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ASSESSMENT OF A PERSON'S ABILITY TO FUNCTION AT WORK

WSIB Research Grant #98 0028

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ASSESSMENT OF A PERSON'S ABILITY TO FUNCTION AT WORK
S. Strong, S. Baptiste, J. Clarke, D. Cole, M. Costa, R. Reardon, H. Shannon, S. Sinclair

EXECUTIVE SUMMARY

INTRODUCTION:

Many decisions about an individual's return to work (RTW), entitlement to benefits, and access to supports and rehabilitation services rely on an assessment of their ability to function at work (Functional Assessment = FA¹). Until this study, we have known little about how well FAs are able to predict an injured worker's ability to function at work or how useful they are for decision-making. Data about how FAs are being conducted and used in Ontario have been limited. This study documented a profile of varied FA practices in Southern Ontario, explored how the FAs which were performed within a cohort of injured workers in employer and WSIB payment systems were perceived and used, and what subsequently occurred.

METHODS:

A combination of qualitative and quantitative strategies were used in this study, which employed multiple methods to generate an in-depth understanding of practice patterns and the underlying factors that influence the usefulness of FAs. These methods obtained a variety of perspectives by:

- documentation of FA practices from 23 providers in Southern Ontario, and description of the similarities and variation in their approaches, based on
 - visits to their organizations
 - questionnaires completed by FA providers
 - interviews with individual assessors
 - reviews of FA reports for injured workers followed by the study
- documentation of the sequence of events post-FA, the role of the FA, and subsequent outcomes such as the worker's occupational and benefit status, impairment levels, general health. In addition, the perspectives of both the workers and the report users on the FA's usefulness and ability to represent the worker's ability to function at work at time of FA was obtained, based on
 - telephone interviews with a cohort of 67 injured workers (recruited after their FA at the participating provider sites December 1999 – December 2000) at two and eight months post-FA
 - telephone interviews with 103 individuals who used those workers' FA reports
- four focus groups each involving a mix of stakeholders, including injured workers, WSIB staff, employers (occupational health, human resources, health and safety personnel), FA and Labour Market Re-entry providers, explored shared views essential elements for the 'best' FA process.

¹ FAs are performance-based assessments conducted by rehabilitation disciplines designed to answer whether an individual can perform a particular job or type of jobs or pursue a vocational goal. They are not to be confused with WSIB's "Functional Abilities Form for Timely Return to Work." In some places, the term "FCE" (functional capacity evaluation) is used to denote FAs and is considered interchangeable for this study.

Data from the above-mentioned sources and literature review findings were synthesized to develop the *McMaster Model: Towards an Optimal Process*.

RESULTS:

FA Provider Profile and Practices: The 23 FA provider organizations which participated in the study included a range of ownership structures, such as large corporations operating at the provincial or national level, hospital-linked for profit centres and smaller independently-owned operations. Most had existed for more than six years. The majority had not been involved in research or academic programs up until this point. Although some offered solely assessment services, the greater number offered a range of assessment, treatment, as well as work re-entry and case management programs. Many were increasing services to employer markets.

Of the individual assessors who participated, there were approximately equal numbers of occupational therapists (OTs), physiotherapists (PTs) and Kinesiologists (32%, 30% and 30% respectively), as well as a few others disciplines, (e.g., physicians, nurses, and sports injury managers). Most had been doing FAs for between three and nine years, but many had moved between organizations during this time. In the majority of cases, the FA was conducted in teams: PT performed musculoskeletal screens, OT or Kinesiologist did the performance-based testing. Assessors differed in their level of knowledge about FAs and the strategies used to overcome the limitations of these tools.

Generally, FAs were conducted in a clinic, and completed in one-two days; the average cost was \$900 at the time. All providers performed work-component testing, with a minority relying solely on commercially marketed systems to do this. Most used a battery of methods involving performance-based tasks and self-report measures. About a quarter of reports included work simulation activities. All FAs assessed physical functioning, with a minority also including emotional, social and/or cognitive issues, or the environmental factors that impacted on the worker's function. All FAs made some comment on the worker's effort, with most using multiple methods in this determination. Observation of consistency of performance was the most frequent method, followed by observation of physiological response and specific "effort behaviours". In the FA reports where questions about the evaluatee's effort was judged to be a factor, the conclusion regarding effort was sometimes stated clearly, but more often clarity was lacking, and findings were not interpreted in a meaningful manner.

Descriptions of practice variations (as evidenced in questionnaires, interviews and report reviews) were synthesized into five themes or dimensions, namely: Nature of Assessor-Evaluee Interactions; Fixed - Flexible Assessment Protocol Delivery; Efforts to Contextualize; Perceptions and Use of Evidence; Provider Organizational Environment. The 23 participating provider sites were situated on four-point scales relating to these approach dimensions. Examination of approach dimension data in relation to a range of outcomes showed no consistent patterns; possible reasons for this include the small number of workers in the cohort and the complexity of the FA process, which includes many intervening elements that influence decision-making and outcomes.

The majority of the FA reports we reviewed were lengthy and complex, and included much detailed reporting of individual test results. It was less frequent, however, to see a report that synthesized findings in a meaningful way and offered a clear professional opinion on the worker's functional abilities and limitations with recommendations placed in context to the report user.

Injured Worker Participants: A total of 67/70 workers completed all interviews (35 men and 32 women; age range 22-63; mean age 42; 17 having English as their second language; time lapsed between injury and FA 0–192 months or 16 years – median two years). Most (70%) were not working at the time of the FA. Approximately half came from large unionized workplaces. At least ten workers had a formal diagnosis of depression and/or were on anti-depressants.

As reported in the FA reports and by the workers themselves, they were experiencing a wide range of impairments at the time when FAs were done; most often these involved upper extremities, shoulder and trunk. Among the documented functional impairments, the most frequent was pain, followed by joint mobility, muscle power and endurance and others. The workers themselves identified a wider range of restrictions in their varied life roles than did the FA reports, which usually dealt more narrowly with work roles.

Eight months after the FA, roughly half of the workers reported no change in their impairment levels, while about a fifth said their impairment had lessened, and an equal number felt it had become worse. The same pattern of changes was seen in their restrictions of occupational roles. The number who were working in some capacity had increased (from 26% at the time of the FA to 40% at eight month), and the number in LMR programs had increased (from 3% to 22%). In keeping with this, the number on WSIB benefits had decreased (from around 87% to less than 70%). During the period between the two- and eight-month interviews, however, approximately half of the workers' scores declined on summary measures of both physical and mental health (PCS and MCS change scores on the SF-36).

Eleven FA reports concluded sub-maximal effort or were inconclusive in their effort determinations. Compared to the cohort as a whole, these individuals were more likely to have English as a second language and a diagnosis of depression. It appeared that the majority of these 11 “effort cases” were those with claims of relatively long duration (median time since injury was four years), and in which there was some sort of dispute or appeal. The range of worker outcomes related to occupational status, benefits and health appeared similar in this group to the larger cohort.

Two months after completing their FA, workers were asked whether the FA findings had been useful for them. Approximately half rated the FAs as “very useful” or “met enough of my needs to be useful”, around 30% gave poor ratings of “not useful at all”, “only met some of my needs”, and about 1/5 (12 workers) reserved judgement. When asked the same question six months later, the same proportion felt it had been useful, but half felt it had not been useful; only one worker reserved judgement at this juncture. The reasons given for the two least satisfied ratings included the FA: was done too early or

too late, did not assess all of the job demands, was used to “get rid of me”, was never used, “only a formality”.

Participants Who Received & Used the FA Reports: We conducted 103 interviews with 87 people who had received FA reports on the 67 workers involved in the study (some of these people had received reports on more than one worker). It was evident that FA reports are received by many people other than the original referral source. Fifty-six percent of report users were WSIB staff (adjudicators, nurse case managers, RTW advisors, those dealing with appeals); 26% were in various roles at the workers’ place of employment (occupational health, human resources, health and safety); 18% in other roles (LMR providers, rehab consultants etc.) Only 57% of these people were experienced users of FAs, with experience of more than one provider organization.

Interview data showed that reports were used for many purposes, which often had not been evident in the referral information. For example, results from a “job match” FA (i.e., “Can this worker return to this particular job?”) might be used to determine whether the person can work full time or should RTW gradually, why previous RTW attempts had failed, whether treatment was required, what other positions or accommodations were appropriate, whether the worker was compliant/gave full effort, whether benefits should continue. Where there was an appeal pending and the FA report cited inconsistent or sub-maximal effort, the FA results tended to be used to settle the dispute (e.g., disallow benefits).

The most frequently cited reasons for choosing a particular FA provider was their expertise, professionalism, use of clinical reasoning and confidence in the assessment practices used. The accessibility/proximity of the clinic, the personalities of those involved and the value for the money paid for the FA were also mentioned relatively frequently. Report users varied in their willingness to communicate FA results to the workers; employers tended to deal openly, almost always giving workers a copy of the full report, whereas the policy within WSIB settings was inconsistent, and results were generally withheld from workers and service (e.g. LMR) providers.

When asked about the usefulness of the FA reports they had received, 57% of users categorized the reports as “very useful”, 32% as having “met enough of their needs to be useful”, 9% as having “met some of their needs”, and 2% as “not useful at all”. The majority of report users also felt that the FA results were a true representation of the worker’s functional abilities. Those using the information used it for RTW planning, to examine effort, for mediation or to move the case along, to validate an opinion or direction, to adjudicate a claim, to measure baseline function, an opportunity for the worker to explore own abilities. The 11% in the two least satisfied categories either disagreed with the conclusions, learned nothing new, or were unable to use the results or carry out the recommendations often because of other complications. We note that users tended to find reports more useful than did the workers who had been assessed, only half of whom judged their assessments as having been useful after a period of eight months had passed. Users rated FA reports by their ability to meet their decision-making needs whereas workers rated FAs by their ability to facilitate action.

The Results of Multi-stakeholder Focus Groups: Data from the multi-stakeholder focus groups were synthesized and compared with data from the sequence of events for each member of the cohort to create ***“The McMaster Model: Towards an Optimal Approach.”*** What emerged was the importance of considering FAs as one part of a complex process, and that what goes on before and after the FA was as important as during the FA. The essential elements are illustrated in the attached Figure.

SUMMARY AND RECOMMENDATIONS:

This research study focused on the use of FAs within the employer and WSIB payment systems, and we are optimistic that the research will contribute to the development of evidence-based guidelines on FA practice. We caution, however, that the results may not be generalizable to more overtly adversarial situations.

Summary

- 1. FA Providers operate within a range of ownership structures with variability in staff training and support, FA approaches and protocols.** The majority conducted FAs in provider clinics with multidisciplinary assessment teams using a battery of standardized and formal assessments. Practices are influenced by referral source demands to deliver FAs as a competitive product.
- 2. Experienced FA Users select particular providers based on perceptions of assessor’s expertise, use of clinical reasoning and referral source-provider relationships** Some employers have developed working relationships with assessors, a practice that enables both to fulfill the other’s information needs and instils confidence and trust. However, these relationships appear to be relatively rare; many users are inexperienced with FAs. **People use FA reports for a wide range of purposes, many of which are not communicated to the FA provider.**
- 3. Workers from this study who participated in FAs usually had injuries of long-standing duration (median time since injury is two years), involving a wide range of impairments.** About half of these workers assess their own FA experience as having been useful in some way to them; many in the remaining group by eight months later say that it was not useful to them primarily because of how the FA information was used or not used by others. Many more are working or in LMR programs at the eight-month point than at the time of FA. Overall physical and mental health may have declined during the period leading up to the eight-month point, however.

Recommendations

- 1. Assessment approaches share common elements and variations that can be described using five dimensions.** Although the present study did not have the statistical power to draw clear associations between these dimensions and worker outcomes, the research team’s assessment, based on rigorous triangulation of qualitative data from multiple sources, is that the five dimensions have implications regarding good FA practice. We recommend the consideration of these dimensions in self-evaluation by providers and during the selection of FA providers.

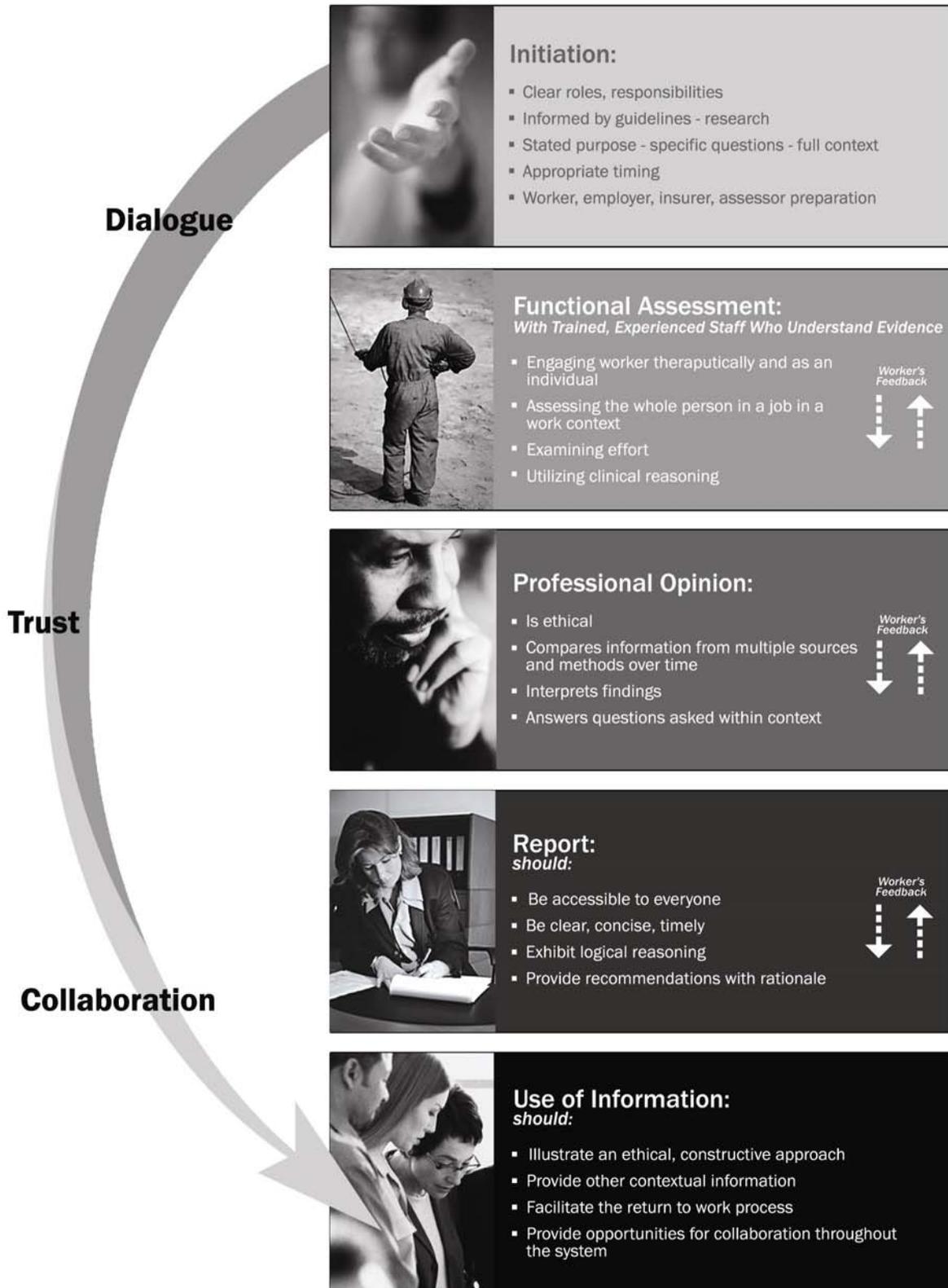
Dimensions:

- **Nature of Assessor-Evaluated Interactions.** This refers to the extent and nature of the interaction between the assessor and worker during the assessment. At the more positive end of the continuum, is on-going dialogue between the assessor and evaluatee, partnership; at the other end there is minimal or no interaction, only recordings of observations.
- **Fixed or Flexible Protocol Delivery.** This refers to the extent to which administration of the protocol varies between evaluatees, based on clinical reasoning. At the positive end of the continuum, there is flexible delivery of protocol, where the assessor plans an individualized assessment directed by understanding of the referral source's needs and the nature of the worker's injury/disability; at the other end is a fixed protocol, requiring low clinical understanding, and directed by tools/technology.
- **Efforts To Contextualize.** This refers to the extent to which contextual factors (re: work/workplace, clinical and whole person) are reflected in the administration of the protocol, analysis, and interpretation. At the positive end of the continuum, the FA's planning and analysis consider the worker's individual circumstances, i.e. disability, work and life roles; at the other end there are significant gaps in the use/integration of this background information.
- **Perceptions & Use of Evidence.** This refers to assessors' familiarity and understanding of the best available evidence, and use of it with their training and experience when making decisions about each worker they assess. At the positive end of the continuum, the assessor is aware of and critically considers the most current available evidence in combination with their training and experience; at the other end there is limited evidence of critical thinking, significant gaps in evidence-based practices.
- **Provider Organizational Environment.** This refers to how the organization is structured with supports and resources to enable assessors to practice to the best of their abilities. At the positive end of the continuum, assessors have ready access to a range of assessment modalities to tailor assessments, and actively seek & use multiple, varied supports/resources; at the other end, there is limited access to resources, and practice is restricted either due to lack of availability or the culture of the organization.

2. **Some Assessors acknowledge the limitations of the FA instruments, and work within them. We recommend that the following strategies be used more universally to increase rigor:**
 - Perform FA over a minimum of two days allowing a comparison of performance over time. This is of particular importance in the long term and complex population, including many of the individuals in the cohort we studied
 - Repeat testing, and use varied methods for triangulation or comparison of information
 - Use multiple data sources, including asking the worker being assessed
 - Obtain and use contextual information (e.g., about medical condition, work, workplace) to adjust protocol and to consider during interpretation of findings

- Use individualized measures (e.g., work simulation) together with standardized testing for meaningful data
 - View findings as capturing optimal performance that may not be sustainable in full time work; formulate conclusions accordingly.
3. **The reasons for initiating FAs are often not transparent. FA results are being used concurrently for multiple purposes and this is generally not communicated to assessors.** The study documented FAs being used for the following purposes: RTW planning, baseline measurement, determining worker's effort, mediation, validation of opinion or direction, adjudication of claims, opportunity for worker to explore own abilities and limitations related to work. We recommend that, given the range of usages, it is important that the findings be presented logically in the FA report, and express a professional opinion. We also recommend that the specific reasons for initiating the FA be communicated more fully in the referral than is currently being done, in order that assessments can be better designed and conclusions better contextualized.
 4. **Controversy surrounds the use of FAs for determination of the worker's effort and for adjudication purposes, as was the case in a number of instances in this study.** In some jurisdictions (e.g. Australia) written policies state that FAs should not be used for determination of worker's effort. We recommend that this be considered in Ontario. Failing this, providers of FAs should ensure that when FA data raises issues around inconsistent or sub-maximal effort, a clearly-stated professional opinion be given with documentation as to how alternative reasons for inconsistent performance were explored.
 5. **FAs are being described (especially by referral sources) as useful information tools,** assisting in RTW and/or rehabilitation plans for workers with soft tissue injuries. We recommend that they be used as part of an overall comprehensive disability management practice, and not relied upon in isolation. We also recommend that a policy be established in user organizations, encouraging the sharing of FA results with workers and with the service providers for whom the results are pertinent, such as LMR providers.
 6. **Traditionally, FAs have been narrowly judged on the basis of their ability to predict RTW, or by worker RTW rates.** We recommend that FAs be evaluated by their usefulness for decision-making and with consideration for types of use, and a range of worker and workplace outcomes
 7. **A synthesis of findings from the focus groups, as well as data from interviews and questionnaires used in this study, has resulted in the creation of a model of FA practice, which we have called "The McMaster FA Model: Towards an optimal process"** (see attached figure). We recommend that the FA be considered as a process, which includes important considerations before, during and after the assessment itself. We further recommend that the model, as an output of this research project, undergo further evaluation in the future.

The McMaster Model: Towards An Optimal Process



ASSESSMENT OF A PERSON'S ABILITY TO FUNCTION AT WORK

S. Strong, S. Baptiste, J. Clarke, D. Cole, M. Costa, R. Reardon, H. Shannon & S. Sinclair

Abstract

Objectives:

1. Document a profile of the varied functional assessment (FA) practices and outcomes in Southern Ontario.
2. Examine how employers and WSIB use FAs within in a group of workers with soft tissue injuries.
3. Are there any differences in FAs' ability to predict occupational performance and utility for vocational decision-making across the range of assessments and contexts in which FAs are administered?

Methods:

A combined qualitative-quantitative approach gathered information from different sources and multiple methods to generate a triangulated understanding of practice patterns and underlying factors that influence FA's utility. A cohort of 70 injured workers was followed prospectively documenting the sequence of events post-FA, the assessment's use, and FA perspectives by:

- 23 FA Provider Site Visits and 76 Assessor Interviews and Questionnaires
- 70 FA Report Reviews
- 67 Worker Follow-up Telephone Interviews at 2 and 8 months, including SF-36
- 103 Report User Interviews
- 4 Mixed Stakeholder Focus Groups each representing injured workers, WSIB (adjudicators, nurse case managers, LMR providers), employers (occupational health, HR, health and safety personnel), and assessors.

