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I. Introduction

Welcome to Rehabilitation Outcome Management System (ROMS). Although unique as a comprehensive outcome system, ROMS greatest advantage is its dual strength as a rehabilitation diagnostic and treatment planning methodology. In terms of its diagnostic and treatment planning capacity, ROMS gives most rehabilitation professionals the ability to:

- Identify and target the client’s primary rehabilitation barriers, thus enhancing compliance and outcome
- Identify and target the client’s main coping concerns
- Identify and target the client’s primary life roles in the past and anticipated in the future, also enhancing compliance and outcome
- Identify and target all ADL limitations by domain and by individual activities
- Identify and target the single/multiple symptoms contributing to each ADL limitation
- Identify and target occupationally oriented functional shortfalls
- Share a common framework across disciplines
- Track treatment effectiveness in terms of client coping and functional activities gains
- Prepare concise graphical reports quickly, thus reducing report writing time

ROMS gives clinicians a framework and set of tools to foster maximal rehabilitation efforts across one or more physical, cognitive and emotional symptom barriers. From the treatment perspective, ROMS allows the clinician maximal freedom in determining the optimal treatment strategy/methodology to utilize in any given situation. Yet, ROMS remains flexible enough to highlight client intervention needs and measure intervention outcomes.

This manual serves as an orientation to the recommended measurement process, the underlying ROMS measurement tools and key strategies for use, the individual client fax-in service process and the aggregate statistics service. For comprehensive details of the measures, including validation support, please refer to the Manual for each respective measure.

II. Recommended Measurement Process

Please see Section VI for a discussion on providing objective ROMS documentation in support of Clinical Assessment Proposals.
Initial Measurement. The initial measurement should be completed as soon as possible and preferably at the time of the initial pre-intervention assessment. Otherwise, the initial measure may not truly reflect pre-treatment baseline and may instead capture early treatment gains. This would reduce the apparent gains made upon subsequent measurement. If a substantial period of time elapses between initial assessment and commencement of treatment, then new measures should be obtained prior to starting intervention.

Subsequent Frequency. It is generally recommended that ROMS measurements be completed upon admission, then at least every four weeks, and then at treatment discharge. If less than an 8-week treatment program is contemplated, then an interim measure is recommended at the half-way point, rather than at 4 weeks. In the event that the clinician may be contemplating an extension of an approved treatment plan, then it may be important to time an end of treatment cycle measure one to two weeks prior to the end of the treatment plan. Some facilities will also opt for a further follow-up to assure that treatment gains are maintained at specified intervals post discharge.

Importance of Mid-Term Measures. While some may perceive cost/time savings by omitting mid-term measures, this strategy is very risky because:

1. Opportunities to make mid-term adjustments for insufficient progress are lost;
2. Client motivation may wane in absence of concrete evidence of treatment gains;
3. Treatment compliance may deteriorate if less than expected gains are made or client prioritized rehabilitation barriers go unaddressed;
4. Progress to an interim-point can still support gains made even if subsequent measurement suggests less progress;
5. Increased measurement points help to offset the “bad day” effect or other naturally occurring measurement variability; and,
6. Funding for continued treatment may be jeopardized by insufficient evidence of any treatment progress at any point throughout treatment.

Location of Measurements. It is generally preferred to have the client complete measures in the clinic/facility in order to assure compliance of completion and return of the forms. Generally a quiet and minimal distraction environment is required. The use of a clipboard is appropriate if a desktop is unavailable. The use of an ergonomic chair or back support is recommended when indicated by the clinical condition.

Facilitation by Support Staff. It is common for support staff to oversee the test administration process for all measures other than the Rehabilitation—Functional Status Markers. Support staff should be aware of the content of this manual and be able to respond to common questions about the measures as presented herein.

Reading/Language Concerns. The measures are generally written at about a grade 6 to 7 English reading level. Some people will be unable to read the measures due to poor reading ability and/or poor English skills. The widespread use of the measures over many years with professional interpreters appears to yield valid results on the basis of face validity (although empirical confirmation of this is pending). The use of family members, significant others or friends to complete the forms should be avoided whenever possible as client’s may be less inclined to respond in a forthright manner, and/or responses may be otherwise distorted by non-professionals in this role. If the use of a family member/friend/significant other is unavoidable, this should be clearly stated on the forms and in the clinical reports that reference the results of the measures.

A Cautionary Note Regarding Use of All Outcome Measures. Arguably the greatest potential pitfall of any and all outcome measurement approaches is the natural variability in the client’s condition on a day-to-day and week-to-week basis. Symptom flare-ups may occur, and particularly “good” or particularly “bad” days
will occur for a variety of physical, emotional, or psychosocial reasons. Premature treatment plateaus may also occur due to a variety of legitimate, but often identifiable and manageable, causes. Similarly, natural breakthroughs and setbacks occur in the course of the treatment and recovery process. All of these factors combine to produce the potential for a recovery curve that may be more reflective of “two steps forward and one step back” than of a straight linear progression. Such a reality can pose a problem in the context of outcome measurement. Specifically, the progress measures may be administered on a day during a natural peak or trough, serving to distort an otherwise steadily progressive, plateaued or worsening course. Measurements taken at such relative high or low points can potentially result in misinterpretations of the client’s actual status. For this reason, it is important that measurements be taken relatively frequently (no less than once per month) and with interim treatment measurements rather than by restriction to pre and post treatment measurements.

