

# PATIENT CATEGORISATION TOOL (PCAT)

## SELF-SERVICE TRAINING SLIDES

### For UK ROC & NCASRI

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# Glossary

- \* NCASRI – National Clinical Audit Specialist Rehabilitation for patients with complex needs following major injury
- \* PCAT – Patient Categorisation Assessment Tool
- \* TARN – Trauma Audit and Research Network
- \* UK ROC – United Kingdom Rehabilitation Outcome Collaborative

# CONTENT

- \* Background
- \* Structure of tool
- \* Tool completion
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# Background

- \* The NHSE Standard Contract for specialised rehabilitation for patients with highly complex needs -Service Specification (<https://www.england.nhs.uk/wp-content/uploads/2014/04/d02-rehab-pat-high-needs-0414.pdf>) defines
  - \* 4 categories of rehabilitation need
  - \* 3 levels of **(inpatient rehabilitation)** service
- \* Sets out defining criteria for
  - \* Patients with Category C/D needs
    - \* Requiring local general (Level 3) services
  - \* Patients with Category B needs
    - \* Requiring district specialist (Level 2) rehabilitation services
  - \* Patients with Category A needs
    - \* Beyond the scope of a level 2 service
    - \* So requiring complex tertiary specialised (Level 1) rehabilitation services

# The PCAT tool

- \* The Patient Categorisation Tool (PCAT)
  - \* was developed from the descriptions within the criteria
- \* It is primarily a **checklist of rehabilitation needs**
- \* It was subsequently developed to an ordinal tool
  - \* Scoring system 1-3 per items
    - \* Total score ranges from 17-50
  - \* Although not designed initially as a scale-able measure
    - \* It performs reasonably well on psychometric evaluation

# Structure of PCAT –Table 1

- \* The tool provides a checklist to assist clinical decision reasoning to identify patients with Category A or B needs
- \* The PCAT tool contains 2 tables
- \* Table 1 contains 4 columns
  - \* Column 1 – lists 16 domains(each rated on a score of 1-3) subdivided into
    - \* Specialist medical or neuropsychiatric needs & intensity
    - \* Clinical needs - physical, tracheostomy/ventilatory, swallowing/nutrition, communication, cognitive, behavioural, mood/emotion, complex disability management, social/discharge planning, family support, emotional load on staff
    - \* Additional needs – Vocational rehabilitation, Medico-legal issues and specialist equipment
  - \* Column 2 – contains the descriptions of types of need for Category A needs
  - \* Column 3 – contains the descriptions of types of need for Category B needs
  - \* Column 4 – contains the descriptions of types of need for Category C needs

# Structure of PCAT –Table 2

- \* The second table is on page 2 and contains
  - \* Service level required
  - \* Category
  - \* Expected duration of admission
  - \* Funding source
  - \* Purchase type
  - \* Name of assessor
  - \* Date of assessment

# Interpretation of PCAT Descriptors

- \* Throughout the tool the following terms are used:
  - \* Highly complex, unstable, severe rehabilitation needs –
    - \* Requiring expertise of a specialist rehabilitation unit with appropriate staffing/facilities
    - \* such as provided by a Level 1 tertiary service
  - \* Moderately complex rehabilitation needs
    - \* Requiring expertise of a specialist rehabilitation unit with appropriate staffing/facilities
    - \* such as provided by a Level 2 specialist rehabilitation service
  - \* Standard needs
    - \* Likely to progress within the normal time scale with the skills and facilities of a general rehabilitation team
    - \* such as provided in a Level 3 rehabilitation service



**Patient Categorisation Tool****Patient Name:**.....**ID Number** (e.g hospital/NHS number) .....*To be completed by the treating Consultant at time of admission.*Tick *all* boxes that apply. If Category A, B or C needs have not been identified (e.g no boxes ticked) a score of 1 will be assigned within the software

