

Client Risk Assessment Scale (CRAS) Summary Report

CRAS Database Review

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PURPOSE OF REPORT

This report will summarize the outcome of risk evaluations conducted over the last 3 years from 2014 to 2016 with Brain Injury Services clients.

BACKGROUND

A risk assessment tool was designed at Brain Injury Services, named “Client Risk Assessment Scale” or CRAS, to help identify individuals in service which risk management issues in 8 areas including:

- Falls
- Skin
- Health
- Behaviours
- Skills
- Mental
- Health
- Addictions
- Vulnerability

The CRAS is a rating scale completed by staff that identifies Low-Moderate-High levels of risk in each of the areas identified above. In some cases, other standardized tools are used as a basis for making a CRAS rating. For example, the Adaptive Behaviour Scales – Residential and Community Version 2 (ABS-RC:2) subscales and part scores are used with cutoff scores to provide rates for “Behaviour” and “Skills”. Falls and Skin risk also rely on other records and tools to help objectify the ratings on the CRAS in those domains (see Appendix for description of each domain and scoring).

CLIENT EVALUATED

Over the 3 years a total of 255 CRAS evaluations were completed by staff of 149 clients. The distribution of evaluations by the 9 services are provided below in figure 1.

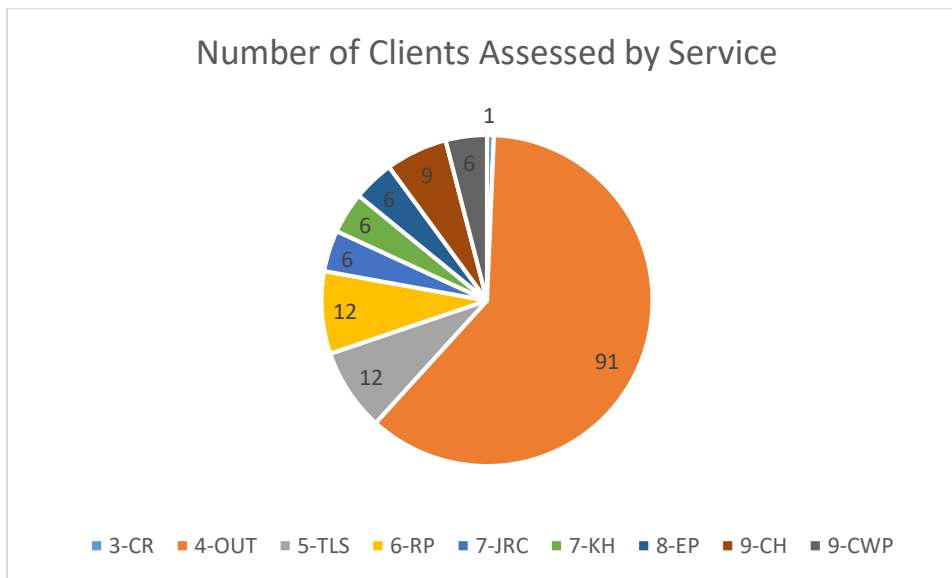


Figure 1: Number of Clients Assessed by 9 Services Areas from 2014-2016

A breakdown of clients assessed each year are provided below in Table 1. As can be seen, many of the assessments, 44%, were conducted in Service “4-OUT”, which is Brain Injury Services’ Outreach service that services higher functioning individuals who, in most cases, are living on their own.

Table 1. Number of Clients Assessed Per Year by Service

Service	2014	2015	2016	Grand Total
3-CR		1		1
4-OUT	45	40	37	122
5-TLS	12		7	19
6-RP	9	7	11	27
7-JRC		6	7	13
7-KH	11	9	9	29
8-EP	1	4	6	11
9-CH	3	7	7	17
9-CWP	3	7	6	16
Grand Total	84	81	90	255

RISK AREAS

Results of assessments for the agency overall complied over the 3 years for each of the risk domains are given below.

Table 2. Risk Levels Across Domains for Years 2014 to 2016

Domain	Level of Risk				Total
	Low	Moderate	High	Very High	
Fall Risk	67%	25%	8%		100%
Falls Severity	93%	6%	1%		100%
Skin Risk	72%	18%	6%	3%	97%
Skin Severity	93%	7%	0%	0%	100%
Health Risk	81%	12%	7%		100%
Health Severity	18%	26%	56%		100%
Behaviour Risk	13%	17%	70%		100%
Behaviour Severity	81%	9%	9%		100%
Skills Risk	36%	35%	30%		100%
Skills Severity	93%	7%	0%	0%	100%
Mental Health Risk	66%	31%	3%		100%
Mental Health Severity	54%	16%	30%		100%
Addiction Risk	94%	0%	5%		100%
Addiction Severity	96%	0%	3%		100%
Vulnerability Risk	54%	27%	18%		100%
Vulnerability Severity	57%	21%	22%		100%
Average Risk	72%	27%	0%		100%

Organized by highest-to-lowest risk level is given in the in table 3.

