten weeks, since the GAIN-Q3 MI was to be administered only on a one-on-one basis with a clinician. Therefore, the ability for clients to self-administer the GAIN-Q3 MI on a laptop or computer could potentially cut down the wait time.

Staff also commented that the self-administered option allowed clients to reflect and answer questions at their own pace, which would be more restricted in the clinician-administered option and in the present ADAT group assessment in which clients answered questions at the pace of the group. Additionally, although clients in the self-administered group complete the assessment in a group setting, staff were able to amply spread out the clients thereby providing them with more space and

privacy, as compared to the ADAT group assessment in which clients sat in close proximity with each other. This additional physical space was thought to be an important feature, especially for clients who have anxiety problems.

Staff also stated that the self-administered option would serve a significant benefit if the agency receives clients with hearing-impairment since these clients would be able to self-complete the GAIN-Q3 MI without an interpreter. Another particular benefit mentioned by staff was that, because of the self-administered option, their agency was able to have youth clients join part of their assessment group. Previously, youth clients were placed straight into a one-to-one appointment with a clinician and, although their wait times were generally shorter than the adult wait times, having the self-administered option was considered to contribute to ensuring more timely services for youth clients. Lastly, staff observed that clients who possessed competent computer skills benefited from the self-administered option and were often excited about getting the assessment started. However, this also contributed to the challenges experienced by one person in the self-administered group, as described in the following section.

b. Challenges of GAIN-Q3 MI Self-Administration

In terms of challenges faced on the organizational level, staff reflected that the cost of setting up the infrastructure for self-administration (e.g., computer or laptop purchase and separate secured network setup) might be an obstacle for other agencies. Staff stated that if not for the project funding, the agency would not have been able to afford the cost. Another potential challenge would be the reliability of the ABS system. In a clinician-administered format, the clinician is able to switch to a paper-and-pencil option if and when the ABS is down (i.e., off time). However, in a self-administered format, it might be a challenge for a client to switch to a paper-and-pencil option in the middle of the assessment. As well, ensuring privacy for clients was thought to be a challenge for agencies that have limited space. One suggestion was to attach a screen filter on the laptop or computer to ensure that data on the screen are visible only to persons directly in front of the monitor.

On the client level, computer literacy might pose a challenge. Staff reported that clients with little or no computer skills may be anxious about self-completing the assessment on a computer or

laptop. The lack of human contact also appeared to frustrate some of the clients as they became disoriented in the self-administration process. For example, one client who was initially motivated about self-completing the assessment commented that ultimately, she simply needed to talk to someone and, therefore, could not finish the assessment. Additionally, not having a separate self-administration version of the GAIN-Q3 MI was an issue that needed to be resolved as clients were often confused by the "For Staff Use Only" questions contained in the version of the tool that was employed for self-administration. Some proceeded to complete these staff questions when, in actuality, they should only be viewed and completed by staff. This challenge would be obviated with a customized tool for self-administration and careful instructions and proctoring.

Staff noted that there seemed to be more inconsistencies in clients' responses identified via the validity report, especially those related to their risk behaviours and trauma experiences. They found it challenging to address these discrepancies with the client because they had not initially administered the tool together with the client and thus had not developed sufficient rapport with the client to comfortably address these discrepancies. Staff also commented that because they did not administer the assessment with the client, they were not entirely in sync with clients' non-verbal cues and communication. Therefore, they were concerned that they might not respond effectively to clients' sudden behavioural change which might have been triggered by particular questions, such as those related to trauma history.

Lastly, although self-administration could be beneficial for some clients who experience anxiety or are not suitable for completing assessments in a group setting, it might not be fitting for some clients with other concurrent disorders. For example, a client with ADHD remarked to the staff that self-completing the GAIN-Q3 MI was "out-of-the-question" as it was simply too significant a task to handle by oneself.

c. Support for Agency and Clients to Self-Administer GAIN-Q3 MI

Staff stated that having a hard-copy of the GAIN-Q3 MI available during the self-administration would be helpful in determining the proportion of the assessment that has been completed – a question frequently asked by clients. An alternative would be to embed a completion bar in the electronic self-administration version to keep track of the percentage of questions completed.

Additional support that was suggested included providing water for clients and, if possible, some snacks. This might prove beneficial in motivating clients to complete the assessment, as the whole process could take upwards of an hour or more for some clients.

d. Perceived Value-Add and Value-Loss

Staff cited more timely service as the value-add of self-administration over clinician-administration. The self-administered option was perceived as having the potential to significantly reduce the wait times for individual assessment and, as such, bring about more timely treatment planning for clients. As previously mentioned, staff projected an increased wait for service within their agency if one – on – one administration was the only option. Staff added that the more timely service with self-administration would mean more clients served by the agency.