	Category A needs (Score 3)	Category B needs (Score 2)	Category C needs (Score 1)
<b>Specialist medical / neuropsychiatric needs</b>			
<b>Medical / Surgical</b>	<input type="checkbox"/> Complex specialist investigation/ intervention <input type="checkbox"/> Medically /surgically unstable <input type="checkbox"/> Complex on-going needs for coordinated trauma care	<input type="checkbox"/> Routine investigation/ intervention <input type="checkbox"/> Currently well but potentially unstable <input type="checkbox"/> Active on-going trauma care management	<input type="checkbox"/> No investigation/ intervention <input type="checkbox"/> Medically stable <input type="checkbox"/> Trauma care largely complete – review only
<b>Neuropsychiatric</b>	<input type="checkbox"/> Complex/unstable psychiatric needs <input type="checkbox"/> High Risk management <input type="checkbox"/> Treatment under section of the MHA	<input type="checkbox"/> Psychiatric condition stable but requires monitoring <input type="checkbox"/> Medium Risk management	<input type="checkbox"/> No psychiatric condition <input type="checkbox"/> Low or no risk
<b>Intensity</b>	<input type="checkbox"/> ≥5 therapy disciplines <input type="checkbox"/> >25 hours total therapy time per week <input type="checkbox"/> requires 1:1 supervision <input type="checkbox"/> ≥2 trained therapists to treat at one time	<input type="checkbox"/> 4 therapy disciplines <input type="checkbox"/> 20-25 hours total therapy time per week	<input type="checkbox"/> 1-3 therapy disciplines <input type="checkbox"/> <20 hours total therapy time per week
<b>Clinical needs</b>			
<b>Physical</b>	<input type="checkbox"/> Complex postural tone /contracture management <input type="checkbox"/> ≥ 2 to handle <input type="checkbox"/> Highly complex musculoskeletal/trauma/pain management issues <input type="checkbox"/> Complex amputee needs (Multi-limb, hi tech etc)	<input type="checkbox"/> Routine physical issues <input type="checkbox"/> 1 to handle <input type="checkbox"/> Moderately complex musculoskeletal/trauma/pain management issues <input type="checkbox"/> Standard specialist amputee needs	<input type="checkbox"/> Higher function problems only (e.g high level coordination/mild deconditioning) <input type="checkbox"/> Standard musculoskeletal/trauma/pain management/neurological issues <input type="checkbox"/> No physical issues
<b>Tracheostomy/ventilatory</b>	<input type="checkbox"/> Unstable tracheostomy requiring intensive suction <input type="checkbox"/> O <sub>2</sub> sats monitoring programme <input type="checkbox"/> Active weaning programme <input type="checkbox"/> Assisted ventilation	<input type="checkbox"/> Tracheostomy in situ but stable	<input type="checkbox"/> No tracheostomy
<b>Swallowing / nutrition</b>	<input type="checkbox"/> Complex swallowing evaluation ( eg FEES) <input type="checkbox"/> Complex nutritional requirements requiring intensive dietary support/intervention	<input type="checkbox"/> Enteral feeding programme <input type="checkbox"/> Moderate monitoring – eg progressive consistency, dietary content <input type="checkbox"/> Dietary education (eg healthy eating, weight reduction)	<input type="checkbox"/> Normal or stable modified diet <input type="checkbox"/> Able to eat independently or with supervision from care staff only <input type="checkbox"/> Standard dietary / Weight monitoring only
<b>Communication</b>	Complex communication needs requiring: <input type="checkbox"/> Specialist evaluation <input type="checkbox"/> Complex communication aid set/up provision	<input type="checkbox"/> Moderate communication issues with some listener burden, but able to communicate basic needs and ideas	<input type="checkbox"/> Higher function problems only <input type="checkbox"/> No problems with communication
<b>Cognitive</b>	Severe cognitive problems requiring <input type="checkbox"/> Intensive support for carryover / orientation etc <input type="checkbox"/> Complex cognitive / neuropsychological assessment	Moderate cognitive problems requiring <input type="checkbox"/> Structured environment, strategies <input type="checkbox"/> Routine cognitive assessment eg by O/T	<input type="checkbox"/> Higher function problems only <input type="checkbox"/> No cognitive problems
<b>Behavioural</b>	<input type="checkbox"/> Highly challenging behaviours (eg physical/verbal aggression) requiring interactive behavioural management programme	<input type="checkbox"/> Mild/moderate behavioural issues controlled in structured environment	<input type="checkbox"/> No significant behavioural problems
<b>Mood/emotion</b>	Severe anxiety / depression / emotional lability requiring: <input type="checkbox"/> Specialist evaluation <input type="checkbox"/> Active management and frequent crisis intervention	<input type="checkbox"/> Mood disorder/adjustment issues under active management with planned programme	<input type="checkbox"/> No significant mood / adjustment issues