Results and Conclusions:

FA Providers are third party providers who operate within a range of ownership structures with variability in staff training and support, FA approaches and protocols.

Assessment approaches share common elements and variations that can be described along continua of five dimensions. These provide a focus for appraising practices.

FAs can be a useful information tool when making return to work and/or rehabilitation plans for workers with soft tissue injuries.

For optimal use, FAs need to be considered as one part of a complex process. The *McMaster Model: Towards An Optimal Process* depicts important considerations before, during and after an FA.

ASSESSMENT OF A PERSON'S ABILITY TO FUNCTION AT WORK

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ASSESSMENT OF A PERSON'S ABILITY TO FUNCTION AT WORK

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1. Introduction and FA Practice Literature

Many decisions about an individual's return to work, entitlement to benefits, and access to supports and rehabilitation services rely on an assessment of the individual's ability to function at work (Functional Assessment = FA). Perceptions of assessments influence how assessment findings are sought and applied, particularly when there is controversy, sparse available information and decisions need to be made regarding workers with elusive conditions in adversarial relationships. In spite of the considerable impact of these decisions, little was known about how well FAs are able to predict work function or how useful they are for vocational decision-making. We had very limited data about FA practices in Ontario prior to our study.

Evaluations of disability and function are challenged with an elusive group of conditions with non-specific diagnosis and controversial etiology, such as soft tissue injuries with chronic pain or repetitive strain injuries. Consequently, it is with this very group that FAs are most often employed. Soft tissue injuries (STIs) are a common underlying factor of chronic disability, which accounts for the largest budget expenditures across payment systems. Ineffective FAs may add further cost and lead to erroneous decision-making. Effective FAs are believed to be a value added service by making a useful contribution to vocational planning and decision-making.

Enabling individuals with disabilities to return to work is pivotal to lowering the burden of injury to families and society. Work and lack of work directly affects individual's mental and physical health. Employers, insurers, and case managers require accurate and useful information about an individual's post injury capabilities to facilitate effective return to work or to the labour market. Vocational planning can be difficult, in part, because of lack of universal service standards, ever-changing regulations, restricted funding and a dearth of information concerning assessment practices. FA providers and users express concerns over important variations in how FAs are conducted and used by employers and WSIB, only some of which can be supported by 'best practices'. Payers have difficulties appraising whether they have obtained value for their money. The scope of FA practices is unknown and stakeholders question what should be common expected standards. No guidelines exist and data is limited about what goes on in FAs. Referral sources must choose from multiple providers with assorted training, using a variety of assessment techniques and approaches, such that actual services received vary. Workers complain of how assessment findings are used, difficulties in navigating the system and inequities of access to services. There remains a significant gap between beliefs of diverse players involved or affected by these injuries, which is a further barrier to effective prevention and treatment. What is central to all stakeholders is the assessment of a person's ability to function at work (i.e., FAs). However, the credibility and usefulness of these assessments

² This project could not have been completed without the significant contributions of our excellent team of research assistants, interviewers, and report reviewers: Pat Carter, Sandra Moll, Dee McKenzie, Ellie Vyver. Special thanks are extended to Dr. Ed Gibson for his support and guidance.

have been criticized. They are conducted largely by competing service providers within a third party payment system with no regulations regarding who performs FAs or how they are conducted or used. This raises serious issues of public safety, accountability and quality of services.

FAs are comprehensive, performance-based assessments conducted by rehabilitation disciplines. They are not to be confused with WSIB's "Functional Abilities Form for Timely Return to Work," which is completed based on a physician's interview and medical examination. In the United States and some periodical literature, the term "FCE" (Functional Capacity Evaluation) is used to denote FAs and is considered interchangeable for this study. FAs were developed as tools used to establish someone's current level of function when determining a person's ability to work and perform certain job functions. Research has demonstrated that pain, disability and physical impairment are related poorly to one another (Turk & Rudy, 1991; [Waddell & Main, 1984](#)), and that they respond differently to treatment (Hazard et al., 1994). This suggests that for disability evaluations to be effective, they should assess current functional limitations rather than focus on permanent anatomic or structural impairments. The use of FAs emerged from this need to have performance-based information in addition to clinical information. Spurred by insurer's pressure to obtain objective information for disbursement of services or benefits, and to address concerns regarding the subjectivity of workers' self-reports, the use of FAs proliferated.

When conducting FAs, clinicians must decide what approach to take amongst a plethora of heavily marketed commercial evaluation systems and instruments. Some assessors are becoming sceptical; realizing that the use of technology does not ensure accuracy and that since FAs are tools, the end result is only as good as the way in which they are used (Hart, 1995). Considerable controversy surrounds the 'best' approach to FAs regarding philosophy, assessment protocol, assessor training and experience. Literature reviews of FA practices (Gibson & Strong, 1997; Newton & Waddell, 1993; Strong & Westmorland, 1996; [Veloza, 1993](#)), and marketed evaluation systems ([Innes & Straker, 1999a; 1999b; King, Tuckwell & Barrett, 1998](#)) are unanimous in their conclusions: there is no empirical evidence to support one assessment approach or in system over another and no research to establish the predictive validity of these assessment practices. The evaluation of assessment approaches articulated in training manuals (Blankenship, 1994; [Isernhagen, 1992; Key, 1986; Lechner, Roth, & Straaton, 1991; Matheson, 1990](#)) or professional programmes is limited to reliability studies of selected instruments or measures. Even those studies that are published have significant design limitations and/or are limited in scope and focus ([Beaton, O'Driscoll, & Richards, 1995; Cooke, Dusik & Menard, 1994; Dusik, Menard & Cooke, 1993; Matheson, Mooney & Grant, 1995; Menard, Cooke, Locke, Beach, & Butler, 1994; Newton, Thow, Somerville, Henderson & Waddell, 1993](#)). Studies evaluate components of assessment procedures rather than the overall assessment of a person's ability to perform a job at work.

The concern has been raised that many FAs focus on the individual, as opposed to the interaction of the person with the work environment and the work itself ([Innes & Straker, 1999a; Strong, & Westmorland, 1996; Veloza, 1993](#)) resulting in conclusions of

questionable validity, and limited utility. Human function is complex, and every individual, and their particular circumstances, is unique. Performance is always relative to a specific individual, engaged in an occupation within a given environment. To grapple with the complexities, assessors break down occupational performance into manageable parts for testing. Critics point to the tendency to reduce function to physical elements, lose the uniqueness of the individual, and perform the FA in isolation of the workplace and/or the return to work planning process. Our understanding of people's responses to injury and disability has broadened to consider multiple factors potentially affecting an individual's return-to-work status. Turk and colleagues (1988) have proposed a multi-axial model of disability to understand the influences of personality, environment, intellectual, social, behavioural and neurological factors. This suggests that an FA needs to have a broad, multifactorial basis. The most effective way to assess these factors and their impact on occupational performance is unknown at this time.

The sincerity of a worker's effort during FAs is an important variable. Insincerity of effort by the worker is believed to undermine the accuracy of measuring an individual's capacity to work (Newton & Waddell, 1993; [Menard et al, 1994](#)). Evaluators often use maximum voluntary effort testing, an examination of the worker's consistency of performance over repeated trials of physical strength testing of various forms. There is significant controversy over how inconsistencies in performance are interpreted, and how determinations of sincerity of effort are made given the many possible reasons for inconsistent performance, the clinically unacceptable high false positive and negative rates, and the limited empirical support for such practices (Strong & Westmorland, 1996; [Lechner, Bradbury & Bradley, 1998](#)). No study has demonstrated that a worker who is judged insincere during an FA provides submaximal effort at the workplace.

Another important issue is the way in which information is interpreted and used, by both assessors and report users. Many of the tools, normative tables, and algorithms for interpreting results are developed on 'well' populations, and therefore, may not be valid for injured workers. Some practices rely on extrapolation of information from static testing situations to make determinations about someone's ability to perform in dynamic work situations. There is evidence that this substitution is not valid ([Abdel-Moty, Fishbain & Khalil, 1993](#)), and clinicians point to the multiple variables of dynamic work not taken into account (e.g., anthropometry, posture, acceleration, inertial load) when drawing such conclusions ([Blankenship, 1994](#)). Similarly the validity of extrapolating tolerance for working eight hours a day, five days a week, on the basis of an assessment taking two to four hours in one day, lacks empirical support ([Innes, & Straker, 1999b](#); [King, Tuckwell, & Barrett, 1998](#)). Practice patterns of FA report users (healthcare clinicians, return-to-work planners, insurers) in employer and WSIB systems, and the role FAs play in decision-making is unknown.

Several key obstacles make it difficult to determine the effectiveness of rehabilitation practices, including FAs. In order to design rigorous studies with sufficient power, the extent of the previously mentioned variation in how these FAs are conducted must be estimated, and key factors influencing outcomes identified. That which is common across FA practices needs to be ascertained and protocols defined to make it possible for

controlled replication of practice in effectiveness studies. Second, study outcomes have been limited to return to work, which is often influenced by factors other than the rehabilitation intervention (e.g., employer practices, labour market forces). When examining whether FAs predict occupational performance, return to work is only a relevant outcome for those instances when the FA concludes the worker is able to perform his/her job. In addition, there are other outcomes important to take into account. Workplace stakeholders have defined successful work re-entry as much more than return to work or reduced time loss hours. Success requires a win-win situation for all workplace parties by which the individual is able to make a meaningful contribution as perceived by all levels of the organization (Westmorland, Strong, Williams, & Arnold, 1998).

In summary, without empirically established assessment practices and little knowledge of current FA practices in Ontario, we have been limited in our ability to make decisions for successful return-to-work planning, entitlement to benefits, provision of supports and rehabilitation services. A study that systematically documents current practices, contexts, range of outcomes and utility has been needed to establish the extent of variation amongst Ontario FA providers — a study that is one of a program of research designed to examine the effectiveness of FAs.

2. Research Objectives

This study set out to document a profile of the varied FA practices in Southern Ontario and to examine how employers and the WSIB use these assessments within a group of workers with soft tissue injuries.

Primary Research Question:

Are there any differences in functional assessments' ability to predict occupational performance and utility for vocational decision-making across the range of assessments and contexts in which FAs are administered?

Research Objectives:

a) Describe current FA practices³ and outcomes, including:

- **the extent of the variation** amongst selected providers (services, approaches, procedures),
- underlying **contextual factors** re: FA organizations (ownership, referral base, staffing practices); assessors (experience, training, beliefs of evaluatees, perceptions of evidence); evaluatees (demographics, occupational roles, level of disability, job factors); FA report users (FA's role in process, perceptions of assessments and evaluatees),

³ In this study, Functional Assessments are all assessments designed to determine whether individuals are able to work in general, able to return to a job, or to establish an occupational goal. The term "FA practices" refers to all practices involved in conducting, interpreting and using these FAs.

- **range of outcomes** 2 and 8 months after FA report completion (evaluatees' occupational roles and health status; implementation of recommendations, services delivered; settlement, costs),
- **perceptions of FA's utility and validity** by injured workers and FA report users.

b) Examine the relationships between assessment variation/contextual factors and the range of outcomes and perceived utility for vocational decision-making.

3. Methods

We employed a combined quantitative – qualitative design with two overlapping phases over two years. The main quantitative component is a prospective cohort study of FA evaluatees. Qualitative components assembled case studies based on interviews and file reviews (examinations of provider and report user practices and contextual factors), and focus groups, exploring stakeholders' perceptions of essential FA elements. Qualitative methodologies are particularly useful when little is known about a situation but tremendous variation and influence from complex interdependent processes are expected (Denzin, & Lincoln, 1994; Patton, 1990). The combined approach uses triangulation, i.e., multiple methods and information from different sources to generate an understanding of practice patterns and underlying factors that may influence the usefulness of FAs.

The study was conducted in two overlapping phases over two years:

Phase One focused upon a prospective follow-up of a cohort of workers with soft tissue injuries.

Phase Two involved focus groups (evaluatees, report users), development of Approach Dimensions and the McMaster Model.

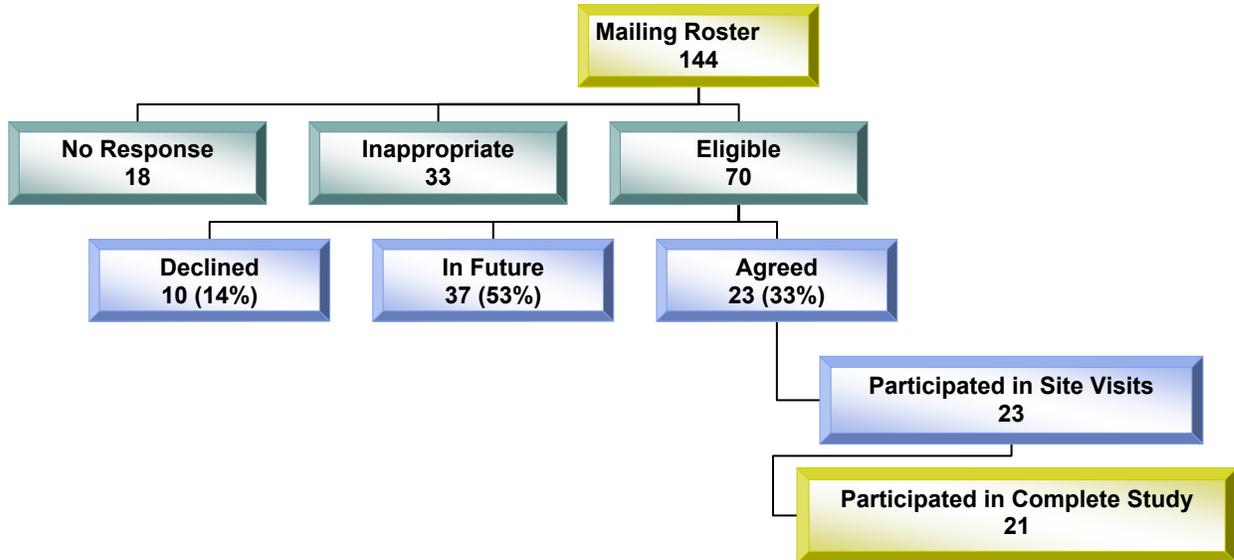
The overlap enabled the phases to inform each other in an iterative analysis.

3.1 Sample Selection

Beginning with an exhaustive roster of providers in Southern Ontario, 144 FA provider organizations were mailed invitations to participate in the study. The roster was assembled from eight mailing lists: Designated Assessment Centres, *1999 Rehabilitation Services Guide* publication, two lists of providers used by WSIB nurse case managers in different occupational sectors, prior Work Function Unit research study participant list, WSIB billings, vocational rehabilitation workshop participant list, independent assessors known to McMaster University. Providers were selected based on having established assessment protocols, a volume of assessments with soft tissue injuries referred by employers or WSIB, proximity within 1.5 hours driving distance of McMaster University in Hamilton, Ontario, and interest. We did not receive responses from 18 invitations, 33 were returned as inappropriate (i.e., not matching selection criteria), and 10 declined (Figure 1). Thirty-seven organizations expressed interest in participating at a future date but were unable at this time due to undergoing changes in management, staffing or practices. We received responses from some organizations on behalf of several sites because of managerial relationships that are not always apparent by the provider site's

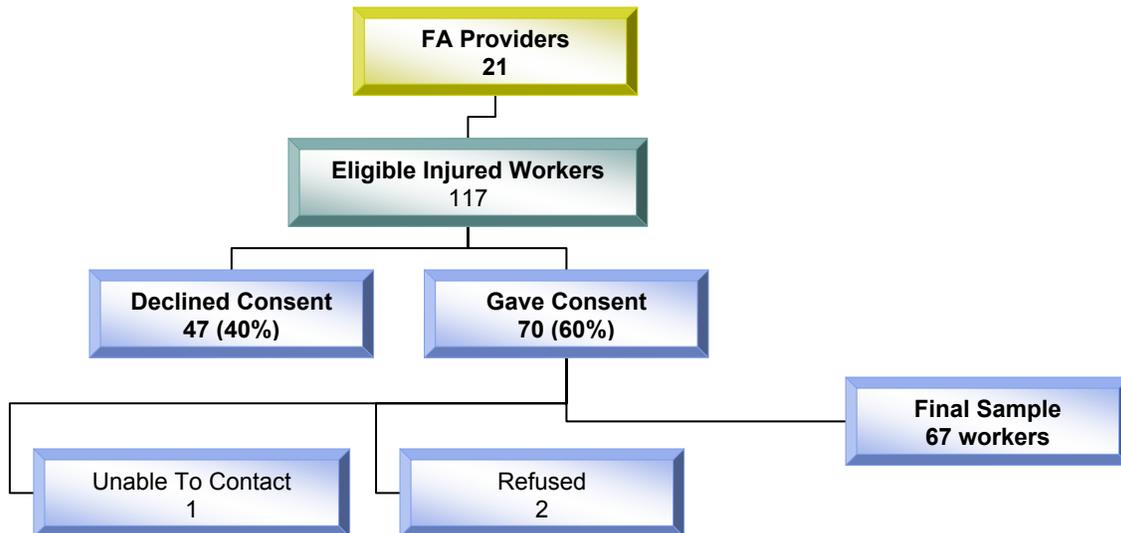
name. Of the 23 providers who began the study, 21 providers remained to contribute workers to the cohort.

Figure 1: Selection of Providers Chart



At each participating site, whenever an FA was completed for a worker with soft tissue injury, during the period from December 23, 1999 to December 4, 2000, the assessors asked the worker for permission to forward their names to us. A research team member contacted each of the 117 individuals whose names were forwarded, explained the study and obtained written consent from approximately 60% of those forwarded (Figure 2). Of the 70 consenting workers, 67 remained in the final sample; one worker was unable to be contacted and two workers refused. We were unable to gather information (e.g., demographics) about the 47 workers who were contacted but declined participation because we did not have their consent.

Figure 2: Selection of Cohort Chart



3.2 Procedures

Using questionnaires and interviews (*Appendix A*) data were collected from provider organizations, assessors, injured workers who had had FAs, and FA report user by the following means:

- **Provider Organizations**
Site Visits, including Organization Questionnaires (n=23)
Assessor Interviews and Questionnaires (n=76)
Report reviews (n=70)
- **Injured Workers**
Review of workers' FA Reports (n=70)
Telephone Interviews at 2 and 8 months post-FA, including SF-36 (n=67)
- **Report Users**
Interviews at 4 months post-FA (n=103)
- **Mixed Stakeholder Focus Groups**
Groups (n=4) with a total of 39 participants representing injured workers, WSIB (adjudicators, nurse case managers, LMR providers), employers (occupational health, HR, health & safety personnel), and assessors

Descriptive profiles of FA providers/organizations and FA Practices were assembled from questionnaires, reports and interviews. We described the similarities and variations in FA approaches from 23 FA provider organizations that represented the full range of practice approaches, and iteratively developed Dimensions of FA Approaches. One purpose of our visits to FA provider sites, the assessor interviews/questionnaires and the review of workers' FA reports, was to describe practice; the other purpose was to increase our understanding of the context, when we analyzed data about our prospective cohort from worker and report user interviews.

The purpose of the interviews with workers, and the users of their assessment reports, was to:

- document the sequence of events post FA, and a range of outcomes;
- examine the extent to which the assessments' conclusions and recommendations become reality;
- identify the role of assessments in decision-making;
- explore perceptions of FAs' usefulness and representativeness of worker's ability to function at work.

Data from evaluatee and report user interviews were used to construct a picture of how FAs are being used in Southern Ontario. Evaluatees and report users were asked to rate the validity and utility of FA reports, and qualitative data from their interviews were used to elaborate on these numerical ratings. Data from these interviews were also used to analyze for themes and trends in the descriptions of the sequence of events post-FA, as recounted by the various parties involved.

A profile of procedures used to determine the evaluatee's effort during an FA was created (based on provider site visits, assessor interviews and report reviews). In addition, that group of workers whose effort had been judged less than maximal was described (based on report review data, worker and user interviews), as was the utilization of this information by report users.

Descriptive data on the factors that might influence outcomes and the utility of FA reports were summarized. We also examined the data for relationships between differences in FA approaches and outcomes, including usefulness for decision-making.

Once data collection was completed for the cohort, mixed stakeholder focus groups held in Toronto, London and Hamilton were used to capture the varying perspectives concerning the emerging study themes. Each group was asked open questions and given evocative contrasting quotations from interviews to engage discussion. The focus of discussions concerned the timing and key elements of the optimal FA, what makes the difference for a FA to be useful or helpful and importance of good communication. A model of the FA process was drafted from these discussions, and further developed by examining the cohort's sequence of events/ outcomes, and integrating literature review findings.

4. Results

4.1 Assessment Practices

4.1.1 FA Provider Organizations & Assessors

The range of FA practices and type of organizations in which FAs are conducted, is evident in the developed profiles. Information from site visits and interviews with providers was supplemented by (and in some instances contrasted to) information obtained from review of FA reports. The following is a summary of findings related to the FA providers' organizational structures, experiences, services, the assessors, and practices concerning FAs and determination of effort.

Organizational Structure and Experience: The study sample of 23 FA provider organizations represented a range of ownership structures. Approximately 50 % of the participating organizations were large third party corporations (n=12), three of these providing services nationally and seven operating at the provincial level. A larger number than expected remain linked with publicly funded, hospitals, although they were revenue generating. There was some representation from independents; two organizations described themselves as sole proprietorships and three as partnerships of a few individuals.