As a general rule of thumb, the more frequently measures are taken, the more likely that the client’s outcome graphs will reflect the true underlying general recovery trend, regardless of the naturally occurring variability of his or her condition. Further, it remains essential that clinicians fully explore and attempt to openly explain and interpret findings of premature plateaus and deteriorative trends. It is equally essential that treatment funding sources come to understand and accept naturally occurring variability, which can distort outcome measurement data. This inherent problem demands mutually respectful communication of all parties towards the best interest of the client. Knee-jerk adverse reactions to single-point measurements that appear discouraging must be avoided in favour of thoughtful problem solving and a common sense approach. Similarly, caution must be exercised with respect to an unduly favourable measure at one point in time that may be followed by a more representative measurement in the subsequent evaluation; this may give the appearance of less progress over the more recent time frame.

One potential (though not necessarily recommended) way to overcome the “bad day/week” phenomenon is to discontinue the re-testing and postpone it for a few days until the set-back has resolved. Thus it is acceptable to discontinue testing on a day in which the client is obviously experiencing the effects of what appears to be a brief or transient physical or emotional set back. However, postponing or discontinuing the re-testing should not occur if the client is obviously on a declining course that is likely to last longer than a few days.

Should a clinician encounter concerns with funding sources in situations in which the naturally occurring variability issue is thought to potentially undermine a client’s future treatment, consideration may be given to sending the above statement to the funder in an effort to educate that party. However, the clinician must also be aware that the over reliance upon, and undue repetition of this argument, continually across clients may in time undermine the clinician’s credibility.

**General administration tips.** For the multi-page Rehabilitation Checklist (RCL) and the Rehabilitation Survey of Problems/Coping (R-SOPAC) use only ballpoint pen and assure sufficient pressure on the underlying page so that the transfer of the response through to the underlying scoring sheet clear.

**Tear away scoring forms.** The RCL and R-SOPAC use a “tear away” format that conceals an underlying scoring form. The top of the forms are generally serrated and should be torn off first; then the tacked bottom part of the forms will pull apart relatively easily. Caution should be taken so as not to tear through the forms themselves by accident. The user need not complete the underlying scoring forms unless direct reference is required to determine the psychopathology risk factors, or for other reference group comparisons.
III. Measures Overview, Key Validity Statistics & Administrative Tips

a. The Rehabilitation Checklist (RCL)

| Purpose/Explanation: | - To identify client perceived rehabilitation barriers  
|                     | - To identify life role impairments  
|                     | - To identify pre-condition and future primary/secondary life roles  
|                     | - To identify client perceived physical and psychological change over time  
|                     | - To identify psychopathology risk factor |
| Administration Time: | - 5 to 10 minutes |
| Key Reliability Statistics: | - Cronbach alpha for Total Rehab Barriers: .85  
| | - Cronbach alpha for Life Role Disability: .82  
| | - Factor analysis support for Rehab Barriers subscales |
| Validity Summary: | - Sound Life Role & Overall Disability correlations with Oswestry  
| | - Supported relationship between subjective perception of progress and presence of psychopathology  
| | - Supported relationship between subjective estimate of return to work and presence of psychopathology  
| | - Sound convergent/divergent validity relative to various psychological measures & R-SOPAC  
| | - 3 established cut-off scores for psychopathology prediction/risk |
| Number subjects for reliability/validity data: | - Workers compensation: 294  
| | - Motor vehicle accident: 100 |
| Manual Name and length: | - Rehabilitation Checklist User’s Manual; 54 pages |
| Test Administration Tips: | - If client has problems prioritizing rehabilitation barriers (on page 1), ask “which of the problems would you take away first, if you could only take one away…what’s the next one that you’d take away…and the next”.  
| | - If a client initially assigns the same priority to more than one item, make an effort to help them prioritize further using the method above  
| | - If the client insists upon assigning the same priority to more than one item, then a decision will need to be made during data entry to assign priorities based upon clinical knowledge of the individual or based upon their order of appearance on the form (but in the context of the client’s other prioritized items)  
| | - A similar approach can be used with regard to life role priorities in terms of efforts to help the client prioritize and the need to assign a priority if not clear  
| | - Occasionally respondents may circle two responses in Part 5, 1-3, one on the positive side and another on the negative side of the horizontal scale; if this occurs the respondent should be redirected to only circle one percentage score |
| Interpretation: | - Rehabilitation Barriers are first marked and then prioritized from 1 to 5  
| | - “Life Role Disability” scores reflect percentage of perceived disability  
| | - Psychopathology risk factor identified by a 50% or greater score on the Aggregate Life Role graph  
| | - For determination of rehab barriers subscores and related psychopathology risk factors requires hand scoring of underlying scoring grid (see pages 20-23 of RCL User’s Manual for detailed instructions).  
| | - Table 1.1 (p. 3) of the RCL User’s Manual provides examples of intervention strategies for selected rehabilitation barriers/problem areas (as identified in part 3 of the RCL)  
| | - Table 1.2 (p. 4) of the RCL User’s Manual provides examples of intervention strategies for selected Life Role Disability (identified in part 3 of the RCL) |
| Report Usefulness: | - RCL graph depicts change in Life Role Disability over time  
| | - RCL graph depicts change in client perceived physical and emotional change over time as well as anticipated future change  
| | - Rehabilitation barriers are presented on the Rehabilitation Progress and Outcome Summary Report |
### b. The Rehabilitation Survey of Problems and Coping (R-SOPAC)