<b>Complex disability management</b>	Complex disability management eg <input type="checkbox"/> Evaluation of low awareness state <input type="checkbox"/> Neuro-palliative rehabilitation / end of life care	<input type="checkbox"/> Standard disability management eg set-up of care programme, care booklet, carer training etc	<input type="checkbox"/> None required
<b>Social / discharge planning</b>	<input type="checkbox"/> Complex placement / housing / funding issues requiring extensive multi-agency negotiation	<input type="checkbox"/> Active discharge planning requiring liaison with community SW/DN/OT eg to arrange care package	<input type="checkbox"/> No major discharge issues, taken care of by family / allocated social worker
<b>Family support</b>	<input type="checkbox"/> Major family distress issues require frequent support or crisis intervention	<input type="checkbox"/> Routine family support needs (met by planned meetings)	<input type="checkbox"/> No significant family problems
<b>Emotional load on staff</b>	<input type="checkbox"/> Demanding situation requiring highly experienced staff / extra support for staff	<input type="checkbox"/> Somewhat challenging situation but manageable	<input type="checkbox"/> Minimal or no emotional load on staff

<b>Vocational rehabilitation</b>	Specialist vocational rehabilitation needs eg <input type="checkbox"/> Multi-disciplinary vocational assessment <input type="checkbox"/> Multi-agency support for return to work, retraining or work withdrawal <input type="checkbox"/> Complex support in other roles (eg single-parenting)	Moderate vocational support, <input type="checkbox"/> Work visits or employer liaison <input type="checkbox"/> Support for other roles, eg home-maker / parenting	<input type="checkbox"/> Not of working age <input type="checkbox"/> No significant needs for vocational support
<b>Medico-legal issues</b>	Complex medico-legal issues eg requiring interaction with legal system: <input type="checkbox"/> Complex Best interests decisions <input type="checkbox"/> Court of protection applications <input type="checkbox"/> DoLs / PoVA applications <input type="checkbox"/> Litigation issues <input type="checkbox"/> Complex mental capacity / consent issues	Standard medico-legal issues eg <input type="checkbox"/> Mental capacity evaluation <input type="checkbox"/> Standard consent / best interests decisions <input type="checkbox"/> LPoA, advance care planning	<input type="checkbox"/> No significant medico-legal issues
<b>Specialist equipment / facilities</b>	Highly specialist equipment / facilities required eg <input type="checkbox"/> Bespoke Assistive technology <input type="checkbox"/> Highly specialist seating/wheelchair needs <input type="checkbox"/> Bespoke orthotics <input type="checkbox"/> Electronic assistive technology <input type="checkbox"/> Assisted ventilation	Moderate specialist equipment needs eg <input type="checkbox"/> Adapted Wheelchair / seating <input type="checkbox"/> Electric standing frame <input type="checkbox"/> Treadmill/harness training <input type="checkbox"/> Assisted cycling (eg motor-med) <input type="checkbox"/> Splinting / casting	<input type="checkbox"/> No equipment needs <input type="checkbox"/> Basic off the shelf equipment only <input type="checkbox"/> Standard exercise facilities, eg plinth, bike tilt-table, parallel bars

Service level required	Category <i>Clinical Impression</i>	Expected duration of admission	Funding Source (to be entered in Episode section – Commissioning & Referral of UKROC software)	Assessor (Print Name)
<b>Clinical Impression</b> <input type="checkbox"/> Level 1 <input type="checkbox"/> Level 2a <input type="checkbox"/> Level 2b <input type="checkbox"/> Level 3 <input type="checkbox"/> Slow stream / Specialist nursing home <input type="checkbox"/> Community rehab <input type="checkbox"/> Not for rehab <b>Has onward referral been made?</b> <input type="checkbox"/> No <input type="checkbox"/> Yes (where to)_____	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> Not applicable	<input type="checkbox"/> Long stay (5-6 months) <input type="checkbox"/> Medium (3-4 months) <input type="checkbox"/> Short (6-8 weeks) <input type="checkbox"/> Assessment/ rapid intervention (2-4 wks) <input type="checkbox"/> Not applicable (slow stream or not for rehab)	<input type="checkbox"/> Clinical Commissioning Group (CCG) <input type="checkbox"/> NHS Commissioning Board (NHSCB) <input type="checkbox"/> NHS outside England <input type="checkbox"/> Social Services <input type="checkbox"/> Private	<b>Signed by assessor</b>
		<b>Reasoning / Alternative recommendations:</b>	<b>Purchasing type</b> <input type="checkbox"/> Contract <input type="checkbox"/> Other (e.g spot purchasing)	<b>Date Completed</b>

