



**Uniform Data System**  
For Medical Rehabilitation

*The Functional Assessment Specialists*

# Selecting the Most Effective Post-Acute Care Setting for Stroke Patients

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Carl V. Granger, MD

UDSMR, Center for Functional Assessment Research  
University at Buffalo, The State University of New York



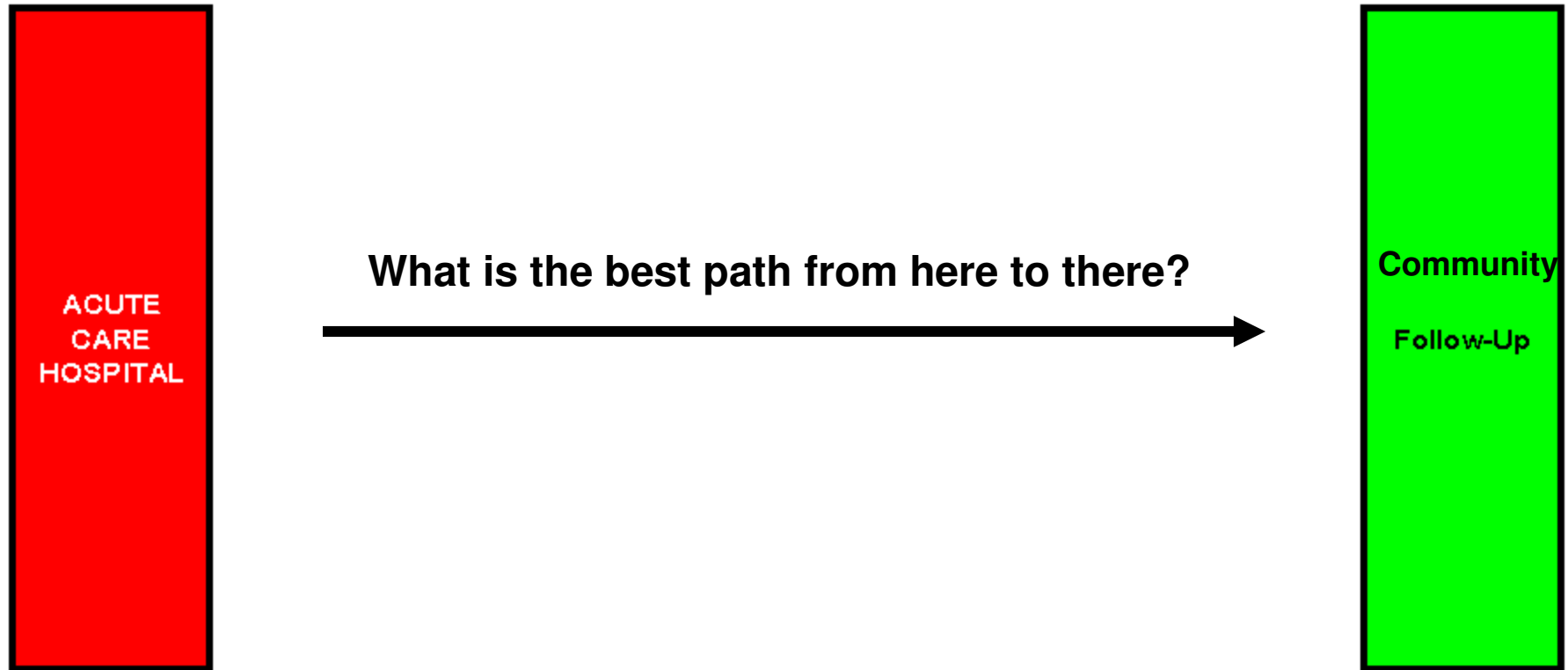
# The Continuum of Care

Usually begins in the **acute care** hospital, progresses through a phase of formal **rehabilitation** (hospital inpatient, subacute, homecare, or outpatient), and then moves to a supportive **community-based** system, such as adult day services.



