Why Function and Burden of Care Matter

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Function, Burden of Care, and Medical Rehabilitation Measurement

• In order to explain why function and burden of care matter, we must understand the science of medical rehabilitation measurement

Predictions

• In 1985, I had predicted that, by the year 2000, authorization for payment would require documentation of outcomes through periodic assessment of functional status in order to determine the most favorable benefit/cost ratios
• This was logical, but it has not happened – Why not?
Anticipated Needs

- Over thirty-five years ago, I anticipated the direction and needs for the rehabilitation field, which I presented at the American Academy of Physical Medicine and Rehabilitation in 1976.
- My presidential address was titled “Epidemiology, Disability and Physiatric Practice.”
- Much of what I discussed then is still highly relevant today.
- I will share the “future” of rehabilitation as I saw it over three decades ago, the progress we have made, and the unfulfilled needs that remain today.

Then and Now: Progress and Accomplishments

- Then: “The rehabilitation industry needs to develop standardized terminology and evaluation methods to describe functional limitations.”
- Now: We have made much progress with the development of the FIM® instrument.
- Then: “Measures to show the impact and general benefit of rehabilitation to society on an ongoing basis.”
- Now: Development and implementation of the FIM® instrument, the LIFEware® System, and the UDSMr® Program Evaluation Model, as well as UDSMr® data aggregation and reporting.

Then and Now: Challenges Still Remaining

- Then: “Chronic illness and disability are among the foremost health problems in our country.”
- Now: Still a challenge.
- Then: “In the competition for health care dollars . . . we must continue to be more and more precise regarding the outcome benefits of rehabilitation services.”
- Now: A very pressing issue.
Then and Now: Challenges Still Remaining

• Then: Function had to be the foundation of what I called the "science of rehabilitative measurement"; disease descriptors and clinical terminology were insufficient to describe the frequency, severity, longevity, and consequences of impairment
• Now: Function is captured by the FIM® instrument, and it should remain the core of any instrument moving forward

Then and Now: Challenges Still Remaining

• Then: “Realizing the ideal of a continuum of care—measuring outcomes across time and settings—requires the ability to measure and manage outcomes and predict which types of patients benefit most, in which settings, and at which times during their illness, along with the durations of services and costs”
• Now: The FIM® instrument and its derivatives, which measure function and the burden of care, can fill this need

Then and Now: Challenges Still Remaining

• Then: “Patient-centered care must overtake all other care approaches so that outcomes, how well the patient does, drive medical decisions, not economics or available technology”
• Now: An urgent issue in the present healthcare system
World Health Organization

- Rehabilitation patients used to be classified only according to diagnostic disease categories, using the International Classification of Diseases (ICD)
- However, for persons with chronic health conditions, their lack of ability to function in daily life activities may be a more important reason for disablement than the particular disease state

World Health Organization

- WHO released the International Classification of Functioning, Disability, and Health (ICF)
- Thus, the total picture of health has two factors—ICD and ICF:
  - Organ-based pathophysiological conditions (medical model of health)
  - Consideration of the whole person as a surviving and thriving human being (biopsychosocial model of George Engel, 1977—functional model of health)

Measurement

- All UDSMr® instruments have been created using Rasch analysis, have been validated, and are mapped to the ICF
Function and Burden of Care as the Metric

- UDSMR has developed a common metric—burden of care/need for assistance, based on functional status—and maintains that this metric can be used to assess patients in acute care and throughout post-acute care venues.