# Completion of PCAT

- \* From April 2013 full itemised scoring of the tool has been a mandatory requirement for Level 1/2 services
- \* The tool should be completed by a Consultant in Rehabilitation Medicine/Neuropsychiatry +/- input from the therapy team
- \* It is completed:
  - \* Prior to referral to a specialist rehabilitation unit by a Major Trauma Centre (MTC) or other referring centre AND/OR
  - \* Following admission to a Level 1/2 specialist rehabilitation unit
- \* All sections of the tool should be completed and then entered into
  - \* TARN (patients assessed in the Major Trauma Centre)/ ORION AND/OR
  - \* UK ROC database (patients admitted to rehabilitation unit)

# Item Selection

- \* Tool completion requires indication (by use of the tick boxes) of the most appropriate descriptor/s for each domain
- \* Some domains are mutually exclusive whilst others may have relevant descriptors in both Category A and B columns
  - \* E.g Intensity – patient may need  $\geq 5$  therapy disciplines (Category A) for 20-25 hours total therapy time per week (Category B)
- \* All relevant descriptors can be indicated, if the patient does not have Category A or B needs, select Category C (default option)
  - \* E.g Tracheostomy – the patient does not have a tracheostomy – tick “no tracheostomy” in Category C column
- \* For consistency and comparability only the descriptors provided should be used and no additional descriptors added

# Scoring guidelines

## Medical/surgical needs

Category	Descriptor	Guidelines
A	Complex specialist investigation/intervention	Requires neurosurgical intervention and/or investigations at specialist centre
A	Medically/surgically unstable	e.g. uncontrolled seizures/diabetes or sympathetic storming/sepsis– may need emergency access to HDU/ITU intervention. Must have access to Acute Care
A	Complex on-going needs for coordinated trauma care	Severe traumatic injury requiring surgical/vascular/orthopaedic/neurosurgical on-going intervention
B	Routine Investigation/intervention	Investigations/intervention can be completed in Specialist Rehabilitation setting
B	Currently well but potentially unstable	Periods of instability e.g. pyrexia, seizures etc. but largely controlled. Needs an environment where relevant medical care is available
B	Active on-going trauma care management	May require surgical/vascular/orthopaedic review whilst on specialist rehabilitation unit
C	No investigation/intervention	Apart from normal basic monitoring
C	Medically stable	No medical issues likely to require emergency care
C	Trauma Care largely complete – review only	On-going trauma care can be managed on a visiting or out-patient basis

# Scoring guidelines

## Neuropsychiatric needs

Category	Descriptor	Guidelines
A	Complex/unstable psychiatric needs	Severe psychiatric problems, suicidal ideation – needs expertise of a cognitive/behavioural unit and 1-1 intervention
A	High Risk Management	Requires expertise of cognitive/behavioural unit – needs 1-1 supervision
A	Treatment under section of the MHA	Currently sectioned under MHA for safety of self / others
B	Psychiatric condition stable but needs monitoring	Psychiatric condition well managed with therapy input/medication but requires regular intervention from psychiatrist/psychologist
B	Medium Risk Management	Some concerns with psychiatric problems but can be managed with advice from psychiatrist on an ad hoc basis or input from a psychologist
C	No psychiatric condition	No history/symptoms of psychiatric condition
C	Low or no risk	May or may not have some psychiatric condition but can be managed in any environment



# Scoring guidelines

## Intensity

Category	Descriptor	Guidelines
A	≥ 5 therapy disciplines	Requires daily therapy intervention from the inter-disciplinary team. At least 5 unit funded therapy disciplines (involved > 1 hour each week) e.g. Physiotherapy, Occupational therapy, Speech Therapy, Dietitian, Psychology and/or social worker
A	>25 hours total therapy time per week	High therapy input – <b>approximately 6 hours</b> per day
A	Requires 1-1 supervision	Can not be left unsupervised at any time due to concerns for safety/absconding
A	≥ 2 trained therapists to treat at one time	Requires either joint sessions (2 or more disciplines involved) or 2+ trained therapists from same discipline (e.g. 2/3 Physio's for all sessions)
B	4 therapy disciplines	Requires weekly therapy intervention from 4 different therapy disciplines (funded establishment, involved >1 hr per week)
B	20-25 hours total therapy time per week	Standard therapy input, approximately 4-5 hours per day
C	1-3 therapy disciplines	Requires weekly therapy intervention from 1-3 different therapy disciplines (funded establishment)
C	<20 hours total therapy time per week	Low therapy input, less than 4 hours daily