| Purpose/Explanation: | - To measure client perceived symptom problem intensity and ability to cope with varied physical, cognitive and emotional symptoms  
- Coping aspects are recognized as generally being more sensitive to change than symptom intensity, especially beyond acute treatment phase  
- To identify psychopathology risk factor |
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Administration Time:</td>
<td>- 5 to 10 minutes</td>
</tr>
</tbody>
</table>
| Reliability Statistics: | - Test-re-test reliability: .91 - .93  
- Chronbach’s alpha full scale: .87  
- Chronbach’s alpha subscales: .77 - .92 (most above .80)  
- Factor analysis support for scale structures |
| Validity Summary: | - Intensity scales more highly correlated with other measures of symptom intensity  
- Coping measures more highly correlated with measures of function (e.g. Oswestry, Neck Disability Index, cognitive function)  
- Emotional subscales highly correlated with varied measures of psychopathology & discriminate levels of psychopathology  
- Demonstrates incremental increases in pathology and decreased coping in respectively going from employed group to unemployed population, and from unemployed to clinical population  
- Cluster analysis identified R-SOPAC patterns to distinguish 3 groups: Adaptive Copers, Generalized Distressed & Mild to Moderate Circumscribed Symptoms  
- Established cut-off score for psychopathology prediction/risk |
| Number subjects for reliability/validity data: | - Workers compensation: 294  
- Motor vehicle accident: 100 |
| Manual Name and length: | - Rehabilitation Survey of Problems & Coping Technical Manual, 112 pages |
| Test Administration Tips: | - As both sides of the form are very similar, some clients will ignore the change in the scoring protocol on the second page. If the response pattern is the same as the first page or the second page is left blank then this likely indicates such a problem; the second page should then be properly completed. In general high problem scores will be associated with low coping scores and vice versa. If the pages are contradictory, the issue should be reviewed and if appropriate, the client may re-do the second page. |
| Interpretation: | - The bottom half (from 0 to –6) of each R-SOPAC graph plots the “symptom problem intensity”; the top half (from 0 to 6) of each R-SOPAC graph plots the respondent’s perceived “symptom coping ability”  
- Each graph provides a clear criterion for client defined “Satisfactory Coping” level as treatment target (thick black line at coping level +3 on all R-SOPAC graphs)  
- “Emotional Intensity” scores of –3 to –6 indicate risk factors for emotional disorders  
- The inner “Scoring Page” contains research reference groups re-employed, disabled & unemployed-non-disabled to consider effects of unemployment alone (requires hand scoring of underlying scoring grid for use—see pages 34-39 of R-SOPAC Technical Manual for detailed scoring instructions). |
| Report usefulness for referral sources: | - Key summary graphs of the measure are provided in the ROMS Progress & Outcomes Summary Graphs  
- Full R-SOPAC Report provides back up support when needed to help explain lack of progress, need for multidisciplinary/psychosocial involvement/assessment, further evidence of progress or appropriateness of treatment termination |
### c. The Rehabilitation Activities of Daily Living Survey (R-ADLS)

| **Purpose/Explanation:** | - To identify activity of daily living (ADL) limitations  
- To identify symptoms responsible for ADL limitations  
- Respondent may be client, significant other or for objective measurement, may be based upon professional assessment |
| **Administration Time:** | - 5 to 10 minutes (plus time for professional assessment where used) |
| **Reliability Statistics:** | - Chronbach’s alpha whole scale: .96  
- Chronbach’s alpha subscales: .83 - .95  
- Split-Half whole scale: .74  
- Split-Half subscales: .79 - .92 (only one under .80) |
| **Validity Summary:** | - Strongly correlated with Oswestry Total (.66) & Oswestry subscales  
- Strongly correlated with Neck Disability Index (.68) and NDI subscales  
- Soundly correlated with Rehab Checklist Life Role Disability (.49)  
- As expected more highly correlated with symptom coping measures than symptom intensity measures |
| **Number subjects for reliability/validity data:** | - 204 motor vehicle accident |
| **Manual Name and length:** | - Rehabilitation Activities of Daily Living Manual, 69 pages |
| **Test Administration Tips:** | - Clients may not completed fill in the “Limiting Symptom” column so this should be monitored and the client encouraged to return to fully complete it or assisted to complete the column  
- ROMS scoring completely eliminates need for complex scoring by hand |
| **Interpretation:** | - Although the respondent rates each activity on the basis of degree of limitation, ROMS report converts this rating to the more positive degree of ability (by subtracting the respondent’s score from 100)  
- See page 3 of R-ADLS Manual for R-ADLS Interpretative Anchoring in Relation to FIM and WHO Criteria |
| **Report usefulness for referral sources:** | - Key summary graph of the measure is provided in the ROMS Progress & Outcomes Summary Graphs  
- R-ADLS Summary Report and R-ADLS Overall Domain Report are highly relevant when disability status/benefits are determined by individual’s capacity to perform normal life activities &/or when quality of life is focus of rehabilitation  
- Individual Domain Reports serve to direct treatment to specific ADL goals and related Symptom Reports assure that the appropriate discipline(s) are addressing the ADL shortfalls  
- Individual Domain Reports provide back up support when needed to help explain lack of progress, need for multidisciplinary/psychosocial involvement/assessment, further evidence of progress or appropriateness of treatment termination |
### d. Rehabilitation—Functional Status Markers (R-FSM)