In terms of the potential value-loss of self-administration over clinician-administration, staff stated that the major loss would be human contact at initial appointment. Staff explained that having human contact would make the clients feel engaged and supported from the beginning to the end of the assessment. This stronger engagement at the initial appointment might play a significant role in getting clients to return to the agency for further appointments. In addition, staff commented that the self-administered option could potentially take a longer time to obtain a full picture of a client's situation, as compared to clinician-administered. The reason being when it comes to the time when the staff person meets the client as his or her clinician or counsellor, they would not have any more information about the client other than that stated in the report. For the clinician-administered option, more personal information could be gathered during the assessment whereas, for those who self-administered the assessment tool, the clinician would have to wait until the next appointment to gather such information. In addition, the clinician would have to spend time confirming what the client had reported on the GAIN assessment.

e. Integration into Existing Services and Incorporation into Provincial Roll-Out

One of the major factors to consider when integrating the self-administered option into the process is the cost. Staff stated that the initial costs of setting up the infrastructure as well as the ongoing costs (e.g., water and snacks) would have to be budgeted aptly. One other factor to consider is staff training. Although staff supervising the self-administration process do not have to administer

the GAIN-Q3 MI directly to clients, it is still crucial to ensure that they are well-trained and certified on the GAIN tool and the validity report and be comfortable addressing concerns with clients.

f. Recommendations

Staff emphasized the importance of having a customized self-administration version of the GAIN-Q3 MI with the "For Staff Use Only" questions omitted. As well, staff suggested that the instructions provided on the response cards that accompanied the GAIN-Q3 MI tool (e.g., the readiness to change question that stated "on a scale of one to 100") be indicated directly on the self-administration version; otherwise, physical cards should be provided to the clients. Staff also suggested adding some features to the self-administration version that might mitigate the reduced human contact. For example, having a screen at the beginning to extend a welcome greeting to the client; subsequent pop-ups that acknowledge their progress and good work; and an ending screen to extend a good-bye greeting to the client. A completion bar, as aforementioned, could also be embedded to show the percentage of questions completed. Overall, staff would recommend incorporating the self-administered option into their services because of its potential to provide more timely services for clients to begin their treatment process. However, they suggested that glitches with the ABS system first be resolved and that the self-administered version of the GAIN-Q3 MI be in place before moving forward.

4.0 Other Highlights from 2013-2014

4.1 Crosswalk between GAIN-Q3 MI, LOCUS, OCAN, and MDS-MH, a Component of the RAI

During implementation, a crosswalk was completed to compare how the LOCUS (Level of Care Utilization System), OCAN (Ontario Common Assessment of Need Full Version 2.0), and MDS-MH (Minimum Data Set for Mental Health) complemented each other and the GAIN-Q3 MI. The first step was to sub-group the criteria in each domain of the LOCUS into general themes in order to facilitate comparison with the other three tools. It should be noted that, although a guided interview is available to assist in scoring the LOCUS, these items were not included in the crosswalk. Items from the GAIN-Q3 MI, OCAN, and MDS-MH were then mapped onto the sub-grouped LOCUS dimensions.

In addition, the project team noted measures that may be inferred from each tool through item comparison and/or multiple administrations, but which were not directly measured by specific items. In areas where the GAIN-Q3 MI was lacking, items were supplemented from the GAIN Initial. The similarities and differences between the four tools were summarized for each sub-group of the LOCUS dimensions.

The tools were also compared across general characteristics such as tool objectives, outcomes, administration methods, times, target populations, and training requirements. It was found that there were many similarities between the four tools. For instance, all of the tools can be used to generate treatment placement, treatment planning, performance, outcome monitoring, and determine level of care placement. In addition, with the appropriate software, all of the tools are capable of automatically generating at least some level of reports.

Although the objectives of the four tools are quite similar, there are several differences among them. The LOCUS, OCAN, and MDS-MH are mainly concerned with current and recent issues. The population targeted is also very different for each tool. The LOCUS is appropriate for adults seeking addiction and/or mental health services. The GAIN-Q3 MI focuses on those seeking addiction treatment and ages 12 and up; the OCAN is aimed at people ages 16 and up and accessing mental health services, while the MDS-MH is focused on adult patients in inpatient psychiatric settings.

