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Health Education and Improvement Wales (HEIW)

Paediatric Welsh Levels of Care Edition 1

Document Information

Title: Paediatric Welsh Levels of Care (Edition 1)
Date: July 2021

Summary:

This document has been produced by the All Wales Nurse Staffing Programme to assist local nursing teams participating in the national acuity audit for adult acute medical and surgical wards. For further information please contact:

Foreword

In 2016 we became the first country in Europe to write into law an obligation for Health Boards to calculate and take steps to maintain nurse staffing levels. The evidence unequivocally tells us that having the right number of registered nurses and the right skill mix reduces patient mortality and improves patient outcomes. Ensuring patients have a safe, high quality standard of care was at the heart of why we supported the introduction of the Nurse Staffing Levels (Wales) Act 2016.

I am proud that the Welsh Government has been able to extend through regulations the Act's second duty to paediatric inpatient wards – a step that was made possible by the hard work of the All Wales Paediatric Group in developing this very document. The Welsh Levels of Care is a key component to implementing the Act in practice, forming one third of the triangulation method that Health Boards are required to use when calculating their nurse staffing levels. The Act makes it clear that any workforce planning tools to be used must be evidence-based and specific to the Welsh context. Given the iterative testing and refinement that has been done over the past three years, I am confident that the Welsh Levels of Care meets those criteria and will give a consistent, standardised approach to nurses in Wales when establishing the acuity of their patients on paediatric inpatient wards.

I would like to formally thank the All Wales Nurse Staffing Group - especially its Paediatric work-stream - and the large number of nurses across the country who are responsible for developing this document. Their hard work has helped to further empower the nursing voice in Wales, ensuring the resources are secured to care sensitively for patients.

Gareth Howells

Interim Chief Nursing Officer (Wales)
Nurse Director NHS Wales

Executive Summary

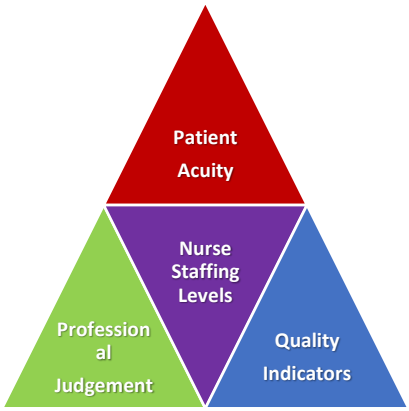
This is the first edition of the Paediatric Welsh Levels of Care and constitutes a key component of the operational guidance for paediatric inpatient wards being developed for national implementation of the Nurse Staffing Levels (Wales) Act 2016.

The Paediatric Welsh Levels of Care has been developed and tested over the past five years through widespread engagement with frontline nursing and management teams in paediatric inpatient wards throughout Wales. Set out below are descriptions of patients across five archetypal levels of care, from routine and simple to critical and unpredictable. These descriptions are broken down into typical patient needs, conditions and situations and the corresponding clinical assessments, interventions and tasks undertaken by nurses.

The purpose of this document is to provide nursing teams with the advice, guidance and definitions required to consistently assign individual patients to a level of care. The level of care is the principle data of the national acuity audits that take place every six months, in January and June. This data is collated and analysed to provide comparative information on the range of nurse staffing levels deployed on every participating paediatric inpatient ward in Wales.

Together with information on workload and the current deployment of staff this data is provided in feedback to operational staff via a tool known as the Visualiser.

The data on the acuity audits is then considered alongside comparative data related to the quality of care. Also considered is a professional narrative on the operational pressures that have influenced the care of patients and deployment of nursing staff during the audit period.



This evaluation is mandated in the Statutory Guidance (V2) 2021, referred to as the Triangulation, and is the method by which Nurse Staffing Levels are to be calculated.

This document is entitled the ‘first edition’ as the document will continue to develop and evolve. Further learning from the audit results and the operational process will be evaluated and incorporated into the concepts, methods and tools designed and developed through the Nurse Staffing Programme.

To support adoption of the Paediatric Welsh Levels of Care and to assist local leads in their preparations for implementation of the Act, the Nurse Staffing Programme provides workshops and master classes in each Health Board. The programme also provides a suite of supportive materials including training packs and templates and these alongside the masterclass sessions provide the opportunity for nursing staff to share learning, become confident in using the Paediatric Welsh Levels of Care and be able to understand and interpret the data and participate in the required triangulation.