There was variation in the length of time providers had been in business (from 2 to 29 years). The majority of providers were well established, with 19 businesses having been in operation for more than two years, and 17 (74%) for six or more years.

At the time of site visits, only nine sites had previously participated in academic or student placement programs. Many of these placements were for occupational therapy (OT) or physiotherapy (PT) students:

- Student placements (i.e., OT or PT programs) that are hospital directed (4)
- OT programs (5) in universities across Ontario and outside Canada, such as University of Toronto, McMaster University, University of Western Ontario, New York State, D'Youville College, University of Buffalo & University of Scotland
- PT programs across Ontario (3): one with University of Toronto, one with McMaster University and one with University of Western Ontario.
- High School co-op programs (1)
- Kinesiology program, University of Waterloo (1)

For the majority of providers (n = 16), this study was the first time they had participated in research. The other seven sites had previous research experience with: *Institute for Work & Health*, *McMaster University (WFU & other research studies)*, *Hanoun Medical Centre*, *Brock University*, *Western University*, *University of Toronto's Centre for Studies in Physical Function*. We do not have information about the extent of this involvement.

Services Offered: All organizations indicated soft tissue injuries comprised the majority of their business, although approximately 78% (n=18) of sites assessed individuals with conditions other than soft tissue injuries as well.

The range of services provided by assessment sites was as follows:

- Assessment services only (i.e., medical, disability evaluations, psychological evaluations, etc) (4 sites)
- Primarily assessment services, supplemented by a work re-entry or case management programs (4 sites).
- FAs plus a variety of therapy services (i.e., PT, Chiropractic, work hardening, exercise, etc) (3 sites).
- FAs, therapy services and work re-entry programs (7 sites).
- FAs, therapy services, work re-entry programs and case management (5 sites).

Providers appear to be expanding services directed towards employer markets, and introducing health promotion related programs. Examples include post-offer employment screening, educational programs (wellness and condition specific), massage therapy, orthotics, and early intervention clinics.

Number of FAs Conducted: Table 1 documents the estimated numbers of FAs conducted per year for soft tissue injuries, as reported initially by FA provider sites. Although 17 sites estimated > 235 FAs per year, we subsequently found upon reviewing the number of FAs available over the year of our data collection period, that less than 1/3 this number of FAs appear to have been conducted. Some of this discrepancy may be accounted for by the changes in referral patterns, or by lack of record keeping by providers.

Table 1: Reported Number of FAs Conducted Previous Year

Estimated Number of FAs per year	Frequency
50 – 60	3
200 – 300	6
400 – 500	1
600 – 700	2
800 – 1,000	2
1,001 – 1,500	2
2,000 – 2,500	3
> 2,500	2
N	21
Missing	2
Total	23

Assessors: Of the 76 assessors interviewed, the majority were female (n=58). Ages ranged from less than 25 to 59 years with the majority between 25 and 39 years of age (n=55, 73%). The assessors’ educational backgrounds were: Occupational Therapy (n=23); Kinesiology (n=21); Physiotherapy (n=21); Medicine (n=2); Nursing (n=3); Sports Injury Management (n=1); unknown (5). The number of years each assessor had been assessing function in the vocational field ranged from less than one year to 13 years with the majority (n=46) performing these assessments between three and nine years.

The majority of respondents (n=41) had worked with their current organization from one to four years (mean = 3 years). They are very mobile in this field and organizations experience frequent staff changes.

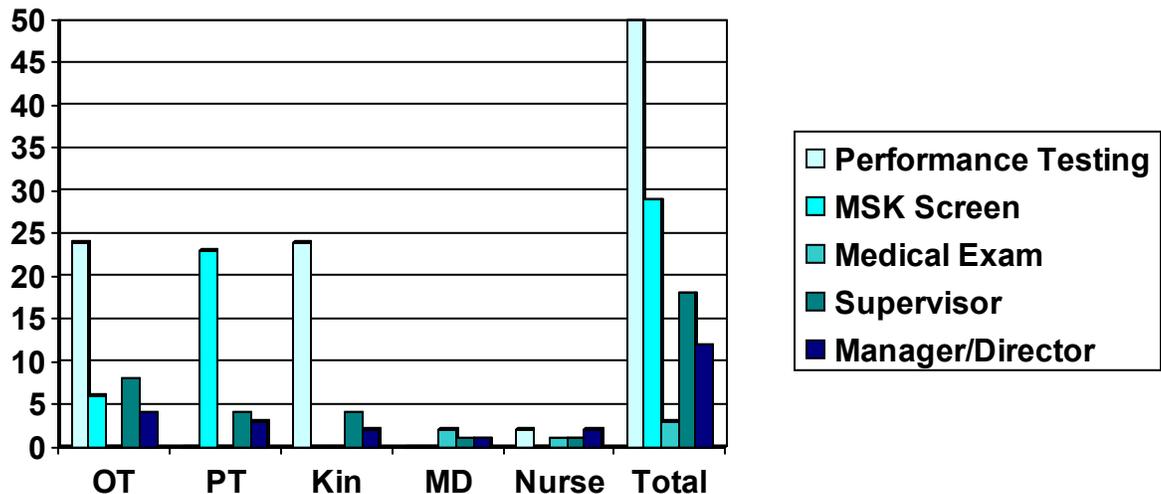
There is considerable variation within the reported number of FAs conducted by each assessor in the six months prior to site visits (0 to 175 FAs). The mean number of FAs conducted by respondents in the prior six months is 27. However, this average is skewed by fifteen assessors conducting 50-175 FAs during this period.

Roles/Team Composition: The majority of FAs were performed in teams. At only two provider organizations were FAs conducted by occupational therapists working alone. The following indicates the team composition and the number of providers with each composition in our sample:

PT & Kinesiologist	n=8
PT & OT	n=4
PT & OT/Kinesiologist	n=2
OT alone	n=2
Nurse & Kinesiologist	n=2
MD & nurse	n=1
MD & Kinesiologist	n=1
Chiropractor & Kinesiologist/OT	n=1

As illustrated by Figure 3, the majority of the physiotherapists performed musculoskeletal (MSK) screens. In practice, Occupational Therapists and Kinesiologists performed the performance-based testing component of the FA following these screens.

Figure 3: Assessor Roles in Provider Organization



Assessors are involved in supervisory and managerial or business related roles as well. Twenty FA assessors identified being responsible for clinical functions (e.g., treatment, consultations) often while supervising students and fifteen assessors identified additional administrative functions (e.g., business related duties, committees) in addition to performing FAs. All disciplines appear to participate in business related roles.

4.1.2 FA Practices:

Report review data indicated that the time spent conducting an FA ranged from 0.5 to 4 days (1-2 days on average) in the cohort. This is a wider range than was reported by providers in Organizational Questionnaires. The majority of reports were reviewed by another individual in the organization before they were sent to the sponsoring agency, reflecting a conscious effort for quality control. Most were reviewed by clerical or administrative staff rather than clinical personnel, precluding a review of content or clinical reasoning, controlling for completeness or grammar only.

From December 23, 1999 through December 4, 2000, billing for FAs ranged between \$500.00 and \$1,250.00. On average, sites charged \$900.00.⁴ The variation in the approach to FA and in the purposes of the FAs is not controlled for in these figures.

Most FAs were conducted in a clinic. Some of the independent organizations reported conducting some FAs in homes and workplaces. In our study, only one FA was conducted at a worker's home and workplace assessments were limited to physical demands or workplace demands analysis contracted in addition to the clinic-based FAs.

⁴ Note, however, that providers reported increased rates in 2001 to over \$1,000.00.

The majority of providers reported using a battery of assessments comprised of standardized and formal assessments involving performance-based tasks and self-report measures, some supplemented by commercial assessment systems and/or work simulations. An examination of report review data illustrates the use of a battery of assessment methods, and identifies common components (Table 2).

Table 2: Components of FA Data Collection

Assessment Method	Evaluees Assessed	% of Cohort
Work Component	71	100
Musculoskeletal Screen	55	77
Interview	53	75
Pain Scale	40	56
Documentation Review	38	54
Structured Self-Report	34	48
Neurological Exam	27	38
Worker used as source of job information	24	34
Physical Demands Analysis	22	31
Work Simulation	19	27
Source of job information is unclear	18	25
Structured Fitness Test	17	24
NOC, DOT is source of job information	14	20
Physiological Measures (heart rate, blood pressure etc)	8	11
Generic Job Description	6	8
Analysis of person's specific job at worksite	5	7
Medical Exam	4	6
Surveillance	2	3

Providers reported using the following commercial systems: Key System, ERGOS, ARCON, Isernhagen and Hanoun. Five of 22 providers relied solely on commercially marketed evaluation systems. More often, however, these systems were used as part of the evaluation, often as an initial screen, together with other methods of data collection. All providers used standardized instruments. Work simulations were used in a quarter of the reports reviewed.

Source of Information About Worker's Job: It is important to note that only 23 reports used the worker as a source of job information. The source of job information was unclear in 16 reports, and in 5 cases, only generic job descriptions were used. The National Occupational Classification (NOC) was relied upon in 14 cases, and some of these were augmented by worker information. The NOC provides limited information about generic types of jobs.

Domains Assessed: All providers assessed the physical domain of function. Other domains assessed varied by protocol and assessor training: emotional domain (9); social/interpersonal domain (7); and cognitive domain (6). Not surprisingly, there were no providers assessing interests/values/aptitude/skills as these tended to be used in vocational testing rather than FAs. Of the 23 providers, 20 reported that their FAs assess function at the level of essential tasks to perform a job. Only 17 providers report that they look at work environment, and 13 providers report that they look at work behaviours.

Assessment approaches did not always consider the impact of environmental factors on function. As shown in Table 3, report reviews revealed that environmental factors were not documented in half of the reports. The use of products and technology to improve function was most often commented upon. In 19 reports, services were recommended. Only two reports commented upon the natural work environment. Also, 14 commented upon workplace systems or policies. Although it is commonly known that workplace beliefs and attitudes do create return to work barriers, these were not commented upon in reports.

Table 3: Environmental Factors Considered in Assessments⁵

Environmental Factors	# of Reports	% of Reports
Products & Technology (e.g., assistive devices used or recommended to be used, work heights and other ergonomic factors)	34	48
Natural Environment & Human Made Changes to Environment (e.g., weather)	2	3
Support and Relationships (i.e., assistance given to the worker by others at work and home)	11	16
Attitudes, Values & Beliefs	0	0
Services (e.g., case management, OT or PT services, ergonomic assessment, work conditioning, work hardening)	19	27
Systems & Policies (e.g., shifts, modified work hours or duties, evaluation of efficiency)	14	20
N	71	100

Determination of Worker’s Effort Practices: All FA reports commented about the worker’s effort. However, a range of terminology was used including: “maximum effort,” “submaximal effort,” “symptom magnification,” “valid participator ,” “physiological

⁵ Categories are from the revised World Health Organization’s Classification of Impairment, Disability and Handicap: World Health Organization. (1997). *ICIDH-2: International classification of impairment, activities & participation: A manual of dimensions of disablement and functioning. Beta-1 draft for field trials.* Geneva, Switzerland: World Health Organization.

indicators of effort were present,” “insincere effort,” “pain-focused behaviour,” “pain focused, psych overlay,” “full physical effort,” “no significant sign of maximal biomechanical effort,” findings “not valid” because of “self-limiting”. The majority of reports provided a rationale for their conclusions accompanied by data collected across multiple methods. No report made determinations of effort based solely on clinical observations or only on calculations of coefficients of variation. Consistency of performance was the most common basis for these determinations, with various measures of consistency used. Observation of physiological response and specific “effort behaviours” were the next most frequent methods. Only 10 reports documented discussions with the worker regarding effort. This may be in part due to the low number of reports that concluded lack of effort (6 reports) or inconclusive effort (5 reports).

Table 4 describes 14 methods of data collection specifically for effort determinations documented in the cohort reports.

Table 4: Methods Used to Determine Workers’ Effort

<i>Method Used to Determine Workers’ Effort</i>	<i># of Reports</i>	<i>% of reports</i>
Consistency of performance across repeated trials of same test	68	100
Consistency of performance across similar activities/tests	60	88
Physiological /biological response (e.g. HR, BP, skin)	58	85
Observation of appropriate/inappropriate "effort" behaviours (e.g. muscle recruitment, biomechanics, facial characteristics, pain behaviours)	56	82
Testing apparatus generates coefficient of variation (% cut-off)	51	75
Testing apparatus generates force curves, analysis for fatigue patterns	45	66
Pain (anecdotal self-reports, diagrams, ratings) increases proportionally with level of effort	39	57
Comparison of observations with evaluatee/worker self-report	29	43
Comparison of performance with what is expected anthropomorphically (e.g., greater force exerted from large versus small muscle groups; extension of wrist > flexion of wrist)	22	32
Comparison of performance with what is expected from pathology/diagnosis	21	31
Distraction tests	20	29
Comparison of structured self-report (e.g., Spinal Function Sort) data of abilities with performance	17	25
Discussion with client regarding effort, including any inconsistencies of performance	10	15
Waddell’s "Non-organic" signs (Waddell et al., 1980)	2	3

Working Within FA Limitations: Amongst assessors, there were differing levels of awareness about the limitations of FAs and existing research on the instruments they used. Some assessors talked about pressures around the issue of credibility, and how in some circles only standardized measures were viewed as ‘scientific.’ While recognizing the value of standardization (i.e., reliability, reproducibility), some assessors pointed to issues concerning relevance, validity and accuracy with standardized measures. For meaningful results, some assessors chose to include individualized measures (e.g., work simulation) as part of their assessment batteries in order to balance the need for conducting a standardized, reliable and reproducible assessment with the need for one that is relevant, valid, and accurate.

Some assessors employ the following strategies to work within the limitations of FAs:

- Perform FA over 2 or more days allowing a comparison of information over time
- Repeat testing, and use multiple methods for triangulation or comparison of information
- Use worker as one data source (e.g., ask worker about typical day, difficulties with work performance, demands at work)
- Obtain and use contextual information to adjust protocol and to consider during interpretation of findings
- View findings as capturing optimal performance, may be an over estimation of the person’s abilities relative to working full time throughout the year, and conclusions are adjusted accordingly.

4.1.3 Dimensions of Assessment Approaches

In order to articulate the variations in FA approach used by the providers participating in our study, and to categorize the providers according to the approaches they used, five dimensions of FA approaches were developed: Nature of Assessor-Evaluated Interactions, Fixed-Flexible Protocol Delivery, Efforts To Contextualize, Perceptions and Use of Evidence, Provider Organizational Environment. This was accomplished over a series of iterations. Dimensions were initially derived from thematic analysis of data from site visit notes, written materials from sites (pamphlets, procedures), and assessor interviews. These materials were reviewed by research team members to identify elements of commonality and variation in FA approach across the different provider organizations. Each dimension was viewed as a continuum; with both ends of the continuum described, and expressed by a scale of one to four. The continuum was operationalized by observable indicator statements, linked with available data sources (e.g., site visit notes, report reviews, report cover sheets, assessor interviews and questionnaires, provider organization questionnaires, evaluatee and report user interviews). In this way, a provider’s approach could be described along the continua of each dimension through the clustering of the observable indicators.

Based on Straus’s Grounded Theory, a review team triangulated information gathered in the field (i.e., site visit notes, organizational profiles, assessor questionnaires and interview transcripts, report reviews, worker and report user interviews) to determine by consensus where each study provider fell along the continuum for each dimension. During this process, the dimensions were further developed and defined.

Descriptions and Scales of the Five Approach Dimensions:

A. **Nature of Assessor-Evaluated Interactions:** refers to the extent and quality of the interaction between the assessor and worker during the assessment. At the more positive end of the continuum, is on-going dialogue between the assessor and evaluatee, partnership; at the other end there is minimal or no interaction, only recordings of observations.

Rating Scale:

1. No evidence of interaction: recordings of observations only
2. Minimal Interaction: restricted to provision of information, perhaps systematically part of the protocol
3. Exchange of information
4. Dialogue of information/thoughts/feelings, partnership and coaching for best performance

B. **Fixed-Flexible Protocol Delivery:** refers to the extent to which the administration of the protocol is changed between evaluatees. The emphasis is on the use of clinical understanding to determine the protocol (i.e., protocol is directed by clinical reasoning versus directed by the tools themselves). At the positive end of the continuum, there is flexible delivery of protocol, where the assessor plans an individualized assessment directed by understanding of the referral source's needs and the nature of the worker's injury/disability; at the other end is a fixed protocol, requiring low clinical understanding, and directed by tools/technology.

Rating Scale:

1. Fixed Delivery of Protocol & Low Reliance on Clinical Understanding
2. More Tendency for Fixed Delivery of Protocol & Lower Reliance on Clinical Understanding
3. More Towards Flexible Delivery of Protocol
4. Flexible Delivery of Protocol Based On Clinical Understanding

C. **Efforts To Contextualize** refers to the extent the work/workplace, clinical and whole person context is reflected in the administration of the protocol, analysis, and interpretation. At the positive end of the continuum, the FA's planning and analysis consider the worker's individual circumstances, i.e. disability, work and life roles; at the other end there are significant gaps in the use/integration of this background information.

Rating Scale:

1. No Background Information or Significant Gaps In Background Information
2. Minimal Contextualization, Although Occasionally Observed
3. Tendency Towards Complete Contextualization, But Not Comprehensively
4. Fully or Comprehensively Contextualized FA (i.e., all three contexts considered during assessment, analysis and conclusions and/or recommendations)

D. **Perceptions & Use of Evidence** refers to how assessors perceive and use the best available evidence with their training and experience in decision-making about each individual assessed. At the positive end of the continuum, the assessor is aware of and critically considers the most current available evidence in combination with their training and experience; at the other end there is limited evidence of critical thinking, significant gaps in evidence-based practices.

Rating Scale:

1. No Evidence Of Critical Thinking Or Significant Gaps in Evidence-Based Practices
2. Possesses Some Information, Some Reflection, Naïve To Issues/Controversy
3. Evidence of Critical Thinking
4. Consumer Of Research & Evidence Based Practice

E. **Provider Organizational Environment** refers to how the organization is structured with supports and resources to enable assessors to practice to the best of their abilities. At the positive end of the continuum, assessors have ready access to a range of assessment modalities to tailor assessments, and actively seek & use multiple, varied supports/resources; at the other end, there is limited access to resources, and practice is restricted either due to lack of availability or the culture of the organization.

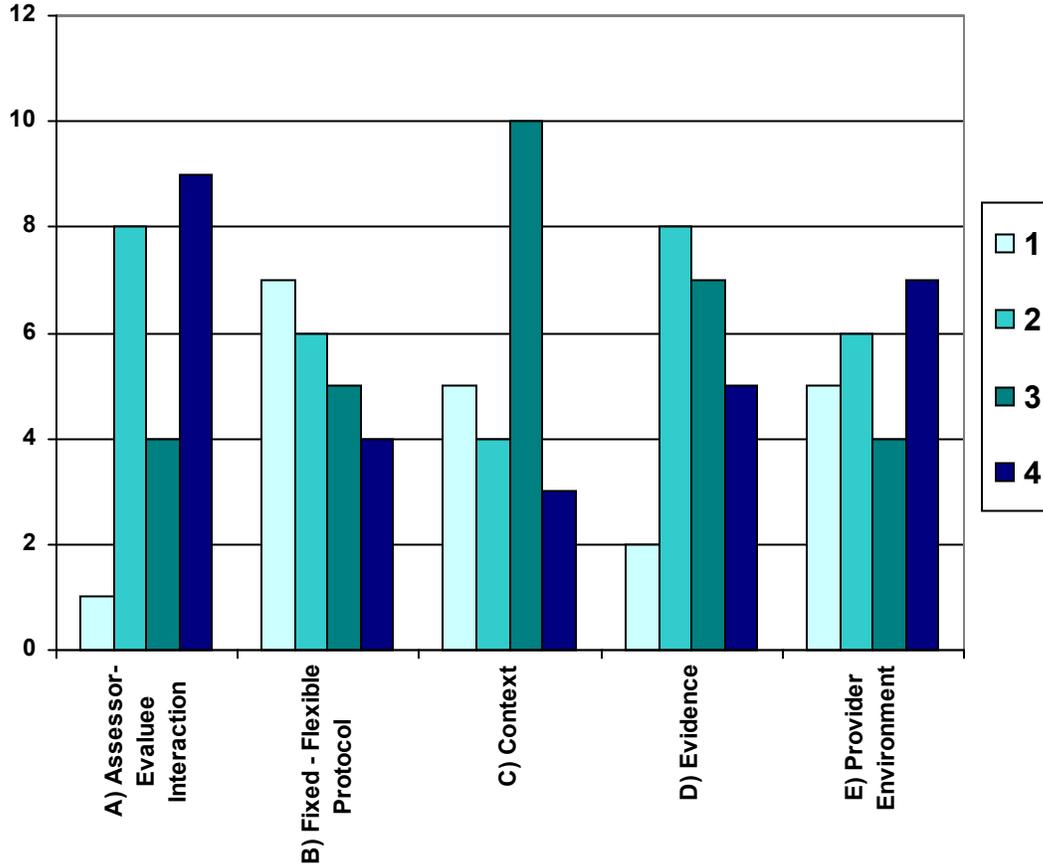
Rating Scale:

1. Limited Access to Resources & Opportunities, Practice is restricted (either due to unavailability or the culture of the organization)
2. Limited Resources & Opportunities
3. Varied Resources & Opportunities
4. Multiple and Varied Resources & Opportunities In Which Assessors Are Actively Seeking & Using

4.1.4 Provider Approach Dimension Ratings

Provider organizations in the study varied with respect to the five Approach Dimensions as illustrated in Figure 4. For the most part, the full 1-4 scale was used to identify differences within each dimension.

