Published in final edited form as:

Arch Phys Med Rehabil. 2008 August ; 89(8): 1600–1606. doi:10.1016/j.apmr.2007.11.060.

Recovery From Disablement: What Functional Abilities Do Rehabilitation Professionals Value the Most?

Pamela M. Rist, BSE, Damean W. Freas, DO, MBA, Greg Maislin, MS, MA, and Margaret G. Stineman, MD

Departments of Physical Medicine and Rehabilitation (Rist, Freas, Stineman) and Medicine (Maislin), University of Pennsylvania, Philadelphia, PA; Leonard Davis Institute of Health Economics, University of Pennsylvania, Philadelphia, PA (Stineman); Clinical Epidemiology Unit, Center for Epidemiology and Biostatistics, University of Pennsylvania, Philadelphia, PA (Stineman); Institute on Aging, University of Pennsylvania, Philadelphia, PA (Stineman); School of Nursing, University of Pennsylvania, Philadelphia, PA (Maislin); and Biomedical Statistical Consulting, Wynnewood, PA (Maislin).

Abstract

Objective—To determine whether rehabilitation clinicians representing different therapeutic disciplines would choose to recover from profound disability differently.

Design—Applying recovery preference exploration as a data-collection tool, clinicians imagined recovery from complete disability in each of the 18 activities assessed on the FIM instrument. We hypothesized that recovery-choice pathways would vary among the disciplines because of differences in training and practice focus. We compared each clinician's preference for imagined recovery of the ability to perform each FIM activity relative to the other 17. Item-level preferences were explored by discipline. The mean absolute difference (MAD) in the medians of the 18 FIM recovery preference values between each of the disciplines was used to quantify overall differences.

Setting—Inpatient rehabilitation unit within a larger tertiary care urban hospital of an academic medical center.

Participants—Ninety-three clinicians actively providing care to patients in an inpatient rehabilitation setting classified into 5 groups anticipated to have similar types of practices: physicians and medical students (physician group), nurses, occupational and recreational therapists (occupational therapy [OT] group), physical therapists (physical therapy [PT] group), and neuropsychologists and social workers (psychology group).

Interventions—Not applicable.

Main Outcome Measures—Relative recovery preferences in 18 FIM activities.

Results—The MAD value between the 2 groups with the least similar recovery values (physician and psychology groups) was 1.78 times larger than the MAD value between the 2 groups with the most similar recovery values (PT and OT groups).

Conclusions—There were subtle differences in recovery choice pathways that may logically relate to differences in the cognitive processes used in clinical decision making among the therapeutic discipline groups.

Keywords

Activity of daily living; Health knowledge, attitudes, practice; Learning; Patient care team; Rehabilitation

Phenomenologists believe that reality is constituted by attributing meaning to experiences through interactions with others.¹ People in alternative-life trajectories have vastly different interactions with others and will attribute different meanings to similar life circumstances, such as recovery from disability. Studies on the process of recovery and its implications and meanings have frequently focused on the perceptions of people with disabilities or on the general public's view. The general public typically estimates the quality of life of people with particular conditions that limit one's abilities to perform daily activities as being lower than people with those conditions rate the quality of their own lives.² Few studies have examined how rehabilitation clinicians attribute meaning to the process of recovery. Consequently, we explore how members of the interdisciplinary rehabilitation team would want to recover if faced with various types of activity limitations. A deeper appreciation of disparities in recovery preferences among various members of the therapeutic team could help provide insights into the dynamics of team functioning and its effect on patient care and recovery.

Brown and Gordon³ distinguish between the “insider” and “outsider” perspectives as held by the person with the disability and the person measuring the disability, respectively. Although clinicians may have some personal experience with disability, most assume the outsider perspective during the clinician-patient interaction. Certain types of rehabilitation professionals, such as psychologists and social workers, by the nature of their practices, may tend to seek more of an insider perspective focusing on implications of disability, whereas others measuring observable status may be more inclined to maintain an outsider perspective.

