The UK FIM+FAM Training Course

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Essential Background

Functional Independence Measure

- The FIM was developed in the 1980s.
- By task force consisting of:
  - American Congress Rehab Medicine
  - American Academy Physical Medicine
  - State University NY, Buffalo
- It is maintained by Uniform Data Systems (UDSmr)
  - Provide central data collation
    - Comparative data for benchmarking
  - Programme for training and updating users
    - Accreditation required to submit data to UDS database

The FIM

- The FIM includes:
  - 18 items
    - 13 motor items
    - 5 cognitive items
  - Each rated on 7 levels
- It is well-validated
- Widely used and understood in USA / world
- Ideally scored by multi-disciplinary team
  - Phone-FIM is available
- Can be translated to a Barthel index

Functional Assessment Measure

- The FAM does not stand alone
  - Uses FIM as basis
  - Adds 12 items
    - specifically addressing cognitive and psychosocial areas
  - Hence abbreviation "FIM+FAM"
- FAM items developed by
  - Santa Clara Valley Medical centre – 1990s
    - No longer being maintained
  - Designed especially for use in brain injury
- UK FIM+FAM
  - Developed by UK Users group
    - Slightly differences from US version – described later

UK FIM+FAM scale – Motor 16 items

FIM - Yellow items FAM - Blue items

- Self-care
  - Eating
  - Swallowing
  - Grooming
  - Bath/showering
  - Dressing Upper
  - Dressing Lower
  - Toileting
  - Bladder Management
  - Bowel Management
- Mobility
  - Transfers
    - Bed/chair
    - Toilet
    - Shower/bath
    - Car
  - Locomotion
  - Stairs
  - Community mobility

FIM+FAM – Cognitive 14 items

FIM - Yellow items FAM - Blue items

- Communication
  - Comprehension
  - Expression
  - Reading
  - Writing
  - Speech intelligibility
- Psychosocial / Cognition
  - Social interaction
  - Problem-solving
  - Memory
  - Emotional status
  - Adjustment to limitations
  - Use of leisure time
  - Concentration
  - Safety awareness

Pros and cons of FIM+FAM

- Scored by M-D Team
  - Enhances team communication
  - Takes longer to sore
    - Some find it too cumbersome
  - Better description of problems
    - Especially for 'walking wounded' patients
  - Some psychosocial items are quite subjective
  - No central data collection system like UDS
    - Danger of inconsistent use
    - No large database to explore its characteristics

AROC Australasian Rehabilitation Outcomes Centre

- In Australia
  - AROC - National database
    - For collating case episodes in rehabilitation
  - Uses FIM
    - As a casemix tool and as an outcome measure
  - Central training on line
    - More detailed instructions for scoring
      - May be helpful – but sometimes differ from US version
- UK FIM users may wish to use AROC system
  - For training or accreditation
    - Therefore we have highlighted the differences in the manual

How to rate
the FIM and FIM+FAM

Broad overview

Each item is scored on 7 Levels

- 7 = Fully independent
- 6 = Independent with device

No help from a person

- 5 = Supervision / set-up

Set-up / supervision
No physical contact

Help from a person

- 4 = Minimal assistance (<25% of task)
- 3 = Moderate assistance (25-50% of task)
- 2 = Maximal assistance (50-75% of task)
- 1 = Total assistance (>75% of task)

Essential scoring rules

- Score on what patient <u>does</u> day-to-day
  - Not on what he <u>could</u>, <u>might</u> or <u>should</u> do
- Score all items - leave no blanks
- Score only 1-7 – no half scores
  - Except for one FIM item (UK version)
    - When Wheelchair mobility is non-applicable
  - Make up your mind
    - If in doubt, score the lower

Vignettes

- No 'what if's…
  - John feeds himself once his Mum has set up his Neater-Eater equipment
    - Score 5 - as he has this equipment
  - Sue needs to be fed for all meals. If her family could afford a Neater-Eater she would be almost independent
    - Score 1 - as she does not have this equipment

FIM+FAM Manual - orientation

- Page 4:
  - Describes some basic principles
  - Describes the use of zero scores
    - New in version 5 of the FIM
- Page 5
  - Describes the framework for scoring
    - General description of levels
- Page 6:
  - Gives an example of the general decision tree

General decision tree

- Boxes at top of page
  - Left – what is included in the item
  - Right – a description of level 7
- Box at bottom of page
  - Level descriptors
    - Check this to make sure the description matches the level you have reached through the decision trees
- Conundrums
  - Page opposite
    - Commonly encountered problems
      - These may help if you have difficulty agreeing a score

Basic principles

- Score as a multi-disciplinary team
- Use the manual / tree structures
  - Use the decision tree
  - Check level description at the bottom
  - In the case of conflict between the two
    - Record the lower level score

What if we disagree?

- Check the manual
  - Has one of you read it wrong?
- If genuine disagreement
  - Score the lowest
- If functions variably
  - Score the lowest

Automatically score 1 if:

- The patient does not perform activity at all
  - Unless a 0 score is allowed for that item
- Needs 2 people to help
- The item is untestable
- Information is unavailable
- Pt would be at risk of injury if tested

Process

- Timing of scores
  - Depends on throughput of service
- As a rule of thumb
  - Admission score - baseline
    - Usually rated within 10 working days of admission
  - Goal score
    - Record what the team believe can realistically be achieved during admission / programme
  - Discharge score – score achieved
    - Usually rated within 7 days of discharge

Goal scores can go down

- Refuses help, but unsafe
  - Goal: to accept help
    - Safer
      - Even if then more dependent
- New information emerges
  - Cognitive deficits become more apparent
    - V common in right hemisphere lesions
- Genuine deterioration
  - Eg progressive condition, further strokes

How does the UK FIM+FAM differ from the original US version?