Figure 4: Study Providers Scored Across Dimensions



The distribution of scores for 22 providers along each of the five Approach Dimensions appeared to cluster into “high” (ratings = 3, 4) and “low” (ratings = 1, 2) scores. Note, not all providers contributed equal numbers of workers to the cohort (Table 5). This resulted in some providers being rated only from the site visits, assessor interviews and sample reports.

Table 5: Approach Dimensions x Providers x Workers Assessed

<i>Dimensions</i>	<i>Score</i>	<i>Number of Providers (N=22)</i>	<i>Number of Workers in Cohort (N=67)</i>
Assessor Evaluatee Interaction	Low	9	22
	High	13	45
Fixed/flexible Protocol	Low	13	37
	High	9	30
Efforts to contextualize	Low	9	25
	High	13	42
Perceptions and use of evidence	Low	11	32
	High	11	35
Provider Organization Environment	Low	10	32
	High	12	35

4.2 Description of Participants

4.2.1 The Worker Cohort – Description At Time Of FA

Seventy workers were initially enrolled in the study and 67 workers completed the two and eight-month follow-up interviews. Data for one individual included in the study was entered twice (i.e., as 2 separate events), because two separate FAs were conducted for different injuries⁶. This increased the number of events for follow-up interviews from 67 to 68 cases.

Workers ranged in age from 22 to 63 years, with a mean age of 42 years. There were 35 men (55%) and 32 women (45%) in the sample. Married workers accounted for approximately 78% of the sample, whereas 8% were single and 14% were divorced, separated or widowed. The marital status for five workers is unknown. Forty-one workers (67%) had dependents. English was a second language for 17 workers (25%). The diverse languages spoken included: French, Spanish, Croatian, Dutch, Hungarian, Polish, Punjabi and Tamil. Note, only a few workers were excluded from the study for language as the majority forwarded as potential study candidates (97%), were sufficiently fluent in English to participate in telephone interviews.

The interval between the worker's date of injury and the date the FA was conducted ranged from less than a month to 192 months (0-16 years). Both medians and the mode of time between injury and FA were 24 months (See Appendix B). This coincides with many long-term disability insurance plans that are based on a two-year term.

The majority of workers (71%) were not working at the time of FAs. We suspect that in the past far more workers were not working at the time of FA, and that the 29% who were working may reflect the changes in early return to work employer practices. At least half of interviewed workers were unionized (n = 35), and worked in workplaces with more

⁶ Statistical analysis with these two FAs did not adjust for lack of independence.

than 200 employees (n = 34). Twenty-four percent of interviewed workers (n = 18) come from workplaces with less 149 employees (Table 6). The large amount of missing data makes it impossible to draw on any further significant inference.

Table 6: Workplace Size

<i>Workplace Size</i>	<i>Frequency</i>	<i>% of sample</i>
200 and more employees	34	74
150-199 employees	1	2
100-149 employees	2	4
50-90 employees	4	9
Less than 50 employees	5	11
N	46	100
Missing	21	
Total	67	

Manufacturing (such as food, rubber, publishing, textiles etc.) was the sector with the highest representation in the sample (n = 19 or 28% of workplaces). Health and Social Service Industries, such as hospitals, accounted for approximately 16% (n = 11) of the sample. Six (9%) interviewed workers were in the Government Service industries sector, locally as well as at the provincial and federal levels. 18% of interviewed workers came from the Transportation, Accommodation and Other Service Industries sectors.

Table 7: Workplace Sector⁷

Sector	Frequency	Approximate % of sample
Manufacturing	19	28
Health & social service	11	16
Government service	6	9
Transportation & storage	4	6
Accommodation, food & beverage	4	6
Other service industries	4	6
Construction	2	3
Educational service	2	3
Agricultural & related service industries	1	1
Retail trade (food, furniture, vehicles)	1	1
Total # of Sectors	54	81
Missing	13	19
N	67	100

At the time of the FA, members of the cohort were living with a wide range of impairments⁸. The structures affected that were most often reported in FA reports were upper extremities, shoulder and trunk, each representing 21% of the sample. Another 15% of impairments related to the lower extremity and almost another 15% involved the

⁷ Categories of workplace sectors are from Statistics Canada. (1995). *National Population Health Survey, 1994-95*. Public Use Microdata Files. 82F0001XCB

⁸ Categories of are from the revised World Health Organization’s Classification of Impairment, Disability and Handicap: World Health Organization. (1997). *ICIDH-2: International classification of impairment, activities & participation: A manual of dimensions of disablement and functioning. Beta-1 draft for field trials*. Geneva, Switzerland: World Health Organization.

neck region. There was little variation in what was reported in the FA report and what was relayed by worker interviews. Only six instances (3.7%) of impairments reported by workers were not recorded in reports.

According to FA reports, about a quarter of all accounts of impaired function was related to pain. Other reported impairments of function involved: joint mobility (15%), muscle power (13%) and sensations related to movement (12%), muscle endurance (9%), other sensory functions (4%), sleep (3%), cardiovascular-respiratory (3%), mental functions (3%), weight maintenance (1%). Recorded impairments in FA reports were close to what was reported in worker interviews except sleep impairment was under documented in reports (9 versus 24 cases), and memory impairment (3 cases) was reported in interviews but not recorded in reports.

Workers reported many more restrictions in their occupational roles than were documented in their FA reports, including limitations in many activities other than “paid work” (Table 8). Approximately 65% of total role restrictions identified by workers were not documented in FA reports. This reinforces the view that FAs in general consider a narrow view of injured workers’ lives.

Table 8: Restrictions in Occupational Roles

<i>Occupational Roles</i>	<i>Restrictions Identified in FA</i>	<i>Restrictions Reported by Worker</i>	<i>Restrictions Identified in FA & Reported by Worker</i>	<i>Reported by Worker but not Identified in FA</i>
Worker (paid)	49	61	48	14
Home maintainer	14	49	14	35
Mobility	11	26	11	15
Leisure/recreation (participant), Civic/Community, Religious/spiritual activities	10	47	10	37
Self Care/looking after yourself	7	33	7	25
Caregiver/assistance to others	2	18	2	16
Social Roles	1	19	1	18
Communication	1	9	1	8
Volunteer (non-paid)		3		3
Student		2		2
Total # of Roles	95	267	94	175

At least 10 workers had a formal diagnosis of depression and/or were on anti-depressants. We suspect there were additional workers with untreated depression.

4.2.2 Changes in Workers' Condition & Status Post-FA

Changes In Impairment: The 68 FA reports had documented a total of 162 instances of impairment of structure. Worker interviews at two and eight months post-FA indicated that these remained relatively constant over this period (43% and 47% remaining unchanged at two and eight months respectively) (Table 9). In some cases where impairment was worse, this was due to the worker having experienced new problems, unrelated to the FA event. At eight months, workers reported equal numbers of structural impairments changed for the better and for the worse.

Table 9: Changes in Impairments of Structure

<i>Change Rating</i>	<i>At 2 Months (n)</i>	<i>At 8 Months (n)</i>
Better	27	31
No change	69	76
Worse	47	31
Worse (new problem)	6	5
N	149	143
Missing		13
Total # of Impairments	162	162

Over the 8 months after the FA, there were no changes for 137 (47%) of identified impairments of function (Table 10). Over the same period, workers reported improved function in 48 cases (16%), and a worsening of function in 58 (20%) cases, plus seven (3%) cases in which the worsening was related to new problems (e.g., new hand injury). The 68 FA reports had documented a total of 293 impairments of function.

Table 10: Changes in Impairment of Function

<i>Change Rating</i>	<i>At 2 Months (n)</i>	<i>At 8 Months (n)</i>
Better	41	48
No change	156	137
Worse	63	58
Worse (new problem)	7	7
# of Impairments Reported by Workers	267	250
Missing	26	43
N	293	293

Changes in Restrictions In Occupational Roles: As mentioned previously, occupational roles, in the WHO's classification system, include personal maintenance, home life, social relations, etc. as well as the work role. Workers were asked in their initial interview, and at two and eight months post-FA, whether their activities in fulfilling these roles were

restricted. The number who report occupational roles being “more restricted” over the eight-month period remains relatively constant, whereas some in the group reporting “no change” at two months seem to have experienced some improvement by the eight-month point (Table 11).

Table 11: Changes in Occupational Roles

<i>Change Rating</i>	<i>At 2 Months</i>	<i>At 8 Months</i>
Less restricted	8	44
No change	185	136
More restricted	50	58
Due to internal/personal reasons	26	39
Due to external/environmental reasons	3	10
Due to both internal & external reasons	21	9
N	243	238
Missing	27	32
Total # of Roles	270	270

Amongst those reporting more restrictions at eight months, in 39 cases, this was attributed by workers to personal or internal constraints (e.g., further degeneration of medical condition), whereas 10 were more restricted due to increased external or environmental demands (e.g., workplace), and 9 attributed it to a combination of personal-external demands.

Changes In Occupational Status: Table 12 gives details of the occupational status of cohort members at the various interview points, i.e., whether they were or were not working, and more specifically describes their current work or training situation. Seventy-one percent were not working at the time of FA, but this gradually declines to 47% at two months and 32% at eight months. By the eight-month point, approximately 40% are working in some form of paid work, and 22% are in retraining programs, part of the Labour Market Re-entry (LMR) program. We note that some workers in the LMR stream were working at the time of the FA and moved to ‘not working’ at eight months. Nine workers did not complete 8-month data collection, and seven of these had been in LMR programs at the two-month point. It is possible that they remained in training programs at 8 months, given that SEB plans, reported in our interviews, generally continue over this time period. Individuals in this cohort who had entered the LMR process tended to express worry about the future when interviewed. They asked, “What happens when the SEB plan is completed and the support of WSIB cum employer ends, and responsibilities to them dissolve?”

Table 12: Changes in Cohort's Occupational Status

Status	At Time of FA	%	At 2 Months	%	At 8 Months	%
Working	20	26.4	36	44.2	40	39.7
<i>Same job, without modifications</i>	2	2.9	3	4.4	2	2.9
<i>Same job, with modified work</i>	10	14.7	11	16.2	7	10.3
<i>Same job, with accommodations</i>	2	2.9	3	4.4	1	1.5
<i>Same employer, different job</i>	3	4.4	11	16.2	13	19.1
<i>Same employer, same job, different location</i>			1	1.5	3	4.4
<i>Different job, different employer</i>	1	1.5	1	1.5	1	1.5
School/Retraining (LMR)	2	2.9	6	8.8	13	22.0
Not at Work	48	70.6	32	47.1	19	32.2
<i>"Not working"</i>	48	70.6	30	44.1	17	28.8
<i>Seasonal Lay-off</i>			1	1.5		
<i>Continuing to seek employment in general labour market</i>			1	1.5	2	3.4
Missing					9	15.3
Total	68	100.0	68	100	68	100

Interestingly, of the ten workers who returned to the same job on modified duties at 2 months, seven remain by eight months. By eight months, 13 workers had returned to a different job at their place of employment (in contrast to three in this situation at the time of the FA), and three were in the same job but at a different location within the same company. In these 13 cases, the FA provided information that was used to select alternative job options. One could speculate that some workers in the group who remain on modified duties after eight months may have been placed in 'make-work dead end jobs'. It is not clear whether those individuals in our study who have returned to work are performing meaningful work.

Changes In Benefit Status: Over time, the number of workers receiving benefits decreased (Table 13). By eight months post-FA, the number receiving benefits while in treatment had decreased from 28 to six; those being supported while in the LMR program had increased from 14 to 22, and 12 workers had returned to work and were off benefits.

Table 13: Benefit Status of Workers

<i>Benefit Status</i>	<i>At time of FA</i>	<i>At 2 Months</i>	<i>At 8 Months</i>
Total number receiving WSIB benefits	61	53	42
Receiving benefits; not working; in treatment	28	10	6
Partial benefits (job accommodation/mod)	9	12	6
LMR	14	22	22
Permanent disability & Unable to work	1	1	
Claim closed, now re-opened	1		
No lost-time benefits	8	8	8
Total number receiving benefits from other sources	2	2	2
STD	2	2	
LTD			2
Total number not on benefits	6	13	16
Benefits have ended/returned to work		9	12
Settlement received from WSIB	1	1	3
No benefits – delay in activating system	1		
Benefits have ended/no work available		1	
Investigated for fraud			1
E.I.	3		
Seasonal Lay-off	1		
Missing	1	2	10
N	69	66	60
Total	70	68	70

Interestingly, eight workers received no lost time benefits and worked throughout. Several workers obtained funding through means other than WSIB: three workers used employment insurance, four workers were supported by short-term or long-term disability plans.

At the time of the FA, 8 workers had been in the appeals process; this increased to 12 workers at two months and 11 workers at eight months. We do not have information about other appeals made in relation to other claims within our cohort, or information about the relationship between FAs and the appeals process.

Changes in Health Status: Workers' general health status was examined, using Physical and Mental Health Change Summary Scores from the SF-36, administered at two and eight months, post-FA (Table 14). In terms of physical health, only 21% appeared to have improved, whereas 33% remained unchanged and 46% became worse. In terms of mental health, 39% improved, compared to 50% that became worse with 12% whose mental health status remained unchanged. Therefore, both physical and mental health status deteriorated for approximately half the cohort. (See Appendix D for more detailed information on SF-36 individual summary tables).

Table 14: SF-36 Physical and Mental Component Score: Changes Over The Eight Months Post-FA

<i>Change</i>	<i>Physical Health Change Score</i>	<i>%</i>	<i>Mental Health Change Score</i>	<i>%</i>
Better	11	21.2	20	38.5
No Change	17	32.7	6	11.5
Worse	24	46.2	26	50.0
Missing	15	28.8	15	28.8
Total	52	100.0	52	100.0

Summary of Worker Changes: In summary, although at eight months more workers were at work and fewer workers were on benefits...

- Approximately half experienced no change regarding structural impairments, and functional limitations;
- As many workers improved as became worse regarding functional limitations;
- Approximately half the cohort deteriorated in their physical and mental health status

4.2.3 Report Users

Approximately five months after the FA report was released, each person who received a copy of the report was contacted for a follow-up interview. A total of 103 report user interviews were conducted, regarding 68 workers with a range of report users in a variety of positions in WSIB and employer systems (Table 15). Some report users were interviewed on more than one occasion because of their involvement with different workers such that a total of 87 individual users were interviewed. No report user interview was conducted for three workers in the cohort; one worker withdrew from the study before the time of the report user interview, and in the case of two other workers, report users refused to be interviewed. In total four report users refused to be interviewed citing lack of permission from the manager of a LTD carrier, and that payment for LMR case manager's contract does not cover time spent in interviews. Two report users did not return calls.

We suspect employer's involvement with FAs may be under represented in Table 15. On several occasions, other workplace parties were mentioned in interviews as having used part of the reports or information from the reports, but they were not interviewed due to workers' consents being restricted to contact only those who are given a full copy of the FA reports.

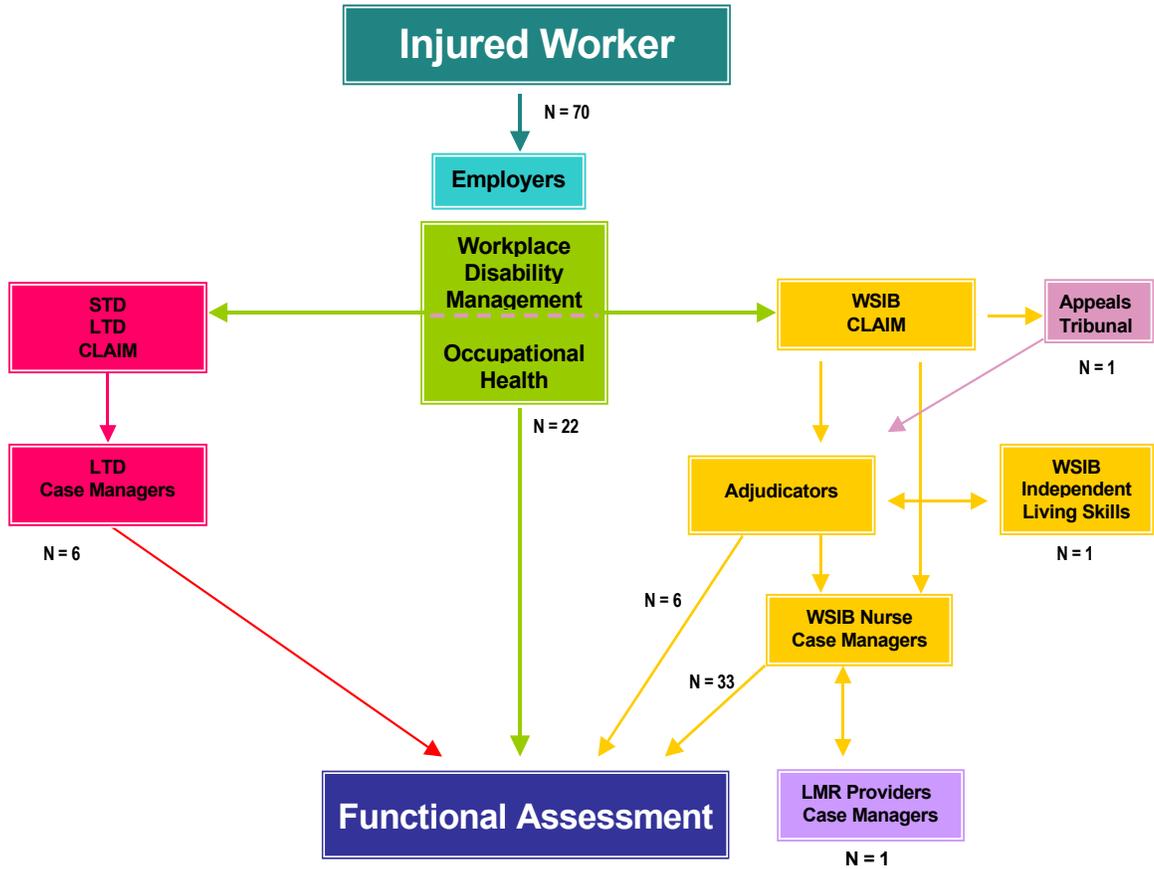
Table 15: Report Users by Position

<i>Position</i>	<i>Total Interviews (Percent)</i>	<i>User Sample (Percent)</i>	<i>Experienced Users</i>
Employer total	27 (26%)	22 (25%)	16
Nurse/OHN/Occupational Health	13		
Human Resources	7		
Health & Safety	4		
Contracted Disability Case Manager	1		
Salaried Rehab Consultant/Case Manager	2		
WSIB total	58 (56%)	51 (59%)	26
WSIB Adjudicator	25	21	13
WSIB Nurse Case manager	27	24	10
Other WSIB: Appeals (2), RTW Advisor (1), Independent Living Consultant (2); WCB adjudicator, Alberta (1)	6	6	3
Other	18 (17.5)	14 (17.4)	8
LMR Providers	10	7	3
LTD Rehab Consultant	5	4	3
Union	2	2	1
Physician	1	1	1
Total	103 (100%)	87	50

4.2.4 Referral Patterns & Sources

FA referrals came from multiple sources within the WSIB and employer systems. When claims are initially rejected by WSIB, employers sometimes obtain FA services through Short-Term or Long-Term Disability Insurers. Provider organizations report that there has been an increase in referrals for FAs directly from employers, and WSIB constitutes a declining proportion of the market.

Figure 5: Functional Assessment Referrals



Many report users have no or limited experience with FAs. In our sample, 37 of 87 users (approximately one third) had worked with only one provider and/or had experience with less than 10 FAs. Some individuals had not read the FA and the first time was upon review of the file for the interview. Understandably, because of their relatively new role, the WSIB nurse case managers in particular lacked experience yet they are the ones who ordered the largest number of FAs for WSIB.

4.3 Use of FAs in Southern Ontario

Our interviews with report users indicated that FA reports go into many hands beyond the original referral sources. Each report user looked at the report differently, depending on his/her training and role. A single report could be used in many different ways, some of which would not have been communicated to the assessor at the time of the referral. The life of the report goes on long after the FA and its original intent.

When the referral source asks “Can this person return to a particular job?” they are often seeking much more information than what is communicated by that question. The additional queries that may or may not be communicated to the assessor include whether the person is able to work part-time/full-time, recommendations for planning a graduated return to work program, insight into previous failures at return to work, potential for other positions, recommendations for treatment and accommodations. In particular, use of the FA for adjudication or mediation is not communicated to assessors.

Willingness to release FA information varied greatly within and across systems:

- Employers tended to deal openly, almost always gave workers a copy of the full report and asked for worker’s permission to send the report elsewhere;
- Release of FA results in WSIB system appeared to be very inconsistent. In most settings the report results were withheld from workers and service providers; some adjudicators and nurse case managers would release results only if asked; for others, results were not forwarded or partially forwarded to LMR providers (a few exceptions);
- According to interviewees, employers generally have policies about releasing FA results to workers who have undergone assessments, and the WSIB does not.