Clinicians' concepts about disability and the meaning of recovery logically evolve through the experience of providing care to patients. Those experiences are shaped by discipline-specific theories and approaches to reasoning associated with their training and professional practices. Mattingly and Fleming⁴ described 3 types of clinical reasoning: procedural, conditional, and interactive. Procedural reasoning is similar to hypothetical or propositional reasoning advocated in the medical problem-solving literature.⁵ Conditional reasoning involves “understanding the whole person” and how his/her disability will affect his/her future. Interactive reasoning is used to interact with patients and engage them in the recovery process. Greater or lesser emphasis on these alternative approaches to reasoning could logically influence how clinicians attribute meaning to recovery from different types of activity limitation. We applied the emerging technique of RPE⁶ to study clinicians' beliefs about the meaning of recovering from the various activities included in the FIM instrument.

Certain therapeutic disciplines within the interdisciplinary team are required to collect standard data on patients' observed performances on each of the 18 FIM activities during inpatient rehabilitation^{7,8} making it a logical choice for RPE in that setting. The FIM includes 2 domains, motor and cognitive, expressing physical and cognitive abilities, respectively.^{9,10} FIM scores express the type and severity of patients' activity limitations as sets of “exteriorized signs of the individual” but fail to express “what people feel about ... its consequences.”^{11(p251)} Goals are often generated, and the achievement of those goals is addressed through standardized FIM scores. Procedural reasoning is typically applied by clinicians in measuring FIM activity limitations and in analyzing resulting scores. In contrast, conditional reasoning is necessary to

understand the consequences of those scores relative to the personal values, contexts, and circumstances defining the patients' life. Interactive reasoning integrates knowledge obtained from both procedural and conditional reasoning. It is a way to optimize the value of the clinical encounter. For example, conditional reasoning would be used to effectively teach patients how to interpret their FIM scores when engaging them to participate in setting their own goals for recovery.

RPE was first applied to study recovery preferences among outpatients across a set of physical, psychologic, and social activities.⁶ Next, it was explored as a therapeutic tool to enhance the patient's, the family's, and the clinical team's understanding of the patient's recovery values.¹² Building on this work, we used RPE to explore the relative meaningfulness of recovering the ability to perform each of the 18 FIM activities as seen by the different rehabilitation disciplines in this study. RPE induces a state akin to decentering a technique applied in social psychology and family therapy to increase empathy and help people appreciate the point of view of someone else.¹³ Decentering in RPE occurs when the clinician imagines being someone who is completely disabled. Applying RPE, each clinician developed an individual recovery choice pathway showing the order of how he/she would want to recover from complete dependence in eating; grooming; bathing; dressing the upper body; dressing the lower body; using the toilet; managing the bladder; managing the bowels; transferring from bed, chair, and wheelchair; transferring to toilet; transferring into a tub or shower; walking or using a wheelchair; climbing stairs; comprehending; expressing; interacting socially; solving problems; and remembering.

We hypothesized that recovery-choice pathways would be dissimilar across the different therapeutic disciplines because of differences in training, therapeutic focus, and clinical experiences. Specifically, PT and OT training and practices compared with the other disciplines place greater emphasis on all aspects of measuring and treating functional status deficits. Medical training and practice, including physical medicine and rehabilitation, focus more on physical illness and how related impairments limit functions. Neuropsychology and social work addresses reactions to illness and disability, adaptation, self-image, and social networks.

METHODS

Sample

The convenience sample included 93 interdisciplinary clinicians either actively practicing in or trainees rotating through an urban inpatient rehabilitation unit within a larger tertiary care hospital. The setting was a general inpatient rehabilitation unit in an academic setting in which clinicians provide care to patients with a wide variety of neurologic, musculoskeletal, and complex medical conditions. Clinicians were combined to form 5 therapeutic discipline groups based on similar education and roles in the rehabilitation process. These groups were physician (5 medical students, 27 practicing physicians), nurse (23 nurses), OT (11 occupational therapists, 1 recreational therapist), PT (15 physical therapists), and psychology (7 neuropsychologists, 4 social workers). All physicians were specialists in rehabilitation medicine. The therapists all worked with a variety of patient populations. Clinicians were selected in efforts to include a wide range of therapeutic disciplines, ages, experiences, sexes, and races. The average age of all clinicians was 33.4 years (range, 21–56y). There were 14 Asians, 12 blacks, 63 whites, 1 white-Indian, 1 Native American, and 1 Pacific Islander in the group. Fifty-nine women and 34 men participated in this study. No clinicians who were asked to participate refused. One physician's RPE session was interrupted, and he was unable to complete the procedure.

