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The Post-ICU Presentation Screen (PICUPS)

A brief functional screening tool to inform the rehabilitation needs after treatment in Intensive Care Settings

The PICUPS is a 14-item developed to support triage and handover of patients stepping down from ITU into the acute wards, and onwards into rehabilitation.

It is designed to:

- Inform the immediate plan for care on the acute ward
- Identify problems that are likely to require further more detailed assessment / evaluation by members of the multi-disciplinary team and
- Inform development of the **Rehabilitation Prescription** as patients leave the acute care setting (which will include the Rehabilitation Complexity Scale) to indicate the patients needs for rehabilitation at their next stage of care.

As well as helping to guide decision-making for individual patients, this information will help to identify where their needs are and are not being met. Used at population level, the information will enable us to quantify shortfalls in service provision and to estimate the gap between capacity and demand for future planning.

The PICUPS is essentially just a **checklist and guide**, so accuracy is not critical –

- The item levels are arranged in clinical domains reflecting different areas of care
- If a patient falls between two scores or their condition fluctuates, then record the lower score.

The PICUPS Plus represents 10 additional items to identify higher-level items that may need to be addressed as patients progress during acute care, and to further assist towards development of the Rehabilitation Prescription that will help to direct their on-going care.

The tool has now has additional functionality so that score levels on the individual items may trigger actions such as referral to the appropriate discipline. These disciplines will undertake a clinical evaluation and may use additional tools as relevant to the clinical presentation. The PICUPS is designed to act as a screening and does not replace any of those tools.

The PICUPS and PICUPS-Plus together form a 24-item scale which may be applied serially to monitor changes that may occur as the patient progresses. A self-report version for use in the community is now under development.

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The Post-ICU Presentation Screen (PICUPS) - to inform rehabilitation needs after treatment in Intensive Care Settings

Item	0	1	2	3	4	5
Medical and essential care (Not needed if RCS-E is recorded alongside this tool)						
Medical stability (1)	Critically unstable Requiring management in a critical care or HDU setting (Level 2-3)	Medically unstable. Primary needs are medical/surgical, requiring an acute ward setting (Level 0-1)	Primary needs are for rehab, but potentially unstable. Requires inpatient treatment in acute setting with 24 hr medical care (eg HA unit)	Requires inpatient rehabilitation, but stable – can be managed in non-acute setting with day-time medical cover only	Can be managed in the community with enhanced support – eg hospital at home or nursing home	No medical needs – can be managed in community with access normal access to GP as required
Basic care needs and safety (Score worst case of care or risk for safety)	Constant 1:1 supervision For safety or behavioural management (Will usually require DOLS)	Very high care / risk Requires assistance from ≥ 3 people for most basic care OR: Very frequent checks (¼ hrly)	High care / risk Requires assistance from 2 people for most basic care OR: Frequent checks (½ hrly)	Moderate care / risk Requires assistance from 1 person for most basic care OR 1-2 hourly checks	Mild care / risk Requires incidental assistance from 1 person for basic care OR 3-4 hourly checks	No care needs – largely independent in basic care and able to maintain own safety - no risk
Breathing and Nutrition						
Respiratory function/ventilator assistance (2)	Complete invasive ventilator dependence – Continuous ventilatory support (eg on home ventilator))	Partial invasive ventilator dependence Manages short periods off ventilator	Non-invasive ventilation via mask (eg CPAP): Continuous or near continuous support	Intermittent non-invasive only (Eg CPAP at night only) OR Continuous high flow oxygen (>15 l)	Self-ventilating with Standard oxygen therapy (<15l)	Self-ventilating with no oxygen therapy
Tracheostomy nursing management (3)	(E: Ceiling of care (including planned end-of-life care) limited trachy interventions for comfort only)	A: Unstable airway Very frequent trachy intervention (eg ½ -1 hourly) +/- de-saturation / mucous plugging	B: Complex tracheostomy Frequent trachy intervention eg 1-2 hrly) including regular deep suction. Trachy needs may be unpredictable.	C: Standard trachy requiring intervention usually every 2-4 hours	D: Simple stable trachy requiring occasional intervention only	No Tracheostomy
Tracheostomy weaning stage 4)	Cuffed tracheostomy. Cuff up all the time	Cuff partially deflated or periods of cuff deflation	Tolerating continuous cuff deflation or cuffless tracheostomy in situ	Cuff deflated/cuffless tube. Tolerating one way valve continuously	Cuff deflated/cuffless tube. Tolerates capping trials	Decannulated OR N/A - No tracheostomy
Cough (2)	Absent cough, may be fully sedated or paralysed	Cough stimulated on deep suctioning only	Weak ineffective voluntary cough, unable to clear secretions independently (e.g.requires deep suction)	Weak, partially effective voluntary cough, sometimes able to clear secretions (e.g.requires Yankauer suctioning)	Effective cough, clearing secretions with airways clearance techniques	Consistent effective voluntary cough, clearing secretions independently
Nutrition/feeding (1)	Nil by mouth requiring full enteral or parenteral nutrition.	Minimal oral intake or food/liquid requiring full enteral or parenteral nutrition.	Partially tube-dependent - Eating and drinking less than ½ hospital meals requiring supplemental enteral tube feeding.	Eating and drinking less than ¾ hospitals meals and requiring oral nutrition supplements and/or assistance or supervision required throughout meal	Eating and drinking 3/4 hospital meals but needs set-up or prompting to ensure sufficient intake	Eating and drinking full hospital meals independently and is not prescribed oral nutrition supplements.