As mentioned earlier, 27/87 report users had little experience with FAs. The remaining 50 experienced FA users’ comments were reviewed and their reasons for selecting a particular provider ranked in Table 16. The most often cited reasons for selecting a particular provider involved referral sources’ perceptions of the assessor’s expertise, professionalism and use of clinical reasoning; confidence in the provider’s practices; and referral source-provider relationships.

The ways FA reports were used are cited in Table 17. The majority indicated FAs were particularly useful for return to work (RTW) planning. Often results were used in a combination of ways – for example, validating not to pursue one direction and identify other directions or options for return to work planning. In some cases, if a lack of cooperation on the part of the worker was suspected, a referral was made to check this out. This practice of using the FA to examine effort, attitude and compliance was conducted by sixteen experienced users in a variety of positions: WSIB adjudicators (6), employers (5), WSIB nurse case managers (4), LTD case manager (1).

Eight responses (8.8%) are classified as being related to adjudication of a worker’s claim or benefits. This may be an under-estimate, given the lack of documentation in reports.

Table 16: FA Users’ Reasons For Selecting Particular Providers

<i>Frequency Of Response With 50 Experienced Users</i>	<i>What were your reasons for selecting a particular provider?</i>
26	Staff’s professional expertise, and use of clinical judgment <ul style="list-style-type: none"> • Staff’s training & knowledge • Confident in giving staff any condition, any level of complexity and able to handle it • Worker is treated professionally & safety ensured • Staff maintain objectivity
19	Confidence in provider’s assessment practices <ul style="list-style-type: none"> • Confidence in FAs validity or ‘truth value’ • Ability to ‘hold up in court’
15	Referral source-provider working relationship <ul style="list-style-type: none"> • Accessibility by phone, proximity • Approachable manner • Provider’s marketing efforts
7	Value for the money <ul style="list-style-type: none"> • Adjudicator considering costs charged to employer • ‘You get what you pay for’; User had previously bought inexpensive FAs and been disappointed, and now pays more to obtain a better product, believes saves money in the end
7	Past history of FA experiences <ul style="list-style-type: none"> • User had recent positive experiences with the provider delivering a good product, often after experiencing short-comings with other providers
7	Logistics <ul style="list-style-type: none"> • Proximity to worker’s residence, Parking • Lack of selection in providers available for the area
4	Purpose of FA; e.g., <ul style="list-style-type: none"> • For mediation, may select a provider who “gives numbers” & a more narrow focused FA • For RTW planning, may select a provider who will give an overall picture of the person and tailor the FA to the context
3	Selection directed by policy <ul style="list-style-type: none"> • Union contract stipulates a particular provider • Offers a few choices to worker & worker selected final provider • Adjudicator or appeals requested a particular provider

Table 17: Uses of FAs

<i>Frequency Of Response With 50 Experienced Users</i>	<i>FAs Were Identified By Experienced Report users As Being Used In Practice For...</i>
30	RTW planning by providing an opinion or direction and detailed information: <ul style="list-style-type: none"> • physical abilities, tolerances, restrictions; • accommodations & work modifications; • graduated RTW plan; • recommendations for therapy and aids/assistive devices
16	Examining effort, attitude, compliance
15	Mediation – a way to deal with or prevent conflict; moves case along <ul style="list-style-type: none"> • Provide an independent third party opinion when there are labour relations issues or review by tribunal • Brings parties to the table & negotiate a joint understanding
13	Validate opinion or direction: <ul style="list-style-type: none"> • gives adjudicator credibility with employer for LMR services; • gives direction and/or substantiates LMR provider’s SEB; • safety check for employers
8	Adjudication of claim or benefits <ul style="list-style-type: none"> • To clarify entitlements e.g., NEL, or FEL/LOE • If FA is reviewed as part of Tribunal, decision-makers have no relationship with worker & may have little information except for the FA • Adjudication staff turnover or coming into the process late without the benefit of relationship or context from which to operate; gives them another piece of information to get a sense of the person
5	Baseline measurement: <ul style="list-style-type: none"> • to monitor progress of treatment in preparation for RTW or rehab planning • to monitor progress of degenerative changes to establish a benchmark for injuries down the road
4	Opportunity for the worker to explore abilities and limitations; move towards planning; come to terms with disability & move on

4.3.1 Selection of FA Providers

The primary reasons given for selection of specific providers were referral sources' perceptions of assessor's expertise, professionalism, knowledge, and use of clinical judgment. Selections appear to relate to decisions involving values, confidence and risk. Users talked about balancing risk, needing to have confidence in the provider because the user's reputation was at stake, and needing to have value for money spent.

Of the 50 experienced report users, 19 selected providers based on familiarity with the providers' FA protocols. Only seven indicated being engaged in an on-going working relationship with a particular provider. There appears to be limited dialogue between providers and purchasers of service. The market is fluid; users change providers and/or use a range of providers. However, some geographical locations have restricted choices in selection of providers. Although logistics was mentioned infrequently in the interviews, in particular cases it was the deciding factor (e.g., ability to bring testing to worker's home, rural location).

4.3.2 What Makes For A Good Or Not-So-Good Experience For An FA User?

During the report user interviews all users were asked to draw upon their present and past experiences with FAs to comment upon what makes for a good or not so good FA experience for them. The following are patterns of responses, listed in no particular order.

1. "A good FA tells me what I need to know"
 - Answers the referral question in an understandable form; no jargon, clear
 - Gives an opinion rather than 'sitting on the fence'
 - Provides sufficient detail for action
2. Service
 - Pleasant, friendly, approachable provider, returns calls quickly
 - Reasonable report turnaround time
 - Support/secretarial staff are courteous vs. rude
3. Provider-worker interactions
 - Provider explains expectations to worker, deals with worker's anxiety
 - Engages worker to do the best they can
 - Staff expertise at dealing with 'difficult' workers (e.g., Workers who are initially unwilling to participate in the FA; chronic pain; depression; workers with complex conditions)
4. Professional, objective observations versus value-laden statements or conflict of interest
5. Conclusions are substantiated with a rationale and data.
6. Comprehensive testing of relevant job demands
7. Referral Source Role
 - Specific questions and reason for referral given to provider at the start
 - Relevant, specific Physical Demands Analysis (PDA) given to provider at the start

8. Report’s presentation
 - Concise summary in front; answers questions with rationale
 - Able to be read and understood by anyone
 - Use of charts (e.g., compares performance with itemized job demands)
9. Internal (mis) communication between parties (e.g., between WSIB adjudicator, nurse case manager, Labour Market Re-Entry Service provider, assessor)
 - Re: intent of referral and what information is needed
 - Items not followed up (e.g., recommendations, issues)
10. Value interpretation of findings (“placing data into real life existence”), giving an opinion and direction given versus valuing a summary of numbers/data
11. Report includes a clear statement about effort
12. Value obtaining a picture of the person/worker (e.g., how worker deals with pain while testing, impact of condition on life).

4.4 Perceptions of Assessment’s Utility and Representativeness

4.4.1 Workers – Perceptions of FA’s Usefulness

During the 2 and 8-month interviews, workers were asked to rate the usefulness of the FA using a four-point scale. A summary of workers’ responses is given in Table 18.

Table 18. Worker Utility Ratings – 2 and 8 Months

<i>Utility Rating</i>	<i>At 2 months</i>	<i>At 8 months</i>
Was Not Useful At All	8	19
Met Some Of My Needs	11	11
Met Enough Of My Needs To Be Useful	9	9
Was Very Useful	24	20
Don’t Know	12	1
Total # of Workers	64	60
Don’t Know	4	8
N	68	68

At 2 months, half the workers gave positive ratings (‘Very Useful’ or ‘Useful’), about one third gave poor ratings (‘Met Some of My Needs’ or ‘Not Useful At All’). At this point twelve workers (18%) abstained from giving any ratings as to the report’s usefulness. However, at 8 months, only 1 worker abstained from giving ratings, positive ratings were given in 44% of cases, and poor ratings increased to 43%.

The reasons given by workers who gave the two least satisfied ratings were as follows:

- Timing i.e., too early or too late in the process
- Failed to show real limitations
- FA was incomplete i.e., did not fully test all aspects of their job
- FA was used as a tool to ‘get rid of the worker’
- Not used in reality, only a formality
- Language in report needed to be translated

The reasons given by workers who gave the two more positive ratings were as follows:

- Provided information about abilities/limitations
- Facilitated action and change
- Substantiated information for benefit payment
- Assisted appeals
- Helped them accept their disability and move on

Reflections of Worker Utility Ratings: Workers 8-month ratings of utility were worse than at 2 months. This is in part because of the number who had abstained at 2 months waiting to see how events unfolded. In several cases, employers/WSIB took several months to take action. Another potential reason for the increase in negative ratings is the need for the passage of time for critical reflection on events. These elements support the need to rate such outcomes at 8 months or later.

Few workers were without reservations about FAs. Those that found FAs useful saw FAs as scientific and working on their behalf. Some workers were aware that good FA experiences do not necessarily result in good outcomes. Interestingly, FAs were viewed by some workers as a “must” to prevent fraud in the system, but reservations surrounded their use in the hands of WSIB/employers.

4.4.2 Report users – Perceptions of FA’s Usefulness

Report users were first asked about the intended use of the FAs reviewed. Approximately half of the FAs (50) were intended as job matches, either single or multiple matches as follows:

- 45 cases – ‘Job Matching’ to single positions
 - 5 cases – ‘Job Matching Multiple Jobs with One Employer/Site’
- 12 cases – ‘Global Screen,’ a general screen of functional abilities and limitations
- 17 cases – ‘Vocational Planning’ for the LMR process
- 14 cases – ‘Other’ referring to a combination of above or adjudication of claim
- 10 cases – Not Applicable due to user’s role not setting intention of use

Next, report users were also asked how useful the FA report was to them in the context of the intended purpose and then asked to rate the particular report’s utility using the same four point scale (1 = Not Useful At All, 2 = Met Some Of My Needs, 3 = Met Enough Of My Needs To Be Useful, 4 = Was Very Useful). In 21 instances, users were unable to give a rating, reporting that they had not worked directly with the worker. The great majority (89%) of the remaining 81 users reported that FA reports were ‘Very Useful’ or ‘Useful.’

Information concerning the usefulness of FA reports to users in different roles and settings is given in Table 19. It is interesting to note that employers in the sample tended to see reports in a positive light; 22 of the 26 users from employment settings rated FA reports as “Very Useful.”

Table 19: Usefulness Of FA Reports, As Rated By Different Users

	WSIB Staff: Nurse Case Managers/ Adjudicators	Employers	Other	Total (%)
Not Useful At All	1	1		2 (2%)
Met Some of My Needs	4	1	2	7 (9%)
Met Enough of My Needs To Be Useful	16	2	8	26 (32%)
Was Very Useful	14	22	10	46 (57%)
Total	35	26	20	81 (100%)

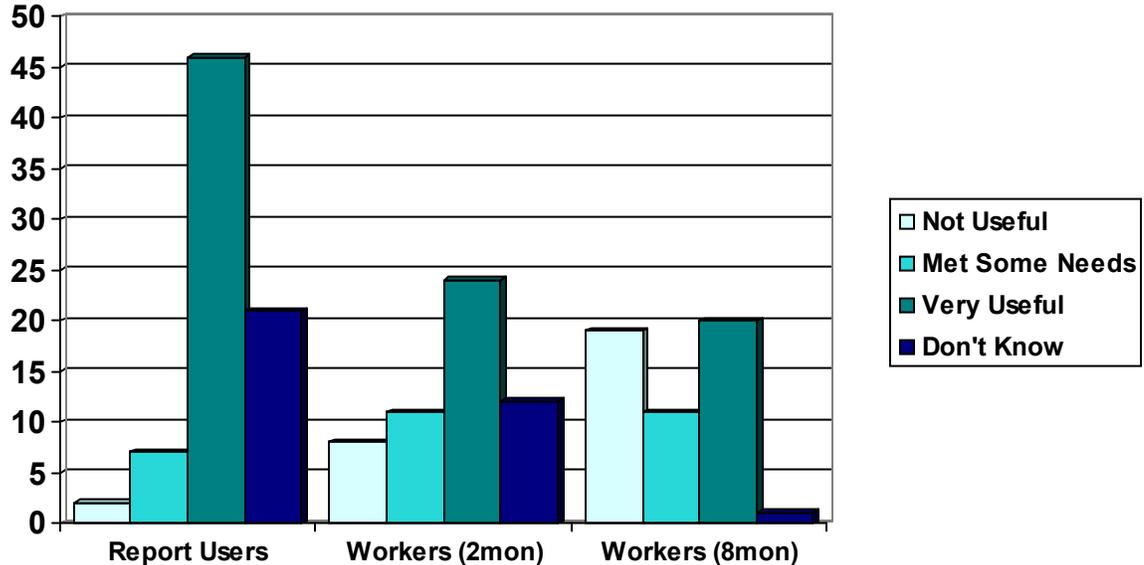
The 11% of users who rated reports as ‘Not Useful At All’ or ‘Met Some of My Needs,’ gave the following reasons for their relatively low ratings:

- Disagreed with the conclusions
- Unable to carry out the recommendations
- FA provided no new information
- FA was not used
- Referral question given to the FA provider was not specific to the end needs
- Other issues “clouded” the situation (e.g., disputes, parties involved, effort, organizational changes)

4.4.3 Comparison of Workers and Report Users Perceptions of Usefulness

Figure 6 illustrates the differences between workers and report users concerning perceptions of FA’s usefulness. Workers found FA reports less useful than did report users, especially after enough time had passed for the workers to make a clear judgement to determine the impact of decisions that had taken place after the FA.

Figure 6: Comparison of Worker and Report User Utility Ratings



4.4.4 Workers – Perceptions of FA’s Ability to Represent Work Function

Workers were asked to rate the FAs’ ability to represent their functioning at the time of the assessment. Workers’ ratings of FAs appear consistent and did not appear to change significantly across the 2 to 8-month interviews. About 59% (37/63) at 2 months and 52% (31/60) at 8 months gave positive ratings believing their FA gave a ‘Very True’ or ‘Mostly True’ representation of their ability to function. On the other hand, approximately 33% (21/63) at 2 months and 42% (25/60) at 8 months respectively give poor ratings believing their FA captured a ‘Somewhat’ or ‘Not At All True’ representation of their ability to function. Issues around how FA results were used appeared to overshadow most workers’ ability to rate the validity of the FA results. However, when workers were asked reasons for poor ratings, comments revealed displeasure with how the findings were used or with return to work outcomes. A few workers made comments that discriminated between utility and representativeness such as:

- “They believed me... doubt ability to capture what I can do in such a short time”
- “I agree 100% with the findings... company didn’t use it”

Because of this poor discrimination between utility and representativeness, these ratings of representativeness need to be interpreted with caution. For this reason, the research team chose not to use these ratings in further analyses.

4.4.5 Report User – Perceptions of FA’s Ability to Represent Work Function

The majority of report users believed the FAs were able to capture the worker’s ability to function: 90% of the ratings (63/70) were positive i.e., ‘Very True’ or ‘Mostly True’ representation. In 29 interviews, report users gave no ratings, commenting to the effect that they did not know the worker sufficiently to make a rating. We did not find any differentiation in ratings by position. There was very little spread in ratings.

Reasons Given For The Two Least Satisfied Ratings:

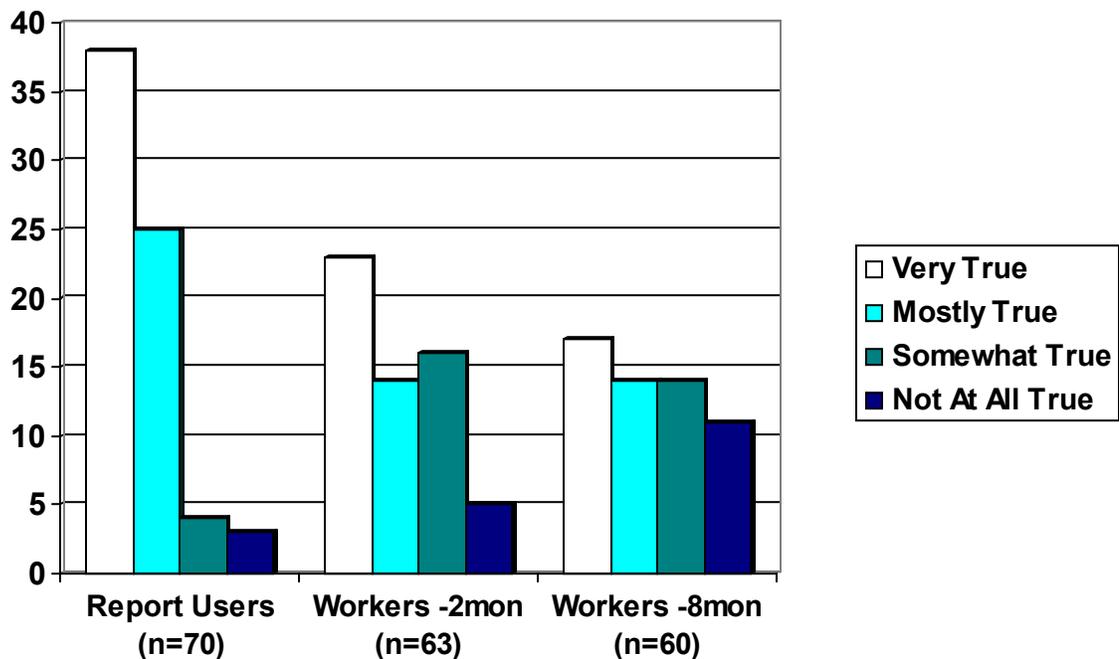
- Disagreed with the conclusions re: extent of disabilities
- Other issues cloud conclusions (e.g., stress, dispute, worker’s effort)
- Lack of confidence in the conclusions due to short testing period

Overall, 60/70 report users gave good ratings for both utility and representativeness.

4.4.6 Comparison of Workers and Report Users Representativeness Ratings

Figure 7 illustrates the differences in ratings of representativeness between workers and report users. Some of this can be understood by their comments during the interviews. Report users tended to have more concerns with the validity of FAs whereas workers tended to have more concerns surrounding the use of FAs.

Figure 7: Workers and Report Users Representation Ratings



4.5 Analysis of Events Post-FA, and Influential Factors

In order to gain a sense of the actual experiences and events lived by all players throughout the FA process, a detailed review of interview data was undertaken. While high-level trends have been identified, it is important to note that every case exhibited its own unique components that belie grouping or reducing to common perspectives.

Key Influential Factors: Many workers reflected upon the chronic and multi-faceted nature of their health concerns, that they felt contributed profoundly to their experience of the work-related accident and/or the resulting functional compromises. The attitudes of workers ranged from being highly motivated to coping with a deep-seated sense of distrust of their employer, their co-workers, and the workplace in general or the WSIB. This sense of distrust tended to permeate the entire experience of being engaged in the FA process. The incidence of workers who reported that they had a positive relationship with their employer was rare. Regardless of the degree of trust or distrust, the nature of these relationships appeared to be an important element in the outcome of the FA endeavour.

Similarly, the nature of the workplace and the workplace culture related to reintegrating injured workers played a significant part in the manner in which the need for an FA was identified, planned and operationalized. In some cases, the employer appeared unprepared to address opportunities for accommodation of injured workers. Alternatively, other employers were, in fact, the initiator of the process, having developed sound relationships with providers of assessment services as well as with the WSIB and the workers themselves. Single case studies illustrate circumstances where mixed messages were received from employers, indicating a wish to help and then resulting in no flexibility in setting up options for return to work. In a very few instances, workers were seen to have few social supports to assist them through this time of difficult transition. Some select cases suggest concerns from the report user that the results of the FA were either unclear or did not seem logically presented. This leads to either a protracted resolution or, at worst, the rejection of the FA outcome thus grinding the process effectively to a standstill.

Range of Outcomes: To understand the scope of outcomes illustrated by this study sample, it is helpful to consider them from the perspective of the worker, the workplace or broader environment and from the view of the report user. Again, the feedback from workers covers a wide spectrum of responses. Many reported increased health problems following the completion of the FA process, although a direct causal link should not be made in any of these cases. Some agreed with the results of the assessment while a few others reported disagreement and concern for the implications of the findings. Frustrations related particularly to the response of the WSIB to the declared directions for future planning; results included termination of benefits attributed directly to the FA results. Other client outcomes included increased feelings of nervousness, depression and frustration. It would appear that many workers enter the FA process thinking that this will be the answer to many, if not all, of their worries related to work and being a breadwinner. Unfortunately, this often proves not to be the case.

In addition, as has been previously stated, some workers identified their concerns that the FA results failed to illustrate real limitations. On occasion, they feared that the FA had been used to “get rid of the worker” and indeed was seen simply as a formality with no investment in attending to the outcomes. Conversely, other views were expressed where the FA was seen to provide information concerning skills and abilities; where the process itself was seen to facilitate action and initiate change. Appeals were also assisted and information stemming from an FA enabled the payment of benefits. Through these means, workers were helped to move on with their lives and gain a more positive direction.

A cohort of employers emerges as being strongly invested in creating a proactive ‘return to work’ culture within their businesses. These employers illustrate many models of flexibility, including opportunities for retraining, openness to several job trials, development of special roles whose responsibility is to case manage and explore positive options to ensure positive outcomes. Many report employers created modified work opportunities to suit the needs of the individual worker; others speak of frustration when, despite modifications, the worker cannot perform the necessary functions. However, these stories of positive effort do not extend across the whole sample. Other employers refer to their concern that workers are not doing their best; these employers fear trusting what they see, since they do not believe the worker is using optimal effort. These cases, however, are fortunately rare, since the outcomes tend to range from no return to work to the necessity for entering into an appeal.