# Scoring guidelines

## Physical Needs

Category	Descriptor	Guidelines
A	Complex postural tone/contracture management	24 hour postural management programme in place/regular tilt-tabling. Complex MD spasticity management. Bespoke splinting
A	≥ 2 to handle	Requires 2-3 (or more) staff for all physical needs including therapies
A	Highly complex musculoskeletal/trauma/pain management issues	Requires specialist MSK /trauma rehab – eg for complex fractures pain management, wounds/ vascular. Regular analgesia
A	Complex amputee needs (Multi-limb, high tech etc)	Complex amputation / prosthetic rehab. Multiple limb loss, high tech prostheses etc
B	Routine physical issues	Requiring regular physical (usually neurological)intervention - eg as available in a Level 2 service
B	1 to handle	Requires 1 person at a time for most physical needs, incl therapies
B	Moderately complex musculoskeletal/trauma/pain management issues	MSK intervention well healing fractures. Pain management programme in place with regular review
B	Standard specialist amputee needs	Regular prosthetic review. Management of artificial limb eg simple amputation, standard prosthetic needs,
C	Higher function problems	Able to walk independently with walking aid/prosthesis
C	Standard musculoskeletal/trauma/ pain management issues	Pain managed with regular therapy sessions, exercises and analgesia
C	No physical issues	



# Scoring guidelines

## Tracheostomy/Ventilatory Needs

Category	Descriptor	Guidelines
A	Unstable tracheostomy requiring intensive suction	Excessive secretions and/or recurrent mucous plugging of tracheostomy, fluctuating saturation levels
A	Oxygen saturation monitoring programme	Constant oxygen saturation recording. CPAP may be required
A	Active weaning programme	Cuff deflated for periods during the day, capping of tracheostomy
A	Assisted ventilation	Portable ventilatory support e.g. NIPPY
B	Tracheostomy in situ but stable	Maintained with regular suctioning/tube changes
C	No tracheostomy	May need tracheostomy dressings following tracheostomy removal only.

# Scoring guidelines

## Swallowing/Nutrition

Category	Descriptor	Guidelines
A	Complex swallowing evaluation (e.g. FEES)	At high risk of aspiration/ silent aspiration. Undergoing investigation such as FEES
A	Complex nutritional requirements requiring intensive dietary support/intervention	Enteral/Parenteral feeding, frequent monitoring of electrolytes, weight management
B	Enteral feeding programme	On an established enteral feeding regime – requires regular review
B	Moderate monitoring – e.g. progressive consistency, dietary content	Puree/soft/normal diet/thickened fluids +/- supplements. Changing consistency/texture
B	Dietary education (e.g. healthy eating, weight reduction)	Weekly weight recording/ dietary advice for patient and family
C	Normal or stable modified diet	Established dietary intake.
C	Able to eat independently or with supervision from care staff	May need help to open packs/cut up food or need monitoring for speed of eating/drinking to ensure safe eating/drinking. Low risk of choking
C	Standard dietary/weight monitoring only	

# Scoring guidelines

## Communication

Category	Descriptor	Guidelines
A	Complex communication needs requiring specialist evaluation	Locked-in syndrome assessment – eye gaze etc. Severe expressive/receptive dysphasia
A	Complex communication needs requiring complex communication aid set-up provision	Alternative and/or Augmentative communication required
B	Moderate communication issues with some listener burden, but able to communicate basic needs & ideas	Picture charts, alphabet chart, light-writer or total communication techniques to assist with communication
C	Higher function problems only	E.g. word finding / articulation difficulties/some clarification may be required for effective communication
C	No problems with communication	

# Scoring guidelines

## Cognitive needs

Category	Descriptor	Guidelines
A	Severe cognitive problems requiring intensive support for carryover/orientation etc.	On day-to-day basis requires prompting/guidance with all basic needs e.g. washing & dressing sequencing
A	Severe cognitive problems requiring complex cognitive/neuropsychological assessment	Requires formal neuropsychological assessment
B	Moderate cognitive problems requiring structured environment, strategies	Orientation board. Day to day timetable. Visual prompts/clues/frequent reminders
B	Routine cognitive assessment e.g. by OT	Day-to-day functional table top assessments
C	Higher function problems only	Functions independently for most of the time but may need some occasional help e.g. for community navigation or extended activities of daily living
C	No cognitive problems	