<table>
<thead>
<tr>
<th>Purpose:</th>
<th>- Compares and tracks client functional abilities in relation to physical job demands (PDA)</th>
</tr>
</thead>
</table>
| Administration Time: | - Depends upon methodology selected to collect data at user’s discretion  
- Occupational physical demands data may be collected on basis of: client report; employer telephone survey; formal physical demands analysis at worksite (greatly preferred)  
- Functional ability data ideally collected on basis of clinician objective assessment  
- Method of data collection should be stated in the related clinical report in which the graph appears |
| Interpretation: | - This graph provides a guideline with respect to the status of the client’s abilities relative to premorbid job demands  
- Activities depicted are not necessarily “essential job tasks”  
- The accuracy of the graph will increase with objective as opposed to strictly subjective inputs  
- Even when based upon objective data, the graph will not necessarily reflect the stamina, work pace and consistency of performance required of a full work day or work week; also, the measures/graphs do not reflect the emotional, cognitive, interpersonal nor psychosocial demand aspects of work |
| Report usefulness for referral sources: | - Key summary graphs of the measure are provided in the ROMS Progress & Outcomes Summary Graphs  
- Individual R-FSM Report is highly relevant when return to work is a primary rehabilitation goal and/or disability status is determined by individual’s ability to perform pre-morbid work tasks |

### e. Pre-Post Condition Life Event Survey (PPCLES)

| Purpose: | - To identify pre-morbid & co-morbid conditions  
- To identify stressful and significant life events in the pre-morbid, concurrent and post-condition periods which may be contributing to the recovery process  
- Serves to facilitate the analysis of impairment attribution regarding a primary event (e.g. motor vehicle/workers’ compensation accident) versus non-accident related factors |
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Administration Time:</td>
<td>- 5 to 10 minutes</td>
</tr>
</tbody>
</table>
| Test Administration Tips: | - For any significant events, indicate details in the right hand margin  
- Ascertained the degree to which the event appears to be an ongoing issue of concern/distress/pre-occupation for the individual |
| Interpretation: | - Interpret at face value re timing of the stressful events  
- Review the details provided to further assess impact of the event/condition relative to the current recovery process |
| Report usefulness for referral sources: | - No report is generated for this qualitative instrument  
- Provides supportive evidence with regard to pre-morbid and co-morbid conditions for further investigation/reporting |
IV. The ROMS Internet Client Tracking Service

In developing its Diagnostic and Outcome products, RREES found that clinicians sought timesavings in the data inputting, scoring and report printing processes. Therefore, after the initial desktop version, ROMS was developed as an Internet service at the request of clinicians. The added benefits of this service include the off-site archiving of data, access via any web-enabled PC, and the automatic generation of quarterly aggregate reports.

ROMS Client Identification Numbers and Confidentiality. In order to assure confidentiality of the data and reports, users do not enter the client’s name at all. Rather, the ROMS system will develop a unique client identification number comprised of the following:

(a) The client’s “Initials” (2) as input into the “Initials box” in the Patient Profile screen; and,

(b) In the Patient Profile screen, in the “Medical #” field, the first 10 digits (i.e. numbers only and no letters) of the client’s “Provincial Health Card Number” should be input.

(c) The client’s identification code becomes an integration of the above (where I=initials, and P=provincial health card number): II-PPPPPPPPPP. For Example, John Smith with a provincial health card number of 1234567890 L would become a unique identification code of JS-1234567890. The patient’s initials decrease the possibility of file duplication with out-of-province clients.

(d) The client file for editing/printing of reports is accessible using this unique code. Also, on all ROMS reports, only the client’s ROMS code appears rather than the name. However, parties can still assure that any given report is associated with the intended patient because the initials and health card number will be verifiable.

This section reviews the recommended process at each respective time interval and the basic information required at each stage.