Outcomes in relation to report users also vary widely. A very few report that the FA was not done well; consequently, the results could not be used. Others express concern that the report was written in too complicated a fashion or the recommendations appear unclear and not logically linked to the FA process itself. For those who felt the FA process and report was useful, they stated their appreciation of an FA completed by well-trained practitioners, with knowledge of impairment as well as the vocational aspects.

Emerging Themes: Unquestionably, there are some key themes that emerge. These include high level constructs such as relationships, communication and systems/processes.

Relationships: Issues focusing upon relationships are complex. The value of having strong social support networks is well illustrated across cases. Similarly, supportive relationships within the workplace, between injured workers and co-workers, and injured workers and employers, are critical to positive outcomes and hope for the future. In these situations, an FA is used to point the direction for optimal outcomes; clear objectives emerge in order to guide the return to work process. Relationships between other players are equally important. For example, in situations where an employer establishes a good connection with particular FA providers, the FA process, from initiation through to realization, tends to be most effective and valuable. Similarly, the results are exemplary where employers have created occupational health services and a formal ‘return to work’ program, with a view to working collaboratively with WSIB, FA providers and workers. Problems ensue when the different parties in the enterprise function in isolation, or with minimal communication. Rigidity and inflexibility by employers in their approach to FA involvement tend to result in the FA being used more as a threat, as an imposition, rather than as a collaborative opportunity to explore work abilities and plan for a healthy return.

Communication: Sound channels of communication can result only in positive outcomes. If there are differing understanding and expectations of the FA process across parties then this is the beginning of misunderstanding, distrust and adversarial relationships. From the very onset of planning for an FA, the importance of clear communication cannot be overstated. The referral question should be clear, leading to a logical pathway for the assessment process itself. The report should be well developed, clearly articulated with interpretation of findings, not simply the reporting of what was done. An open-minded approach to dealing with matters broader than the presenting physical deficits is central. Those workers that report concerns around psychosocial matters, including depression and other mental health problems, speak most articulately of feeling unheard, misunderstood and in constant fear being evaluated against objective measures that disregard less obviously measurable elements.

System-wide Concerns: An overall observation clearly identifies the need to focus on clinical, human and social issues, against a background of teamwork. Functional Assessments must be customized, tailored to the distinct needs of the injured individuals, in the context of their workplace, their relationships and their lives. Disagreement between various players can only serve to reduce the potential for positive outcomes, thereby impacting negatively upon the central players, namely the injured workers. Incidences of cultural clashes emerge throughout the study sample, dwelling within ethnic differences pin-pointing the death of inter-cultural understanding and tolerance for differences. In addition, there were more subtle cultural clusters influenced by different sized workplaces and varying expectations of roles within the workplace. Assumptions were made based upon observations not supported by a deeper understanding of purpose.

4.6 Examination of FA Reports With Effort Issues

In eleven (15%) of the 71 FA reports, the effort put forth by the worker was judged to be suspect enough to throw caution unto the interpretation of the assessment's results. We note that this is a relatively small proportion of overall cases, and selection bias may have been involved, i.e., evaluatees for whom such issues had been raised may have refused participation in the study.

We compared these eleven cases, on the basis of:

- what was the reason for referral?
- who were the evaluatees who were assessed thus?
- who provided the assessment?
- how clear was the conclusion about effort?
- what recommendations were made?
- who used the report and what did they have to say about the outcome?
- how were the assessment results used?
- what was the worker's health, occupational and benefit status at follow-up?

Reason for Referral: Although the official reason for referral in these eleven cases included determinations of the worker's ability to perform work globally or to perform a specific job, interviews with report users revealed that in five of the eleven cases, some sort of dispute (appealing or attempting to establish benefit or pension) was pending, and the results of the FA were intended for use in resolving the dispute. This is consistent with findings noted in other sections of this report, i.e., that there are multiple users of FA reports, and that the ways in which the findings will be used are often not transparent when the referral is made. We note, also, that this group of workers had "older injuries" than did the rest of the cohort, i.e. the time between their date of injury and the FA report was significantly longer (median four years post-injury for the "effort cases" versus two years for the larger study population). It must be recognized that there were other workers involved in disputes for whom effort was not deemed an issue.

Description of Workers: There were four women and seven men in this group; their average age was 42. Five had English as their first language; five did not; information on language was not recorded in one case. Of the nine workers whose reports included information on previous treatments, most had undergone several forms of treatment, including physiotherapy (n=8), medication (n=7), surgery (n=4), chiropractic (n=3), injections (n=2), pain and/or pain and anger management (n=2), massage (n=1), and acupuncture (n=1). Of the eight workers for whom co-morbid conditions were documented, five were reported to have experienced depression and in one other case, "mild post-traumatic stress". Compared to the cohort, there were higher numbers of individuals with English as a second language and depression.

Assessment Providers: These eleven reports were generated at four provider sites; the assessment team at one provider site generated five of the reports, teams of assessors at the three other sites generated two each. Seventeen providers involved in the study did not forward any cases where issues around effort were noted. It is unclear whether this is the result of different practice patterns at different provider site. Another possible reason is that referral sources may have selected certain sites to do the FA in cases where some form of dispute was present. There is some indication of this at one site where referrals were sent from some distance, and the site provided other assessment services.

Clarity of the 'Effort Conclusion': The conclusions drawn in reports about the worker's effort were not always as clear and definitive as the report users may have wished. We reviewed the conclusions in these eleven reports, and seven were judged to lack clarity. Sometimes this was due to apparent contradictions between information in the body of the report and in the summary statements, with no explanation of the discrepancy. In other cases, it was the language used that created incoherence; the following quote from one report is one example "*Chronic pain issues will continue to self-limit her ability to carry out full time employment.*" In still other cases, the confusion stemmed from the use of 'pass/fail' language pertaining to effort 'tests', with no indication to the report user about how to interpret the 'report card' and arrive at an overall outcome, for example: Does the failing of three out of eight effort tests mean the results are invalid?

Interviews with assessors suggested that, for many, this is an area where comfort levels are low. This may be one reason why the conclusions drawn often failed to be definitive, or why the ‘facts’ were left to speak for themselves. Although FA practice has evolved a series of ‘effort determination’ techniques and systematic observations, the final conclusion about effort given is the evaluator’s opinion and this may be a difficult opinion to arrive at and express.

Recommendations in FA Report: In four cases, the report concluded that some type of psychological intervention might benefit the worker (in one of these cases, the worker had already completed involvement in a chronic pain management program; in the other, the worker was referred to such a program after the FA). In two reports, the recommendation was that no further formal therapeutic intervention would likely be of benefit. In one of these cases, the recommendation was for the worker to improve his cardiovascular fitness through low-impact sports/activity, and in the other, that the worker be allowed to self-pace in the workplace, to change position as required and to use assistive devices.

Two reports recommended a short conditioning program (to improve both the patient’s function and her perceptions about her disability), followed by a work hardening program/gradual RTW. It appeared that the recommendations had not been implemented in either of these two cases. The WSIB Nurse Case Manager receiving one of the reports noted that the FA recommendations were “not going to do us any good” as several previous attempts at modified work, and treatment by specialists, had not been successful. In the four remaining cases, no specific recommendations were made.

Report Users and Their Perspectives: In all eleven cases, WSIB personnel were prime users of the FA reports. Given the dispute surrounding several, it is not surprising to find among the WSIB staff: Adjudicators (seven cases); Appeals Resolution Officers (two cases); NCMs (five cases). In two instances the report also went to the family doctor and in one case, a summary was sent to the employer.

Interviews with these report users shed further light on how reports that are identify ‘effort issues’ are perceived and used (or not used). NCMs, who are more responsible for ongoing case management, tended to find such reports ‘frustrating’; one NCM asked “*What am I to do with a report that says it’s not valid due to inconsistencies?*” In contrast, users who were looking to the FA report to assist in the resolution of disputes related to benefit and pension determinations found that reports detailing the evaluator’s observations and/or quantifying inconsistencies linked to lack of effort were useful in aiding decisions about level of worker disability. None of these users, however, were content with reports that lacked clear opinions about the reasons for the inconsistent performance and/or perceived lack of effort, but left the issue of effort as a shadowy outline that ‘tainted’ the assessment results .

The Centrality of the Effort Conclusion in Subsequent Decision-Making:

The role of the effort conclusion was, not surprisingly more pivotal in cases where when a dispute was pending. In three of the five assessments where this was the case, we judged the conclusion regarding effort to be ‘clear’. These effort conclusions were central to

decision-making around disputed issues. In one case where the conclusion lacked clarity, the WSIB appeals resolution officer bemoaned the lack of interpretation of data and lack of concluding opinion. In the other, the assessor had reported a mixed picture (with some tests indicating maximal effort, and others suggesting a lack of maximal effort), but concluded that the results were “a valid representation of current maximal physical capacities”. The adjudicator using the report, however, did not accept this judgment, pointing to the individual tests on which the worker was felt not to have given maximal effort. His stated opinion was that FAs “are sometimes subjective, and... can skew things.”, and noted that this report did not change anything about his decision regarding benefits. In this case, the worker was still involved in the appeal process at the time of the 8-month interview.

In the six cases remaining cases (i.e., those where no pending dispute was noted) the issues raised in the reports about suspect effort appeared to have less impact on the ongoing process. Report users sometimes found the FA results frustrating because the ‘effort cloud’ appeared to render all the information in the report as unreliable; effort issues seemed to have little impact on subsequent decision-making. In one case, however, the worker was referred to a pain program by his family doctor on the basis of report findings, and in another, the worker was referred to the WSIB’s Serious Injury Program.

Worker Outcomes: One worker did not do the eight-month interview, so data is reported for the remaining 10 workers: Four were working, three were not working and two were involved in LMR at the eight-month point. There had been no change in benefit status for six workers, whereas in four cases benefits had been terminated/denied. Two workers reported improvement in their level of impairment; four reported no change in this regard; four reported a worsening of their condition.

Summary

Four of the 21 provider sites wrote FA reports in which worker effort was questioned in some way. In all, this amounted to 11 reports. In some cases, the conclusion regarding effort was stated clearly, but more often clarity was lacking. It appeared that these 11 “effort cases” were often those with claims of relatively long duration, and in which there was some sort of dispute or appeal. This latter point was not listed in the formally stated reasons for referral, however. Where there was an appeal pending, the FA results tended to be used to settle the claim (i.e. disallow benefits).

It should also be noted that co-morbid conditions involving emotional/psychological problems were documented in slightly over half of these reports, and English was a second language in half of these cases. The range of worker outcomes related to occupational status, benefits and health appeared similar to those of the cohort.

4.7 Congruence: Do the FA Results Match Subsequent Outcomes?

We created a measure of the "Congruence" between FA findings and eventual outcomes, i.e., whether the FA conclusions were borne out, recommendations were used, and also the match between (1) what would be expected on the basis of FA findings and (2) the worker's subsequent abilities, as reported in worker and report user interviews. We saw this concept as an important one, because people talk about FAs as a means of assessing and planning for a person's future capacity for work, and we wanted to explore outcomes from this perspective. We were able to rate the congruence on 31 of the 67 cases.

Cases Not Rated for Congruence: Approximately half the workers in the cohort were considered ineligible for congruence ratings. A rating could not be made for 36 workers. In 22 cases, the FA report's conclusions were not tested often understandably for safety reasons because the report had given restrictions or physical limitations, and these limitations were respected in the provision of modified work. We saw it as inappropriate to make a judgement as to congruence in these cases. In two cases, ratings were not done due to many delays evident in the case, and the fact that interventions were just beginning and/or not completed. In one instance, the case was at a stand still (i.e., worker not at work, plans in limbo). In 11 additional cases, the decision not to rate congruence was because of effort issues, i.e., the FA reports concluded effort was insincere or were inconclusive concerning effort given during the assessment. We decided not to extrapolate data from other occupational roles for the purpose of the congruence rating, and rated the remaining 31 workers instead.

Comparison of workers in the "Could Not Be Rated" group to "Rated" group (Table 20) shows demographic characteristics were very similar.

Table 20: Comparison of Congruence Rated Group to Not Rated Group

<i>Characteristic</i>	<i>Ineligible (n = 36)</i>	<i>Rated (n = 31)</i>
Age	25 - 64 years (x = 42.7 yrs) Unknown = 2	22 - 62 years (x = 43.6 yrs) Unknown = 2
Gender	Men: 20 Women: 16	Men 17 Women 16
Marital Status	Single 4 Married 24 Divorced/Separated/Widowed 5 Unknown 3	Single 1 Married 25 Divorced/Separated/Widowed 4 Unknown 1
Dependents	Yes 22 No 9 Unknown 5	Yes 18 No 10 Unknown 3
English was Second Language	Yes 12 No 24	Yes 5 No 26
Working at Time of FA	Yes 12 No 24	Yes 9 No 22

Congruence Procedures: Data from worker interviews at two and eight months, and from user interviews at five months, were used to make an "Overall Congruence Rating" for each worker in the cohort. For each worker followed in the cohort, the following four questions were examined:

- A. Did the worker agree with the FA conclusions?
- B. Did the report user(s) agree with the FA conclusions?
- C. Were FA report recommendations followed through?
- D. Did the worker's later occupational performance outcomes match FA findings?

To answer Question A, using the 2- and 8- month interview ratings with comments of how well they agreed with each of the FA conclusions, the researcher team assigned a composite Worker Agreement Rating on a four-point scale, where zero meant "do not agree at all" and four meant "complete agreement".

The answers to Questions A to D were synthesized into an Overall Congruence Rating, using four categories of ratings:

- (1) Congruence
- (2) No Congruence, Recommendations Followed
- (3) No Congruence, Recommendations Were Not Followed
- (4) Congruence Rating Was Not Possible.

In cases where there was no congruence, or where ratings could not be made, explanations were recorded and categorized .

Congruence Findings:

Table 21: Summary of Congruence Ratings

Rating	N=31
Congruent	22
No congruence/ recommendations followed	4
No congruence/recommendations were not followed.	5

Cases Rated As “Congruent”: Of the 67 cases eligible for congruence ratings, 22 were rated as “Congruent”, indicating a match between what might be expected, based on the conclusions in the FA report and the occupational outcomes that followed .

We note that a “Congruent” rating does not necessarily indicate a positive FA experience for the worker, or a report in which the user(s) are completely satisfied. Even when a “Congruent” rating was made, report users complained about how the conclusions were written. In addition, workers might disagree about individual findings or believe that the FA over-estimated his/her abilities, but agree with final conclusions. Another important observation was that in some of these cases, FAs were used as dispute resolution mechanisms, and did not contribute to returning an injured worker to work.

Cases rated as “No Congruence/Recommendations Followed”: In four cases that were rated “No Congruence”, recommendations had been followed. The lack of congruence can be attributed not only to the FAs’ failure to accurately estimate the worker’s ability to perform at a full-time job, but also to additional health, psychosocial issues, and system-based or FA process issues (e.g., timing of FA before surgery):

1 case: FA failed to make a predictive estimation of ability. The FA concluded that the worker was unrestricted in standing yet at work, the worker was shown to have difficulty with standing. The worker commented that the test for standing was not reflective of the job requirements. In addition, the FA was conducted before the worker had surgery.

1 case: The worker experienced on-going health problems that aggravated problems at each successive modified job. The extent to which the FA failed versus additional health problems was the issue is not completely clear.

1 case: The worker believed the FA over-estimated abilities. The worker reported over-extending self at work to the detriment of other roles, and had yet not been able to reach the FA’s estimate of being able to work full time. The individual was also dealing with family issues and depression. This case illustrates the impact of psychosocial issues (family, depression) on outcome and raises the question of whether FAs can generalize findings to full-time work tolerance.

1 case: The FA concluded the worker was able to work eight hours/day, and the worker is struggling at four hours/day. Also, the report user commented that they did not ask the right questions of the FA.

Cases rated as “No Congruence/Recommendations Not Followed”: At eight months, five workers were rated ‘No Congruence and Recommendations Not Followed’. All five experienced re-injury or worsening of health as follows:

1 case: Recommendations not followed by worker or WSIB, health & function declined as worker over used opposite side to compensate for disability.

1 case: Worker worked outside restrictions and recommendations not fully implemented by employer; health worsened and injury re-occurred.

1 case: Worker not given gradual return to work as recommended, experienced exacerbation & left work after 2 months

1 case: At 5 months employer implemented recommended accommodations such that job matched worker’s restrictions. At 8 months, worker had re-injured self by working outside restrictions.

1 case: Re-injured back working outside restrictions, recommendations partially followed through.

Some would argue that these re-injuries, or worsening of health, support the predictive ability of the FA conclusions. If these five cases are removed from the ten mismatches, it would leave five of the 31 rated cases or 15% lacked congruence.

In summary, approximately half the cases in the cohort were rated for congruence between the FA results and subsequent occupational outcomes. Conservatively, in the majority of these cases (22 out of 33 cases), the subsequent outcomes were judged as congruent with expectations based on the FA report. We note, however, that this seemingly positive result must be judged with caution, given the relatively small proportion of all cases that we were able to rate.

4.8 Relationships Between Assessment Variation & Range of Outcomes

We examined each Approach Dimension in relation to a range of outcomes, including report user and worker 8-month utility ratings, worker's health status (both physical and mental health change scores of SF-36), claim status, and occupational status. We found no evidence of clear relationships or consistent patterns, even after splitting the data in different ways (see Appendix B). We also examined relationships among congruence ratings and a range of outcomes perceived usefulness of the FA reports, occupational status, claim status at eight months and changes in health status. In addition, the relationship of perceived usefulness (worker and user 8-month utility ratings) to the occupational, claim and health outcomes was examined. No clear relationships of association were found.

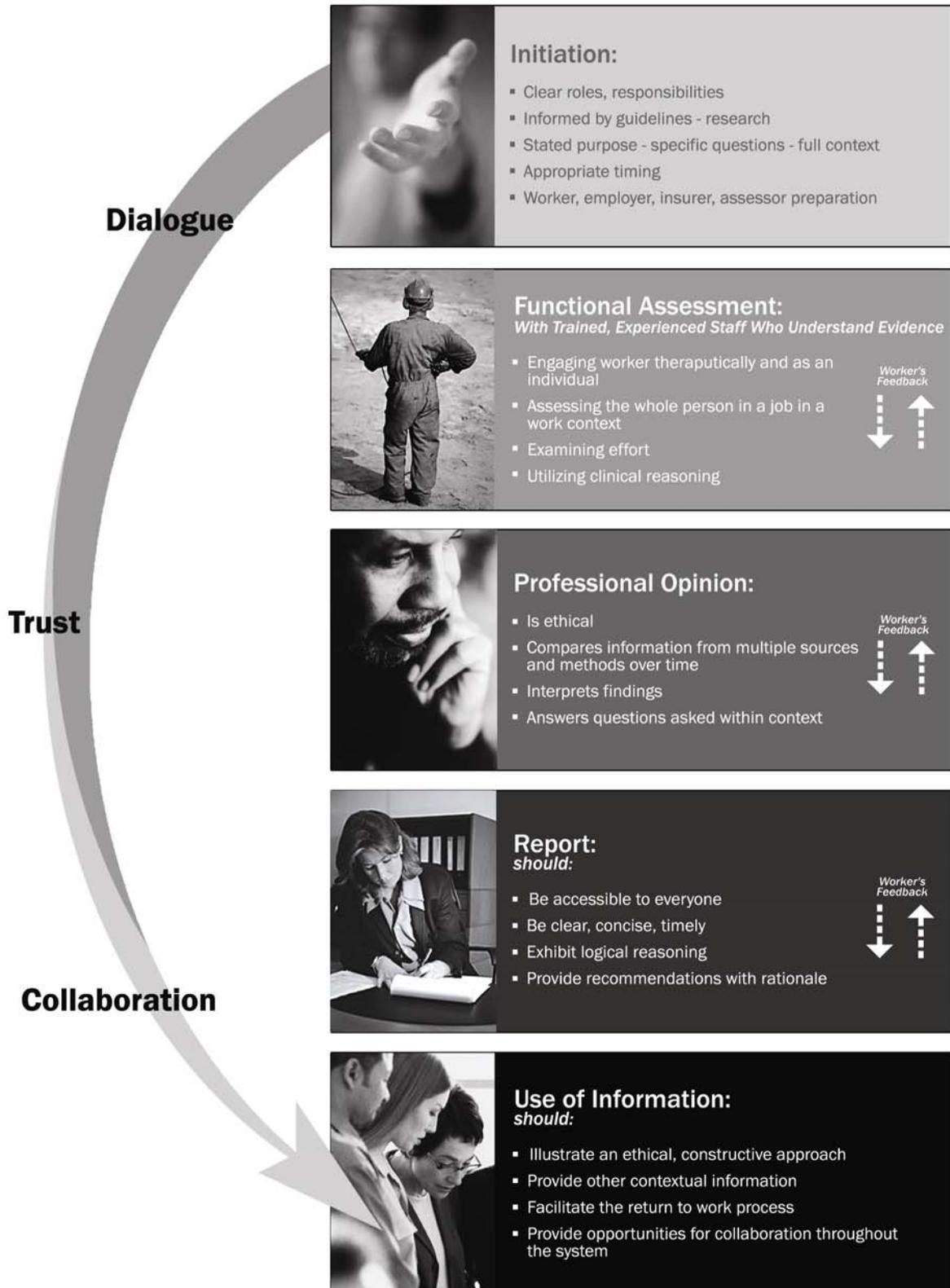
This appears consistent with our growing understanding of the complexity of the FA process and the many elements, other than approach to the assessment, that influences decision-making and actions. However, recognition is also given to the fact that our numbers are small, thus lessening the likelihood of our finding significant patterns.