Procedure

The protocol was approved by the participating hospital's institutional review board, and all clinicians signed consent forms in which they agreed to the publication of deidentified qualitative and quantitative information. The RPE procedure developed by Stineman et al⁶ was derived from the Features-Resource Trade-Off Game¹⁴ and described in earlier patient studies.^{6,12} In this study, the procedures were administered by a resident physician under the supervision of an attending physician.

To begin RPE, the clinician was presented with a paper game board that listed the 18 FIM activities on the left-hand side and 5 performance levels (complete dependence, some assistance, supervision, take longer/need a device, completely independent) across the top. The 5 performance levels combined several of the 7 FIM performance levels into a single level. The FIM levels of total and maximal assistance as well as moderate and minimal assistance were combined into "complete dependence" and "some assistance," respectively, after pilot tests of the procedure revealed that the game with 7 levels created a procedure that was too lengthy to be practical for the clinicians.

RPE was uniformly administered by relaying all instructions from a standardized script (available from the corresponding author). The clinician was also given standard definitions for each FIM activity. The clinician was asked to imagine himself/herself in a state of such profound disability that he/she was completely dependent in all 18 FIM activities. The clinician was instructed to determine his/her own optimal path of imagined recovery by initiating moves on a board. Each move was numbered in the order in which recovery occurred. As in actual recovery, the clinician was not aware how much recovery he/she would be allowed to imagine, and thus each choice was to be viewed as possibly the last. In this study, the procedure was allowed to continue until full recovery was imagined.

To move from complete dependence to complete independence in all 18 FIM activities, the clinician made a total of 72 moves (4 moves for each of the 18 activities as shown in figure 1). After selecting a higher level of functioning for a particular activity, the clinician wrote the move number in the box corresponding to the new position. For example, in figure 1, the clinician's first move (labeled "1") was improving to "some assistance" in expression from the imaginary starting point of complete dependence. The move labeled "2" was improving to "some assistance" in toileting and so forth. Seventy-two moves were divided into 4 stages each with 18 moves as shown by the different degrees of gray shading in figure 1. At the beginning of each stage, the clinician was asked how he/she would want to recover beginning from the new starting point as defined by the endpoint of the previous stage. After completing each stage, the clinician was asked to explain his/her imagined recovery choices. Explanations were audio recorded and transcribed verbatim. Broad concepts from the transcripts were applied to explain the rationale for clinician choices. More formal thematic analysis of the transcripts are planned similar to those applied to patient RPE transcripts as described previously.¹²

RPE yields quantitative utilities and qualitative data about how the player would want to recover beginning from the point of being fully dependent in multiple activities. Utilities measure strengths of preference for particular outcomes on a scale from 0 to 1 and are considered to be an appropriate way to measure health-related quality of life.^{15(p167),16} The strength of a clinician's preference for recovery in a particular FIM item is determined by comparing the utility value of that item to the other 17.

Method of Calculating Utilities

At the end of play, each of the 18 FIM activities had 4 move numbers associated with it. For instance, in figure 1, the move numbers for eating were 8, 24, 42, and 61. These 4 move numbers