Finally, the structure and administration of the tools differ greatly. The LOCUS relies heavily on clinician judgment and there are semi-structured guiding questions that are intended to help with severity ratings. As such, the LOCUS relies on previous application of good screening and assessment tools to ensure accuracy and completeness of the information to be used for the severity ratings and level-of-care placement. The GAIN-Q3 MI, OCAN, and MDS-MH are semi-structured tools with defined questions to guide the assessment interview. The LOCUS and OCAN are more subjective in recording and scoring items and the GAIN-Q3 MI and MDS-MH are based on more structured questions and answers and objective scoring. With respect to administration of the tools, the LOCUS, MDS-MH and OCAN are staff administered and the OCAN has an additional self-administered section. The GAIN-Q3 MI can be staff or self-administered. From a systems planning perspective, and specifically concerning the implementation of a given tool or tools, it would be important to look at

the overall system of treatment and support holistically to determine what tool(s) are more relevant in what settings and when they can be optimally utilized in the context of a client's journey.

4.2 First Nations, Inuit and Métis (FNIM) Meeting

A 2-day dialogue session was held in October 2013 with FNIM service providers across Ontario to discuss the cultural appropriateness and potential adaptation of screening, assessment and outcome-oriented tools. The main goal of the dialogue session was to convene a group of key FNIM service providers to learn, share and discuss important aspects to consider when developing culturally-appropriate screening, assessment and outcome-oriented tools for the FNIM communities. The sessions included presentations on current work on the adaptation of various screening and assessment tools for the FNIM populations, as well as discussions on the cultural adaptation process and ideals for new tools.

It was concluded that the cultural adaptations of existing tools do not adequately address FNIM system needs with regards to culturally appropriate substance use and addiction treatment tools. Consequently, a proposal to develop a new trauma-informed substance use treatment screening and assessment tool for the FNIM populations was submitted and approved as part of the 2014-2016 DTFP package. This initiative will be a collaboration between CAMH and several agencies/communities that provide services to FNIM populations. The project aims to develop a new substance use treatment screening and assessment tool that is generated from the expertise that exists in providing service to FNIM populations. The tool will be trauma-informed as well as screen and assess for impacts of traumatic history and influence on current substance use.

4.3 Central/Coordinated Access Workshop

Several LHINs have moved to the "Central/Coordinated Access Model", which endorses a single, multi-service point of contact for clients accessing mental health and addictions services. In addition, various versions of central/coordinated access appear to be on the horizon or are being actively considered by other LHINs. As a result, a one-day workshop was held in March 2014 with key delegates from the Ministry, LHINs and mental health and addictions services to explore how best to integrate the new screening and assessment tools, including the GAIN-Q3 MI, and processes into the various central/coordinated access models. The objectives of the workshop were:

1. To provide an overview of models of coordinated access in the mental health and addictions sector and key findings from the research on these models
2. To describe several models of coordinated access for mental health and addiction services being implemented in Ontario
3. To highlight key issues related to coordinated access with respect to common mental health and addictions screening and assessment tools and processes

The workshop included presentations on current central/coordinated access initiatives by three LHINs and Oxford County, as well as discussions related to the implementation process of the staged screening and assessment, potential challenges and issues, and possible next steps within the context of central/coordinated access model. A recommendation made as an important next step was to conduct a review of the central/coordinated access models across the province including a literature review on evidence-informed practice.

5.0. Planning for Provincial Dissemination of the Staged Screening and Assessment Process

a. Adapting GAIN-Q3 MI ONT Implementation Guide

An implementation guide for the staged screening and assessment process (GAIN – SS CAMH Modified, MMS, POSIT, and GAIN Q3 MI ONT) is in development. This guide will support the training and implementation process across Ontario, and provides a reference in addition to the training sessions. With approval from Chestnut Health Systems, the guide includes adapted sections from the current GAIN Q3 and GAIN – SS manuals. Once completed, the implementation guide will be available in both English and French.

b. Development of the Tools and Related Reports

Feedback from the 2011-2013 pilot work suggested that a more detailed report of client's substance use history might be needed in certain circumstances to facilitate treatment planning. As a result, the substance use grids section contained in the larger GAIN I assessment (the most comprehensive and lengthy of the GAIN family of tools) has been embedded into the GAIN Q3 MI ONT. This allows the clinician to gather more depth of detail on substance use as well as treatment

history. This section is administered if required, with client responses dictating the appropriateness of administration.