A. Data Entry Input

The initial or baseline assessment requires additional demographic material to be completed and entered into the ROMS service, relative to the interim and final measures. Final measures contain discharge information not contained in the initial or interim measures. The chart below indicates the requirements for each of the measurement periods. It is not required that the Input Summary pages below be filled out by hand first; however, they are made available should some users desire to use this interim step as a means of collecting data and then passing the information over to someone assigned to data entry.

<table>
<thead>
<tr>
<th>ROMS Measurement Period</th>
<th>Input Materials Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Assessment</td>
<td>ROMS Initial (Time 1) Input Summary + Available measures</td>
</tr>
<tr>
<td>Mid-Term Assessments</td>
<td>ROMS Subsequent (Time 2+) Input Summary + Available measures</td>
</tr>
<tr>
<td>Final (discharge) Assessment</td>
<td>ROMS Subsequent (Time 2+) Input Summary + Available measures</td>
</tr>
</tbody>
</table>
B. Accessing the ROMS through the RREES Web Page

ROMS may be accessed through the RREES Home Page (www.rrees.com). To go to the ROMS Page, first click on the ROMs selector button on the left hand side. The below screen will appear. To enter the ROMS’ portal, click on the icon as indicated in red print. Once clicked the web browser will access the ROMS portal page. To start ROMS click on the “Execute ROMS” selector button as indicated in the second screen shot below.

![Click on this icon to enter the ROMS system](image)

**What is ROMS?**

Intended for use by all rehabilitation professionals, ROMS is an Internet based software system to track, analyze, graphically trend and report patient progress and rehabilitation outcome measures. ROMS utilizes a comprehensive array of occupational, functional and symptom outcome measures, each with clinically meaningful benchmarks. Years of research and development have established sound reliability and validity of key ROMS measures. Through ROMS the user obtains graphical patient measure scores, and views key trends for each measure that illustrate patient progress.

For clinic performance analysis, in phase II, ROMS will generate aggregate patient outcome trends based on user-selected criteria including diagnosis, physician, insurer, client characteristics, and more. ROMS is designed to produce finished printed reports that capture patient and clinic progress and status.

After obtaining the patient input through paper pencil and/or observational testing, ROMS users then access the Internet for test scores inputting. ROMS reports are then generated and immediately returned via e-mail. In addition to individual patient reports, beginning in 2004, the ROMS Service will also automatically generate quarterly reports of user-selected facility aggregate outcomes that demonstrate the facility’s effectiveness based using designated, national source, insurer and/or other selected criteria. These
C. Entering ROMS and Navigating the ROMS program

To enter ROMS, enter your Facility User ID and Facility Password into the start page. If this does not work, confirm your information e-mailed to you at the time that you registered your User Qualification Form. Then retry. If your log in is successful, then the ROMS welcome page will appear. If not, go back to the RREES web page and contact us about your access problem.

The Welcome Page is the main navigation tool for the program. It provides access to the patient information entry screens, to the ROMS tests, to your account information and to the on-line user manual.
D. Patient Administration Entry

The ROMS Initial (Time 1) Input Summary may be used to collect the initial baseline information from the patient’s first assessment (Appendix xx). However, you may use your current information collection forms to facilitate this process. The data input screen also allows tracking of the following on each patient:

- Birthdate
- Gender *
- Province of Residence *
- Postal Code
- Martial Status *
- Level of Education *
- English Language Ability *
- Mother Tongue Language *
- Current/Recent Occupation*
- Time living in Canada
- Current/Recent Employer
- Family Doctor
- Insurer *
- Referral Source
- Case Management Firm
- Funding*

Most of the input is done through pull-down menus that are indicated above with an asterisk (*). To start with a new patient, click on the “Patient Profiles” and then “New Patient Profile”. Enter the available information and click on “save” when complete. If the profile is incorrect, click on “cancel”. To modify information about a patient, select the active patient from the list and click on “New Patient Profile”.

E. Creating or Using a Test Group

Now that a patient record has been created, any one of the ROMS tests may be associated with that client. For each assessment, the program tracks the client’s progress with a date. Each date is considered to be a “Test Group”. To add a new “Test Group” for the current active patient, click on the “ROMS” start button. Select the active patient from the pull down menu and click on “Create Test Group”. To use a current test group, select it from the pull-down menu, under “Select Test Group to Input/Edit data”.

13
Step 1. Click here to start ROMS

Step 2. Select the current active patient from the pull-down menu

Step 3. Click here to create the test group

Step 4. Select a previously created test group from the pull-down menu

Once a test group has been accessed, then ROMS will provide the below access menu to select any one of the following ROMS components:

a) Diagnostic & Outcome Data
b) Rehabilitation Checklist
c) Rehabilitation Survey of Problems & Coping
d) Functional Status Markers
e) Rehabilitation Activities of Daily Living Survey.
To access each of the tests, click on the title block. Expect a short delay before the test measure loads. The program will access each of the screens for data input. Once selected, the appropriate input screen will appear. Transfer the information from the paper measure into the corresponding input page. Samples of filled out paper copies are located in Appendix xx. The actual tests may be ordered from www.rrees.com E-STORE FOR PROFESSIONALS.