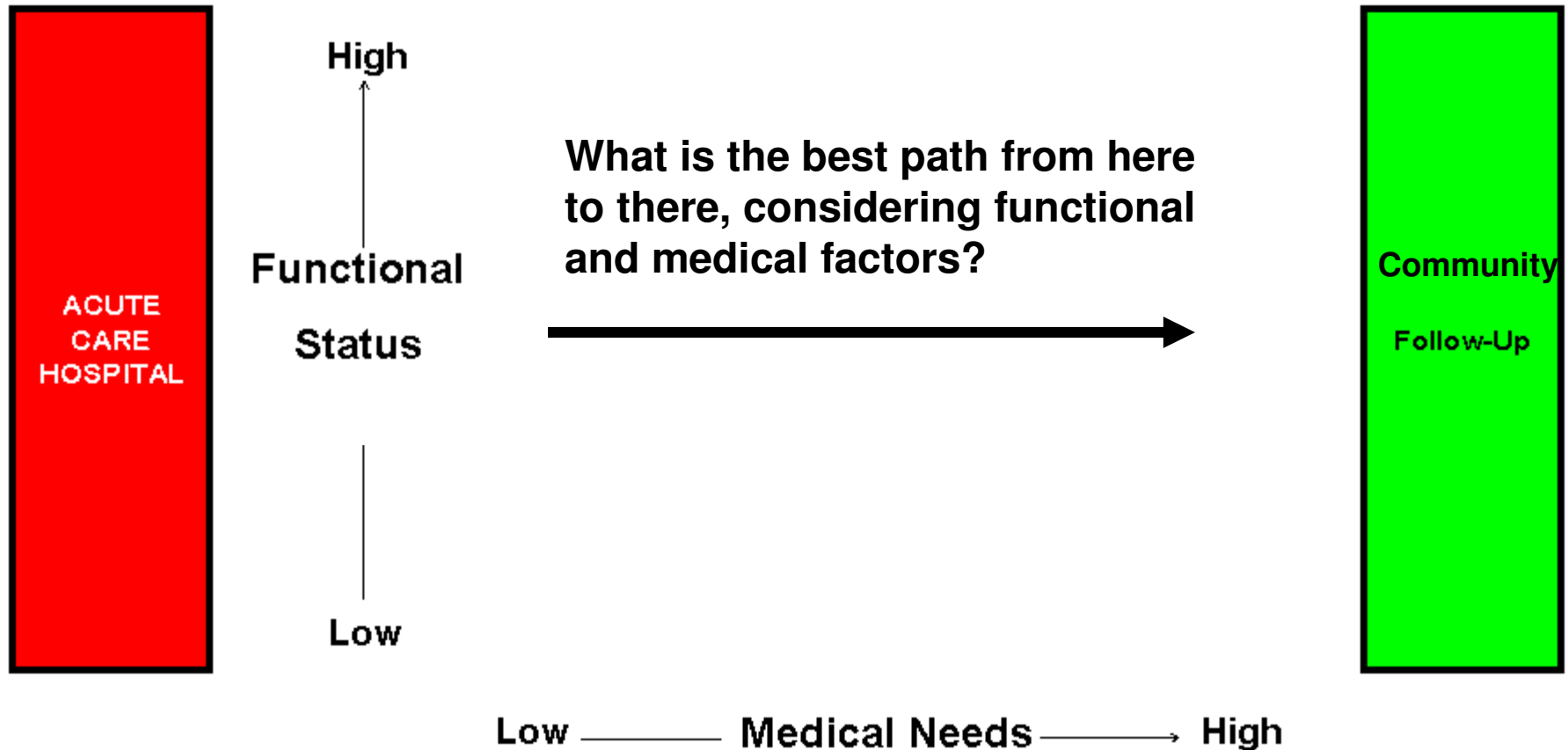
# ASSESSING THE POST-ACUTE CARE CONTINUUM:

*Is PAC care Safe, Efficient, Patient-centered, Effective, Timely and Equitable?*



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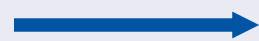




# Links Across the Continuum of Care

What are the best ways of getting the right patient from acute care into the right PAC site at the right time?