Greg Dix
Executive Nurse Director
Cwm Taf Morgannwg Health Board

Introduction

This document describes the Paediatric Welsh Levels of Care, developed for use within paediatric inpatient areas in NHS Wales to assist nursing staff in measuring levels of patient acuity. This should be read in conjunction with the guidance on participating in the national acuity audits.

The Paediatric Welsh Levels of Care consists of 5 levels of acuity ranging from; level 5 where the patient is highly unstable and at risk, requiring an intense level of continuous nursing care on a 1:1 basis, down to level 1 where the patient's condition is stable and predictable, requiring routine nursing care.

This document explains how nurses can use the Paediatric Welsh Levels of Care to assign their patients into the right level of care, by providing descriptions of the types of typical patient at each level of care. These descriptions are broken down into categories with increasing specificity:

Lay Descriptors – describe in simple terms the typical condition of the patient and types of care
Clinical Descriptors – more detail including professional considerations at each level
Nursing Themes – technical detail about the condition and interventions required at each level

These descriptors were developed through detailed examination and iteration with a wide range of nursing staff from a number of disciplines. They are designed in such a way that the categories are coherent across the 5 levels of care, leading to a more consistent scoring of the right patient into the right level of care.

How to choose the right level of care

It is expected that for most patients, most of the time, the Lay Descriptors will be sufficient to assign an accurate level of care. The Lay Descriptors are given in detail on page 10, but are summarised as follows:

Level 5	**One to One Care** - the patient requires at least one to one continuous nursing supervision and observation for 24 hours a day
Level 4	**Urgent Care** - The patient is in a highly unstable and unpredictable condition either related to their primary problem or an exacerbation of other related factors.
Level 3	**Complex Care** - The patient may have a number of identified problems, some of which interact, making it more difficult to predict the outcome of any individual treatment
Level 2	**Care Pathways** - The patient has a clearly defined problem but there may be a small number of additional factors that affect how treatment is provided.
Level 1	**Routine Care** - The patient has a clearly identified problem, with minimal other complicating factors.

If the Lay Descriptors are insufficient, the nurse completing the acuity audit can refer to the Clinical Descriptors to assign the right level of care. If this once more proves insufficient, they can then refer

to the Nursing Themes Descriptors: Assessment & Observation; Respiration; Personal Care, Nutrition & Hydration; Cognition & Communication; and Medication.
It is possible for a patient to have needs in different levels of care in the Nursing Themes. These descriptors are meant as a guide and ultimately the nurse completing the score will need to aggregate this information and make a reasonable professional judgement, as to the level of care that best describes the patient in line with the requirements of the acuity audit. Clearly the patients' level of care will change, and the score will need to be regularly reviewed.

Frequently asked questions

What time do I capture the data?

The acuity audit needs to be completed once a day at 18:00

Can we include Assessment Units or High Dependency Units (HDU) in the audit?

Dedicated assessment units are typical high throughput areas and are not included in the data collection, they are however able to pilot an audit utilising a separate template which has been designed to capture data in high throughput areas. Where wards have assessment beds as part of their ward layout and the staffing for those beds is part of the workforce, these patients are captured as part of the acuity audit.

Where wards have a High Dependency Unit (HDU) as part of their ward layout and the staffing for the HDU is part of the workforce for that ward, these patients will need to be recorded as part of the audit. It is likely that patients who require high dependency will require a level of nursing intervention similar to that of level 4 or even level 5 patients. It is recommended that comments are added where a patient scores a level 4 or 5 to explain the nature or situation of patients at the highest levels of activity.

In wards that have a separate HDU with nurses specifically assigned to the unit, then these patients would not be counted as part of the audit, but they are able to collect data for their own information and use.

How can we capture ward attenders?

It is acknowledged that high volumes of ward attenders on paediatric inpatient wards can impact on the demands on nurse time, and similarly to patients on assessment units, ward attenders could be considered as similar high throughput, or short stay activity.

A bespoke piece of work is being undertaken to calculate the average nursing time that would be required to meet the care needs of these different categories of patient. Meanwhile, this information can be collected in the additional data, as it helps to give an indication of the demands put upon the ward and how this can impact on staffing. Furthermore, operational narrative can continue to be collected to explain this level of activity and help inform any future developments.

