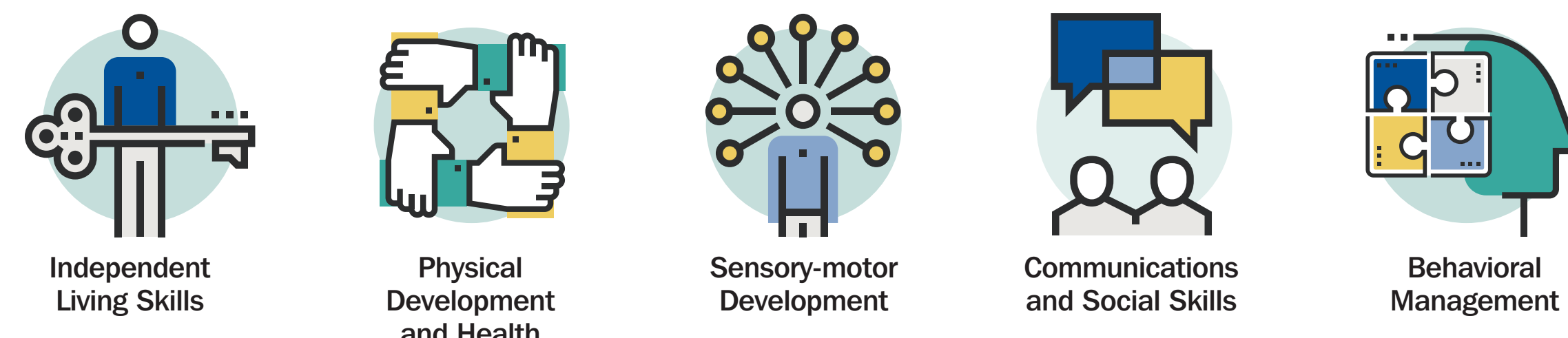


## INTRODUCTION

- Acquired Brain Injury (ABI) currently affects about 1.5 million Canadians, and each year an additional 165,000 people sustain an ABI.<sup>1</sup>
- ABI rehabilitation is complex due to the vast differences in cause, severity, location, duration, and progression of ABIs.<sup>2</sup>
- Effectiveness of rehabilitation also depends on a variety of factors, such as treatment setting, provider expertise, treatment type and intensity, and measurement tool.<sup>3,4,5</sup>
- In 2014, the Ontario Ministry of Health and Long-Term Care mandated Vista Centre Brain Injury Services (VCBIS) to administer the International Resident Assessment Instrument (InterRAI) – Community Health Assessment (CHA)<sup>6</sup> with its Personal Support and Independence Training (PSIT) program clients annually and after significant change in health.
- In 2016, PSIT workers initiated the use of a variety of rubrics developed in-house to assess clients' on-going progress with their goals.
- Management from VCBIS sought the assistance of graduate students from the University of Ottawa Program Evaluation diploma program to conduct an evaluation of the PSIT program from Sept. 2018 to April 2019.

### PSIT PROGRAM COMPONENTS INCLUDE TRAINING IN:



## OBJECTIVES

- Examined specific PSIT program service delivery methods, a core service for VCBIS, and identified strengths and/or weaknesses in how the program is currently being implemented.
- Through a process evaluation approach, the focus of this evaluation was on the activities and output portions of the PSIT program, wherein stakeholders were involved in the evaluation design, data collection, and an opportunity to comment on the interpretation of the evaluation analysis.
- The following evaluation questions were developed to assess the implementation of the PSIT program:
  - Question 1:** To what extent is information from the assessment tool (CHA) being appropriately used to develop client Individual Support Plans (ISP) and assess on-going needs?
  - Question 2:** In what ways is there good alignment between the expectations outlined in the client's ISP and the reality of the PSIT service delivery method?