Item	0	1	2	3	4	5
Physical / movement						
Repositioning within bed (1, 2)	Unable, to be moved except with extreme care (eg requires log-rolling)	Requires assistance of 3 or more people to reposition in bed	Requires assistance of 2 people to reposition	Requires moderate hands-on assistance of 1 person to change position	Requires minimal assistance of 1 person or prompting only to change position	Able to change position fully independently
Transfers: bed-chair and back (1)	Unable/unstable	Full hoist transfers	Transfers with assistance of two people (with or without aid)	Transfers with physical assistance of one person (with or without aid)	Transfers with standby supervision/promoting only (with or without aid)	Fully Independent transfer without equipment
Communication / Cognition / Behaviour						
Communication (1,4)	No consistent functional communication	Unable to attract attention, but responds to direct questions about basic care needs using Yes/No or gestures.	Able to attract attention and communicate at the level of expressing basic needs/ information	Communicates within context to familiar people – but substantial listener burden	Some listener burden, but communicates with a unfamiliar people and out of context	Unrestricted communication Able to understand and express complex information and to communicate with anyone
Cognition / delirium (1)	Unconscious – in coma (Including if still fully sedated)	Awake but still disordered consciousness (ie inconsistent responses equivalent to vegetative or minimally conscious state)	Emerged into consciousness, but severe cognitive deficit or severe confusional state	Moderate cognitive problems. Not fully orientated	Fully orientated but some higher level problems with memory and attention and/or executive function	Normal cognition
Behaviour (1)	Agitated, physical aggression requiring restraint at times (Should be on DOLS)	Challenging behaviour with verbal (but not physical) aggression	Marked behavioural problems, but largely controlled in structured environment	Moderate behavioural problems. Some problems with temper control. Needs persuasion to comply with rehabilitation or care.	Mild behavioural problems. Needs prompting for daily activities. Occasional outbursts only	No behavioural problems Socially appropriate, co-operative, able to engage actively in rehabilitation. OR N/A – eg in coma / Vegetative state
Psychosocial						
Mental health (1)	Known active pre-existing mental health condition requiring on-going secondary mental health input and psychiatry eg bipolar disorder, schizophrenia, other psychosis	Severe new mental health problems (eg stress/ severe depression /psychosis) that effectively prevent engagement in daily activities (requires psychiatric input)	Marked anxiety /depression /mood /stress problems that impact significantly on daily function and ability to engage in rehab, requiring frequent support	Moderate anxiety /mood issues with some impact on function/rehab requiring active intervention/ treatment	Mild anxiety /mood issues which does not impact on engagement daily function / rehabilitation, but requiring further exploration /support	No mental health issues No problems with anxiety/ depression/ stress OR N/A – eg in coma / Vegetative state
Family /friends distress/support (1)	Family/friends extremely distressed with imminent risk of breakdown, requiring referral to the emergency support services	Family/friends highly distressed requiring very active support and management (such as regular consultant-led meetings)	Family/friends markedly distressed requiring formal psychological support in their own right	Family/friends moderately distressed, requiring some extra support /counselling from the team	Family/friends mildly anxious requiring additional information / time but coping well	Family/friends well-adjusted requiring usual information but no additional support

PICUPS plus: “pick ‘n’ mix” –

Additional items for post ICU patients who are progressing towards discharge to the community

The **PICUPS Plus** represents some additional items that may be used depending on the individual’s presentation, to identify potential higher-level items that may need to be addressed as the patient progresses within acute care, and to further assist towards development of the Rehabilitation Prescription. For example, a non-brained injured patient who was intubated and extubated on ITU and who has ICU-acquired dysphagia, dysphonia or upper airway dysfunction may not trigger referral to SLT on the PICUPS, but the Dyspnoea/Voice/Swallowing items on the PICUPS plus will identify these problems and trigger referral to an SLT for further evaluation and intervention.