Acute Hospital Care

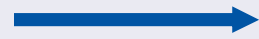


**AlphaFIM<sup>®</sup> Instrument**

Facilitate triage to and predict admission functional status at next level of care



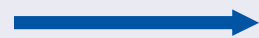
Rehabilitation Program



**FIM<sup>™</sup> Instrument**

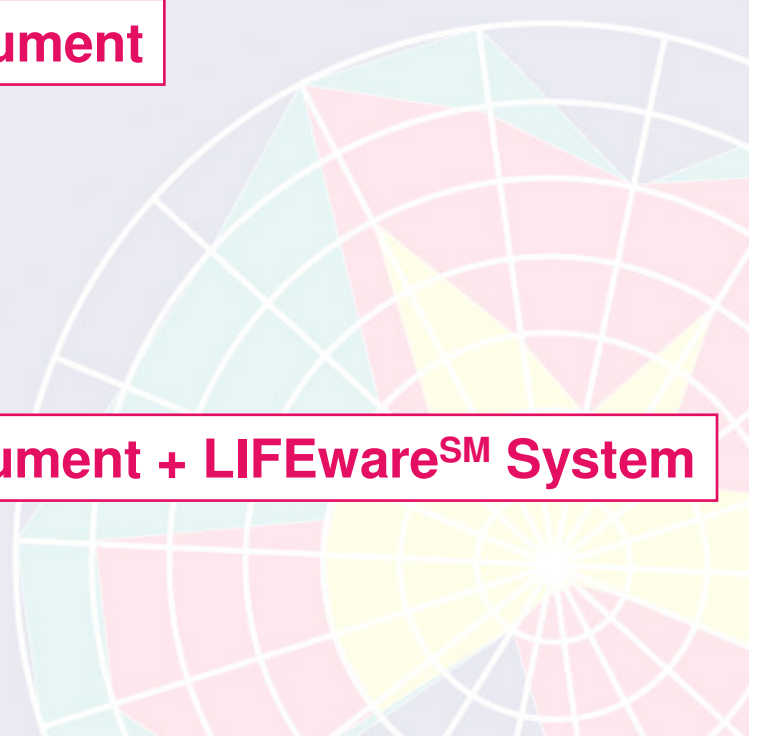
Acute Inpatient (IRF)  
Subacute  
LTCH

Outpatient Assessment or Program



**FIM<sup>™</sup> Instrument + LIFEware<sup>SM</sup> System**

Home Health  
Outpatient





# The AlphaFIM<sup>®</sup> Instrument in the Acute Care Hospital

- The AlphaFIM<sup>®</sup> instrument consists of six items ranked on an ordinal scale from 1 (total assistance) to 7 (complete independence)
- There are four motor items (eating, grooming, bowel management, toilet transfers) and two cognitive items (expression and memory)
- The primary purpose for using the AlphaFIM<sup>®</sup> instrument is to provide the physician and discharge planning team early guidance in triaging patients, including those with stroke, from acute care to the appropriate next level of care



# The AlphaFIM<sup>®</sup> Instrument

The AlphaFIM<sup>®</sup> instrument facilitates triage of patients from acute care to the next care setting