## METHODS

### MIXED METHODS

#### Quantitative

- Agency data (client demographics, ISPs, Rubrics)
- Agency document review (InterRAI – CHA)
- Client feedback survey (n=57)
- PSIT worker survey (n=10)

#### Qualitative

- Focus group interview (PSIT workers) (n=10)
- Survey comments (Clients and workers) (n=67)

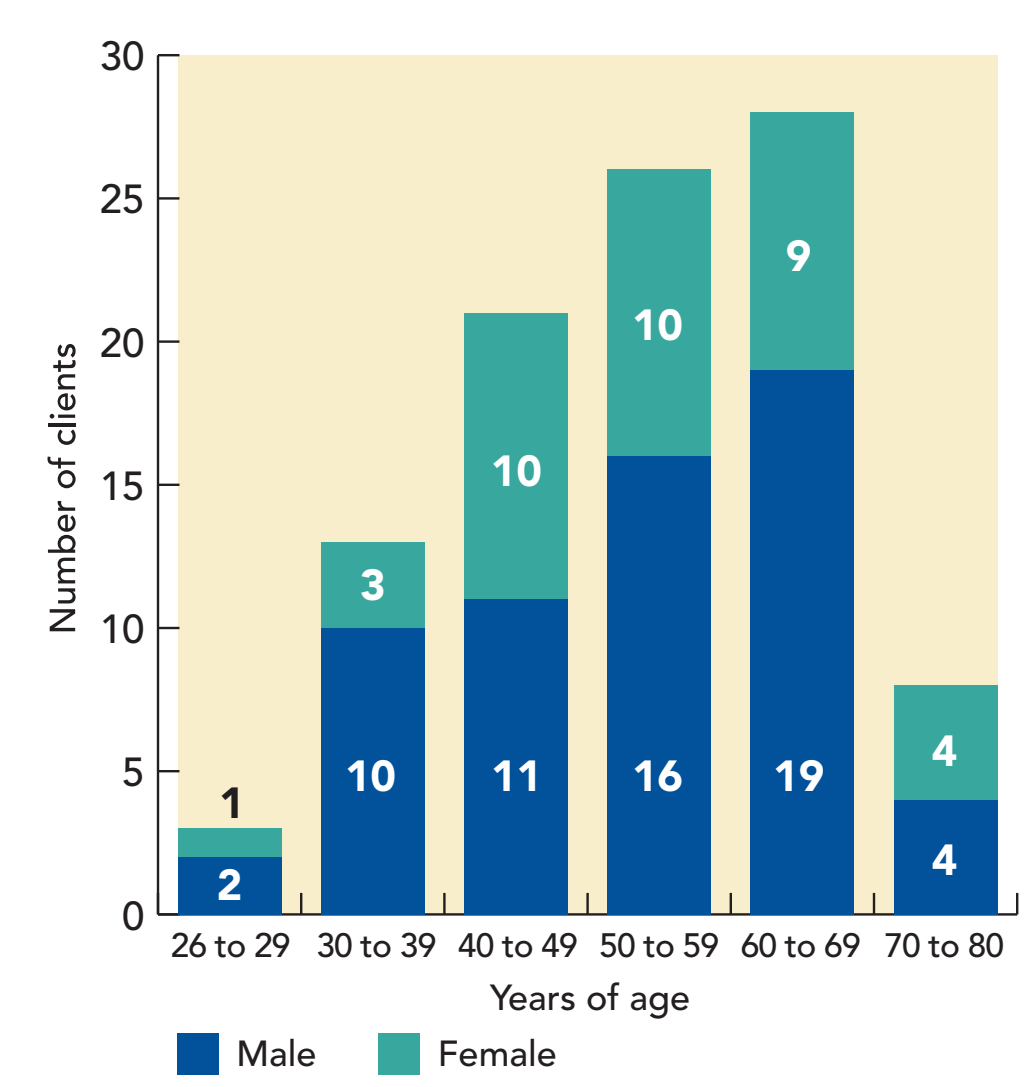
## ANALYSIS

- A mixed-methods approach was used, synthesizing both quantitative and qualitative data collected from multiple data sources of information to answer the evaluation questions.
- Descriptive statistics for the data were computed, and correlational and linear regression analysis were used to explore the relationship between service delivery intensity and the PSIT workers.
- Qualitative analysis of the focus group interview audio recording and notes was completed independently by both evaluators. A thematic analysis was conducted, wherein the focus group interview transcript was coded to extract important themes and ideas from PSIT workers.