What happens when we need to record patients that are being specialled?

There will be occasions when patients require intensive and continuous nursing support to meet their needs and minimise risk. Patients who require 1:1 care for at least 12 hours a day from either a registered nurse or Health Care Support Worker (HCSW) should be classed as a level 4 patient due to the complexity, intensity and unpredictability of their health needs. Those patients' who require at least 1:1 care from either a registered nurse or HCSW for 24 hours a day, should be

classified as a level 5 patient. It is recommended that nurses completing the audit provide a rationale for why a patient requires specialling.

How do we record when nurses are loaned to other areas?

Within paediatric units, staff can be relocated or “loaned” to other areas for a variety of reasons. In these cases, the hours of deployed nurse staffing should only include those nursing staff members who are working on the ward where the data is being captured/recorded. Similarly, areas who receive additional staff from other wards should record the additional hours as part of their audit data as supplementary staff.

If staff are required to stay on after their shift has finished, those additional hours should be recorded as supplementary hours.

The purpose of the audit is to capture the deployed nursing hours (core and supplementary registered nurses and HCSW), so only the staff available to care for those patients on the ward scored in the acuity audit should be recorded.

What happens when patients are moved to other areas?

Similarly to the example above regarding staff loaned to other areas, if patients are moved to other wards, the patient is the responsibility of the receiving ward and therefore the ward should record the patient’s level of acuity as part of their audit data. The acuity audit needs to be completed once a day at 18:00.

How is the data analysed?

The paediatric work stream and the health boards receive support from analysts based within HEIW. The analysts extract the data from HCMS, collate it into a database and produce charts for each participating ward in a tool called the visualiser. This tool is made available to participants and presented to local leads for interpretation. Regular feedback sessions will be held to support paediatric wards in interpreting the data.

The visualiser, analytical tools and techniques are also shared to inform discussions and decisions at the paediatric operational work stream group.

There is no centralised interpretation or reporting or aggregation of the data to any person or organisation beyond the participating sites and wards. HEIW has no role in providing information or reporting to the Welsh Government for the data gathered within the All Wales Nurse Staffing Programme. Reporting on nurse staffing levels is the responsibility of participating health boards.

What happens if we have a level 4 or 5 patient after we have completed our acuity scoring?

It is recognised that none of the existing tools are currently capable of describing all the demands placed upon nursing time. The only way to do that would be to capture timings and scores for every patient every time their acuity changes. This, together with continuous data on staffing levels could provide us with the information to mathematically calculate the proportion of dedicated time in each hour available to each patient at each level of care.

At present we do not have the technology to enable this level of data capture and analysis. Meanwhile to support the development, we are using a number of statistical techniques to view patterns of activity over time. The fixed time of the audit each day help to facilitate this analysis and there is considerable evidence in the literature that supports the effectiveness of a real-time, clinical judgement.

The acuity audit is one of the elements of the triangulation methodology which is required to assess and agree the right nurse staffing level on each ward.

Can I score my patient if I have admitted them and they are waiting for a bed to become available?
Yes, score the patient as if he or she was in a bed if waiting for a bed to become available i.e. waiting for discharges.

How do I score children that are admitted on the day of surgery that require HDU or PIC care post operatively that are not allocated a bed on ward but require increased support and input?
Score them as usual using the Paediatric Welsh Levels of Care.

To complete the Acuity Audit, you score each patient under the care of the ward at the time of the audit.

Do not look back and estimate a score for the preceding 24 hours, this invalidates the method and the analysis, as the score is related to a patient not a bed. Any empty bed is an empty bed and therefore has no acuity. For each 24 hour period we need to capture: a sample of the levels of care of the patients; the amount of nursing time actually deployed by the ward during that 24 hours and a small amount of additional indicators as defined on the Audit Tool.