# Scoring guidelines

## Behavioural needs & Mood/Emotion

Category	Descriptor for Behavioural needs	Guidelines
A	Highly challenging behaviours e.g. physical and/or verbal aggression, requiring interactive behavioural management programme	Normally managed in a unit specifically able to meet the needs of cognitive/behavioural issues with intensive input from neuro-psychiatry/neuro-psychologist
B	Mild/moderate behavioural issues controlled in a structured environment	Managed with specialist psychology /MDT sessions and behavioural management guidelines
C	No significant behavioural problems	
Category	Descriptor for Mood/Emotion	Guidelines
A	Severe anxiety/depression/emotional lability requiring specialist evaluation	Assessment and at least daily sessions required from psychiatrist/psychologist
A	Severe anxiety/depression/emotional lability requiring active management and frequent crisis intervention	Regular and emergency psychiatric/ psychology interventions. Use of medication/behavioural management programme
B	Mood disorder/adjustment issues under active management with planned programme	Mood assessments – BDI, HADS – therapy session/CBT/medication as appropriate
C	No significant mood/adjustment issues	

# Scoring guidelines

## Complex disability management

(usually as alternative to goal-oriented rehabilitation)

Category	Descriptor for Complex disability management	Guidelines
A	Complex disability management – evaluation of low awareness state (PDOC)	Requires SMART/WHIM /CRS-R assessment for formal diagnosis
A	Complex disability management – neuro-palliative rehabilitation/end of life care	Best interest/ceiling of care decision-making, with end of life care for dying patients (e.g. following withdrawal of active treatment / CANH etc.)
B	Standard disability management e.g. set-up of care programme, care booklet, carer training	Complex care arrangements for nursing home care / complex home care packages
C	None required	

# Scoring guidelines

## Social/discharge planning

Category	Descriptor for social/discharge planning	Guidelines
A	Complex placement/housing/funding issues requiring extensive multi-agency negotiation	On-going placement unclear – multi agency negotiation – eg housing / home office, NHS and social care to agree funding (eg NHS continuing care or joint funding arrangements) and identify a suitable placement
B	Active discharge planning requiring liaison with community SW/DN/OT to arrange care package	On-going placement identified (e.g. home/alternative residential placement) – needs community/family support
C	No major discharge issues, taken care of by family and/or allocated social worker	

# Scoring guidelines

## Family Support & Emotional Load on staff

Category	Descriptor for Family Support	Guidelines
A	Major family distress issues requiring frequent support or crisis intervention	Highly challenging family issues e.g. unrealistic patient/ family expectations/dissatisfaction with care. Frequent consultant and multi-disciplinary input required.
B	Routine family support needs met by planned meetings	Family meetings/keyworker sessions / nurse discussions +/- consultant <b>to meet family needs</b>
C	No significant family problems	

Category	Descriptor for Emotional load on staff	Guidelines
A	Demanding situation requiring highly experienced staff / extra support for staff	Staff need additional support from senior colleagues and/or psychologists. Change of treating team to lessen the load
B	Somewhat challenging situation but manageable	Staff able to cope with patient /family demands through routine supervision sessions
C	Minimal or no emotional load on staff	



# Scoring guidelines

## Vocational Rehabilitation

Category	Descriptor	Guidelines
A	Multi-disciplinary vocational assessment	Workability support assessment. Work prep / placement for retraining for work. Site visits to assess for suitability of work environment. Assessment for access to work
A	Multi-agency support for return to work, retraining or work withdrawal	Complex liaison eg with employer / occupational health, pensions department. Medical retirement from work due to ill health or graded return to work. Provision of re-training to alternative role – multiple agencies involved.
A	Complex support in other roles e.g. single parenting	Close support required to assess/develop ability to care for child/other relative
B	Work visits or employer liaison	Liaison with employer, facilitation/support for return to work, reduction in or graded return to duties.
B	Support for others role e.g. home maker or parenting	Able to care for self and ability to engage with another person e.g. play a game with own child or able to cook/clean
C	Not of working age	Already in retirement/receiving pension
C	No significant needs for vocational support	

# Scoring guidelines

## Medico-legal issues

Category	Descriptor	Guidelines
A	Complex best interest decisions	Challenging BI decision-making eg with dispute between parties
A	Court of Protection applications	For vulnerable adults or in situations of family conflict or to withdraw CANH in PDOC etc
A	DoLs/PoVA applications	Deprivation of Liberty Safeguards application for those deemed to be competent or have mental capacity. Protection of vulnerable adults
A	Litigation issues	Following road traffic accident/medical issue with on-going investigation/court proceedings
A	Complex mental capacity/consent issues	Borderline capacity requiring multidisciplinary assessment or complex abstract or highly emotive issues (e.g. childcare)
B	Mental capacity evaluation	Capacity assessment for specific questions e.g. choice of discharge destination
B	Standard consent/best interest decisions	Standard consent for procedures e.g. insertion of PEG, treatment on the basis of best interests etc.
B	LPoA, advance care planning	Includes end of life care planning. Decision/capacity to delegate responsibility to others (F&P and/or H&W)
C	No significant medico-legal issues	