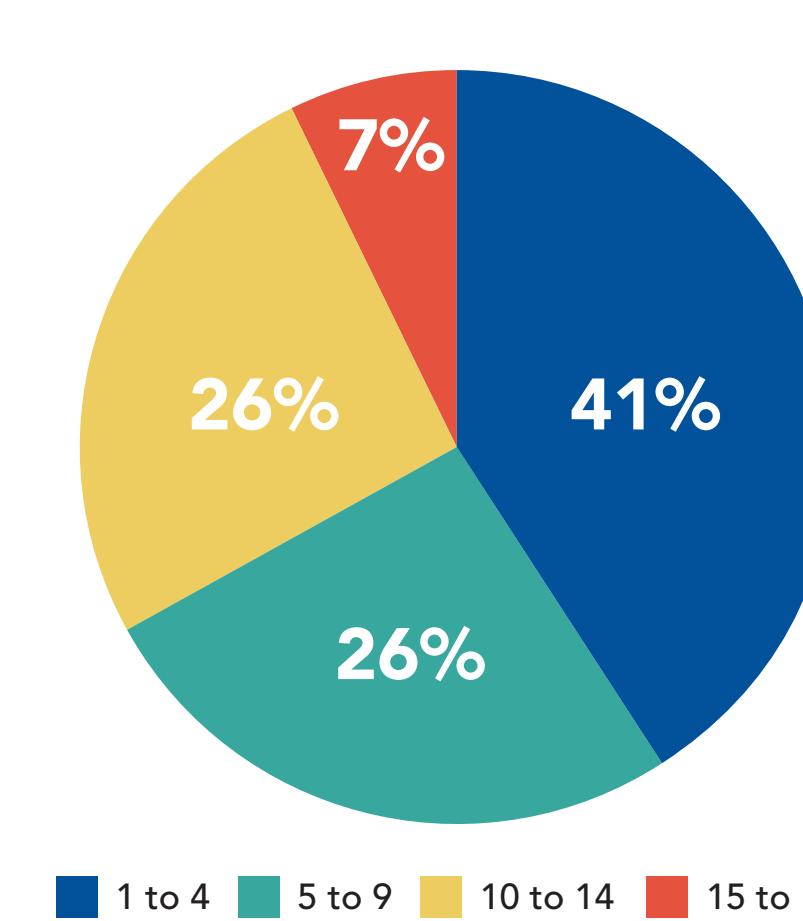
## RESULTS

### DEMOGRAPHICS

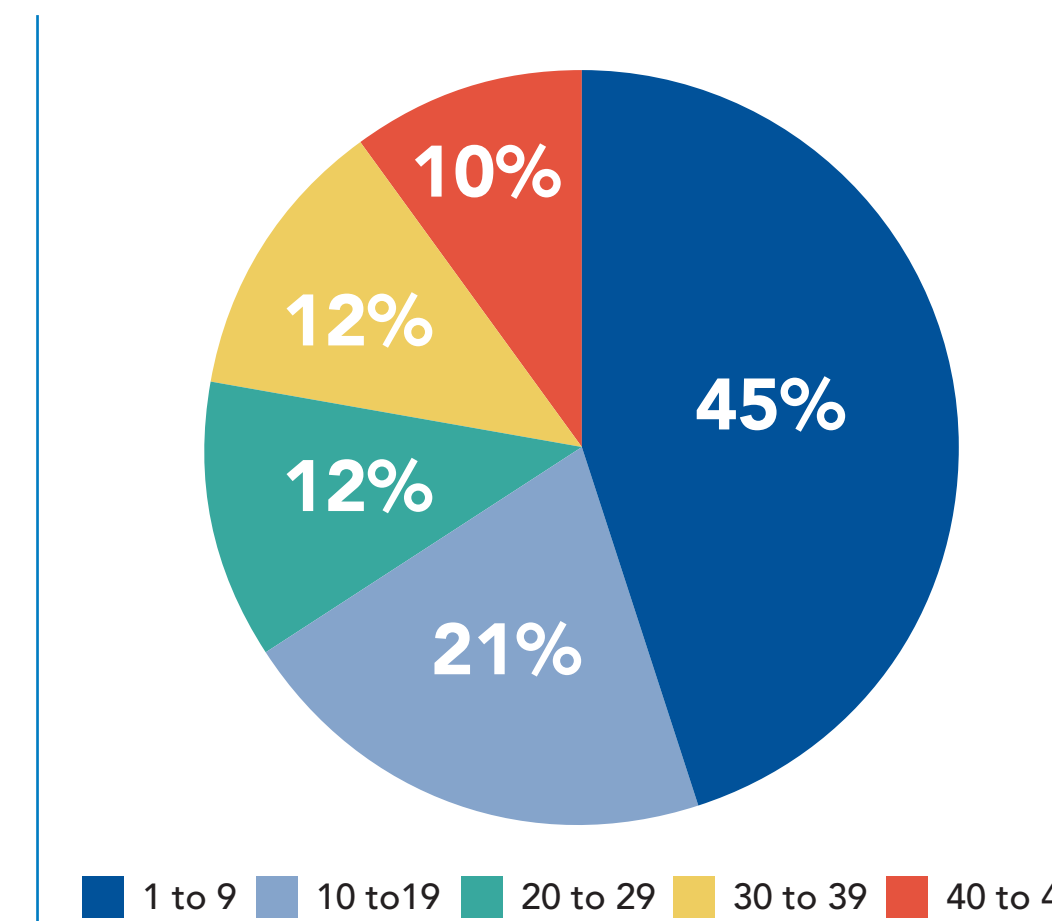
#### PSIT CLIENT AGE AND GENDER (n=90)



#### YEARS WITH VCBIS



#### YEARS SINCE BRAIN INJURY



NOTE: n=54 for both above pie charts

## QUESTION 1

To what extent is information from the InterRAI-CHA assessment tool being used to develop client ISPs and assess on-going needs?

Chart review (n=25) show that:

- 100% of CAPs triggered in the CHA are incorporated into client ISP:
  - Rubrics to work on specific areas of independence training
  - Recommendations the follow-up with medical care
  - Client chooses NOT to work on CAP triggered
- Method of Assigning Priority Levels (MAPLe) scores are not indicated on the ISPs

#### Difficulties with CHA

- It takes a long time to administer during the primary interview and assessment (ranging from 40 minutes to 3 hours)
- Clients' self-assessment limits the accuracy of CHA scores
- The CHA is not specific to ABI clients and does not lend to maintenance and improvement of independence for individuals with ABI.
- PSIT workers also expressed that their level of training limits their ability to address specific problem areas identified by the CHA.

How do changes in CAPs triggered over time compare to changes in rubric levels over time?

- 100% of clients (n=25) triggered the CAP Cognitive Loss (2017 and 2018)
  - Level triggered for cognitive loss did not change over time for any clients
  - Several other triggered CAPs did change over time, both in level and in type of CAP (e.g., physical activity, mood)
  - Rubric levels were measured for a period of 6 months up to 2 years
  - Most common: levels stayed the same or increased 1 level
  - Clients worked on 1 to 4 rubrics at a time