Lay Descriptors

The Lay Descriptors provide information on the general characteristics of a patient at each level of care

Level 5 One to one care	• Child/young person requires at least one to one continuous nursing supervision and observation for 24 hours a day • Child/young person is highly unstable, unpredictable, in immediate risk of harm or in serious clinical deterioration. • There may not be a clearly identified primary problem and the child/young person's condition, the care plan, observations, clinical review, decision making and the work to deliver care, may include a combination of any or all of the factors described in the lower levels of care.
Level 4 Urgent Care	• Child/young person is in a highly unstable and unpredictable condition either related to their primary problem or an exacerbation of other related factors. • The existing or longer-term plan of care may be postponed, while alternate urgent treatments and interventions are put in place to avoid any further deterioration, or protect the child/young person • Child/young person's condition may change rapidly and therefore high levels of observation and supervision are in place or provided on a continuous basis for the majority of the day. • There is regular senior clinical review. • The work to deliver care is multifaceted with a number of highly skilled interventions and technical procedures interspersed with numerous tasks to provide full personal care. • Child/young person's ability to participate in the ongoing care, and maintain their own safety and that of others, may be the primary factor in their ongoing instability and therefore, require actions and interventions beyond the normal routines of the nursing team.
Level 3 Complex Care	• Child/young person may have a number of identified problems, some of which interact with one and other making it more difficult to predict the outcome of any individual treatment. • Care plan is often multidisciplinary and broken up into smaller goals or steps with ongoing observation and regular review by the multidisciplinary team. • Child/young person may have a combination of treatments from more than one traditional pathway, or have phased treatment to overcome short term problems, while planning out care aimed at ongoing rehabilitation or long-term support. • Work to deliver care will have a number of skilled interventions and many tasks including close personal care for ordinary day to day activities and there is a risk of harm without this intimate support. • Outcome of treatment could vary considerably, and the child/young person may need close supervision and ongoing assessment from a range of staff to deal with problems as they arise and adapt the plan of care.
Level 2 Care Pathway	• Child/young person has a clearly defined problem but there may be a small number of additional factors that affect how treatment is provided. The care is fully planned out but there is a need for regular observation to look out for any variations or unplanned changes in the child/young person's condition.

	• The work to deliver care may be described on a detailed pathway designed to deliver a specific treatment, for a common problem. The work to deliver care will include several routine tasks planned together, some skilled interventions and ongoing clinical decision making, but remains within the normal routines of the nursing team.
Level 1 Routine Care	• Child/young person has a clearly identified problem, with minimal other complicating factors. • Care plan is straight forward, and ongoing observations may be scheduled but the outcome is predictable with very little variation from what is expected. • Work to deliver care is routine and there will be a number of tasks, including skilled interventions and are completely within the normal routines of the nursing team

Clinical Descriptors
The Clinical Descriptors provide an overview of the type of patient and the nursing interventions that are required to meet their needs at each level of care.

Level 5 One to one care	• Requiring a similar level of nursing care as a child/young person within a typical intensive care environment as the child/young person's condition is highly unpredictable • Rapid or irreversible deterioration from an unknown cause. • Requiring emergency intervention and highly intensive levels of nursing care on at least 1:1 for 24 hours a day • Deteriorating or compromised single organ failure • Child/young person at imminent risk of harm • Maintain and stabilise prior to urgent transfer
Level 4 Urgent Care	• Requiring similar level of nursing care as a child/young person within a typical high dependency environment, for example, a bed or bay dedicated to high risk patients • Child/young person requiring 1:2 care for the majority of the day • Requires highly skilled, proactive intervention to prevent the child/young person deteriorating or requires urgent therapeutic intervention due to a rapidly changing condition or ongoing instability • Extended post-operative care • Severe infection or Sepsis
Level 3 Complex Care	• Child/young person's condition may be stable but has the propensity to change quickly • Child/young person requires frequent interventions or close observation • Child/young person has complex needs, requiring varying degrees of support with majority of activities of daily living • Facilitating a complex discharge where it is the responsibility of the ward nurse • Immediate post-operative care of complex surgery
Level 2 Care Pathway	• Routine post-operative care • Child/young person is stable but requires regular monitoring • Child/young person may have a degree of cognitive impairment and or reduced level of understanding that requires ongoing support, reassurance or intervention • Child/young person's age and development mean that they may require ongoing support, reassurance or intervention
Level 1 Routine Care	• Child/young person is stable, and the care is routine with little variation • Child/young person has a small number of clearly defined needs • All activities within the normal routines of the ward for example elective medical or surgical admissions • Child/young persons who are ready for discharge but may require some therapy input

