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Patient Care Portfolio

AUKUH Acuity/Dependency Tool

Implementation Resource Pack

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1. Acknowledgements

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Pilot sites: Southampton University Hospital NHS Trust; Barts & The London NHS Trust; University Hospitals Coventry & Warwickshire NHS Trust; Guy's and St. Thomas' Hospital NHS Trust; Hammersmith Hospitals NHS Trust; Kings College Hospital NHS Foundation Trust; University Hospitals of Leicester NHS Trust; Oxford Radcliffe Hospitals NHS Trust; University College London Hospital Foundation Trust.

Field Test Sites: NHS Scotland; Newham University Hospital NHS Trust; Sheffield Teaching Hospitals NHS Foundation Trust; Whipps Cross University Hospital NHS Trust; Winchester & Eastleigh Healthcare NHS Trust.

2. Introduction to the Tool

The AUKUH Acuity and Dependency Tool has been developed to help NHS hospitals measure patient acuity and/or dependency to inform evidence-based decision making on staffing and workforce. The tool, when allied to Nurse Sensitive Indicators (NSIs), will also offer nurses a reliable method against which to deliver evidence-based workforce plans to support existing services or the development of new services.

This booklet offers brief guidance for the people using the tool in practice. It includes:

- A brief overview of the tool
- How acuity and/or dependency are measured
- How to ensure that accurate data are collected
- What Nurse Sensitive Indicators will be allied to acuity and/or dependency measurement
- How to use nursing multipliers to support professional judgement
- What can be learned from the pilot sites and FAQ
- How to get help or support if needed.

3. A Brief Overview of the Tool

The AUKUH Acuity/Dependency tool is based upon the classification of levels of care of critical care patients (Comprehensive Critical Care , DH 2000). These classifications have been adapted to support measurement across a range of wards/specialties. The full Acuity and Dependency Tool is outlined below.

AUKUH Adult Acuity/Dependency Tool [©]

Levels of Care	Inclusion Criteria	Guidance on Care Required
Level 0 Patient requires hospitalisation. Needs met through normal ward care.	Elective Medical or Surgical Admission, Routine Post Diagnostic/Surgical Procedure care, May have underlying medical condition requiring on-going treatment, Patient awaiting discharge.	Routine post-op/ post procedure care (Incl ½ hry obs until stable), Regular observations 2 - 4 hourly, ECG monitoring to establish stability, Fluid management, PCA, Oxygen therapy 24 – 40% (Specialist Surgical Areas ONLY – single chest drain). Requires routine nursing assistance
Level 1 Appropriately managed on in-patient ward but requires more than baseline resources. Level 1a Acutely ill patient requiring intervention or those who are UNSTABLE with a GREATER POTENTIAL to deteriorate.	Observation & Therapeutic Intervention - “Step Down” from Level 2 care, Post-Op care following Emergency or Complex Surgery, or following peri-operative event. Emergency Admission requiring immediate therapeutic intervention. Deteriorating Condition or Fluctuating vital signs.	Instability requiring continual observation/ invasive monitoring, Support of Outreach Team but NOT higher level of care. Oxygen Therapy greater than 40% +/- Chest Physiotherapy 2 – 6 hourly. Arterial Blood Gas analysis – intermittent. 24 - 48 hours following Tracheostomy, insertion Central lines/ Epidurals/ Chest drains.
Level 1b Patients who are in a STABLE condition but have an increased dependence on nursing support.	Severe Infection, Sepsis, Complex wound management. Compromised Immune system. Psychological Support/Preparation. Requires Continual Supervision. Spinal Instability / Mobility Difficulties.	Complex Drug regimes, Patient and/or carers require continued support owing to poor disease prognosis or clinical outcome. Completely dependent on nursing assistance for all activities of daily living. Constant observation due to risk of harm.
Level 2 Patients who are unstable and at risk of deteriorating and should NOT be cared for in areas currently resourced as general wards. (May be managed within clearly identified, designated beds, resourced with the required expertise and staffing level OR may require transfer to a dedicated Level 2 facility/unit).	Deteriorating /Compromised Single Organ System, Post-op Mgt following Major Surgery, Post operative optimisation/ extended post-op care. “Step Down” from Level 3 Care. Uncorrected Major Physiological Abnormalities.	Patients requiring Non-invasive ventilation/ resp support. Routine short-term post-operative ventilation. First 24 hrs following Tracheostomy insertion. Requires a range of therapeutic interventions including; Greater than 60% oxygen, Continuous ECG & invasive pressure monitoring, Vasoactive drug infusions (amiodarone, potassium, inotropes, GTN, magnesium), Haemodynamic instability. Pain Management ; IV analgesic infusions, CNS depression of airway & protective reflexes, Neuro monitoring.
Level 3 Patients needing advanced respiratory support and therapeutic support of multiple organs.	Monitoring and Supportive Therapy for Compromise or Collapse of two or more Organ Systems.	Respiratory or CNS depression/ compromise requires Mechanical/ Invasive ventilation, Invasive monitoring, vasoactive drugs, treatment of hypovolaemia/haemorrhage/ sepsis or neuro protection.