were used to generate utilities. To illustrate this process, the example game board provided in figure 1 will be used. To calculate the utility for a FIM activity, the inverses of each of the 4 move numbers were summed so that a more valued activity (an activity that was moved early) would have a higher utility value. Summing the inverse of the move numbers for eating ($1/8 + 1/24 + 1/42 + 1/61$) yields .207. The possible range of the summed inverse value is from a minimum of .057 ($1/69 + 1/70 + 1/71 + 1/72$) to a maximum of 2.083 ($1/1 + 1/2 + 1/3 + 1/4$). These values would occur if the clinician chose to imagine complete recovery for an activity during the last and first 4 moves of RPE, respectively. Because utilities are measured on a scale from 0 to 1, the sum of the inverses was scaled so the calculated value ranged between 0 and 1. To do this, first, the lowest possible sum (ie, .057) was subtracted from the sum of the inverses. The resulting value was then divided by 2.027 (the highest possible sum [ie, 2.083] minus the lowest possible sum [ie, .057]). If 1 FIM activity's utility was greater than the utility of another FIM activity, this indicated that the value of recovery for the first activity was greater than for the second activity. Data were entered into and analyzed in Excel.

Method of Analyzing Utilities

In our analysis, the utility values for each of the 18 FIM activities were established separately for each clinician. The utility data showed nonnormal distributions, indicating that it could not be validly summarized by obtaining means or applying parametric statistics. The item-level utilities were summarized for each of the 5 therapeutic discipline groups by median and 25th and 75th percentiles.

To quantify the relative magnitude of pairwise differences between therapeutic discipline groups, the MAD aggregated across all 18 FIM activities was calculated for every pair of groups. MAD is a metric that is not dependent on normality of utilities and thus can be applied as a nonparametric summary metric for agreement. As the value of the MAD decreases, agreement between 2 group's utility profiles increases.

To calculate the MAD value between the physician and PT groups, for example, first the absolute value of the difference in the median utility between the physician and psychology group is calculated for each FIM activity. These absolute values were then summed and divided by 18 (the number of FIM activities) to obtain the MAD between the physician and PT groups. These calculations were repeated between all other possible therapeutic discipline group pairings. Because the MAD is a measure of relative agreement, it provides the means to rank each discipline group pairing by the degree to which their imagined recovery preferences were similar.

To graphically show the differences between the therapeutic discipline group comparisons with the highest and lowest MAD values, plots were created in which the first group's utilities were plotted along the *x* axis and the second group's utilities were plotted along the *y* axis. Additionally, 45° lines starting at the origin were drawn on all of the graphs. If both groups value a FIM activity equally, the point will lie on the 45° line. If the FIM activity is valued more by the first group (on the *x* axis), the point will lie below the line; conversely, if it is valued more by the other group (on the *y* axis), it will lie above the line. The greater the distance from the 45° line, the larger the disparity in the value of the particular activity between the 2 groups. This graphic approach was developed and published previously.¹⁷

RESULTS

When looking at the averaged utilities for all therapeutic disciplines combined in figure 2, expression was by far the most valued activity of all the 18 (median, .355; Q1 [25th percentile] = .239; Q3 [75th percentile] = .579). This was followed by comprehension (median, .255; Q1 = .108; Q3 = .509). There was a large drop in utility moving to the next most valued activity,

memory (median, .115; Q1=.052; Q3=.200). The lowest valued FIM activities were tub or shower transfer (median, .018; Q1=.010; Q3=.027) and stairs (median, .007; Q1=.002; Q3=.014). Although utility differences can be observed between the other FIM activities, none of these differences were as marked as the difference between expression and comprehension and all other FIM activities.

Three clusters of utilities emerged for all clinicians, grouping the highest, moderate, and lowest valued activities. Comprehension and expression made up the highest valued cluster. Memory, bowel management, problem solving, bladder management, eating, toileting, and social interaction tended to be in the moderately valued cluster. Bathing; walk/wheelchair; toilet transfer; bed, chair, and wheelchair transfer; grooming; dressing upper body; dressing lower body; tub/shower transfer; and stairs were in the lowest valued cluster. Figure 2 further shows that the activities in the highest valued cluster had the widest interquartile ranges, indicating a large degree of variability at the individual level. However, even if the true median of the utilities for expression was to be at the lower bound of the interquartile range, the utility for expression would still be higher than the utility for any other FIM activity except comprehension. In contrast, activities in the lowest valued cluster tended to have the narrowest interquartile ranges, supporting agreement between clinicians about comparatively less value of achieving independent performance in those activities.