Nursing Theme 1
Assessment and observation

Level 5 One to one care	• 1:1 nursing care • Monitoring and supportive therapy for compromised or collapse of 1 or more organs or systems • Requires close and constant monitoring for a life-threatening condition or an immediate risk to life • Instability requiring continuous observation, for example cardiac monitoring, invasive pressure monitoring, neurological monitoring • Requires constant observations due to highly unstable and unpredictable condition • Awaiting transfer to PICU or PHDU area • End of life pathway • Child/young person requires a dedicated nurse throughout the shift to provide supervision and safeguarding management
Level 4 Urgent Care	• Emergency admissions requiring immediate therapeutic intervention • Child/young person requiring 1:2 care for 24 hours • Requires ongoing monitoring and observations 1 hourly due to unstable and unpredictable condition • Ongoing management of unstable observations • Fluctuating levels of consciousness • Multidisciplinary/complex communication issues for safeguarding
Level 3 Complex Care	• Neurological observations • Immediate post-operative management of complex surgery • Increased level of observation and therapeutic interventions • Complex discharge planning • Education and training for child/young person or family/carer that may/may not require competency completion • Full safeguarding investigations commenced
Level 2 Care Pathway	• Observations outside normal parameters and requiring escalation • Child/young person stable but requires monitoring and regular interventions. • Immediate Post-operative or post procedural care, up to 2-4 hourly observations • Initiation of safeguarding policy
Level 1 Routine Care	• Observations 4 hourly • Pre-operative care and assessments e.g. ECG monitoring, pre-operative bloods • Preparing simple discharges and families fully engaged • Child/young person awaiting discharge • No additional nursing requirements for safeguarding

Nursing Theme 2
Respiration

Level 5 One to one care	• Respiratory or CNS (Central Nervous System) depression or compromise requiring mechanical or invasive ventilation • Emergency or temporary tracheostomy requiring constant monitoring and 1:1 care • Unstable airway requiring constant monitoring and frequent intervention • Monitoring and interventions in immediate post cardiac or respiratory arrest • Child/young person requiring advanced respiratory and therapeutic support of multiple organs
Level 4 Urgent Care	• Until first tube change following new tracheostomy insertion or ongoing care of an unstable tracheostomy • Child/young person in acute respiratory distress requiring non-invasive ventilation or respiratory support using CPAP or BIPAP • NIPPY dependent patient with no carers present • Greater than 40% oxygen continuously RCPH (2014) via re breath mask to maintain oxygen saturations at an accepted agreed level • Moderate to severe work of breathing • Frequent de saturations on high flow oxygen • Babies who are having frequent apnoeas • Child/young person at risk of airway obstruction post operatively • Management of chest drain with suction • Frequent changes to BIPAP
Level 3 Complex Care	• New or increased requirement for more than 35% oxygen via Hudson mask to maintain oxygen saturations at an accepted agreed level • Moderate increased work of breathing • Child/young person requiring non-invasive ventilation or respiratory support requiring close observation for complications • Ongoing care of established BIPAP/ CPAP/NIPPY/High Flow • Ongoing care of chest drain • Child/young person requiring more frequent tracheostomy suction than their norm • High risk of aspiration or requires oropharyngeal suction
Level 2 Care Pathway	• Oxygen therapy less than 28% via nasal specs or Hudson mask to maintain oxygen saturations at an agreed accepted level • Mild increase to work of breathing • Regular chest physio e.g. 4 -6 hourly • Ongoing care of established or stable tracheostomy • Changes to ongoing oxygen therapy for patients on long term oxygen
Level 1 Routine Care	• Long term oxygen therapy • Normal work of breathing, respiratory rate etc. within normal parameters