Goals: Function and Burden of Care

- The main goals of rehabilitation:
  1. To minimize the extent of functional impairment, limitations, and disability
  2. To improve the patient’s quality of life
  3. To discharge the patient back to a community setting

- Improving the patient’s function reduces the burden of care on caregivers, which increases the likelihood of the patient’s return to the community

- Burden of care (BoC) is the estimated time a caregiver will need to tend to the patient in a community setting

The FIM® Instrument and BoC

- The FIM® instrument and BoC fill several critical needs:
  - Can aid payers in controlling the cost of post-acute care by informing discharge planning on the appropriate patient setting
  - Proven ability to be used for classification for payment purposes and to predict length of stay in inpatient rehabilitation
The FIM® Instrument and BoC

- The FIM® instrument and BoC fill several critical needs:
  - Can help manage patient care (determine burden of care needed by a caregiver and functional status) while controlling costs (length of stay, appropriateness for inpatient admission) and improving quality (by monitoring functional progress, treatment effectiveness, discharge to home/community, and likelihood of re-admission to acute care)

The FIM® Instrument

- The FIM® instrument has been tested, and it is available royalty-free
- It measures the burden of care and the patient’s functional status
- It has been tested in several hundred research studies, the results of which have been published in numerous peer-reviewed scientific journals over the last thirty years
- Consists of a minimal data set, as opposed to other instruments that contain hundreds of questions

Translating a Patient’s Total FIM® Rating into a Daily Burden of Care

<table>
<thead>
<tr>
<th>Raw FIM® Rating (18–126)</th>
<th>Rasch Measure (0–100)</th>
<th>Daily Burden of Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>40</td>
<td>Approximately four hours of assistance</td>
</tr>
<tr>
<td>80</td>
<td>50</td>
<td>Approximately two hours of assistance</td>
</tr>
<tr>
<td>90</td>
<td>60</td>
<td>Approximately one hour of assistance</td>
</tr>
<tr>
<td>100</td>
<td>65</td>
<td>Minimal to no assistance</td>
</tr>
<tr>
<td>110</td>
<td>70</td>
<td>No assistance</td>
</tr>
</tbody>
</table>

Patients who require no more than two hours of assistance per day can be cared for at home after inpatient discharge.
The FIM® Instrument

- Research of the extensive UDSMr® database has demonstrated that the FIM® instrument has an expected structure such that each impairment condition fits one of five different motor item hierarchies and one of two cognition item hierarchies.

Stroke Motor Hierarchy

- The patient is trained for independence with progressively more difficult tasks.

Precision Case Management

- Research has demonstrated that intensive and comprehensive inpatient rehabilitation produces predictable results.
- During inpatient rehabilitation, patients should gain at least 1 FIM® point per day.
  - High-performing programs may gain 2.5 FIM® points per day.
Precision Case Management

- Precision case management (PCM) means that the physician who is responsible for inpatient rehabilitation should not only identify the total FIM® rating but also determine whether the patient’s FIM® ratings correspond with the FIM® item hierarchy associated with the patient’s impairment type (for example, the hierarchy for stroke differs from that for orthopaedic conditions).

Continuum of Care

- The continuum of care presents another important healthcare challenge for our times:
  - A concept of quality of care that includes merging patient data within and across venues of care through which patients pass.
  - Tracking the status of health and functioning through the continuum of care is appropriate for patients with enduring functional deficits or limitations.
  - Often, such persons are at risk for reduced quality of life (QoL).

Continuum of Care

- Usually, the process begins in the acute care hospital and progresses through a phase of formal rehabilitation (hospital inpatient, subacute, homecare, or outpatient) and into a supportive, community-based system.
- The details of the continuum need to address comprehensive QoL issues and the spiritual dignity of the affected person.
The Future of Rehabilitation

- Will the progress made in the field continue as the US healthcare system remains seriously underfunded, costly, and disorganized?
- How can the field rise to the challenges ahead?
  - By using functional assessment data in new ways to provide the most effective and efficient care
  - By working closely with other medical specialties to treat the whole person
  - By implementing a seamless continuum of care that meets the needs of the patient, rehabilitation facilities, providers, and payers

The Last Word

I look forward to the day when rehabilitation medicine’s therapeutic interventions will consistently demonstrate quantifiable benefits to functional health and therefore be clearly regarded as outcome-optimizing and worthy of payment.
Function Matters!
Any Questions?