Once the data has been entered, click on “save” to associate the test group with the individual patient. An example for the Diagnostic & Outcome Data input screen is below. You may use all of the ROMS components for each patient on each of the dates.

Once the input is complete, you may produce a report by clicking on the “generate report” button.

V. Interpreting the Graphs and Selecting The Ones to Send with Your Reports

For purposes of diagnostic assessment of rehabilitation issues and concise treatment tracking, all ROMS graphs are of value. ROMS graphs can help to reduce the amount of time required in the preparation of reports. However, many referral/funding sources may not require the full exhaustive set of measures produced by ROMS. Rather, ROMS gives you a wide selection of graphs to choose from based upon referral/funding source preferences and the clinician’s desire to highlight various aspects of a client’s status. One referral source may have more of an interest in physical symptoms breakdowns (as given in the R-SOPAC graphs), while another may be more keenly interested in detailed results in terms of discrete activities of daily living (as per the R-ADLS graphs).
The table below provides a step-by-step approach to interpreting the graphs. The table is combined with a column indicating the typical usefulness of each report to referral sources. “Optional Send” reports may be sent to referral/funding sources especially to support the need for: a change in modality, added treatment sessions, broadening of treatment scope, more disciplines to be involved in treatment, etc. *The supplemental reports can also serve to support progress in treatment that is not as readily identified by other graphs, or can support treatment discontinuation.*

### Table 5.1. Interpreting & Sending ROMS Reports

<table>
<thead>
<tr>
<th>Interpretation Steps</th>
<th>Report Name</th>
<th>Recommended Appropriateness for Referral Sources &amp; Report Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>ROMS Rehab Progress &amp; Outcome Summary Report</td>
<td><strong>Always Send</strong> – Summarizes: treatment sessions, presenting problems, rehab barriers (RCL), occupational outcome status</td>
</tr>
<tr>
<td>Step 2</td>
<td>ROMS Progress &amp; Outcomes Summary Graphs</td>
<td><strong>Always Send</strong> – Summarizes: pain coping status (R-SOPAC); percentage of symptoms meeting satisfactory coping level (R-SOPAC); aggregated physical/emotional/cognitive symptoms (R-SOPAC); ADL status (R-ADLS); percentage of physical demands criteria met (FSM); percentage raw score of total physical demands met (FSM)</td>
</tr>
<tr>
<td>Step 3</td>
<td>The Rehabilitation Checklist (RCL) Report</td>
<td><strong>Always Send</strong> – Summarizes: life role disability status; client perceived emotional and physical progress; identified psychopathology risk factor to support need for psychological assessment/treatment</td>
</tr>
<tr>
<td>Step 4</td>
<td>The Rehabilitation Survey of Problems and Coping (R-SOPAC) Report</td>
<td><strong>Optional Send</strong> – Summarizes individual and aggregate physical, emotional and cognitive symptoms; identifies psychopathology risk factors to support need for psychological &amp; neuropsychological/OT assessment treatment</td>
</tr>
<tr>
<td>Step 5</td>
<td>The Rehabilitation Activities of Daily Living Survey (R-ADLS)</td>
<td><strong>Always Send R-ADLS Summary Report and R-ADLS Overall Domain Report for non-workers (and treatment by mental health professionals)</strong> – Summarizes: activities of daily living as broad domains; identifies whether physical, cognitive &amp;/or emotional symptoms are responsible for activity limitations across entire activities. <strong>Optional Send individual domain reports</strong> – Summarizes: activities of daily living as individual domains and respective activities; identifies which physical, cognitive &amp;/or emotional symptoms are responsible for activity limitations per domain</td>
</tr>
<tr>
<td>Step 6</td>
<td>Functional Status Markers (FSM)</td>
<td><strong>Send if client goal to return to work</strong> – Summarizes: physical functional status in relation to physical job demands</td>
</tr>
</tbody>
</table>
VI. Integrating ROMS in Clinical Report Preparation: Time savings and providing an evidence base for “reasonable and necessary” treatment

If desired, the use of ROMS graphs in clinical initial-baseline, progress and discharge reports should greatly reduce the required time for report preparation. This will free up clinical time to spend on more meaningful and profitable direct client contact. Generally referral and funding sources prefer concise reports that, at the same time, clearly depict the client’s status and progress. ROMS use does not restrict in any way the format or manner in which clinicians write their reports, nor treatment modalities selected. However, use of ROMS reports facilitates the writing of very concise, summary oriented clinical reports. Clinical reports may succinctly interpret the ROMS graphs and conclude whether or not there is overall evidence of substantial, moderate or minimal clinical progress. In the Clinical initial-baseline report, specific ROMS graphs may be referenced to initially support the need for, and goals of treatment i.e. ROMS provides evidence that treatment is reasonable and necessary. In clinical progress and discharge reports, ROMS graphs may be referenced to support the clinical conclusions, which may include the need for continued treatment, alternate treatment modality, assessment/treatment by other disciplines, treatment cessation, etc.