# Scoring guidelines

## Specialist Equipment/Facilities

Category	Descriptor	Guidelines
A	Bespoke Assistive Technology	e.g. communication aids.
A	Highly specialist seating/wheelchair needs	Custom contoured seating
A	Bespoke orthotics	Complex tailor-made orthoses requiring specialist orthotist input for design, provision and /or review and revision
A	Electronic assistive technology	Environmental controls, eye gaze technology
A	Assisted ventilation	Portable ventilatory support
B	Adapted wheelchair/seating	e.g. Jay2 cushion. Adjusted tilt-in-space wheelchair
B	Electric standing frame	e.g. Quest
B	Treadmill/harness training	
B	Assisted cycling e.g. motomed	
B	Splinting/casting	Or other orthosis e.g. hinged AFO
C	No equipment needs	
C	Basic off the shelf equipment only	
C	Standard exercise facilities	e.g. plinth, tilt-table, parallel bars

# Clinical decision of Service Level and Patient Category

- \* Usually completed by the Consultant in Rehabilitation Medicine
  - \* Overall clinical impression of category of need
    - \* And the level of rehabilitation service level required
  - \* (NB. the service level required may not be the same as the service level the patient has been admitted to. Level 1/2a can be selected)
- \* Funding source and purchase type should also be completed.

# Ordinal Score

- \* Descriptors for each domain are presented in one of 3 columns.
  - \* Category A = ordinal score 3
  - \* Category B = ordinal score 2
  - \* Category C = ordinal score 1
- \* Total scores are automated within the UKROC software
- \* If calculating scores manually:
  - \* Take the highest score from the Medical/surgical & Psychiatric needs
    - \* do not include scores from both sections
  - \* For the remaining domains add the highest score
    - \* (only count one item per domain e.g if  $\geq 5$  therapy disciplines and  $>25$  hours total therapy time per week have been selected in the Intensity domain the score is 3 and not 6)
  - \* The expected duration of admission scores
    - \* Long stay – add a score of 2
    - \* Medium stay – add a score of 1
    - \* Short and assessment/rapid intervention - no additional score added
- \* Clinical expertise is essential for identifying rehabilitation needs
  - \* In general, if a PCAT total score  $\geq 30$ , patient is likely to have category A needs
  - \* Some patients with scores 27-29 may also have category A needs, but requires justification

# Psychometric properties of PCAT

- \* Exploratory and Confirmatory factor analysis suggested that
  - \* PCAT reasonably summed into a total score – but also comprises two factors
    - \* one relating principally to cognitive/psychosocial requirements (PCAT-Cog)
    - \* the other to physical requirements (PCAT-Phys)

- \* 2 subscales
  - \* 10 items each
- \* Note that 2 items load onto both domains
  - \* Communication
  - \* Discharge planning

PCAT-Cog Domains	PCAT-Phys domains
Neuropsychiatric	Medical/surgical
Communication	Communication
Cognitive	Intensity
Behaviour	Physical handling
Mood	Tracheostomy
Family Support	Swallow/nutrition
Emotional load on staff	Complex disability management
Vocational Rehabilitation	Specialist equipment/facilities
Medico-legal issues	Expected duration of rehabilitation
Social/discharge planning	Social/discharge planning