Original US FIM+FAM

- Developed in USA - 1992
  - Santa Clara Valley Medical Center
    - Dr Karyl Hall
  - For UK purposes
    - Language was ‘opaque’ – ‘US English’
    - Some items were vague and difficult to score
- UK FIM+FAM version 1996
  - UK FIM+FAM users development group
    - Collaborative development
      - 9 UK brain injury centres

UK FIM+FAM development group

- Aims:
  - Improve consistency of scoring
  - Agree common method of data collection
    - And analysis methods
  - Develop core clinical dataset
  - System for training and updating users
  - Evaluate changes
    - Compare UK with US version

Identifying offending items

- Each group member ask to identify
  - 6 worst items
    - Place in rank order
  - Only 10 items mentioned at all

* FIM Items

1. Problem-Solving*
2. Adjustment to limitations
3. Emotional status
4. Employability
5. Social Interaction*
6. Community Mobility
7. Safety Judgement
8. Attention
9. Speech Intelligibility
10. Comprehension*

Changes to items

- No change to 7 level structure
- FIM items - cannot change
  - Define standard task batteries
- FAM items
  - Wording in decision tree / manual
  - Define cut-off points between levels
- Tested and revised over 2 years

Changed items

Original: Item	UK FIM+FAM: Item became:
Employability	Use of leisure time (Employability is participation not disability – usually not observable in in-pt settings) (‘Work /education’ is included in FAM EADL module)
Attention	Concentration (Defined in terms of the length of time the individual can concentrate for)
Safety judgement	Safety awareness (Defined in terms of the length of time the individual can be safely left alone)

Problem Solving

- FIM item – cannot change it
- Developed task battery:
  - Easily testable scenarios
    - can be observed on the ward
- Simple problems
  - No cutlery on meal-tray
  - Writing - give unsharpened pencil
  - Put on T-shirt - give inside out
- Complex problems
  - Plan journey - at least 3 stages
  - Given wrong change in shop
  - Plan a 3-course meal

Reliability

- Compared UK and original versions
- Multi-centre study
  – Based on vignettes
- Improved consistency overall
  – Particularly in ‘problem’ items
  – Some substantially improved
  – Difficult FIM items were still worst offenders

Turner-Stokes et al. Clin Rehabil 1999; 13: 277-88

Other developments

- Minimum clinical dataset
  - Collected alongside FIM+FAM data
- Computerised data entry
  - UKROC software
    - Works on any version of Microsoft Excel
  - FAM-splat graphic presentation
    - Collates Neurological Impairment Set
    - Automated conversion to a Barthel Index

Minimum Dataset

- Factors known to affect outcome
  - Age
  - Time delay since onset
- Neurological impairment set
  - Severity and nature of deficits
    - Physical
    - Cognitive
    - Communication
  - Complications
    - Visual, hearing
    - Behavioural problems
  - Mood, motivation

Computerised conversion

- UK FIM+FAM Software
  - Automated conversion
- Enter FIM+FAM
  - Output at all three levels
  - FIM+FAM / FIM / Barthel
- Common language at level of Barthel between 95% of units in the UK

Relationships between measures

- FIM+FAM
  - Information at level of FIM
- FIM
  - Contains similar information to Barthel
  - Can Barthel be derived from FIM?
- Common language at level of Barthel?

FIM - Barthel conversion

- One way only
- Not straight-forward conversion
  - Can be done
- Good agreement between
  - Directly scored Barthel Index
  - Barthel Index derived from FIM
    - Nyein et al Clin Rehabil 1999;13:56-63
  - But requires some differences
    - In the way that scores are recorded

To allow derivation of the BI

- Bladder and bowel
  - Management <u>and</u> incontinence
    - For FIM, both are rated but only the lower score is retained
    - For conversion to BI, <u>both</u> are needed
- Mobility:
  - Walking <u>and</u> wheelchair
    - For FIM, only rated for the preferred method of locomotion
    - For conversion to BI, <u>both</u> are needed
- Both ratings are entered into software
  - It uses them to derive a Barthel index
  - Then applies the appropriate choice for FIM
    - Automatically entered in FIM Score sheet

User satisfaction - UK version

- Subjective improvement in comparison with original
  - Clearer cut-off points
  - Easier for new users to understand
- Computer entry programme
  - Facilitates data collation / presentation

Some common scoring conundrums

Dressing

- John can dress himself independently in a T-shirt and joggers
  - But needs help to put a suit and tie on
- What does he actually do
  - Does he in fact wear casual clothes on a day-to day basis?
  - Or does he in fact put a suit and tie on to go to work?

Bathing

- James can bath independently,
  - but usually forgets to check the water temperature
- What normally happens?
  - Does someone actually run the bath and check it for him
    - Score 5 for ‘set-up’
  - Does he run it himself and take the risk
    - Score 6 for ‘consideration for safety’

Toiletting

- Four different items
  - Address different aspects of toiletting
    - 6: Toiletting
      - Bottom -wiping and adjusting clothing, managing sanitary towels etc
    - 8. Bladder management
      - Control of voiding
      - Frequency of incontinence
    - 9. Bowel management
      - Control of bowels
      - Frequency of incontinence
    - 11. Toilet transfers
      - Getting on and off the toilet

Orthoses

- Donning orthosis
  - Part of dressing
- Score 7
  - If can do this independently
- If orthosis is then needed to complete task
  - Score 6, if patient applied it themselves
  - Score 5, if someone applied it for them

Influence of environment

- The FIM+FAM is environmentally sensitive
  - People perform differently in different environments
  - Discharge rating
    - In context of hospital environment
  - If planning to use FIM+FAM for community follow-up
    - May wish to score also for home environment at that point
  - Specify environment
    - For which the FIM+FAM is rated