The need for physical assessment/interventions can be supported by reference to Physical barriers, coping problems and limiting symptoms. The necessity of psychological and/or occupational therapy assessment/interventions can be supported by reference to Emotional barriers (RCL), Emotional symptoms/coping problems (R-SOPAC) and Emotional limiting symptoms (R-ADLS) and by reference to the psychological risk factors. Neuropsychological and/or occupational therapy assessment/intervention can be supported by reference to Cognitive barriers, coping problems and limiting symptoms. Table 1.1 (p. 3) and 1.2 (p.4) of the Rehabilitation Checklist User’s Manual provide examples of intervention strategies pertaining to a wide variety of specific Rehabilitation Barriers and Life Role Disability, respectively.

If clinical progress has been minimal, an explanation for this should be offered. If applicable, this explanation may include the possible “bad day/week” phenomenon (although efforts should be taken to wait out measurement in this period if reasonable as was discussed in Section II). Section II of this document provides further guidance on this issue.

VII. Assessment Proposals: Providing an evidence base for “reasonable and necessary” Assessment

Various jurisdictions and clinical circumstances necessitate the approval of an assessment prior to the provision of treatment. In essence, the principle of “reasonable and necessary” assessment is commensurate with that of “reasonable and necessary” treatment. That is, evidence that justifies one, should also justify the other. The difficulty however is that in order to justify the assessment one ideally would provide objective evidence that typically arises from the assessment itself. The normal referral information itself (e.g. a referral note or letter) is often insufficiently detailed to clearly establish that an assessment is both reasonable and necessary. While a clinician might engage in a brief interview with the client to provide more substantive supporting information, if overly involved, this can be a costly and financially risky endeavour as typically the professional would go unremunerated for this initial client contact—particularly should the assessment never become funded.

Operationally defining “reasonable and necessary”. Although other definitions may very well exist, in a rehabilitation context, the following is considered to be a sound definition of “reasonable and necessary” assessment and treatment:
The provision of rehabilitation goods and services in order to ameliorate the effects of a *substantive impairment*, symptom coping concerns and/or other client perceived rehabilitation barriers, which is/are otherwise causing a *substantive* daily living, work and/or other life role limitation, or threatens to do bring about either.

In light of the above, the definition of “reasonable and necessary” in a rehabilitation context, may be conceptualized as assessment/treatment services that serve to:

1. Address the effects of other impairment related client perceived rehabilitation barriers; *and/or*,
2. Address the effects of substantive impairments and/or symptom coping concerns;

and,

3. Ameliorate/reduce/minimize substantive or threatened impairment-related Activity of Daily Living limitations; *and/or*,
4. Ameliorate/reduce/minimize substantive or threatened impairment-related occupational activity (essential task) limitations, *and/or*,
5. Ameliorate/reduce/minimize substantive or threatened impairment-related other life role activity limitations.

It would follow then, that screening procedures could be developed to represent the operationalization of the above definition. Table 6.1 below provides such an operational link between the conceptualized definition of “reasonable and necessary” rehabilitation service provision, and ROMS’ pragmatic assessment/screening measures.

### Table 7.1. Screening Procedure to Substantiate “Reasonable & Necessary” Assessment.

<table>
<thead>
<tr>
<th>“Reasonable/Necessary” Criteria:</th>
<th>ROMS Assessment/Screening Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify substantive rehabilitation barriers</td>
<td>Rehabilitation Checklist (RCL)</td>
</tr>
<tr>
<td>2. Identify substantive symptoms/coping concerns</td>
<td>Rehabilitation Survey of Problems &amp; Coping (R-SOPAC)</td>
</tr>
<tr>
<td>3. Identify Activity of Daily Living limitations, gaps, treatment needs</td>
<td>Rehabilitation Activities of Daily Living Survey (R-ADLS)</td>
</tr>
<tr>
<td>4. Identifying Occupational Demands limitations, gaps, treatment needs</td>
<td>Functional Status Measures (FSM)</td>
</tr>
<tr>
<td>5. Identify other life role limitations, gaps, treatment needs</td>
<td>Rehabilitation Checklist (RCL)</td>
</tr>
</tbody>
</table>

This screening process at the pre-assessment phase, and the related supportive measures, clearly also provides evidence for reasonable/necessary intervention. The above discussion suggests that both rehabilitation treatment and assessment services can be soundly justified when the above information is systematically collected, interpreted and communicated to a funding source. The goal of the assessment proposal is to identify concerns in the above areas that in turn warrant further detailed evaluation. The goal of the assessment is to critically evaluate the concerns raised in the screening process and to objectify issues in each of the above target areas, in an effort to determine reasonable and necessary interventions.