The GAIN Q3 MI ONT has been integrated into the Drug and Alcohol Treatment Information System (DATIS) and is accessible via Catalyst interface. This allows for the auto-generation of numerous reports associated with the assessment that provide a strong foundation for treatment planning and referral. Reports include:

- Recommendation and Referral Summary Report (RRS) – a fully editable narrative report that summarizes the client's information and suggests prioritized treatment needs
- Personalized Feedback Report (PFR) – a client and clinician version are produced providing a foundation for a motivational-based treatment planning discussion
- Individual Clinical Profile (ICP) – a visual depiction of the level of complexity/need across all domains

All reports have been modified to the Ontario version of the assessment tool.

c. Translation Work of the Tool, Reports, and Manuals

All of the tools within the staged screening and assessment process, assessment reports, and the implementation guide will be available in both French and English.

6.0 Summary and Next Steps

This report summarizes the various aspects of additional pilot work concerning the staged screening and assessment protocol conducted between April 2013 and March 2014 and in continued preparation of provincial implementation with renewed funding for 2015-16. We presented highlights of the actual pilot data which complements the earlier report on the pilot work and showed the high enthusiasm for the new tools and process among the pilot agencies for their work with clients. We also looked more closely at the data from the two-staged screening process and lastly, we compared the results of a small experiment on self- versus clinician-administration of the GAIN Q3 MI, the core assessment tool poised for provincial implementation.

The pilot data shown here illustrate the potential value of the multi-level database (i.e., program, regional and provincial) that will accrue as a result of the provincial implementation process that lies ahead. While the Ontario treatment system current enjoys the benefits of the data collected by DATIS (e.g., age, gender, presenting problem substances, services received), the DATIS information is not sufficient to create a clinical and psychosocial profile of clients. This profile, or "case-mix", will be readily available in real-time with the anticipated staged screening and assessment tools illustrating, for example, complexity of the substance use profile and co-occurring mental health challenges, and overall "multi-morbidity" with physical health and social problem areas. One will also be able to profile, and cost, the service utilization pattern prior to a given treatment episode. This range of information will be extremely useful for program managers and treatment system planners and administrators to validate the appropriateness of client placement. For example, one will expect the profile of those clients in residential services to be more complex than those in community services and those in medical withdrawal management to be more complex than those in home, mobile or community withdrawal management services. This may highlight important gaps in the treatment continuum, for example there were no other options available, or the need for additional training and support on client assessment and treatment placement. Addressing a wide variety of other system-level evaluation questions will be possible for different sub-populations as well-illustrated in this report that shows major differences between male and female clients, the latter showing more severe profiles and a higher level of pre-treatment service utilization. Lastly, the level of clinical and psychosocial detail in the data will permit the determination of client-level outcomes if selected programs or regions of the province are able to implement a follow-up service such as was piloted in the 2010-2013 DTFP work (Rush, Rotondi, Chau et al., 2013c). While the outcome system that was piloted required some further research and development before it would be ready for provincial scale-up, a wide variety of lessons learned were reported on and detailed guidance provided for others wishing to move into this area using GAIN-like client data (Rush, Godinho, Chau et al., 2015). The Homewood Research Institute has recently applied this work in the development of a post-discharge monitoring system for Homewood Health Services (Costello, Ropp, Sousa et al., in press) providing yet another Ontario application for others to learn from. Aside from the value of having robust baseline and follow-up data on a wide variety of

substance use and other social and clinically-oriented outcomes over time, the inclusion of the measures of pre- and post-treatment service utilization would allow for important determination of the cost and potential cost savings associated with different treatment services and population sub-groups (e.g., savings related to costly emergency or hospital care).

With respect to the detailed analysis of the two-staged screening tools (now established for adults as the GAIN-SS and the Modified Mini Screen) the results are interesting and with important implications for provincial roll-out. The GAIN-SS is a well-established screening tool that covers several domains in a compact set of sub-scales and items (Dennis et al., 2006). It was developed for application in many settings, including screening for mental health challenges (internalizing and externalizing) in substance use services and screening for substance use challenges in mental health and other services. This flexibility in and of itself has value for system planning (i.e., providing a simple common metric of client complexity and severity across a range of services) in addition to its value at the individual level. At the individual level, the 5-item sub-scale on internalizing disorders (IDSsr), essentially mood and anxiety) has been validated in the Ontario context (Rush et al., 2013a) and a cut-off score of 3 out of 5 items was recommended as the criterion for further assessment, based on a goal of balancing sensitivity and specificity considerations. The authors, however, recommended a staged approach whereby a client meeting the criteria for further assessment on the 5-item IDSsc would then be screened with a "second stage" mental health screening tool that would provide more diagnostic-specific information which would further indicate the need for a mental health assessment. The aim is to accumulate an increasing level of detail on mental health challenges so as to facilitate a referral while at the same time making maximum use of scarce and costly resources for a full psychiatric assessment. In some areas of the province such resources are very difficult to access, especially psychiatric assessment provided by a psychiatrist.