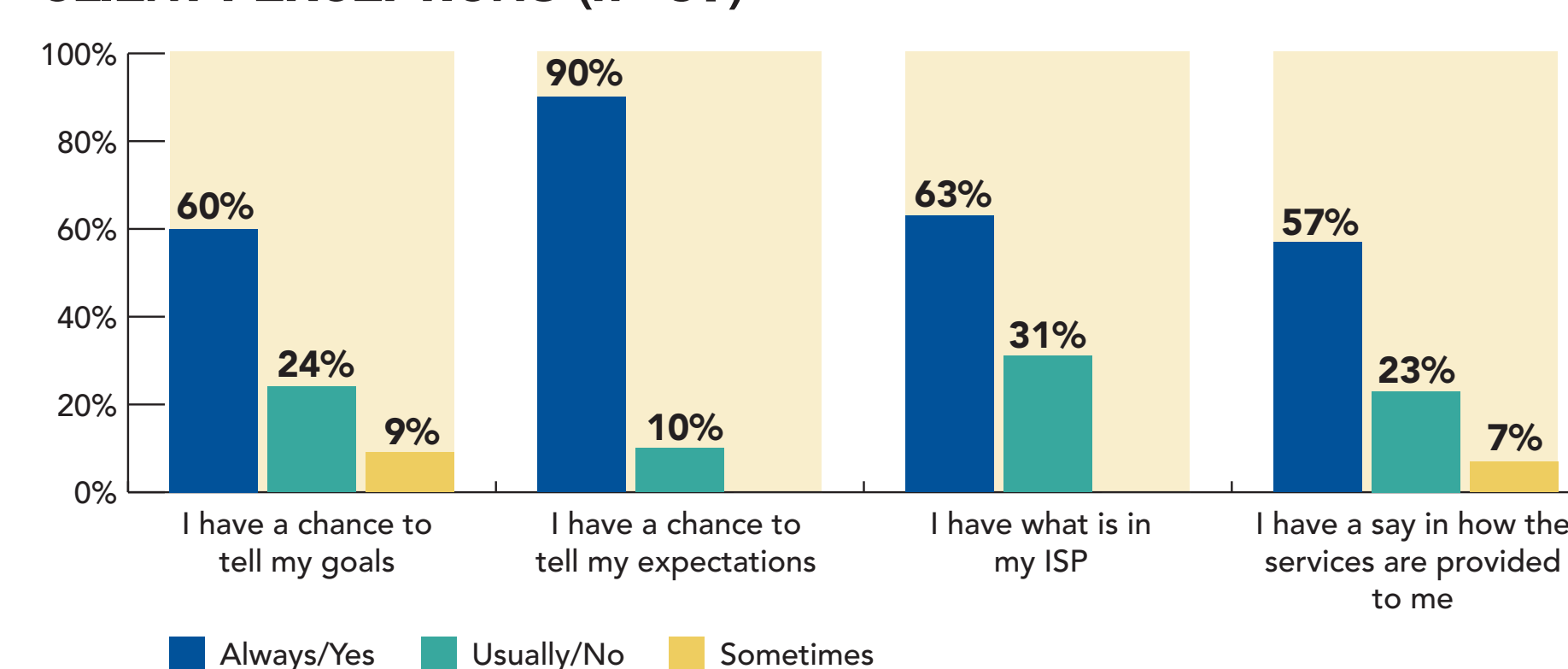
#### The PSIT worker focus group (n=10) shows that:

- Difficult to see improvement over a short period of time (3-month intervals).
- Rubric implementation is subjective and inconsistent measurements.
- Rubrics not sensitive enough to measure small changes in functioning for ABI population.
- PSIT workers have difficulty in justifying client care to management when the assessment tools used do not demonstrate change