# Psychometric properties of PCAT

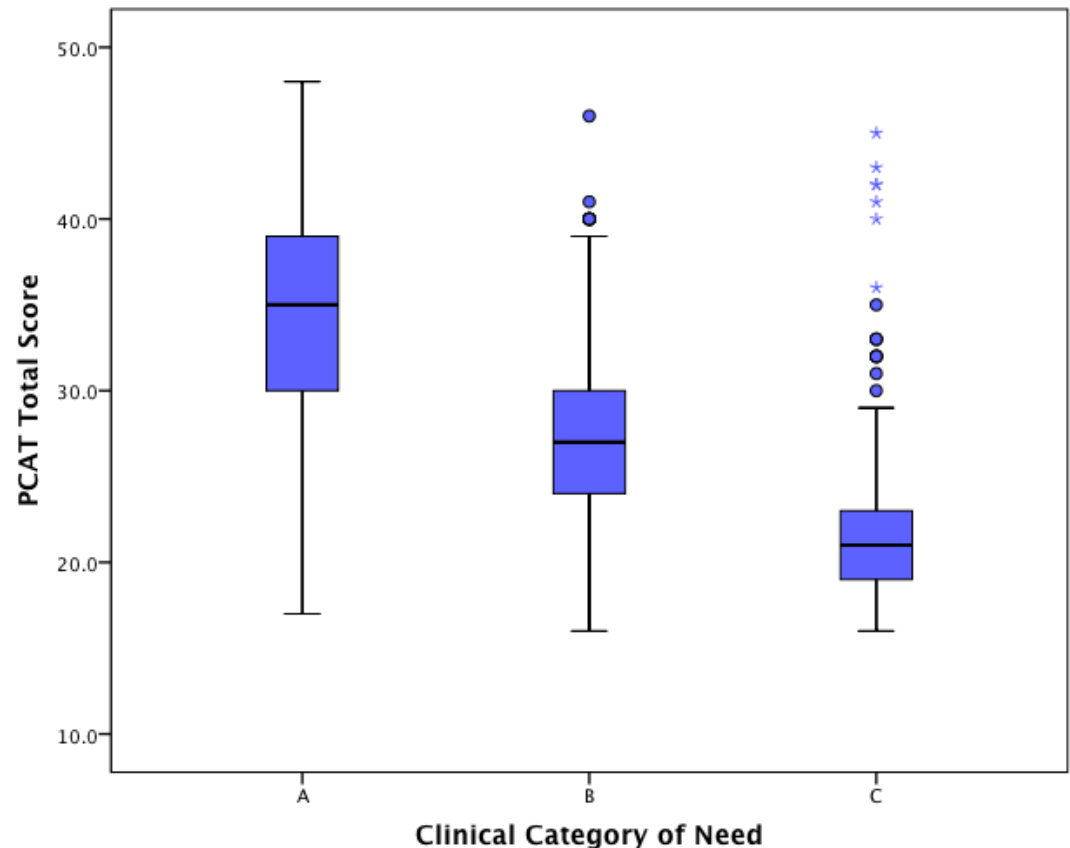
- \* Inter-rater reliability
  - \* percentage absolute agreement ranged from 66-90%
  - \* unweighted kappa coefficients from 0.50-0.80 (moderate – substantial agreement)
- \* Concurrent Validity – as expected:
  - \* positive correlation with total RCS-E v12 and total NPDS
  - \* negative correlation with total UK FIM+FAM
- \* Sensitivity and specificity -
  - \* clinical impression of category A, B, C needs vs PCAT total scores suggested:

	Category A	Category B	Category C/D
Total score (18 items)	≥ 30	24-29	<24
PCAT Phys score (10 items)	≥ 18	14-17	<14
PCAT Cog score (10 items)	≥ 18	14-17	<14

# Box and Whiskers plots

## Total PCAT vs Clinical category of need

- \* Reasonable separation between categories
  - \* Inter-quartile range barely overlaps
  - \* But whiskers do – so not infallible
- \* **A PCAT score of  $\geq 30$**   
Identifies category A needs with:
  - \* Sensitivity 73%
  - \* Specificity 75%
  - \* Positive predictive value 76%
  - \* Negative predictive value 72%





# Use of PCAT scores within UKROC

- \* UKROC reports both
  - \* Clinical impression of needs category
  - \* PCAT score
- \* PCAT score  $\geq 30$ 
  - \* Not always synonymous with category A needs
  - \* But provides a comparable benchmark
    - \* To check if clinical categorisation is generally in line with other units
- \* We also sense-check for compatibility of items and across tools
  - \* As some are mutually exclusive
    - \* Check if frequencies generally in line with the norm
      - \* Or if a given unit has a lower threshold to tick certain items

# Summary

- \* **The PCAT tool is a checklist** to aid Rehabilitation Consultants decide on the Rehabilitation service level and category required by each individual patient
- \* The PCAT tool should be completed once by the Consultant in Rehabilitation Medicine, on admission to the rehabilitation unit
- \* All relevant descriptors within each domain should be indicated
- \* The rehabilitation service level required to meet the rehabilitation needs should be selected based on clinical decision
- \* The patient category should be selected using the checklist to inform the clinical reasoning

# References

- NHSE Standard Contract for specialised rehabilitation for patients with highly complex needs - Service Specification 2014
- <https://www.england.nhs.uk/wp-content/uploads/2014/04/d02-rehab-pat-high-needs-0414.pdf>)
- Cost efficient service provision in neurorehabilitation: defining needs, costs and outcomes for people with long term neurological conditions  
<https://www.kcl.ac.uk/lsm/research/divisions/cicelysaunders/research/studies/uk-roc/Short-Extract-Scientific-summary-29.07.15.pdf>