Although quantitatively we were unable to demonstrate clear relationships between FA approach and the above-mentioned range of outcomes, our qualitative analysis of stakeholders' comments and the cohort's sequence of events did greatly increase our understanding of factors important in determining successful outcomes. These findings are articulated in the *McMaster Model: Towards An Optimal Process*.

4.9 McMaster Model: Towards An Optimal Process

From the data collected through multiple interviews, focus groups, the literature review and a review of the sequence of events for each member of the cohort, a distinct pattern emerged that assisted in providing a clear image of a desirable process of functional assessment. In addition to the importance of the actual FA experience, what occurs prior to and after the FA session is of equal concern. It is the total process which bears close scrutiny and reframing; from the initiation of the FA through to the evaluation itself, the arrival at a professional opinion, the writing of a report and how the FA information is used to complete the process. This process is illustrated by the *McMaster Model: Towards An Optimal Process* (p. 60).

The McMaster Model: Towards An Optimal Process



Initiation: Someone must take responsibility for making the referral. This may appear to be an obvious statement, but we learned that often the identification of a key individual to take the responsibility for making the referral was often lacking. This served to prolong a process that was often already too protracted. There was also a need to be clear about why the referral is being made and to communicate to the assessor how the information will be used. There were several references to the danger of unclear objectives that potentially can lead to a poorly designed assessment plan, which, in turn, leads to results that are of little use to the initial referral source. This proved to be the case for some of the injured workers followed in our study.

Mr. V. injured his back while working at a physical job in which the safety of others depended on his actions. He saw a physician right away who suggested that he restrict his activities, but the company wanted further testing to ensure he was safe on the job. An FA was organized through the company to explore a possible job match. The employer was proactive and gave a thorough accounting of the reasons and circumstances for the FA; they wished to safeguard the employee, with consideration of the appropriate limitations. Mr. V. agreed with the FA conclusions, his supervisor followed the recommendations and was very supportive overall. He was able to return to work on modified duties until he was laid off, due to the seasonal nature of his employment. There was no lost time while he was working for the company.

This case offers a good example of when an FA is initiated at an appropriate time and for a logical reason.

There was a clear recognition that an **FA can be completed at any point along the recovery continuum.** The timing is dependent upon the individual needs of the worker, the work place and the referral source. It is best initiated when it is safe to do so; it can be done earlier rather than later when issues other than being off work are compounding the return to work process.

The situation experienced by Ms. T. illustrates several problems that can be inherent to the FA process.

From the onset, it would appear that Ms. T. and those working on her return to work planning were not functioning from the same set of assumptions or the same information. An adversarial relationship emerged between the worker and the WSIB, which was reinforced by miscommunication related to expectations about the meaning of 'assessment,' the process of intended treatment and the fact that FA recommendations were not followed through because of ongoing medical issues. Upon reflection, it would seem that the FA was undertaken

prematurely, since Ms. T. was still medically unstable. There were other confounding elements, however, one has to wonder if these concomitant problems would have emerged to the same degree, if the FA were done at a later stage.

A contextual requirement recognized from the outset by many participants is the need to engage in the FA process from a **a perspective of evidence-based practice**. This finding supports the need for guidelines established for, and in collaboration with referral sources, articulating what to expect from an FA and how to select a provider. What constitutes a good FA does not necessarily require the most current computerized methodology, and the use of assessment tools that employ the latest technology do not indicate excellence and relevance in and of themselves. Use of technology does not ensure accuracy, since the effectiveness of the tool is only as good as the manner in which it is applied and interpreted. Parties need to be aware of how FAs are more than the instruments used. Referral sources need to consider the attitude of the providers to the use of evidence in determining their approach to the practice of functional assessment, and the extent to which providers employ strategies to work within the limitations of the tools. In turn, the provider must engage with the evidence – from current clinical judgment to formal, rigorous literature – in order to design and deliver credible services.

Other elements of a preferred FA culture include an approach that embraces **collaboration** between all parties, with **open dialogue** and clear delineation of roles and responsibilities. There was some meaningful discussion at focus groups concerning the need for mutual respect and courtesy; ensuring that all involved should be aware of the process of care to be followed and should feel included in the process. **Objectivity**, as appropriate, should be one of the guideposts. ‘Objectivity does not remove the person from the process, it removes the behavioural issues or “noise”’ (Focus group, June 4th). Even so, there is a need for those involved to balance objectivity with collaboration, providing workers with a fair opportunity. It is through developing a culture incorporating such values and behaviours that **trust** can emerge as one of these core values.

Perhaps one of the most obvious examples of an employer continually trying to collaborate and make things better is seen in the case of Mrs. B.:

Mrs. B.'s type of employment made any kind of job modifications very difficult; consequently Mrs. B. had been off work for about six months before the FA was completed. There had been repeated attempts at returning her to work with various modifications tried, all to no avail. The medical specialist recommended that she not return; the worker was determined to do so. It was a high paying job and it would be very difficult to find another position with similar benefits. She was feeling depressed and anxious about her inability to continue doing what she enjoyed and valued, both in the work place and during her

leisure time with her family. The support of the employer was such that Mrs. B. was able to gain some rest while waiting for opportunities to arise, at the same time as participating in hand therapy that was arranged by her employer. When Mrs. B's condition flared again after the FA, the employer offered to arrange changes in the length of continuous work as well as extra support from co-workers.

This case truly illustrates the individualized nature of return to work planning, and the benefits of an employer working with an employee over time. It also highlights the need to keep open lines of communication regarding ongoing medical status. The impact of injury upon all aspects of a worker's life, including the psychosocial impact, is particularly important in this case.

Another element that elicited clear consensus at focus groups was that **the referral source had an obligation to become an informed consumer of services**. As previously mentioned in the discussion of taking an evidence-based perspective, it was felt to be critical that referrals should be made from an understanding of the service providers available in the market place, and the differences between the services offered. Referral sources need to be discerning consumers of FA services. At the same time, there was strong support that **the worker should be given choice** of FA providers as often as possible. The worker needs to receive information about the service provider to which he/she is referred, and what to expect during the FA. Clear support was given to the idea that **the assessor should be provided with as much information as possible about the worker**. This would include all particulars of the job, work place, and worker's medical condition. In addition, information relative to the worker's family and social context, was viewed as critical in order to paint a picture of the whole individual within the context of his/her life. Also, suggestions were offered that **the assessor should be encouraged to visit the work place** of the worker being evaluated, since this provides a much richer contextual sense of the individual within the work environment engaged in the particular occupational role.

The following case example illustrates the need for open dialogue and mutual partnership:

Captain M. is a public servant, working in a highly physical sphere, who has a long history of back injuries. He had experienced many forms of treatment for his pain and physical limitations, with the latest injury necessitating a fourth surgical procedure. He was ready to return to work, with the family doctor, surgeon and physiotherapist all agreeing. However, erring on the side of caution, the employer felt that an FA should be completed, given his history of injury and compensation. The case coordinators at WSIB also felt concern that he should consider not returning to his previous job. After much time had elapsed, the worker returned to a job of similar type since his previous job had been given to

someone else. The worker felt strongly that if he could have returned when he felt ready, then he would have been able to fill his previous position. In this circumstance, it does appear unfortunate that the employee and employer did not manage to engage in an open dialogue around their mutual concerns at a time when there was still an option for returning to the original position. Undoubtedly, Captain M's history of previous injuries and WSIB claims caused the employer and WSIB to be more cautious, and with good reason. However, discussing this from a position of mutual partnership would have provided all parties with the opportunity to negotiate rather than legislate. In this situation, the Captain M. would have felt more listened to and consequently potentially more prepared to compromise.

The Functional Assessment: There were several common themes that emerged when addressing the FA itself. The best kind of FA should be completed by **trained, experienced staff, who understand what the evidence says** about assessment of function and measurement principles and theory; individuals who can apply this knowledge to each client, considering their individual needs within each unique context. Some comments indicated a preference for assessors with sound knowledge of the impact of injury/illness on function, rehabilitation theory and strategies, and barriers to return to work, such as occupational therapists and physiotherapists. The training is important to enable the evaluation to be driven by clinical reasoning rather than by the instruments themselves.

The assessment should take place within a climate of respect, where **the person is engaged in the enterprise in a therapeutic manner** and seen as an individual, not someone on a testing production line.

Despite the differing opinions over the course of the following example, there are many examples in this case of people doing their job and doing it well; it would seem that everyone considered the client at the centre of their concern, performing their appropriate roles with expertise and respect for her needs. Perhaps, the process would have been expedited if more specific information was given to the assessor at the time of referral:

Mrs. P. is a bus driver who injured her back while driving, apparently due to defective equipment. She underwent several interventions, including local injections to decrease the pain. Surgery followed, but the pain persisted, although the worker did experience increases in mobility, sitting tolerance and better pain medication; this opened up opportunities for modified work. The GP requested a general FA for return to work planning. Although the GP did not agree with the results, the worker did. After listening to the worker's feedback, the

employer referred her for an FA. Since the original FA referral was general with no reference to a particular job, the results were difficult to use in planning a graduated return to work plan or making job modifications. The employer contacted the provider to explain the decisions needing to be made and sent a completed Physical Demand Analyses (PDAs) to the provider to ensure accurate information concerning restrictions, and then made necessary job modifications. Although Mrs. P. was still seeing several health professionals at the time of the study, both she and the nurse case manager felt she was managing well at work. The health and safety coordinator was negotiating with the union and maintaining consistent contact with the worker.

The assessment should be undertaken based on knowledge about **the particular individual on the job within a work environment context**. Standardized assessments together with individualized formal assessments (e.g., work simulation) should be employed to meaningfully capture occupational performance. There should be sufficient time for the testing to be complete and meaningfully answer the referral questions identified. Time is required for repeated testing to compare or triangulate information from multiple methods and sources over time. One component of the FA is **determining whether effort** expended by the worker is a factor. Reasons for inconsistencies (including asking the worker) should be explored and any disparity defined in an objective manner. This approach of triangulation and use of contextual information adds confidence in, and credibility to, the results due to the limitations of current tools. The ideal length of time for an FA is not easy to define, largely because, if done well, it should be responsive to the unique needs of each worker. However, undoubtedly there were many concerns raised in the focus groups about completing an FA in hours as opposed to days. The shorter models may appear to be economically wise at the onset but, if the findings are of little use to the referrer, they waste resources, detrimentally impact relationships with workers and additional testing or a repeated assessment may be required. Some reports users stated, however, that they found the shorter models useful for information gathering, but not for planning return to work.

This case provides a very positive view of collaboration with the worker as a central player in the resolution:

Mr. D. has worked for the same employer for more than fifteen years in a modified capacity due to a long-standing injury. Unfortunately, his job is being phased out. The employer has established a formal, comprehensive disability management program with a full complement of medical and rehabilitation staff. Mr. D feels that he has a very supportive manager. He is currently in a stable medical condition and therefore an FA

was completed to update knowledge concerning work skills and abilities, during which Mr. D reported he was treated very well. The worker was involved in the planning process as well as the task selection during the direct FA experience. The outcome of the FA provided sufficient detail for planning, and the information stemming from the assessment, was viewed as credible by the worker. Mr. D selected another position with the employer that was suitable to his interests and abilities. He has started a new full-time position that is within his restrictions and that he enjoys. He is not attending any treatments currently, but maintains a home exercise regimen. There was no need for lost time benefits, since he worked throughout the process. The FA was utilized to place the worker in a suitable position and to prevent conflict between the union and other workers with more seniority.

Professional Opinion: Participants talked about the assessor needing to use training and experience to **interpret findings**, since this is the true **opinion being sought**. It is of the most help when assessors identify issues for further investigation, formulate recommendations and present information in a way to **facilitate return to work planning**. For example, identification of abilities as well as limitations is helpful. Pages of data or simply a summary of findings are not sufficient. It is very important to synthesize the results in a way that is both meaningful and transparent. Formulation of the professional opinion needs to be done in a **professional manner**; taking into account the conclusions and their impact on workers' lives is of surmount importance.

Ms. C. has a long-standing chronic pain condition that is complicated by depression and sporadic work attendance. She is continually visiting health professionals and seems to be shopping for a cure. She feels she is in a very adversarial position with her employer, however reports that her co-workers are quite supportive. She states that she was ready to return to work when the FA was requested, and she believes that the timing has had a marked negative impact on her return to work. In the FA report, there is confusion regarding the actual conclusions reached; there are several contradictory statements concerning functional abilities and their match with job demands. The report users are left not knowing what to conclude from the report and begin to make their own interpretations.

In a case of this nature, it is important that the FA provider write the report in a professional manner and articulate the purpose and present the results clearly. When

there is such a confusing amount of potential data and sources that impact on a client's evaluation, the evaluators involved need to indicate their scope of practice, clearly tell the story of what went on during the FA with the workers' responses, and give an opinion in response to the referral question(s).

Report: The final report should be **concise, clear and logical** in the manner in which the findings are described, and conclusions drawn. It should clearly communicate what went on during the assessment and how the worker responded. The referral question(s) asked should be clearly answered. Conclusions should be accompanied by a rationale that flows logically from the findings, with inconsistencies interpreted and explained. If worker's effort is an issue, conclusions must be given with documented rationale and how inconsistencies were explored. There should be no jargon used; terms which might be unclear should be meaningfully defined. The report should be written with the understanding that everyone involved in the referral should receive a copy, including the worker and case manager (e.g., the Labour Market Re-Entry provider). **The report should be completed in a timely fashion**, after the results have been **interpreted to the worker**, and any feedback from the worker has been considered and integrated as appropriate.

Use of Information: If the FA has been planned and carried out in a climate of openness, trust and mutual respect, then it is naturally more likely that it will be applied in an ethical manner and the information in the final report is constructive and helpful in determining the future directions for the worker in question. All participants stressed that this relies on relationships, good communication, and an understanding of the recovery process. Some focus group members expressed concern that reports are not being used, particularly when the person who has made the referral disagrees with the results. Evidence from our follow-up of the injured worker cohort supports these concerns. This is both an ethical and a practical dilemma. It would suggest that there needs to be a clear understanding at the beginning of the process how the FA information will be used and that the FA report be reviewed together with other information jointly with the worker and planners to collaboratively plan the next steps. It also highlights the need for people, policies and structures to be in place to support the implementation of FA recommendations. Disregarding recommendations may result in injury as was unfortunately the case for some of the workers in our study.

'The best kind of FA is one that is used' (Focus group, June 4th).

5. Conclusions

This research study focused on the use of FAs within the employer and WSIB payment systems, and we are optimistic that the research will contribute to the development of evidence-based guidelines on FA practice. These findings are expected to be applicable across Canada and the Western world. Although there are variations in contexts, the FA is used universally with the same assessment credibility and utility issues. We caution, however, that the results may not be generalizable to more overtly adversarial situations.

For optimal use of FAs, they need to be considered as one part of a complex process. What goes on before and after the FA is just as important as what occurs during the FA. This is articulated in the *McMaster Model: Towards An Optimal Process*. The following conclusions have been organized using the sections of this model as a framework.

The Referral Source/FA User Has An Important Role In Making The FA Process Successful. The user directs how the FA is positioned within the return to work process (e.g., timing, use in decision-making). The user initiates a three-way partnership (worker-user-provider) and lays the foundation for respectful dialogue, collaboration, and trust. It is important that the user clearly communicate what decisions he/she intends make with the FA information and the questions being asked of the FA to the provider and worker. Efforts need to be made to engage providers in dialogue about what can be delivered and what is needed relative to the user's particular situation within an on-going working relationship. The user plays an essential role in acting upon FA recommendations and enlisting strategies to implement recommendations. The referral source has a responsibility to be a discerning consumer of FA services and sensitive to the worker's recovery process.

The Worker Has An Important Role In Making The FA Process Successful. The worker communicates concerns, expectations and information needs to FA users and assessors to enable dialogue, collaboration, trust, and meaningful planning. The worker ensures that they, themselves, are educated about how the return to work – compensation systems operate and players' roles/responsibilities. Although the worker may have reservations, their openness to the process and full participation will benefit the process.

The FA Provider/Assessor Has An Important Role In Making The FA Process Successful. The FA provider organization upholds standards formally through policies and provision of resources, and informally through verbal expectations and mentorships. Assessors and other provider organization staff are responsible for spending time and receiving training to reflect on their practices and ensure they are implementing what is considered currently evidence-based practice. The assessor has an important role in orienting the worker to the FA, creating a constructive atmosphere, developing rapport and addressing the safety and emotional security needs of the worker.

The assessor has a responsibility to conduct a fair, objective assessment according to ethical, evidence-based practice.



Initiation:

- Clear roles, responsibilities
- Informed by guidelines - research
- Stated purpose - specific questions - full context
- Appropriate timing
- Worker, employer, insurer, assessor preparation

FAs Are Accessed Largely By Employees With Complex Return To Work Issues Who Work Predominantly In Unionized, Large Workplaces In Manufacturing, Health And Social Service And Government Industries. This presents the question of inequalities in access to FAs particularly given the costs involved and FAs delivered by third party providers.

FA Referrals Are Made By Multiple Sources Within The WSIB And Employer Systems. There has been an increase in referrals for FAs directly from employers, and WSIB constitutes a declining proportion of the market. Some but not all referral sources are individuals who use the FA report in decision-making (i.e., report users). When claims are initially rejected by WSIB, employers sometimes obtain FA services through Short-Term or Long-Term Disability Insurers.

Experienced FA Users Select Particular Providers Based On Perceptions Of Assessor's Expertise, Use Of Clinical Reasoning and Referral Source-Provider Relationships. Experienced providers view FAs as a specialized service requiring particular expertise, judgement, and professionalism given the important consequences of the FA conclusions.

There Appears To Be Limited Dialogue Between Providers/Assessors And Users Of FA Services. Many assessors have never talked with referral sources about the referral context and have not received feedback on their reports. Many users have never contacted assessors directly to talk about their organization, workplace environment and to explain their information needs. Some contact appears to occur to seek clarification once the report is circulated. In some cases, this late dialogue has resulted in inappropriate referrals, or incorrect referral questions being asked and findings being irrelevant. The few employers, who have developed a working relationship with assessors, have found it invaluable; the on-going two-way communication ensures both fulfill the other's information needs and instills confidence, and trust.

Mistrust Between Workers And FA Report Users. In many instances, relationships between workers and the people using FA reports were characterized by mistrust. Parties came with preconceptions and expectations.

Timing Of The FA Relative To The Return To Work Process And Medical Condition Appears Important. Participants reported the importance of not waiting too long to institute return to work plans before other issues compounded the situation and the FA was seen as a way to move planning forward. A few employers reported using FAs with every injured worker off work more than two months with a stable medical condition. There are no guidelines for the timing of FAs. The individual needs of the worker, workplace and referral source are to be considered. An essential consideration is the worker's safety. Also, we learned from following our cohort, FA findings are not useful when the FA is performed before surgery.



Functional Assessment:
With Trained, Experienced Staff Who Understand Evidence

- Engaging worker therapeutically and as an individual
- Assessing the whole person in a job in a work context
- Examining effort
- Utilizing clinical reasoning

Worker's Feedback



FA Providers Are Third Party Providers Who Operate Within A Range Of Ownership Structures With Variability In Staff Training And Support, Client Services, And FA Practices. Variation was documented across providers concerning who conducted the FA, FA protocols and approaches, reporting practices and costs. The majority conducted FAs in provider clinics using multidisciplinary assessment teams. Providers appear to be expanding services directed towards employer markets, offering worksite-based FAs, worksite analysis and health promotion related programs. Practices are influenced by referral source demands and efforts to deliver FAs as a competitive product.

The Assessment Tools Are Not The FA. The FA Involves The Interplay Of Worker, Assessor, And Assessment Protocol Operating Under A Framework Of Preliminary Referral Information. The FA itself involves a process of the assessor systematically gathering and evaluating information, and using

clinical reasoning to make and test hypotheses about performance in relation to an occupation within the particular worker's context.

Assessment Approaches Share Common Elements And Variations That Can Be Described Along Continuums. Assessment approaches defined in this study are: Nature of Assessor-Evaluee Interactions, Fixed-Flexible Protocol Delivery, Efforts To Contextualize, Perceptions and Use of Evidence, Provider Organizational Environment .

The FA Is Inherently Decontextualizing. The FA involves breaking a job down into components and examining a person's ability to perform a subset of these frequently in a clinic environment. For conclusions to be meaningful for a given individual assessors need to bring context into the assessment protocol, analysis and interpretation (i.e., work context, clinical context, whole person context). This necessitates use of clinical reasoning throughout the process.

Assessments Are Conducted Often With Limited Contextual Information particularly with regard to the work or workplace or limitations in worker's occupational roles irrespective of the referral question. Some FAs were conducted solely with job descriptions or National Occupational Classification (NOC) information, both of which are widely known for their limitations. With most, but not with all providers, the clinical information regarding the worker's medical condition is shared with the assessor to ensure the worker's safety. Contextual information is important to ensure relevance of FA reports.