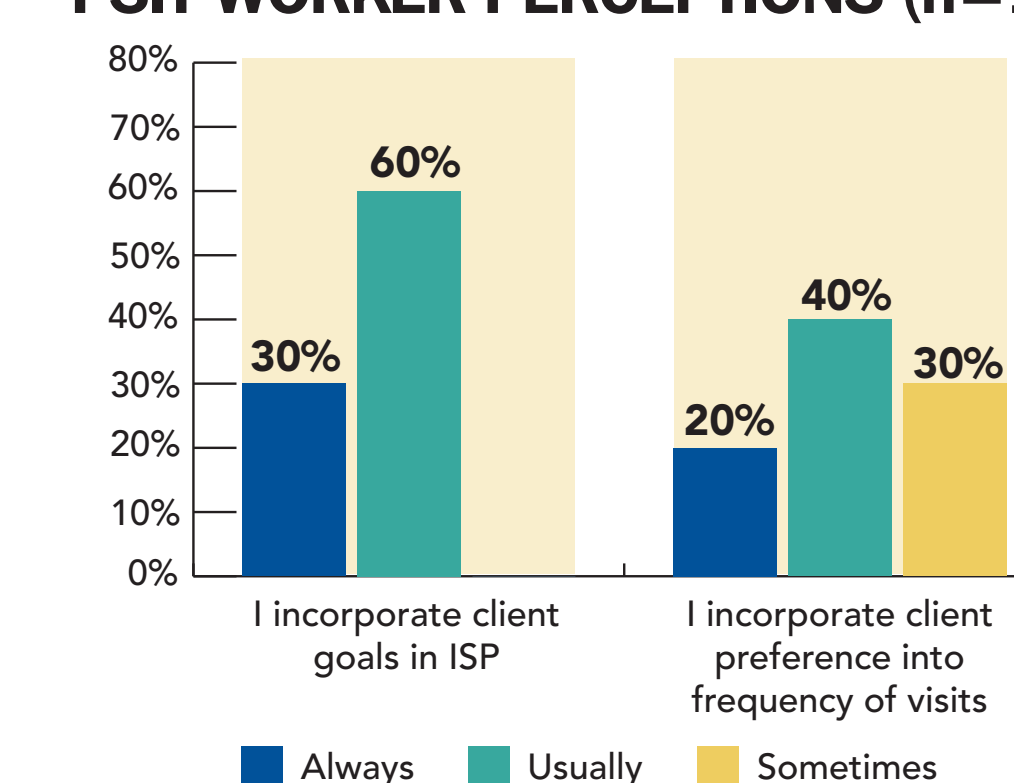
## QUESTION 2

In what ways is there good alignment between the expectations outlined in the client's ISP and the reality of the PSIT service delivery method?