Professionals who opt to undertake such a screening process should first consider the existence of any professional obligations, such as the need to have direct contact with a client, before adopting the assessment proposal procedure proposed above.
VII. Aggregate Statistics Service

For clinic performance analysis, ROMS generates quarterly aggregate client outcome reports based on user-selected criteria including diagnosis, physician, insurer, client characteristics, and more. The aggregate reports demonstrate the facility’s effectiveness based upon diagnosis, referral source, insurer and/or other selected criteria. This aspect of the services remains under development at this time.
Appendix A. ROMS Individual Reports
(all reports contain a fictional name)

ROMS® Rehabilitation Progress and Outcome Report

Facility Name: Demo
Client Name: XXXX
Occupation: CLERICAL RELATED
Employer: BELL CANADA
Insurer: MVA INSURANCE
Referral Source: DR R U SIKH
Case Mgt Firm: RECOVERY WHILE-U-WAIT
Claim Number:
Condition Date: September 7, 1998
Admission Date: September 22, 1998
Discharge Date: Apr 17, 1999
Sessions Used: 54
Sessions Total: 54
Present Status: Discharged - Treatment Completed

Presenting Problems:
Primary Diagnosis: WAD3 Complaint of neck pain AND Neurological signs - Weakness and sensory deficits
Secondary Diagnosis: S00 Superficial injury of head
Prior Symptoms (R-SOPAC): Headaches
Prior Symptoms Worse Post: YES

<table>
<thead>
<tr>
<th>Client Perceived Barriers - Admission</th>
<th>Client Perceived Barriers - Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physical restrictions</td>
<td>1. Physical restrictions</td>
</tr>
<tr>
<td>2. Headaches</td>
<td>2. Headaches</td>
</tr>
<tr>
<td>3. Irritability/anger</td>
<td>3. Job suitability concerns</td>
</tr>
<tr>
<td>4. Dizziness</td>
<td>4. Irritability/anger</td>
</tr>
<tr>
<td>5. Anxiety/Stress</td>
<td>5. Anxiety/Stress</td>
</tr>
</tbody>
</table>

Pre-Morbid Primary Role: Regular employment
Pre-Morbid Secondary Role: Parental activity
Future Expected Primary Role: Significant other
Future Expected Secondary Role: Parental activity

Occupational Outcome Status as of November 10, 2002

<table>
<thead>
<tr>
<th>Pre-Condition Onset</th>
<th>Current Status at Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occ. Class.</td>
<td>Medium</td>
</tr>
<tr>
<td>Status</td>
<td>Full time</td>
</tr>
<tr>
<td>Restriction</td>
<td>None reported</td>
</tr>
<tr>
<td>Earnings ($/hr)</td>
<td>$25.00</td>
</tr>
</tbody>
</table>

From Demographics Inputs

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ROMS® Rehabilitation Survey of Problem and Coping

*Emotional Intensity scores which are in the 5 to 6 range reflect significant risks for psychopathology.

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ROMS® Functional Status Markers

Client: XXXX  Facility: Demo  Report Date: Nov 10, 2002

*Unless otherwise specified, and unless the date has been collected over a series of consecutive days (each approximating a competitive work day), then a participant who meets all of the above noted physical demands, cannot necessarily be considered to meet higher essential job demands even from the strictly physical perspective. A competitive work day must consider such issues as the cognitive and psychosocial occupational demands as well as such factors as stamina, endurance, and continuous concentration, persistence, and competitive work pace. These cautions apply to this graph as well as the summary graphs derived from it.

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### Appendix B. R-ADLS Interpretative Anchoring in Relation to FIM and WHO Criteria

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Output (% Intact Ability)</td>
<td>Input (% Limitation)</td>
<td>Complete Dependence 1. Total Assistance (0%)</td>
<td>2. Maximal Assistance (25%)</td>
<td>Complete Difficulty/Restriction (96 - 100%)</td>
</tr>
<tr>
<td>0%-4%</td>
<td>Full Assistance/ Cannot do at all 96% - 100%</td>
<td>3. &quot;Cannot Do&quot;</td>
<td></td>
<td>Severe Difficulty/Restriction (50 - 95%)</td>
</tr>
<tr>
<td>5%-50%</td>
<td>Maximal Assistance/ Serious Difficulty 50%-95%</td>
<td>2. &quot;Need Much Help&quot;</td>
<td></td>
<td>Moderate Difficulty/Restriction (25-49%)</td>
</tr>
<tr>
<td>51%-75%</td>
<td>Moderate Assistance/ Difficulty 25%-49%</td>
<td>1.&quot;Need Some Help&quot;</td>
<td>3. Moderate Assistance (50%)</td>
<td></td>
</tr>
<tr>
<td>76%-84%</td>
<td>Minimal Assistance/ Mild Difficulty 16%-24%</td>
<td>4. Minimal Assistance (75%)</td>
<td>5. Supervision</td>
<td>Mild Difficulty/Restriction (5-24%)</td>
</tr>
<tr>
<td>85%-95%</td>
<td>Independent with supportive device 5%-15%</td>
<td>Independence 6. Modified Independence (Device)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>96%-100%</td>
<td>Fully Independent (performs in safe/timely manner) 0%-4%</td>
<td>0.&quot;Can Do Alone&quot;</td>
<td>7. Complete Independence (Timely, safely) (100%)</td>
<td>No Difficulty/Restriction (0-4%)</td>
</tr>
</tbody>
</table>