4. How is Acuity and Dependency Measured?

Trusts collect data at the same time to enable benchmarking across participating organisations. Acuity and dependency measurement currently takes place twice yearly (January and June). Over time, it is anticipated that this acuity and dependency measurement will enable identification of trends across seasons and in response to changing demographics and healthcare needs. Ultimately, this evidence base will support workforce plans for nursing that should accurately predict and enable resources to be identified to support nursing establishments that meet patient and service needs.

Acuity and dependency measurement must have a consistent approach. It is essential to ensure that all relevant data are collected during the same period. This will allow nursing staff to understand not only the levels of patients on wards, but also enable this information to be allied to other key data including:

Nurse Sensitive Indicators are quality indicators linked to nursing care. They inform nurses of good and poor patient outcomes enabling sharing of good practice and review of potential reasons for poor quality. (See section 6)

Patient Flow information is collected to enable nurses responsible for nursing workforce reviews to consider issues such as throughput, including numbers of admissions, discharges, transfers, ward attenders, deaths and transfers away from the ward/department, levels of occupancy and staffing levels.

Nurse Sensitive Indicators and patient flow allied to acuity and dependency support professional judgement and enable agreement of nursing establishment appropriate to meet the needs of each department.

The data collection tool used is included as part of this resource pack for use by Trusts. A sample database is also included. Trusts may prefer to work with their IT department to develop an electronic version of the provided tool and database.

Data should be collected on every patient on participating wards/units at 1500 hrs, daily Monday to Friday for 20 days. Quality control is fundamental to ensuring a robust approach to data collection. How to ensure that accurate data are collected is outlined in section 5.

Q1 **Ward Name**

--

Q2 **D** **D** **M** **M** **Y** **Y**

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Q3 **Acuity Score**

	Bed 0	1a	1b	2	3
1					
2					
3					
4					
5					
6					
7					
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40					

Q4 **Patient Flow**

Admissions

--	--

Discharges

--	--

Transfers In

--	--

Transfers Out

--	--

Ward Attenders

--	--

Deaths

--	--

Escorts for long periods of time

--	--

Q5 **Staffing**

	Registered	Bank/ Agency	Unregistered	Bank/ Agency
E				
L				
N				

Q6 **Completed By**

Name

--

Signature

--

6. How do I Ensure That Accurate Data are Collected

Red Rules

Quality control is the key to successful data collection. These simple steps will ensure a consistent approach across participating wards:

1. Nominate somebody to quality control the data collection. This may be a Practice Facilitator, a member of your Critical Care Outreach Team or a senior member of the corporate nursing team.
2. Identify no more than 3 leads per ward to complete the scoring daily for the duration of the data collection period.
3. The 3 leads should include the Sisters/Charge Nurses. If no Sister/Charge Nurse is available, a nominated member of staff should be agreed with the Senior Nurse for the Directorate.
4. The data collection should take place twice per year in January and June.
5. Data should be recorded on every patient from Monday until Friday for a total of 20 days.
6. Acuity and dependency data should be collected for each patient in each bed at 1500hrs.
7. Once complete, data collection forms should be stored in a folder on the ward/unit to await collection.
8. Patient flow data should be collected for the 24-hour period leading to the data collection time e.g. All admissions/discharges between 1500 hrs that day and 1500 hrs the previous day.
9. Nurse Sensitive Indicator data can be collected retrospectively by the senior nurse responsible for nursing workforce review.
10. Data sheets should be collected weekly from participating wards/departments.
11. Data should be entered onto the database as speedily as possible after collection.
12. Feedback results to sisters and charge nurses.