Acute Care Hospital

Acute Inpatient Rehab

SNF / Subacute Rehab

Homecare Rehab

LTCH

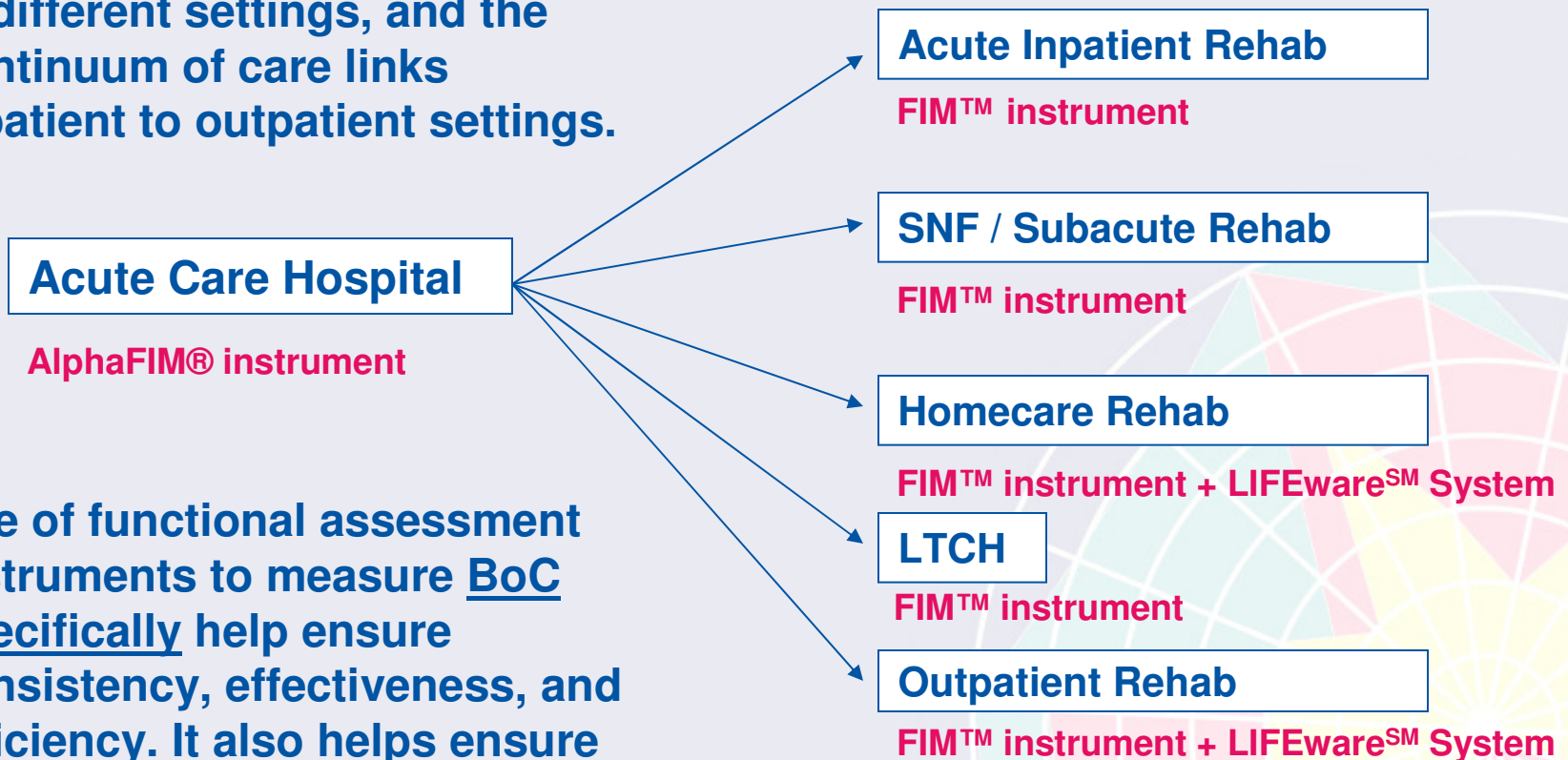
Outpatient Rehab

Currently, PAC comprises separate “moving parts,” thus, placement decisions may be viewed as arbitrary



**FIM™ instrument includes abbreviated versions:  
AlphaFIM® or OmegaFIM® instruments as appropriate**

**UDSMR's instruments are used  
in different settings, and the  
continuum of care links  
inpatient to outpatient settings.**



**Use of functional assessment  
instruments to measure BoC  
specifically help ensure  
consistency, effectiveness, and  
efficiency. It also helps ensure  
that services are cost-beneficial  
throughout the PAC.**



# Uses of the AlphaFIM<sup>®</sup> Instrument

- The AlphaFIM<sup>®</sup> instrument is used primarily to facilitate triage in discharge planning
  - As a result, assessments must be timed such that AlphaFIM<sup>®</sup> information can contribute to the discharge plan
- May be used to track changes from acute care admission to discharge, if desired
- Records actual performance, not capacity
- Best available information used: observation or from reports
- Clinicians are trained and tested to assure accuracy of ratings





# Uses of the AlphaFIM<sup>®</sup> Instrument Beyond Triage to Post-Acute Care

- Taking about 5 minutes to complete, the AlphaFIM<sup>®</sup> instrument, which is completed prior to acute hospital discharge, allows projection of the following:
  - Probable FIM<sup>™</sup> rating at post-acute admission
  - Probable hours of care needed
  - Probable rating for the walking item (estimating walking ability is particularly useful when selecting the next level of care)

# AlphaFIM Instrument

Print



Save

Cancel

Close

## Algorithm for projecting generic FIM-13 Motor and FIM-5 Cognition ratings

Patient ID: 395737236

First Name: Horatio

Last Name: Robinson

Birth Date: 8/6/1935



Assessment Date: 8/23/2006



Admission Date: 8/21/2006



Impairment Group: 1.1 - Stroke: Left Body



Discharge Date:



### Discharge to

Planned:

2-IRF (Inpatient Rehab)



Description:

Dalmatian Hospital

Actual:



Description:

### Enter the raw ratings (1-7) below

Eating:

5-Supervision or Setup



Grooming:

4-Minimal Contact Assistance



Bowel:

4-Minimal Contact Assistance



Toilet Trsf:

3-Moderate Assistance



Expression:

6-Modified Independence

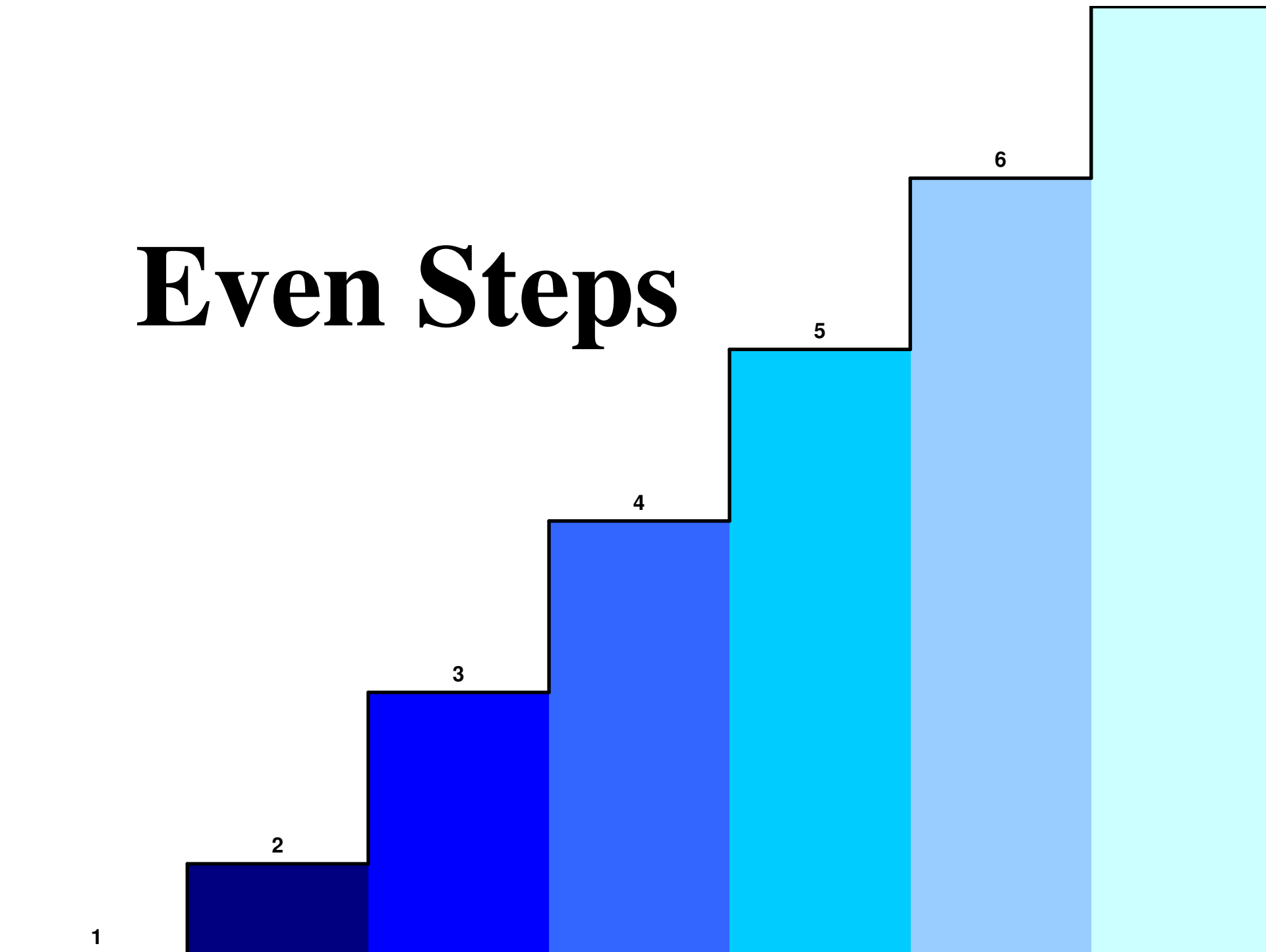


Memory:

5-Supervision or Setup



# Even Steps





# Uneven Steps

1

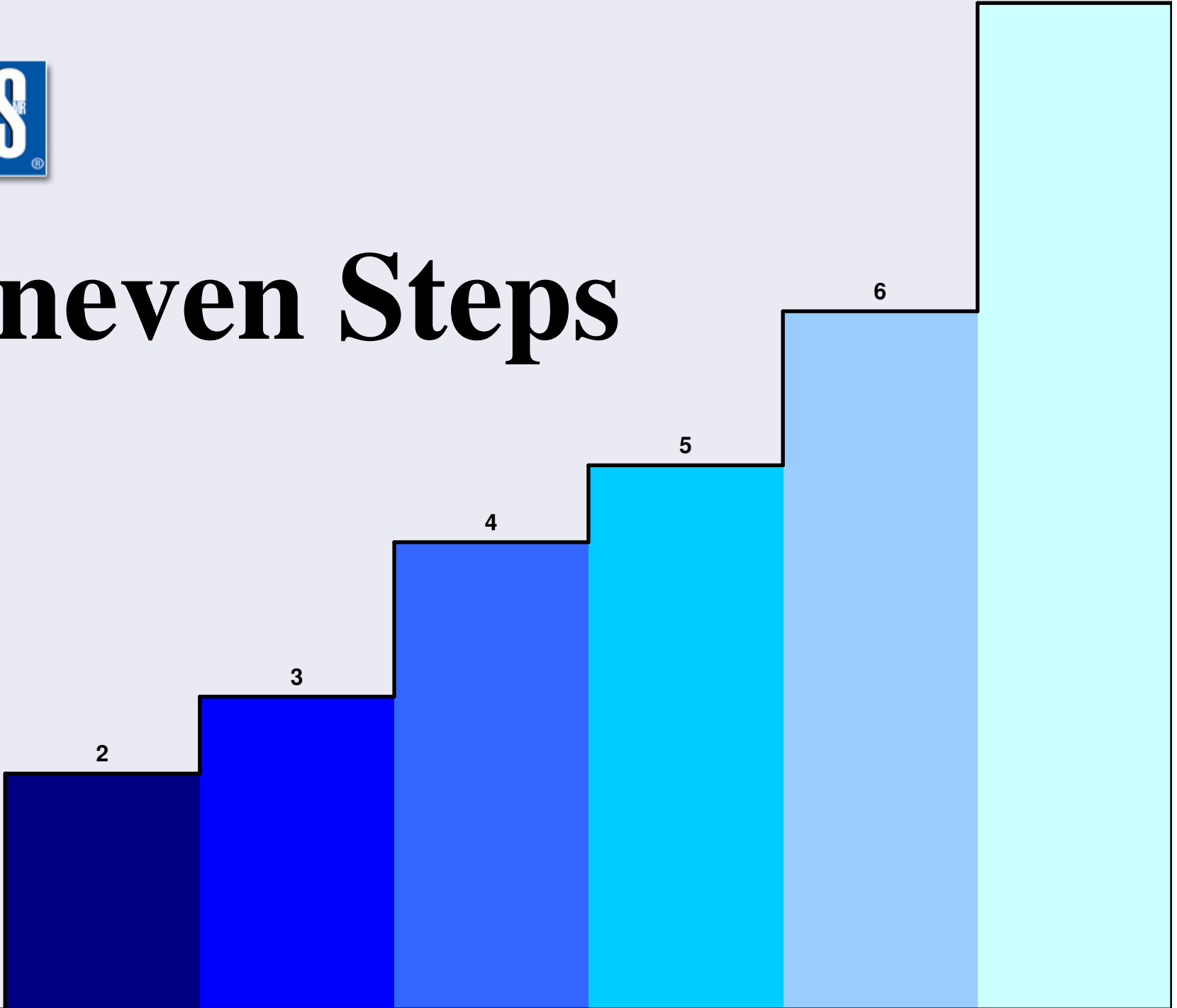
2

3

4

5

6

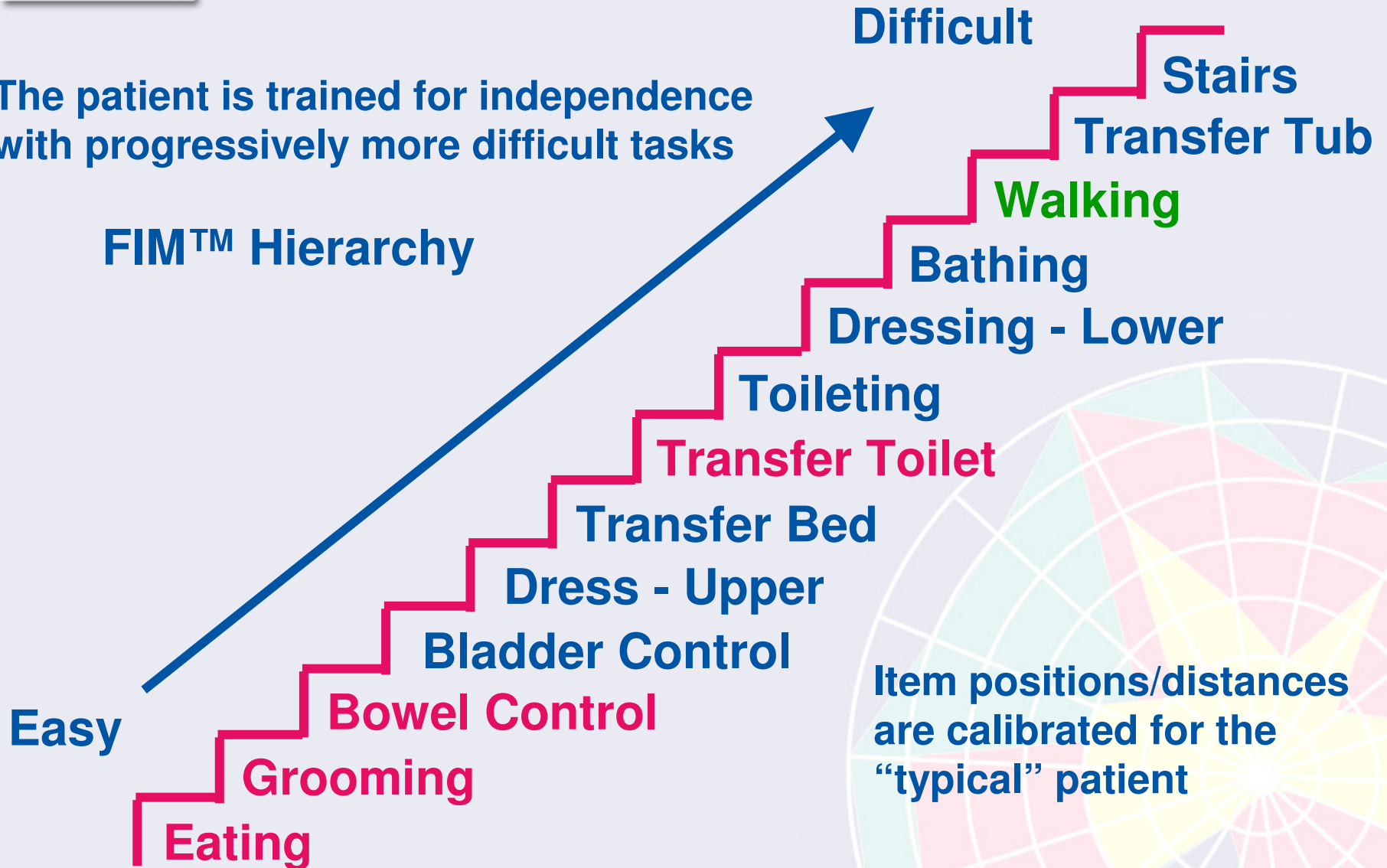




# Hierarchical Staircase from Dependence to Independence

The patient is trained for independence with progressively more difficult tasks

FIM™ Hierarchy



Item positions/distances are calibrated for the "typical" patient

**PROJECTED**

**PROJECTED**

FIM-13 Raw Motor:

42

FIM-5 Raw Cognition:

28

FIM-13 Rasch Motor:

43

FIM-5 Rasch Cognition:

62

FIM Motor range:

Moderate to minimal assistance

FIM Cognition range:

Minimal assistance to supervision

FIM Walking range:

Moderate assistance

Help Needed:

3 to 4 hours

**Discharge placement to an IRF would be appropriate**



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# Application of the AlphaFIM<sup>®</sup> Instrument to Stroke Patients

The AlphaFIM<sup>®</sup> rating created in the acute care hospital is compared with the actual rehabilitation admission FIM<sup>™</sup> rating



## Objective

- Examine validity and applicability of the AlphaFIM<sup>®</sup> ratings obtained in an acute care hospital setting for predicting admission FIM<sup>™</sup> ratings in the comprehensive medical rehabilitation unit





# Design

- Prospective data collection in acute care and matched data analysis of rehabilitation data obtained from UDSMR's repository
- 144 patients who were admitted to an acute care stroke center for ischemic or hemorrhagic strokes and subsequently transferred to one of two affiliated comprehensive medical rehabilitation units





## Results

- Mean age was 67.3 (sd 15.1)
- Age range 24 to 88 years old
- 53% female, 47% male
- Mean AlphaFIM<sup>®</sup> instrument total rating at the acute care hospital: **64.8** (sd 21.48)

----- bridge between acute and rehab -----

- Mean admission FIM<sup>™</sup> instrument total rating at the rehabilitation unit: **64.7** (sd 18.67)

**The means are equal!**



# Results

## Pearson correlation coefficients:

- Positive linear relationships were found between AlphaFIM<sup>®</sup> instrument ratings obtained in the acute care setting and admission FIM<sup>™</sup> ratings obtained in the medical rehabilitation unit
- Between AlphaFIM<sup>®</sup> total and total FIM<sup>™</sup> admission:  $r = 0.75$  ( $p=0.01$ ) and discharge:  $r = 0.59$  ( $p=0.01$ )  
*Surprise! Surprise!*





# Results

- Pearson correlation coefficients:
  - Positive linear relationships were found between AlphaFIM<sup>®</sup> ratings obtained in the acute care setting and admission FIM<sup>™</sup> ratings obtained in the medical rehabilitation unit
  - Between AlphaFIM<sup>®</sup> total and total admission FIM<sup>™</sup> rating:  $r = 0.75$  ( $p = 0.01$ )
  - And there is the possibility of predicting the rehabilitation discharge FIM rating – as previously noted the correlation between total AlphaFIM<sup>®</sup> rating and total discharge FIM<sup>™</sup> rating was high at  $r = 0.59$  ( $p = 0.01$ )



# Niagara Falls Memorial Hospital

## TR64

	Total FIM™ Rating	Walking Rating	Hours of Help Needed	Discharge Destination
A	24	1	7-8	Long-term NH
B	30	1	6-7	IRF
C	48	1	5-6	SNF subacute
D	79	2	2-3	SNF subacute
E	85	3	1-2	Homecare



# University of Rochester

## TT018

	Total FIM™ Rating	Walking Rating	Hours of Help Needed	Discharge Destination
A	20	1	8+	SNF subacute
B	23	2	7-8	SNF subacute
C	57	2	4-5	IRF
D	62	2	3-4	IRF
E	68	2	3-4	IRF
F	71	3	2-3	Other
G	76	3	2-3	IRF
H	79	3	2-3	Home w/o services
I	82	3	1-2	IRF
J	82	3	1-2	IRF



# University of Rochester

## TT018

	Total FIM™ Rating	Walking Rating	Hours of Help Needed	Discharge Destination
K	101	5	None	Home w/o services
L	104	5	None	Home w/o services
M	105	5	None	Home w/o services
N	114	5	None	Home w/o services
O	114	5	None	Home w/o services
P	114	5	None	Home w/o services
Q	114	5	None	Home w/o services



# Conclusions

- The AlphaFIM<sup>®</sup> ratings obtained in the acute care hospital setting are important for helping decide where to triage patients into appropriate settings
- The AlphaFIM ratings can *predict* the FIM<sup>™</sup> instrument rating not only at admission to, but also at discharge from, the medical rehabilitation unit





# Conclusions

- The results of this study are applicable only to stroke patients at this time
- Further study with other conditions is needed
- Additional research should extend the period of analyses of results over the 6 months following PAC discharge
- Include analyses of differential costs and cost-benefits for the following:
  - Various classes of PAC providers
  - Specific PAC providers
  - Different levels of functional severity and medical need



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# Function matters!

Carl V. Granger, MD  
Thank you!