Table 1 shows the MAD values comparing the overall magnitude of recovery preferences between all possible therapeutic discipline 2-group comparisons. PT and OT groups created the most similar recovery choice pathways (MAD=.018), followed by the physician and nurse groups (MAD=.019), and the OT and psychology groups (MAD=.020). The physician and psychology groups had the most dissimilar recovery-choice pathways (MAD=.032). To place these values in perspective, the MAD value between the physician and psychology groups (the groups with the largest difference) was 1.78 times larger than between the PT and OT groups (the groups with the smallest difference).

Figure 3 graphically displays the median utility differences established by the physician to the psychology group, the groups with the least similar recovery preferences. In contrast, Figure 4 compares the median utilities established by the PT to the OT group, the 2 groups with the most similar recovery preferences. In figure 3, the large distance of the comprehension and expression activities from the 45° line shows that early recovery of comprehension for the physician versus early recovery of expression for the psychology group were the primary drivers of disparities. In sharp contrast, in figure 4, all of the activities are close to the 45° line, which shows similarities in the recovery preferences of physical and occupational therapists. Although recovery preferences were very similar, the OT group compared with the PT group tended to have a slightly greater imagined recovery preference for the cognitive and communication activities.

DISCUSSION

The aim of this study was to gain an understanding of the different ways in which various members of the rehabilitation team think about the relative importance of recovering the abilities to perform each of the 18 FIM activities. The premise was that differences would vary among therapeutic groups because of differences in training, therapeutic focus, and the degrees to which they tend to use procedural or conditional reasoning in their daily practices. There were subtle but logical differences in the recovery-choice pathways across the therapeutic disciplines that in part supported this hypothesis. Although clinicians likely use all forms of reasoning, the different disciplines within the rehabilitation team likely tend to focus on different types of information and use different cognitive strategies when assessing patients and making clinical decisions. Physicians may represent the discipline that depends the most

on evidence-based procedural reasoning for therapeutic decision making. Procedural reasoning tends to reflect an outsider perspective. When seeing the patient as “an object of the medical gaze,”¹⁸ attention is mostly on illness, impairment, and physiologic details related to pathology. Relatively few personal and social details are included in physicians’ clinical notes or in the medical literature. This pathology-oriented way of seeing patients is taught in medical school and is considered necessary to be competent as a physician.¹⁸ Comprehension, which was valued more highly by physicians than by any of the other therapeutic groups, is clearly fundamental to procedural reasoning. Physicians’ preferences were closest to nurses, consistent with both types of practices being focused on the management of illness and pathology.

Psychologists and social workers tend to take a more contextual approach to patient assessment and care that is more consistent with conditional reasoning. Their clinical notes and scientific literature are filled with personal and social details essential to understanding the patient’s insider perspective. Psychology examines a person’s behavior and experience “in its quest to identify, remediate and prevent mental and physical disorders.”^{19(p1128)} Social work often applies a holistic social justice perspective to practice that includes concepts of advocacy and empowerment.²⁰ The ability to express, which was valued more highly by the psychologist and social worker group, is clearly fundamental when attempting to understand the life contexts that drive meaning within the patient’s insider world. Because of these different approaches to and roles in caring for people with disabilities, it is not surprising that the largest differences in imagined recovery-choice pathways were between the physician and psychology groups. Most of these differences related to the large disparities in the perceived importance of being able to comprehend versus express. Although physicians valued comprehending (what is being said), psychologists and social workers valued expressing (what is needed).

Consistent with their shared therapeutic focus on treating activity limitations, the PT and OT groups logically showed the most similar recovery-choice pathways. But even these most similar groups showed subtle differences. The very slight tendency of occupational compared with physical therapists to assign greater relative value to the cognitive than physical functions seems consistent with occupational therapists’ greater therapeutic emphasis on daily skills and occupations, which often require memory or problem solving.

Recovery preference differences across most of the therapeutic groups were relatively small. This is in sharp contrast to comparisons between clinician and patient groups that exhibit large differences in their recovery-choice pathways.²¹ The large differences observed between patients and clinicians shows that the RPE methodology is sufficiently sensitive to pick up a difference in recovery preference between groups of people sharing life contexts and circumstances.