Our pilot results show that, given a very high level of mental health co-morbidity in the treatment population, most clients scored in the high range of the IDSscr sub-scale (only about 11% below 3 and 24% below 4). Therefore, by using that sub-scale alone the large majority of clients would be signaled for mental health assessment. Some additional "filtering" is provided by the second stage screener. At a score of 2 or 3 on the IDSsr sub-scale almost no clients met the cut-off for psychiatric assessment on the PDSQ or the MMS combined, or the MMS alone. In the language of

screening tests these would be considered “false positives”. It is not until one uses a cut-off of 4 or 5 on the IDSscr that one sees a significant portion of clients also meeting the criteria for further assessment based on the second stage screener (e.g., 50% at a score of 4).

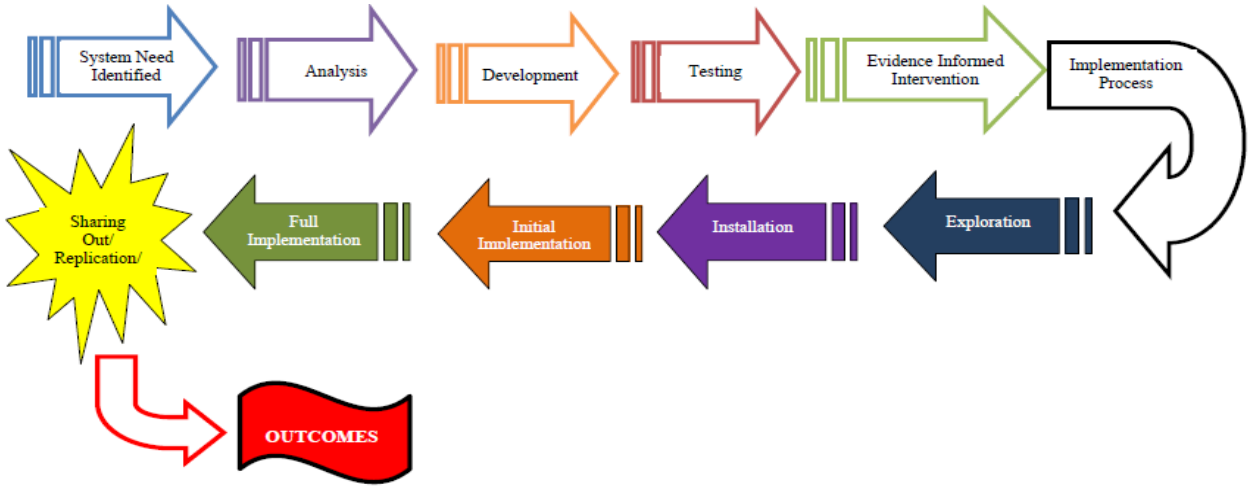
What are the implications for more widespread application of these tools across the Ontario substance use treatment system? First, the results should be replicated on a larger sample as data accumulate in the provincial database. Data also should be examined separately for males and females given the other data shown here on the higher complexity of female clients. Additional analyses by age would also be appropriate. Second, the results suggest that if a score of 3 was used on the IDSscr to signal the additional application of the second stage screener this would indicate use of the second screener in about 90% of clients to gain more collaborating information. However, at a score of 4 on the IDS scale the use of the 2nd stage screener would be very highly recommended before proceeding to a full mental health assessment. Local context and availability of mental health assessment ans treatment resources would be relevant in choosing the cut-off. Further to this, however, rather than recommend strict adherence to set of cut-offs on the two screening tools for further mental health assessment, it would be better to see each of the two tools as contributing some unique and complimentary information to the assessment of co-occurring mental health challenges and, therefore, the need for referral or in-house detailed mental health assessment. The MMS will provide more diagnostic information than that provided by the IDSscr alone. It’s important also to remember that the GAIN-SS contains another mental health sub-scale on externalizing disorders (e.g., attention-deficit, behavioural challenges) as well as the individual “CAMH-items” (e.g., eating disorders, problem gambling) all of which contribute information not covered by the MMS. Further, the GAIN Q3 MI ONT contributes additional information, the sum total of which complements the administering clinician’s exploration of previous treatment, current treatment including medication and the client’s motivation to seek help for challenges in the mental health area.