Nursing Theme 3
Personal Care, Nutrition & Hydration

Level 5 One to One Care	• Totally dependent on healthcare professionals for all activities of daily living as unable to participate in own care and requires constant intervention
Level 4 Urgent Care	• Requires 2 or more staff for most activities of daily living. • Complex wound care interventions more than three times a day and more than one nurse to manage • Unaccompanied child/young person and is dependent on healthcare professional for all daily activities of living for most of the day • Complex fluid management i.e. fluid resuscitation
Level 3 Complex Care	• Wound management requiring more than one nurse or takes more than one hour to complete • Mobility or repositioning difficulties requiring the assistance of two people and/or the use of aids and/or requires pressure area care 2 hourly • Requires personal care lasting more than an hour at any one time • Intensive supervision with meals i.e. CAMHS patients • TPN (Total parenteral nutrition) • Hourly or continuous Naso gastric feeds • Strict fluid balance monitoring i.e. Renal patient
Level 2 Care Pathway	• Enabling, assistance or prompting with varying degrees of support for some activities of daily living. • Routine pressure area care, may have some identified risks • Requires assistance with feeding, oral or enteral • Daily wound dressings taking less than an hour to complete • Catheter care • Monitoring and recording fluid balance
Level 1 Routine Care	• Routine management of nutrition and hydration • Child/young person requiring occasional/minimal assistance with some activities of daily living • Self-caring, independent and mobile (with or without aids) • Simple wound management • Routine pressure area care/skin bundle • Parents/carers present and providing care

Nursing Theme 4
Cognition and Communication

Level 5 One to one care	• Continuous monitoring of neurological deficit due to risk of rapid deterioration • Child/young person at significant risk which is further compromised by their inability to initiate any communication e.g. post ictal • Violent and aggressive child/young person is at immediate and significant risk of serious harm to self and/or others requiring constant supervision from 1 or more staff for 24 hours a day • Aggressive/non-compliant families, risk to staff and/or other children/young persons or relatives on the ward • Risk of absconding • Child/young person has significant mental health problems, is highly unpredictable, requires constant supervision on a 1:1 basis or more • Child/young person is on a section of the Mental Health Act (1983) nursed with 1:1 RMN
Level 4 Urgent Care	• Child/young person with learning disabilities requiring supervision, support and frequent intervention for the majority of the day • Child/young person with enduring mental health problems requiring enhanced supervision, i.e. requiring 30-minute visual observation until CAMHS review • Children/young persons may be cohorted to provide continuous supervision at a ratio of 2:1 for the majority of the day • Child/young person or families/carers requiring enhanced psychological support due to diagnosis and/or pending transition to adult service or recent transfer from a critical care unit
Level 3 Complex Care	• Child/young person with cognition and communication difficulties experiencing increased anxiety and so requires additional support and reassurance • Child/young person with no family present with increased potential for harm • Increased levels of parental/familial support • Child/young person or families require education and training • Communication barriers between families and professionals i.e. language • Child/young person requiring supervision for most of the day
Level 2 Care Pathway	• Presence of cognitive impairment and/or reduced level of understanding that requires ongoing support, reassurance or intervention • Child/young person requiring supervision for some part of the day • Child/young person/parent exhibits mild challenging behaviour • Child/young person has been reviewed by CAMHS and deemed safe for discharge, awaiting medical confirmation for discharge
Level 1 Routine Care	• Child/young person compliant or has full capacity • Child/young person /family requires minimal support • Able to communicate needs • Child/young person has mental health issues that do not impact on their acute care • Family present for all or most of the day

Nursing Theme 5
Medication

Level 5 One to One care	• Treatment of hypovolaemia, haemorrhage, sepsis or neuro protection in a patient receiving constant intervention • Drug infusions that require continuous intensive monitoring, for example vasoactive drugs (amiodarone, inotropes)
Level 4 Urgent Care	• Pain management- intrathecal analgesia • Drug infusions that require continuous intensive monitoring i.e. potassium, magnesium, infliximab • PCA/NCA • Epidural analgesia • Drug challenges • Unstable child/young person receiving medication regime that requires frequent changes i.e. DKA • Complex medication regimes that require MDT input
Level 3 Complex Care	• Complex intravenous/sub cutaneous drug regimes, including those requiring prolonged preparatory administration or post administration care • Blood transfusion/ Blood products • Salbutamol, Atrovent, Magnesium nebulisers/inhalers (back to back nebulisers/inhalers) • Hourly inhalers • Medications administered via Naso jejunal tube
Level 2 Care Pathway	• Assistance taking medication • Patient requires support to take medication lasting more than 30 minutes • Multiple bolus intravenous antibiotics • Sub cutaneous medication including insulin infusion • Established central line or Portacath care i.e. flushes • Use of Entonox • Inhalers administration
Level 1 Routine Care	• Routine medication administration • Routine pain medication