Beyond the subtle differences described earlier, the recovery-choice pathways among the therapeutic discipline groups were surprisingly similar. All 5 therapeutic discipline groups tended to cluster similar sets of items into very high, intermediate, and low relative utilities. Comprehension and expression were always the highest valued FIM activities. Communication is essential for the clinical encounter, both from the patient and the practitioner perspective. Two broad types of activities, those related to thinking and those related to eating and eliminating waste, were assigned intermediate relative values by all groups. Clinicians described problem solving and memory as essential for people with physical disabilities if they are to develop and maintain effective strategies for living in the community. The abilities to eat and eliminate waste are fundamental and necessary for basic physiologic survival.²²

The remaining activities were assigned the relatively lowest values consistently by the groups. In contrast to other activities, dependency in activities such as dressing and bathing was noted by the clinicians as requiring assistance from another person only once or twice daily. Clearly,

one could construct a life that avoided the need to climb stairs, for which the achievement of independence was consistently deemed least important to clinicians in this and in a previous study.¹⁴

RPE was developed and applied based on the belief that the more we know about ourselves and our personal values relative to disabilities the better we will be able to understand the patient's insider perspectives and attitudes. We carry our own culture, expectations, biases, beliefs, and skills.²³ With ongoing development, RPE could have educational applications as a tool to increase self-knowledge and critical self reflection in ways that enable us to listen more attentively to patients' attitudes and experiences.²⁴ The experience of RPE might help rehabilitation clinicians and clinical trainees better distinguish their own recovery preferences from those of their patients. Integrated into courses on medical ethics, the RPE procedure might be applied to explore tensions between medical indications (beneficence) and patient preferences (autonomy). Information about such tensions could emerge through future research applying RPE to contrast patient preferences to those of clinicians. Finally, the senior author applies RPE in educating epidemiology students about various functional status measures in hopes of inspiring a greater appreciation of clinical significance as distinct from statistical significance.

Although we did not look specifically at team functioning in this study, we believe that the use of different reasoning styles could have implications to team functioning and the development of recovery goals for patients. Overemphasis on procedural reasoning could bias a team toward patient goals that are logically appropriate but less essential to the patient's desires. Yet, procedural reasoning is key when focusing on solutions to specific problems, and overemphasis on conditional reasoning could bias a team toward goals that are physiologically or psychologically impractical. The ultimate goal of the RPE experience should be to enhance clinicians' capacity for interactive reasoning. By uncovering one's own beliefs about recovery, one can better appreciate patients' beliefs and the importance of communicating with and engaging them in their own rehabilitation processes. Better physician-patient communication has been shown to improve patient emotional health and functioning in a number of randomized controlled trials.²⁵

Study Limitations

This study was limited by the small sample sizes across clinician types. Future work will be necessary to confirm findings in a larger, more geographically diverse sample of clinicians. Our study involved clinicians in an academic setting. Because values are so dependent on life contexts and experience, it is reasonable to assume that recovery-choice pathways might differ among clinicians practicing in other settings. Additionally, we did not have information on the experience level of the clinicians or number of years each clinician had been practicing. Because the clinical viewpoint may be affected by these factors, future work will need to consider how recovery preferences differ according to setting or how they change as clinicians gain more years of experience.

Most essential, RPE will be applied directly to explore how patients' recovery-choice pathways differ from clinicians. Such studies could help ensure that professional beliefs do not unduly bias, influence, or override patient preferences.

CONCLUSIONS

RPE provided a means to study the value rehabilitation clinicians attribute to recovering from various types of activity limitation. Disparities in the recovery-choice pathways varied logically across the therapeutic disciplines dominated primarily by the perceived relative importance of expression and comprehension. We believe those differences may be logically

distinguishing among disciplines based on distinctions in training, therapeutic focus, and related differences in problem solving. Beyond these small differences, the broad similarities in recovery preferences were encouraging, suggesting that clinicians when performing RPE are able to look beyond their parochial areas of therapeutic emphasis when thinking about the broad meanings of disability.