A wide range of other details were investigated by the project team in 2013-14 and in support of provincial implementation. Most importantly, we demonstrated the feasibility of self-administration of the GAIN Q3 MI ONT in a group or individual context, thus addressing one of the major concerns raised in the initial pilot work concerning potential negative impact on waiting time

to treatment. Several recommendations in this regard are noted in that sub-section of the report, including the need for development of a self-administered version of the tool itself. The foundation was also laid for lending support as needed to the development of an Aboriginal, culture and trauma-based assessment tool and for working to best integrate the staged screening and assessment tools and processes into existing and emerging central/coordinated access models across the province.

In 2013-14, the research team began to work closely with an emerging CAMH Implementation Support Team being developed to roll out the staged screening and assessment package based on the principles of implementation science (Fixsen et al., 2005) and building upon the experience of the Provincial Services Support program (PSSP) in the Systems Improvement through Service Collaboratives (SISC) initiative. Figure 6.0A provides a conceptual framework for how the extensive research and development that has been undertaken with respect to the staged screening and assessment process moves forward to a new phase of implementation and evaluation. This demonstrates that, through the DTFP, we have been able to close what is normally a significant gap between the time that evidence-informed practice is developed and when it comes to fruition within services.

Figure 6.0A. Staged model of implementation of evidence-based practice



To ensure effective implementation, it is important that "spread" of the new package of screening and assessment tools be informed by evidence-informed models of implementation. Using the National Implementation Research Network (NIRN)'s implementation science approach (Fixsen et al.,

2005) allows a strong emphasis on purposeful implementation processes to support fidelity and sustainability. This includes a staged approach to implementation that goes beyond one-off, didactic training and extends to actively supported implementation. Implementation strategies include, for example, a staged approach, assessment of organizational readiness, key "levers" that facilitate implementation as well as identified challenges and specific goal setting.

Planning and staffing the Implementation Team has laid the foundation for a group of implementation projects, including the provincial refresh of the old ADAT package with the new staged screening and assessment package, as part of the CAMH proposal for the DTFP funding 2014-16. This team is also concurrently supporting the Ontario-wide implementation of the client perception-of-care tool, the OPOC-MHA. The team consists of various functional roles that have proven beneficial in supporting research-driven implementation, including capacity related to coordination, coaching, knowledge exchange, and evaluation. Team members have attained trainer-level certification on the assessment tool so as to support fidelity implementation. As noted above, a comprehensive implementation guide is being developed to detail the steps for implementing the staged screening and assessment process. This guide will include foundational principles of the addiction system on which the process is being implemented, details of the tools within the staged process, guidance on implementation, consideration related to health equity, and expectations around fidelity implementation.

Infrastructure development *vis a vis* DATIS/catalyst and Chestnut Health Systems is also well underway. A foundation has also been laid with the MOHLTC and the Local Health Integration Network (LHIN) mental health and addiction leads across the province in order to provide the required leadership at the policy and planning levels that will support the on-the-ground work ahead with Ontario's substance use treatment providers. The Ministry having recently mandated the new process provides some impetus for leadership to actively engage in implementation.

Importantly, implementation work will also be carefully integrated with several other provincial processes including central/coordinated access models now being widely implemented across Ontario. A comprehensive evaluation plan will also be prepared that assesses implementation processes and outcomes at multiple levels (client, clinician, program and system). Importantly, agencies serving FNIM communities/populations may also decide to build capacity to use the tools

and would certainly be supported in the process. This would allow services the option to use the tools if and when appropriate for an individual client.

The implementation work currently underway includes LHIN-level planning that accounts for the context of how people access treatment and support in each area. It is also important that the planning account for other tools and processes already in place, such as OCAN and LOCUS. Discussion related to the relationship between such elements is taking place at both local and provincial levels. A Health Equity Impact Assessment is also in the preliminary stages that will inform implementation approaches at the LHIN and agency level, encouraging mindfulness to how diverse populations may differentially experience the tools. The implementation team is also developing a comprehensive evaluation plan that will examine both implementation and intervention variables. System change of this scope will occur over time; there will be a significant period of supported transition from old to new practices. The intended end result will be enhanced screening and assessment processes, better treatment planning, more informed matching of clients to the most appropriate level of care, and a better understanding of the needs and complexities faced by those seeking service in Ontario's addiction sector.

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