Assessments Focus Almost Exclusively On the Physical Domain of Performance. This leaves a gap with emotional and cognitive domains, particularly with increases in depression, stress-related disorders and other mental health impairments. Note clinical depression was present with many of this study's cohort and we suspect depression may have been a factor for others but not diagnosed. This raises questions as to how an assessment is able to truly capture a worker's function if it is solely physically based given the accompanying cognitive impairments of depression that would impact performance.

The Dilemma of Standardization. Standardization facilitates reproducibility but does not ensure relevance. Technology does not ensure accuracy. Individualized measures (e.g., formal assessments using work simulation, worksite-based assessment) are often used to tailor assessments to meaningfully answer the referral question for the particular worker within the given context and compensate for the limitations of FA measurement instruments. Therefore, assessors will balance use of individualized assessment methods with standardized measures for meaningful conclusions.

There Are Varying Perceptions About What Constitutes A “Scientific” Or Credible FA. In some circles, there is the view that for an FA to be considered “scientific” and credible, the protocol must strictly follow a standardized protocol; the

same protocol for every worker. Others hold a broader understanding of terms (e.g., “scientific,” reliability, validity) and expect systematic data collection driven by clinical reasoning involving a balance of individualized-standardized data collection methods. Opinions were heard about the need for the assessor to engage with the worker therapeutically as a person; to address anxiety, expectations and concerns in order to obtain optimal performance versus the assessor maintaining a removed stance.

Determinations Of Effort Are Being Based On A Profile Of Findings Comparing Information From Multiple Methods. Conclusions are no longer made based solely on CV’s. However, effort issues are largely not discussed with workers. This is counter to and undermines assessor’s efforts to build trust and rapport.



Professional Opinion:

- Is ethical
- Compares information from multiple sources and methods over time
- Interprets findings
- Answers questions asked within context

Worker's Feedback



The End Product Of An FA Is A Professional Opinion. Report conclusions are based on the assessor’s interpretation of the information given to them at the start, what was done at the assessment, and the performance that was observed. FA Users clearly indicated that what is being sought is a professional opinion rather than a summary of data; an opinion that answers the question being asked within the individual’s context as expressed in conclusions and recommendations.

FAs Rely Heavily On The Assessor’s Training And Experience. Because of instruments’ limitations to determine someone’s ability to perform at work and the fact that those measures will always be tools that are only as good as the way they are used, and because of the complexity of human performance needing to be considering within a particular context, FAs rely heavily on the assessor’s training and experience. These points to the need for reflective clinicians who are aware of personal bias, limitations of FA instruments and who have training in clinical reasoning. The assessor requires knowledge of the impact of injury/illness on function, measurement of function, demands of occupations within workplace environments, and skills in occupational analysis and workplace demands.

Assessors Sometimes Use Strategies To Work Within The Limitations Of The FA Instruments. These strategies include:

- Perform FA over a minimum of two days allowing a comparison of performance over time. This is of particular importance in the long term and complex population, including many of the individuals in the cohort we studied
- Repeat testing, and use varied methods for triangulation or comparison of information
- Use multiple data sources, including asking the worker being assessed
- Obtain and use contextual information (e.g., about medical condition, work, workplace) to adjust protocol and to consider during interpretation of findings
- Use individualized measures (e.g., work simulation) together with standardized testing for meaningful data
- View findings as capturing optimal performance that may not be sustainable in full time work; formulate conclusions accordingly.

Workers Are Not Consistently Used As A Source of Information (e.g., for work demands, explanations of inconsistent performance or pain management strategies etc). For some types of information, workers are the only possible data source. To provide a fair, balanced assessment, assessors use workers' self-reports together with other sources of information.

Limiting Data Collection To Certain Types Of Evidence Creates Bias.

For example, gathering measurements without context or collecting primarily numeric data on the ability to generate force, without clinical observations of performance (applying the forces during tasks) and evaluatee comparisons, can lead to misinformed interpretations, erroneous conclusions. Assessors compare information from multiple sources and different methods over time to provide rigor and confidence in findings.



Report:
should:

- Be accessible to everyone
- Be clear, concise, timely
- Exhibit logical reasoning
- Provide recommendations with rationale

Worker's Feedback



Willingness To Release FA Information Varied Greatly Within And Across Systems. Employers tended to deal openly, almost always gave workers a copy of the full report and asked for worker’s permission to send the report elsewhere. Release of FA results in the WSIB system appeared to be very inconsistent. In most WSIB settings the report results were withheld from workers and service providers; some adjudicators and nurse case managers would release results only if asked; for others, results generally were not forwarded or partially forwarded to Labour Market Re-Entry (LMR) service providers. According to interviewees, employers generally have policies about releasing FA results to workers who have undergone assessments, and the WSIB does not.

FAs Are Interpreted On Multiple Levels By Different Parties. Not only is each FA’s findings interpreted by the assessor, each report user looks at the report differently and interprets the FA within their own training, experience and role. Some FA Users contact assessors to clarify the match between their interpretation and what was intended by the assessor.

Reports Vary In Format and Content Across FA Providers. Report Users were unanimous in requesting the quality of reports be improved and more consistent in content. When Users articulated what made for a good or not so good FA experience, they said a good report included:

- Communicate concisely and clearly what went on during the FA and how the worker responded
- Answer the referral question being asked
- Provide conclusions with a rationale that flows logically from the findings
- Interpret and explain inconsistencies and what actions were taken to pursue inconsistencies.
- Write the report with the expectation that it will be read by anyone, including the worker
- Complete the report in a timely fashion



- Illustrate an ethical, constructive approach
- Provide other contextual information
- Facilitate the return to work process
- Provide opportunities for collaboration throughout the system

Many Report Users Have No or Limited Experience with FAs. There have been many recent changes in organizations. As a result, many employer and WSIB staff are in new roles and responsibilities, one of which is working with FAs.

FAs Are Being Used Concurrently For Multiple Purposes. The study documented seven different ways FAs are being used: return to work planning, determining worker's effort, mediation, validation of opinion or direction, adjudication of claims or benefits, baseline measurement, opportunity for worker to learn about own abilities and limitations. Frequently a single report is used concurrently for different purposes at the same time. **Often, these purposes have not been communicated to the assessors, and hence, the assessment and reporting of conclusions are not meaningfully directed to these multiple intents.** Controversy surrounds the use of FAs for determination of worker's effort and adjudication purposes.

According To Workers And FA Report Users, FAs Can Offer A Useful Information Tool For...

- Return to work planning
- Rehabilitation planning
- The recovery process

FAs Are Being Used For An Undetermined Length Of Time After The Assessment Was Conducted. No practice standards or guidelines exist concerning how long the FA conclusions can be used before requiring another FA.

Approximately Equal Numbers Of Workers Find FAs To Be Useful As Not Useful. The reasons given by workers who felt that FA reports were not useful to them involved the timing of the FA (i.e., too early or too late in the process) and the use of the FA (i.e., used as a tool to 'get rid of the worker,' FA findings not used) in addition to concerns about the FA itself (i.e., did not assess all relevant aspects of their job, failed to show what worker identified as limitations, language in report needed translation). The reasons given by workers who felt that the FA was useful were that the FA provided information about abilities/limitations, facilitated action and change, substantiated information to enable benefit payment, assisted appeals, and helped with acceptance of their disability so that they could begin to move on. Few workers viewed FAs without reservations.

The Majority Of Report Users Find FAs To Be Useful. The remaining 10%, who rated FAs poorly commented it was because they disagreed with the conclusions, were unable to carry out the recommendations, believed the FA provided no new information, FA was not used (the worker's condition changed or workplace situation changed), the referral question given to the FA provider was not specific to the end needs or other issues "clouded" the situation (e.g., disputes, parties involved, effort, organizational changes). Employers in particular view FAs positively when using them constructively to provide an opinion or direction and detailed information for return to

work planning, and using them for mediation to prevent or deal with conflict by bringing parties to the table for negotiation. It is acknowledged that the 10% poor ratings may be an underestimate given that those who may have had poor experiences would be conflicted by having to justify the expense.

Report Users Tend To Have Concerns With The Validity Of FAs Whereas Workers Tend To Have More Concerns Surrounding The Use Of FA Findings. This reflects the realities of differences in stakeholder roles and interests. Workers often expect the FA to assist some action to take place (e.g., return to work plans or provision of benefits) and are concerned with how the findings are used to this end. The report users are concerned with making decisions and being confident in using the FA's information to inform their decisions.

In addition, we have learned from following a cohort of injured workers eight months after assessment:

FAs Do Not Replace Good Treatment And Sound Return To Work or Disability Management Policies. The FA is an information tool that can assist the return to work process. It is not by itself an intervention.

At 8-months post FA, although more workers were at work or retraining and less using WSIB benefits...

- Approximately half experienced no change in structural impairments, and functional limitations;
- As many workers improved as became worse in functional limitations;
- Approximately half the cohort appeared to deteriorate in their physical and mental health status

Poor Worker Outcomes Appear To Be The Result Of Interplay Among Workers, Occupations And Systems (Workplace, WSIB, Healthcare/ Rehabilitation) Factors. Each member of the cohort presented as unique. A review of the cohort's sequence of events data reveals poor outcomes may be the result of complex interactions between workers, their jobs and a variety of systems (workplace, WSIB, healthcare/rehabilitation).

6. Recommendations & Contributions to Practice

6.1 Practice

1. FAs be viewed as an information tool that can be useful when making return to work and/or rehabilitation plans for workers with complex soft tissue injuries. Recommend using FAs to provide: a) an opinion or direction and detailed information for return to work planning; b) information for use deal with conflict between parties; c) baseline measurement information against which progress can be examined when the same assessor repeats the FA; d) an opportunity for workers to become more familiar with their own abilities and limitations relative to work.
2. FAs be used within a collaborative return to work process that is part of an overall comprehensive disability management practice, and not relied upon in isolation. Recommend FA Users, Workers, and FA Providers become aware of their roles in making the process successful.
3. FA Users and FA Providers review the *McMaster Model: Towards an Optimal Process*, reflect upon their current practices, and explore opportunities to improve practices.
4. Referral Sources and FA Users become discerning consumers of FA services. Suggest organizations such as WSIB, employer, provider and injured worker associations work together with this study's research team to develop and offer workshops for FA Users.
5. Referral Sources and FA Users assertively dialogue with FA Providers and Assessors and develop on-going working relationships. Providers can assist Users to sort out how FAs can or cannot assist them with their information needs. Users can assist Providers with their information needs concerning work, workplace context.
6. Assessors regularly employ strategies such as those documented in this study to work within the limitations of FAs and increase rigor.
7. Assessors review *Dimensions of Approaches* developed by this study (See p?) and use it as a tool to reflect upon for self-evaluation.
8. FA Referral Sources review *Dimensions of Approaches* developed by this study and use it as a basis to ask questions when selecting FA Providers.
9. Assessors' need to approach each worker as an individual person and address the worker's anxiety, expectations and concerns at the beginning and throughout the FA.
10. FAs be driven by clinical reasoning rather than by tools, measurements or systems. This requires a level of professional training (re: knowledge of the impact of injury on performance and sequella, worker-workplace-job relationships, skills in occupational analysis, measurement theory) and experience not obtained by attending technical courses by equipment manufacturers alone. Professional training also emphasizes reflective practice, ethical practice standards and

- evidence-based practice. There is a need for continuing education post professional training.
11. Assessors obtain contextual information (re: work & workplace, clinical condition, whole person) at the outset, adjust the FA to be relevant and ensure findings are interpreted within context.
 12. FA protocol includes the use of standardized measures with formal individualized measures (e.g., work simulation, work trials & work-site assessment) to provide meaningful data.
 13. FA assessors include in the FA protocol a screen for potential depression (e.g., Beck Depression Inventory) that would identify the need for physician assessment. Develop an FA protocol to deal with the impact of depression on performance.
 14. As inconsistencies arise throughout the FA and the worker's effort is questioned, assessors bring these inconsistencies to the worker's attention and request feedback. Inconsistencies should be explored for the multiple potential causes of the inconsistencies before assuming effort is an issue, and the steps taken to explore alternatives should be documented. The worker should be told what will be documented and the potential consequences.
 15. When feasible, a meeting with the worker, report users and assessors be held at the FA conclusion to review conclusions and discuss how they can be used. FAs need to be written in a manner to be understood by anyone.

6.2 Policy

16. Procedures and policies be put into place to support the activities by FA Users, Workers and Providers before the FA takes place and after the FA takes place as articulated in the *McMaster Model: Towards an Optimal Process*. In particular clearly communicating to assessors what decisions need to be made, by whom, and the particular questions being asked of the FA.
17. FAs are being used for a multiplicity of purposes. There needs to be discussion and development of guidelines concerning timing and use of FAs. Should FAs be used to determine effort? Australia's National Rehabilitation provider has written in policy FAs are not to be used for determination of worker's effort. Occupational therapists in some other Canadian provinces no longer comment about effort in FA reports. We recommend that this be considered in Ontario. Failing this, providers of FAs should ensure that when FA data raises issues around inconsistent or sub-maximal effort, a clearly-stated professional opinion be given with documentation as to how alternative reasons for inconsistent performance were explored. Discussions need to take place surrounding what changes need to be put into place to fairly and more meaningfully answer questions related to adjudication of claims, prior to, during and after the FA. Should the kinds of evidence provided differ depending on the use of the FA?
18. Policies be established in user organizations encouraging the sharing of FA results with workers and with service providers for whom the results are pertinent such as LMR providers.

19. A policy be developed whereby the worker reviews with the assessor whatever information the assessor has about the worker's job to ensure a shared accurate understanding of the worker's essential job and workplace demands, and the worker signs a written summary before the FA is begun. Due to the limitations of relying solely on job descriptions and/or National Occupational Classification (NOC), recommend standards include obtaining additional information from employers, and workers.
20. Minimal standards be developed of what should be included in a FA report.
21. Policy be developed concerning how long the FA conclusions can be used before requiring another FA.
22. Develop a framework to make FA services and FA information more readily available to LMR service providers to support SEB planning.
23. Put into place structures and resources for all employers and workers to have equitable access to FA services.

6.3 Research

24. Research has tended to focus on the characteristics of the worker and psychometric properties of the instruments, and to date has not dealt with the assessment process as a whole. It remains a 'black box' that needs to be better described and understood.
25. Evaluate the strategies used by therapists to deal with the limitations of FAs.
26. Test the principles identified in the *McMaster Model*. Are they applicable to workers in other sectors and in other geographical regions? Can the principles be demonstrated to improve outcomes?
27. The *Dimensions of Assessment Approaches* lend themselves to be developed into interactive tools for: a) Assessors/Providers to reflect on their practices and b) Users when selecting FA providers. They could also be used to describe FA approaches in research studies.
28. As information tools, FAs should be evaluated by their usefulness for decision-making and with consideration for the type of use and a range of worker and workplace outcomes. Traditionally, FAs have been narrowly judged by worker return to work rates or their ability to predict return-to-work. A systematic study in which FAs were given to all injured workers in an organization, controlling for type of use, would provide further understanding about the extent of the usefulness.
29. We do not recommend a controlled comparison study to evaluate the predictive validity of FAs given our difficulties with evaluating congruence between FA conclusions and outcomes, and the inappropriateness of evaluating FAs against these outcomes.
30. Conduct an appraisal of the research evidence concerning the use of heart rate measurements to determine worker's effort during FAs. The use of heart rate is increasingly being observed in FA reports.
31. Develop assessment protocols for workers with mental health issues.

7. Plans for Disseminating Study Findings

7.1 Activities Completed or In Process:

1. We have held forums to present this information to each participating FA provider organization in Niagara, London, Toronto, and Hamilton.
2. An executive summary will be distributed to all study participants. The research team will offer to discuss with interested workplace, WSIB and FA provider parties the research evidence and its implications for their own environment.
3. The research team will provide written findings to: this study's collaborators; the coordinators of WSIB's Labour Market Re-Entry Project and Nurse Case Manager Project; WSIB practice leaders; this study's supporter's, including offices from the Ministry of Labour. We will extend an offer to work with them to implement the results into policy to impact practice.
4. Information has been shared with a planning team for a multistakeholder conference to launch a research dissemination initiative focused on FAs that is lead by the WFU, McMaster and funded by WSIB's RAC.
5. A summary of FA literature and practice issues was published in an Occupational Therapy trade magazine: Strong, S. (2002). *Functional Capacity Evaluations: The good, the bad, and the ugly*. *OT Now*, January/February, 5-9. (A copy is attached).
6. Interim results were presented by invitation to two groups of vocational rehabilitation providers, a group of assessors in the auto sector, and to worker representatives at a Bancroft Research Institute workshop. Initial findings of practice patterns were presented to researchers at the Canadian Association for Research on Work and Health 1st National Symposium, Toronto:

April 26/01 Strong, S., Reardon, R., Shannon, H., Baptiste, S., Cole, D., Clarke, J., Gibson, E., "Assessment of A Person's Ability To Function At Work." Bancroft Research Institute, Toronto, ON

June 7/01 Gowan, N., Strong, S. "Functional Assessments." Canadian Association of Rehabilitation Professionals Annual Ontario Conference, Burlington, ON

July 21/01 Strong, S. "Obtaining the Most Out of Your Functional Capacity Evaluation (FCE): Lessons learned from a study of FCE's and their use." National Conference of Vocational Rehabilitation Providers by Tasmania's Association of Vocational Rehabilitation Providers, Hobart, Tasmania

Nov 9/01 Strong, S. "Evidence Based Initiatives in Functional Assessment." Association of Designated Assessment Centres Annual Conference 2001: "Evidence-Based Practice and DACs: Putting Evidence into Practice," Toronto, Ontario.

- Nov 18/01 Strong, S., R. Reardon, S. Baptiste, J. Clarke, D. Cole, M. Costa, H. Shannon, S. Sinclair, E. Gibson. "Practice Patterns of Functional Capacity Evaluations in Employer-Compensation Systems. Canadian Association for Research on Work and Health 1st National Symposium, Toronto, Ontario.
7. Interest was generated in our study by presenting a poster at WSIB Research Advisory Council's one-day consultation conference: "Connecting OH&S Research to the Workplace: Focus on Priorities" (Nov 1999), and by presenting at two rounds: Health Care Services Grand Rounds, Workplace Safety & Insurance Board, Toronto; Research Rounds, School of Rehabilitation Science, McMaster University, Hamilton.
 8. Findings are being integrated into the CHS Occupational Therapy Programme, McMaster University. Material was used in two interactive problem-based learning sessions for Term 2:PREP (February 5, 2002) and Term V (February 11, 2002) students regarding work assessment and complex return to work issues.
 9. Three presentations were made at a peer-reviewed national conference of occupational therapists. "*What is left when all the bells and whistles are taken away?*" (Evidence-Based Practice Forum); "*Functional Evaluations: Perceptions of Usefulness by Workers, Report Users, Assessment Providers*" (paper); "*Assessing Function – Can Theory, Evidence and Practice Reality Merge?*" (Extended Discussion) were presented at CAOT National Conference, Saint John, N.B., May 26-28, 2002. Another abstract has been accepted at the World Federation of Occupational Therapists, Stockholm, June 25th 2002, *Assessment of a Person's Ability to Function at Work: A Profile of Practices*.
 10. By invitation presented "What did we learn from a study about FAs & their use by employers and WSIB?" to Disability Managers at the Ontario Association of School Board Officials, March 22, 2002. Upon request, we returned to returned to present findings related to determination of worker's effort during these assessments, June 7, 2002
 11. By invitation, presented "Assessing Functional Capacity" to family physicians and interested health professionals at a half day continuing education program about managing work-related soft tissue injuries, sponsored by the Ontario Ministry of Labour, McMaster University, May 29, 2002
 12. Invited to present at two support network groups for health professionals: Hamilton Private Practice Network, May 9, 2002 Ergonomic Network Group, May 6, 2002

7.2 Planned Activities:

1. We will be preparing learning materials based on this study's findings to share with conference delegates and research study participants in the recently WSIB funded study: *Towards Best Practices of Functional Assessment: An Innovative Model For Research Dissemination* (Investigators: Strong, S., Dobbins, M., Polanyi, M., Baptiste, S., Clarke, J., Costa, M., Gibson, E.). Working groups

- arising from the conference have the potential for development of dissemination materials and development of decision-making tools for stakeholders.
2. The WFU will develop workshops for assessment providers, and professional colleges and associations will be invited to attend. The study team will offer to assist WSIB and the Office of the Employer Advisor in providing workshops for FA users.
 3. Submissions will be made to peer reviewed journals concerning:
 - Profile of FA Practice Patterns
 - Stakeholder's Perceptions of Utility and Validity of FAs
 - The McMaster Model: Towards an Optimal Process
 - Determination of Effort
 4. Findings will be submitted to newsletters: IWH's *At Work*, NIDMAR's *Return*, Occupational Health Nurse's newsletter & *Back To Work*
 5. Presentation to NIDMAR's Disability Management training sessions, McMaster-Mohawk.

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We hope that this work will contribute to the development of future evidence-based guidelines on assessment practices. Findings have been shared with a team designing a multistakeholder conference to launch a research dissemination initiative focused on FAs lead by a research team at the WFU, McMaster and funded by WSIB’s RAC.

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10. Appendixes

Appendix A: Data Collection Forms and Questionnaires

Appendix B: Factors Tables

Appendix C: Physical & Mental Health Component Summary Scales