The PICUPS Plus items should be addressed as early as possible after step-down from ICU.

Item	0	1	2	3	4	5
Upper airway						
Breathing (5)	Extreme dyspnoea Too breathless to leave the house or breathless when dressing	Severe dyspnoea Stops for breath after walking 100 yards or after a few minutes	Significant dyspnoea Walks slower than people of the same age because of breathlessness, or has to stop for breath when walking at own pace	Moderate dyspnoea Breathless when hurrying or walking up a slight hill	Mild dyspnoea Breathless only with strenuous exercise	No dyspnoea
Voice (6)	Aphonia No voice	Severe dysphonia Can only produce a weak whisper; at times no voice	Significant dysphonia Voice sounds very abnormal or is effortful to produce all of the time; consistent difficulties being heard on the telephone and in conversation	Moderate dysphonia Voice occasionally sounds abnormal or effortful to produce; occasional difficulties being heard in conversation	Mild dysphonia Difficulty being heard in loud environments; sound of the voice varies throughout the day or gets worse towards the end of the day	No dysphonia
Swallowing (7)	Extreme dysphagia Difficulty managing secretions or aspirates requiring nil by mouth	Severe dysphagia Commencing oral intake Tolerates small amounts of oral intake for therapeutic purposes	Significant dysphagia Requires more than two IDDSI diet/fluid level restrictions; fatigue limiting oral intake	Moderate dysphagia Requires 1-2 IDDSI diet/fluid level restrictions, and/or consistent use of compensatory strategy for safe/efficient swallowing	Mild dysphagia Able to eat (near) baseline diet with some difficulty or supervision required, e.g. no more than one IDDSI diet level restriction; difficulty with specific foods; longer mealtimes; coughing when drinking liquids quickly	No dysphagia

Physical / activities of daily living						
Postural management and seating	Unseatable – Unable to sit in any modified seating system (eg due to severe posturing, severe pressure ulcers etc)	Severe postural problems that limit seating (ie, severe contractures, pressure ulcers) requiring a Tilt-in-space seating system with bespoke customisation (requiring highly specialist seating assessment/provision)	Marked postural problems Poor head and trunk control requiring standard Tilt-in-space or reclining seating system +/- some modification	Able to sit out in standard wheelchair with minor modifications (eg pressure relief cushion)	Mild postural problems but able to maintain good sitting position in standard wheelchair with no modifications	No postural problems able to sit in ordinary armchair Or not applicable Eg seating prevented by other conditions eg severe agitation, medical instability etc
Personal hygiene eg grooming, washing, bathing, dressing, managing continence (1)	Unable to contribute in any way All hygiene tasks are done for them	Maximal help Able to contribute in a very small way, but nearly all hygiene maintenance is done for them	Moderate help Able to manage some hygiene tasks themselves, but needs help for > half	Moderate help Able to manage > half of hygiene tasks themselves but needs some hands-on help	Minimal help eg just reminding to wash or setting up for them	Fully Independent
Care needs for basic activities of daily living, maintaining safety etc (1)	Totally dependent 2 or more carers required throughout 24 hours	Severe dependence 1 carer required throughout 24 hours with second carer for some tasks (eg bathing)	Marked dependence 1 carer required throughout 24 hours (may be sleep-in at night, but unable to live alone)	Moderate dependence 1 -2 carers required on visiting basis – able to summon help and so be left alone between visits	Mild dependence Incidental help , safety checks or support for extended activities only eg visit once daily or less often	Fully independent
Moving around (1) (Indoors)	Bed bound	Wheelchair bound – attendant propelled	Independently mobile in wheelchair	Walks with assistance from someone (+/- aid)	Walks independently (+/- aid) but concerns for safety (eg falls risk)	Normal mobility indoors – no safety concerns
Arm and hand function	No functional use of either arm/hand	Poor functional use of both hands – very limited dexterity affecting all activities	Some functional use of one hand – but dexterity is poor even in good hand	Good use of one hand but upper limb activities limited (eg by lack of bimanual function)	Good functional use of one or both hands but problems with fine dexterity affect higher-level function	Normal dexterity and hand function
Symptoms that interfere with daily activities						
Fatigue	Extreme Fatigue Only able to get up for very short periods – spends most of the day in bed or in a chair due to fatigue	Severe Fatigue Fatigue impacts severely on daily activities – requires several rest periods during the day	Marked Fatigue Fatigue impacts significantly on daily activities – requires a rest period during the day	Moderate Fatigue Fatigue requires modification of some activities – eg part time working, limited exercise - but able to manage basic daily activities	Mild Fatigue Able to carry out normal activities (including work) but tired at the end of the day	No fatigue – normal stamina
Pain	Extreme Pain Interferes with sleep and almost all activities. Medication / pain interventions have little or no effect	Severe Pain Severe pain, not controlled by medication / pain interventions. Interferes with daily activities every day	Marked Pain Reports marked pain. Medication/ pain interventions partially effective. Interferes with some activities most days	Moderate Pain Reports moderate pain. Helped by medication / pain interventions and only occasionally interferes with activities	Mild Pain Reports mild pain symptoms but they are well controlled and do not interfere with activities	No Pain