#### CLIENT PERCEPTIONS (n=57)



#### PSIT WORKER PERCEPTIONS (n=10)

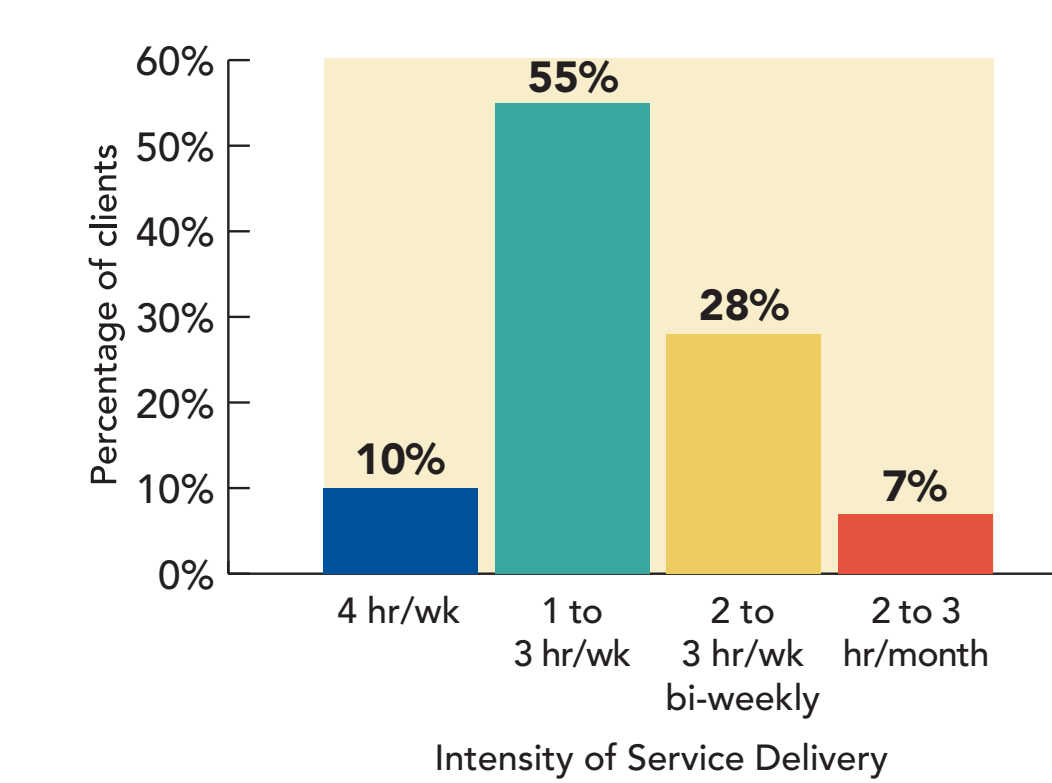


The PSIT worker focus group (n=10) shows that:

- PSIT workers expressed that they have difficulty prioritizing client goals/needs while still incorporating CAPs into the client ISPs
- Most PSIT workers are not trained to provide skills or address difficulties related to cognitive decline or ABI-related cognitive symptoms

## QUESTION 2 (continued)

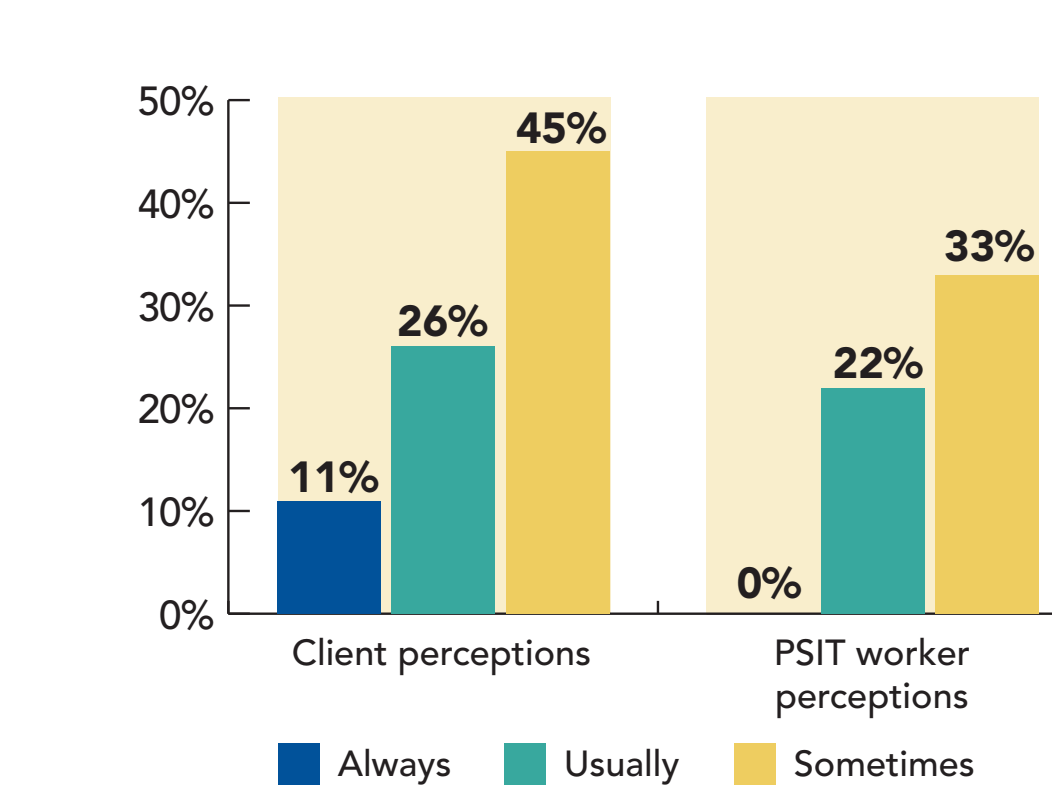
### INTENSITY OF SERVICE DELIVERY (n=70)



The PSIT worker focus group (n=10) shows that the frequency and number of hours of service is affected by:

- Program budget. Whether the program budget allows for service delivery frequency/length
- Exchanges between PSIT worker and management. Whether PSIT workers justify PSIT service to management
- Client's expressed need for service PSIT worker experience. PSIT worker's judgement of frequency and intensity of the program based on prior experience

### ARE PSIT WORKERS REVIEWING ISPS WITH CLIENTS REGULARLY?



Review dependent on many factors:

- Clients not interested in reviewing ISPs every 3 months
- Client anxieties towards lack of progress shown
- Some clients prefer to review on yearly basis unless there is significant change.