Table 3. Risk Across Domains Organized by Severity of Risk

Domain	Level of Risk				Total
	Low	Moderate	High	Very High	
Behaviour Risk	13%	17%	70%		100%
Health Severity	18%	26%	56%		100%
Skills Risk	36%	35%	30%		100%
Mental Health Severity	54%	16%	30%		100%
Vulnerability Risk	54%	27%	18%		100%
Vulnerability Severity	57%	21%	22%		100%
Mental Health Risk	66%	31%	3%		100%
Fall Risk	67%	25%	8%		100%
Skin Risk	72%	18%	6%	3%	97%
Health Risk	81%	12%	7%		100%

Domain	Level of Risk				Total
	Low	Moderate	High	Very High	
Behaviour Severity	81%	9%	9%		100%
Falls Severity	93%	6%	1%		100%
Skin Severity	93%	7%	0%	0%	100%
Skills Severity	93%	7%	0%	0%	100%
Addiction Risk	94%	0%	5%		100%
Addiction Severity	96%	0%	3%		100%
Average Risk	72%	27%	0%		100%

The top 6 domains of risk are highlighted in graph and are: Behaviour, Health, Skill Deficits, Mental Health, and Vulnerability.

These data can be seen graphically in Figure 2 below.

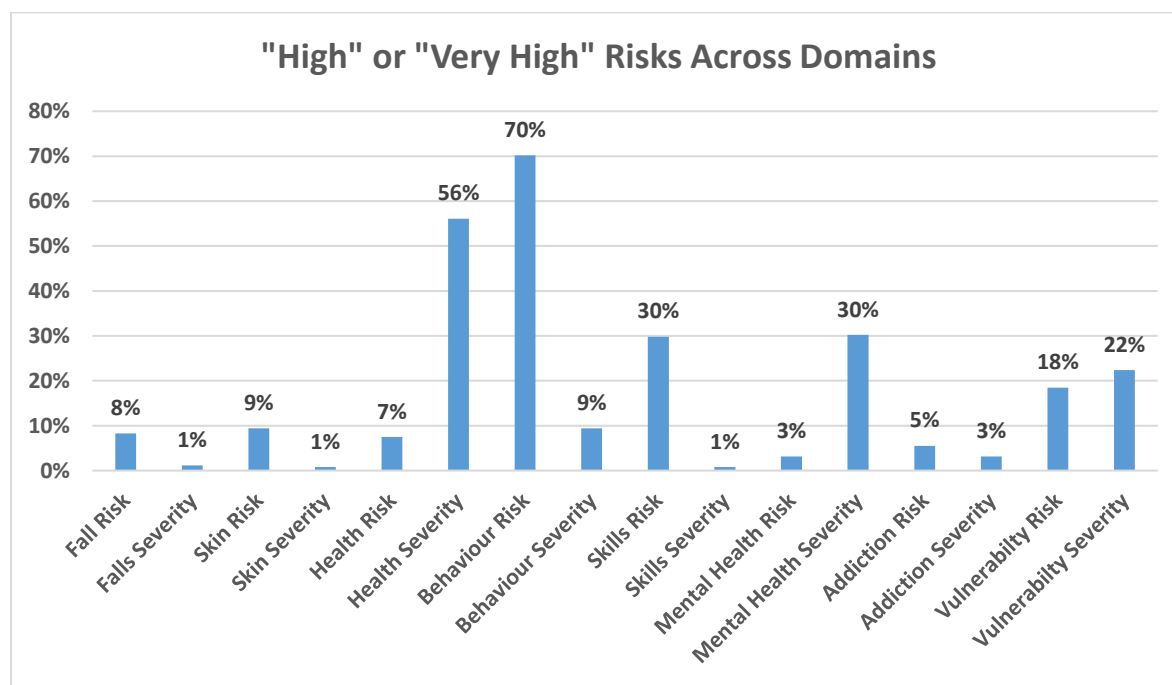


Figure 2. Percentage frequency of Assessment with High or Very High Risk across Domains.