(Other optional items may be added on a pick 'n ' mix basis as necessary as the tool develops to help clinicians in their decision-making process)

Summary scores and triggers for referral

At Step down from ICU - Post ICU Presentation Screen (PICUPS tool)

Domain	Item	Score	Score Triggers assessment by:	
Medical / Care	Medical stability	(0-5)	2, 3	Consultant in RM
	Basic care and safety	0-5)	≤ 4	O/T
Breathing / Nutrition	Ventilatory assistance	0-5)	≤ 4	P/T
	Tracheostomy care	0-5)	≤ 4	P/T, SLT, ENT
	Trache weaning	0-5)		
	Cough / Secretions	0-5)	≤ 4	P/T
	Nutrition / feeding	0-5)	≤ 4	Dietician, SLT, O/T
Physical Movement	Repositioning in bed	0-5)	≤ 4	P/T O/T
	Transfers (bed / chair)	0-5)	≤ 4	P/T O/T
Communication/ Cognition	Communication	0-5)	≤ 4	SLT, O/T
	Cognition & delerium	0-5)	≤ 4	Psychologist, O/T
	Behaviour	0-5)	≤ 4 ≤ 2 0	Psychologist/ O/T Psychiatrist/ neuropsychiatrist Liaise with existing MH team
Psychosocial	Mental Health	0-5)	≤ 4 ≤ 2	Psychologist, O/T Psychiatrist
	Family distress	0-5)	≤2	Consultant in RM /Psychologist

In acute care phase – The PICUPS Plus information that may help team to formulate RP

PICUPS plus items

Domain	Item	Score	Score Triggers assessment by:	
Upper Airway	Dyspnoea	(0-5)	≤ 3	P/T, SLT
	Voice	0-5)	≤ 4	SLT, ENT
	Swallowing	0-5)	≤ 4	SLT, Dietitian
Physical and Activities of daily living	Postural management / seating	0-5)	≤ 4	P/T, O/T
	Maintaining hygiene	0-5)	≤ 4	O/T
	Care needs	0-5)	≤ 4	O/T
	Moving around (indoors)	0-5)	≤ 4	P/T, O/T
	Arm and hand function	0-5)	≤ 4	O/T
Symptoms that interfere with daily activities	Fatigue	0-5)	≤ 4 ≤ 2	P/T, O/T, Psychologist
	Pain	0-5)	≤ 4 ≤ 2	P/T, O/T, Psychologist

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3. Adapted from the NHSE Standard Contract D02 supplement Levels of nursing care and supervision for tracheostomised patients ©Lynne Turner-Stokes 2015.
4. Adapted from the Therapy Outcome Measures (TOMS). Enderby, P., John, A. (2019) *Therapy Outcome Measure User Guide*. Croydon: J & R Press Ltd
5. Adapted from the Modified Medical Research Council Dyspnoea Scale
6. Adapted from Airway-Dyspnoea-Voice-Swallow (ADVS) scale (Nouraei, S., et al *Clin Otolaryngol*. 2017;42(2):283-294) and Grade, Roughness, Breathiness, Asthenia, Strain (GRBAS) Perceptual Voice Rating Scale
7. Adapted from ADVS and International Dysphagia Diet Standardisation Initiative (IDDSI)