Acknowledgments

The opinions of the authors are not necessarily those of the sponsoring agency.

Supported in part by the National Institutes of Health (grant no. R21-HD045881, protocol no. 800766).

List of Abbreviations

MAD	mean absolute difference
RPE	recovery preference exploration
OT	occupational therapy
PT	physical therapy

References

1. Kleiman S. Phenomenology: to wonder and search for meanings. *Nurse Res* 2004;11:7–19. [PubMed: 15227895]
2. Baron J, Asch DA, Fagerlin A, et al. Effect of assessment method on the discrepancy between judgments of health disorders people have and do not have: a web study. *Med Decis Making* 2003;23:422–34. [PubMed: 14570300]
3. Brown M, Gordon WA. Empowerment in measurement: “muscle,” “voice,” and subjective quality of life as a gold standard. *Arch Phys Med Rehabil* 2004;85(4 Suppl 2):S13–20. [PubMed: 15083418]
4. Mattingly, C.; Fleming, MH. *Clinical reasoning forms of inquiry in a therapeutic practice*. FA Davis; Philadelphia: 1994.
5. Eraunt, M. *Developing professional knowledge and competence*. Routledge; London: 1994.
6. Stineman MG, Ross RN, Maislin G, Marchuk N, Hijirida S, Weiner MG. Recovery preference exploration: analysis of patient feedback after imagined scenarios. *Am J Phys Med Rehabil* 2007;86:272–81. [PubMed: 17413540]
7. Granger CV, Hamilton BB, Keith RA, Zielezny M, Sherwin F. Advances in functional assessment for medical rehabilitation. *Top Geriatr Rehabil* 1986;1:59–74.
8. Hamilton, BB.; Granger, CV.; Sherwin, FS.; Zielezny, M.; Tashman, JS. A uniform national data system for medical rehabilitation. In: Fuhrer, MJ., editor. *Rehabilitation outcomes: analysis and measurement*. PH Brookes; Baltimore: 1987. p. 137–47.
9. Linacre JM, Heinemann AW, Wright BD, Granger CV, Hamilton BB. The structure and stability of the Functional Independence Measure. *Arch Phys Med Rehabil* 1994;75:127–32. [PubMed: 8311667]
10. Stineman MG, Shea JA, Jette A, et al. The functional independence measure: tests of scaling assumptions, structure, and reliability across 20 diverse impairment categories. *Arch Phys Med Rehabil* 1996;77:1101–8. [PubMed: 8931518]
11. World Health Organization. *International classification of functioning, disability and health: ICF*. Geneva: WHO; 2001.
12. Kurz AE, Saint-Louis N, Burke JP, Stineman MG. Exploring the personal reality of disability and recovery: a tool for empowering the rehabilitation process. *Qual Health Res* 2008;18:90–105. [PubMed: 18174538]
13. Kogan SM, Gale JE. Decentering therapy: textual analysis of a narrative therapy session. *Fam Process* 1997;36:101–26. [PubMed: 9248822]