## DISCUSSION

To what extent is information from the assessment tool (CHA) being appropriately used to develop client Individual Support Plans (ISP) and assess on-going needs?

- When developing client ISPs, the PSIT workers incorporate both client goals and specific clinical assessment protocols (CAPs) identified from implementing the CHA with clients, however the PSIT workers prioritize client goals.
- Majority of clients feel that their goals are incorporated into their ISP.
- PSIT workers feel that rubrics are useful for measuring on-going progress in client's functional levels in well-defined tasks, but identified problems with the number of different rubrics in use and the lack of standardization of rubric design and scoring among PSIT workers.
- PSIT workers have identified that the CHA has several weaknesses when implemented with this ABI population that limit how useful it is to assist in developing client ISP and measure outcomes.
- CHA does not seem to be sensitive enough to measure changes in areas such as cognitive loss, which is key to ABI rehabilitation.
- PSIT workers also expressed confusion regarding how certain CAPs "triggered" from the CHA, such as communication and cognitive loss, are to be addressed in clients' ISPs.

In what ways is there good alignment between the expectations outlined in the client's ISP and the reality of the PSIT service delivery method?

- The workers find that 3 months is too short a time period to sufficiently measure progress with rubrics, especially when some clients receive visits once a month.
- Clients themselves do not feel the need to review their ISP this frequently either. This seems to be in part due to minimal progress apparent in this short time period.
- Intensity of service delivery (i.e., number of hours per week or month) allocation does not seem to have a consistent and goal-orientated method. Factors such as client's severity of injury or time since injury could be considered when determining service delivery.

1. Brain Injury Canada. (2014). *Brain injury can happen to anyone*. Retrieved from <https://www.braininjurycanada.ca/wp-content/uploads/2014/07/Brain-Injury-Can-Happen-to-Anyone.pdf>

2. Van Heugten, C., Wolters Gregório, G., & Wade, D. (2012). Evidence-based cognitive rehabilitation after acquired brain injury: A systematic review of content of treatment. *Neuropsychological Rehabilitation*, 22, 653-673. <https://doi.org/10.1080/09602011.2012.680891>

3. Cioe, N. J., & Seale, G. S. (2018). Brain Injury Rehabilitation Outcome Measurement: Challenges and Future Directions. *Journal of Head Trauma Rehabilitation*, 33, 375-377. <https://doi.org/10.1097/HTR.0000000000000406>

4. Cioe, N., Seale, G., Marquez de la Plata, C., Grot, A., Gutierrez, D., Ashley, M., Connors, S. (2017). *Brain Injury Rehabilitation Outcomes: A Position Paper of the Brain Injury Association of America*. Retrieved from <http://www.biausa.org/biaa-position-papers.htm>

5. Smeets, S. M. J., Ponds, R. W. H. M., Verhey, F. R., & Van Heugten, C. M. (2012). Psychometric properties and feasibility of instruments used to assess awareness of deficits after acquired brain injury: A systematic review. *Journal of Head Trauma Rehabilitation*, 27, 433-442. <https://doi.org/10.1097/HTR.0b013e3182242f98>

6. Morris, J. N., Berg, K., Bjorkgren, M., Declercq, A., Finne-Soveri, H., Fries, B. E., ... & Hirdes, J. P. (2010). *InterRAI Community Health (CHA) assessment Form and User's Manual and Related Materials*, 3.1. Rockport, Massachusetts: Open Book Systems