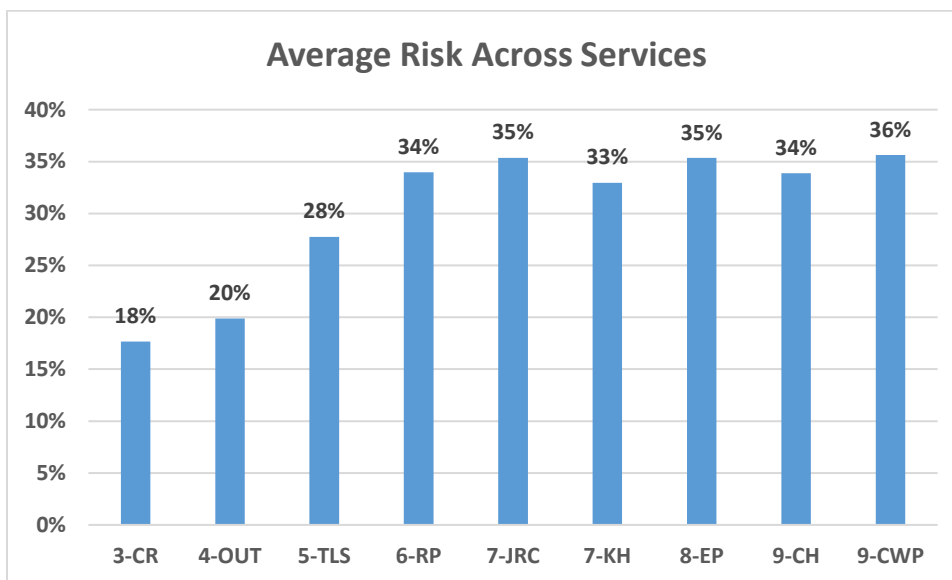
YEARS

In order to grasp the overall result across years and the different services, we computed an average risk score for each assessment, which was the arithmetic mean across all scales. This yielded a percentage score representing the percentage risk compared to a maximum risk of 100%. There was no statistically significant change in risk level over the years 2014 to 2015.

Years	Average of Total Risk	Std Dev of Total Risk	# of Assessments
2014	27%	12%	84
2015	26%	10%	81
2016	27%	10%	90
Grand Total	27%	11%	255

SERVICES

Statistically significant differences (ANOVA F-test, $p < .001$) across services were found (see figure below).



As expected, the more independently living clients had lower risk scores (CR, OUT) than those living in group home settings (RP, JRC, KH, EP, CH, CWP) with intermediate risk levels in those living in the apartment program (TLS).

APPENDIX – DESCRIPTION OF SCALE DOMAINS AND SCORING

	RISK DOMAIN	DESCRIPTION	SCORE RANGE	PERCENT SCORE
1	Fall Risk	3 Level rating of risk of fall (Low, Moderate, High).	0-3	0-100%
2	Falls Severity	4 level rating of level of medical attention given in last 12 months.	0-4	0-100%
3	Skin Risk	4 Level rating of risk of fall (Low, Moderate, Very High).	1-4	0-100%
4	Skin Severity	5 level rating of level of medical attention given in last 12 months.	0-4	0-100%
5	Health Risk	5 level rating of problems with medication taking (0-4).	0-4	0-100%
6	Health Severity	5 level rating of kind of medications (prescribed, PRN) and problems.	0-4	0-100%
7	Behaviour Risk	8 ABS-RC:2 behaviour domains rated Below Average, Average, Above Average.	0-16	0-100%
8	Behaviour Severity	8 ABS-RC:2 behaviour domains rated 3 levels based on BSP (none, past, present).	0-16	0-100%
9	Skills Risk	10 ABS-RC:2 behaviour domains rated Below Average, Average, Above Average.	0-20	0-100%
10	Skills Severity	10 ABS-RC:2 behaviour domains rated 3 levels based on BSP (none, past, present).	0-20	0-100%
11	Mental Health Risk	5 level rating of level of psychiatric problems & medications; 5 level rating of medications.	0-8	0-100%
12	Mental Health Severity	5 level rating of level of psychiatric services & medications; 5 level rating of types of medications.	0-8	0-100%
13	Addiction Risk	5 level rating of 4 types and risk of different addictions.	0-16	0-100%
14	Addiction Severity	5 level rating of impact of 4 types of addictions.	0-16	0-100%
15	Vulnerability Risk	5 level rating of vulnerability.	0-4	0-100%
16	Vulnerability Severity	5 level rating of type of intention required when vulnerable.	0-4	0-100%
	Total	Total Score	1-151	0-100%
	Average Risk	Average of Percent Level of each item.	N/A	0-100%