14. Stineman MG, Maislin G, Nosek M, Fiedler R, Granger CV. Comparing consumer and clinician values for alternative functional states: application of a new feature trade-off consensus building tool. *Arch Phys Med Rehabil* 1998;79:1522–9. [PubMed: 9862293]
15. Sox, HC.; Blatt, MA.; Higgins, MC.; Marton, KI. Medical decision making. Butterworth; Boston: 1988.
16. Torrance GW. Utility approach to measuring health-related quality of life. *J Chronic Dis* 1987;40:593–603. [PubMed: 3298297]
17. Stineman MG, Wechsler B, Ross R, Maislin G. A method for measuring quality of life through subjective weighting of functional status. *Arch Phys Med Rehabil* 2003;84(4 Suppl 2):S15–22. [PubMed: 12692767]
18. Good MJ, Good BJ. Disabling practitioners: hazards of learning to be a doctor in American medical education. *Am J Orthopsychiatry* 1989;59:303–9. [PubMed: 2712161]
19. Strauman T. Paradigms, promises, and the potential of clinical psychology. *J Clin Psychol* 2001;57:1125–32. [PubMed: 11494245]
20. Bransford CL. Conceptions of authority within contemporary social work practice in managed mental health care organizations. *Am J Orthopsychiatry* 2005;75:409–20. [PubMed: 16060736]
21. Stineman MG, Rist PM, Maislin G, Kurichi JE. Uncovering differences in the meaning of functional recovery: a comparison of patients and clinicians [abstract]. *Arch Phys Med Rehabil* 2007;88:E49.
22. Katz S, Ford AB, Moskowitz RW, Jackson BA, Jaffe MW. Studies of illness in the aged. The index of ADL: a standardized measure of biological and psychosocial function. *JAMA* 1963;185:914–9. [PubMed: 14044222]
23. Dobie S. Viewpoint: reflections on a well-traveled path: self-awareness, mindful practice, and relationship-centered care as foundations for medical education. *Acad Med* 2007;82:422–7. [PubMed: 17414201]
24. Epstein RM. Mindful practice. *JAMA* 1999;282:833–9. [PubMed: 10478689]
25. Stewart MA. Effective physician-patient communication and health outcomes: a review. *CMAJ* 1995;152:1423–33. [PubMed: 7728691]

	Complete Dependence	With Help		No Help	
		Some Assistance	Supervision	Take Longer/ Need a Device	Completely Independent
Eating	Complete dependence	8	24	42	61
Grooming	Complete dependence	10	62	64	65
Bathing	Complete dependence	16	25	41	58
Dressing-upper body	Complete dependence	11	26	40	56
Dressing-lower body	Complete dependence	12	27	39	57
Toileting	Complete dependence	2	23	33	52
Bladder management	Complete dependence	13	28	34	53
Bowel management	Complete dependence	14	29	35	54
Bed, chair, wheelchair transfer	Complete dependence	3	30	37	59
Toilet transfer	Complete dependence	9	31	38	60
Tub/shower transfer	Complete dependence	15	32	68	69
Walk/wheelchair	Complete dependence	4	36	43	55
Stairs	Complete dependence	17	70	71	72
Comprehension	Complete dependence	5	19	44	50
Expression	Complete dependence	1	22	45	51
Social interaction	Complete dependence	18	63	66	67
Problem solving	Complete dependence	7	20	46	48
Memory	Complete dependence	6	21	47	49

Stage 1	
Stage 2	
Stage 3	
Stage 4	

Fig 1.

Example RPE game board. This example of a completed RPE game board is used to show how the procedure works and how utilities are generated. The utilities (appearing as numbers) are applied to develop a person's recovery preference pathway as described in the text.

Fig 2.

Utility values for all therapeutic groups combined across the 18 FIM items. This aggregate plot shows 3 clusters of utilities according to relative importance (see text). Abbreviations: Ba, bathing; Be, bed chair wheelchair transfer; Bl, bladder management; Bo, bowel management; C, comprehension; Dl, dressing lower body; Du, dressing upper body; Ea, eating; Ex, expression; G, grooming; M, memory; P, problem solving; S, stairs; Si, social interaction; T, toileting; Ts, tub/shower transfer; Tt, toilet transfer; W, walk/wheelchair.

Fig 3.

Physician (physician and medical student) versus Psych (psychologist and social work) group utilities. Recovery preferences are higher for the psych compared with physician group for those activities above the 45° line. This comparison shows utilities for the 2 practitioner groups with the least similar recovery choice pathways. Abbreviations: see figure 2.

Fig 4. Physical therapist (PT) versus occupational therapist (OT) utilities. This comparison shows utilities for the practitioner groups with the most similar recovery choice pathways. Abbreviations: see figure 2.

Table 1

MAD Values for Each Possible Pairing

Comparison Groups	MAD Value
PT-OT	.018
Physician-nurse	.019
OT-psychology	.020
PT-psychology	.022
Nurse-PT	.025
Nurse-OT	.027
Physician-OT	.029
Nurse-psychology	.029
Physician-PT	.030
Physician-psychology	.032