7. What Nurse Sensitive Indicators are Allied to Acuity and Dependency?

Nurse Sensitive Indicators refer to quality indicators that can be linked to nurse staffing issues, including leadership, establishment levels, skill-mix and training and development of staff. This information can be used to further support ward staffing requirements identified through acuity and dependency measurement. The NSIs used within this project have been identified as indicators of quality of care with specific sensitivity to nursing intervention or lack of.

Official Complaints

Official complaints about nursing/midwifery care/staff received (per 10,000 occupied bed days) identifying the 3 areas of:

- Communication
- Clinical Care
- Attitude

Drug Errors

- Actual drug errors where nursing was the primary cause, not including near misses per 10,000 occupied bed days.

Infection

- Incidence rates of MRSA bacteraemia per 10,000 occupied bed days and Clostridium Difficile per 1000 occupied bed days.

Slips, Trips & Falls

- Number of slips, trips or falls per 10,000 occupied bed days caused primarily by nursing error.

Pressure Ulcers

- Incidence of hospital acquired pressure ulcers per 10,000 occupied bed days.

Nutrition

- Number of patients having had nutritional screening per 10,000 occupied bed days.
- Percentage of wards that have implemented protected meal times policy within the Trust.

8. How to Use the Multipliers .

Multipliers can be used to inform the setting of nursing establishments allied to acuity and dependency measurement. The multipliers agreed for each level of patients on in-patient wards are:

Level 0	0.79 WTE nurse per bed
Level 1a	1.70 WTE nurse per bed
Level 1b	1.86 WTE nurse per bed
Level 2	2.44 WTE nurse per bed
Level 3	6.51 WTE nurse per bed

For example, if a ten-bedded ward has 6 patients at Level 0, 3 patients at Level 1b, and 1 empty bed, a total of 10.32 WTE nursing staff would be required.

Sum:

6 patents at Level 0	0.79 x 6 (4.74)
3 patients at Level 1b	1.86 x 3 (5.58)
Total	10.32

This figure is a baseline against which to set nurse staffing levels. Two ten-bedded wards may have different activity. One may take few admissions, discharges or ward attenders whereas another may have many. Professional judgement is required to ensure that establishments are adjusted appropriately under these circumstances. Nurse sensitive indicators can also be used at this stage to ascertain the impact of acuity, dependency and activity on quality outcomes.

9. Occupancy

Occupancy is calculated by obtaining the number of bed days available and the number of bed days used (the latter is calculated by adding together the number of beds that have been assigned an acuity/dependency score and are therefore occupied) as follows:

$$\frac{\text{Number of bed days used} \times 100}{\text{Number of beds available}}$$

For example if a ward has 420 bed days available and 400 bed days are used, the occupancy rate calculation is: $400 \times 100 = 40000$ divided by 420 = 95% occupancy.

10. Top Tips from the Pilot and Field Test Sites?

This section aims to provide useful tips to support successful implementation of acuity/dependency scoring in your Trust.

Preparation

It is essential that staff are prepared and trained to undertake the acuity and dependency scoring.

Communication

Meet with sisters/charge nurses to explain the process and reasons for measuring acuity and dependency. If they do not understand the reasons, they may be suspicious and reluctant to participate.

Ensure that general managers and executive directors are engaged and understand the potential implications of implementing this tool across the organisation.

Quality Control

Quality control by individual(s) will ensure that the tool is applied consistently across all wards/units.

Data Input

Data input can be time consuming. Input from the Information Technology (IT) department with a nominated contact person will support this aspect of the project.

Feedback

Wards are grateful for feedback on the levels of acuity/dependency within their area

11. Frequently Asked Questions

- Q.** If I have had a Level 1b patient in my bed for the last 18 hours and a Level 0 patient has just been admitted to that bed, do I score at Level 0 or Level 1b?
- A.** Score for the patient that has occupied the bed for the longest time within the last 24 hours; in this case at Level 1b.
- Q.** When looking at activity, do I include potential discharges?
- A.** No you should include actual activity not predicted activity.
- Q.** We have just measured acuity for the second time and there is a big change in acuity. How can these data be used as evidence to show that we need more staff?
- A.** This may be an anomaly. It is not advised that these data are used to show trends until it has been collected a number of times. Pilot sites have been collecting acuity data since 2005 and may be willing to share their findings with you to enable comparisons to be made.

12. Who Can I Contact If I Need Help?

London and the South of England

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All pilot sites and field test sites are willing to be contacted by organisations using this acuity and dependency tool.