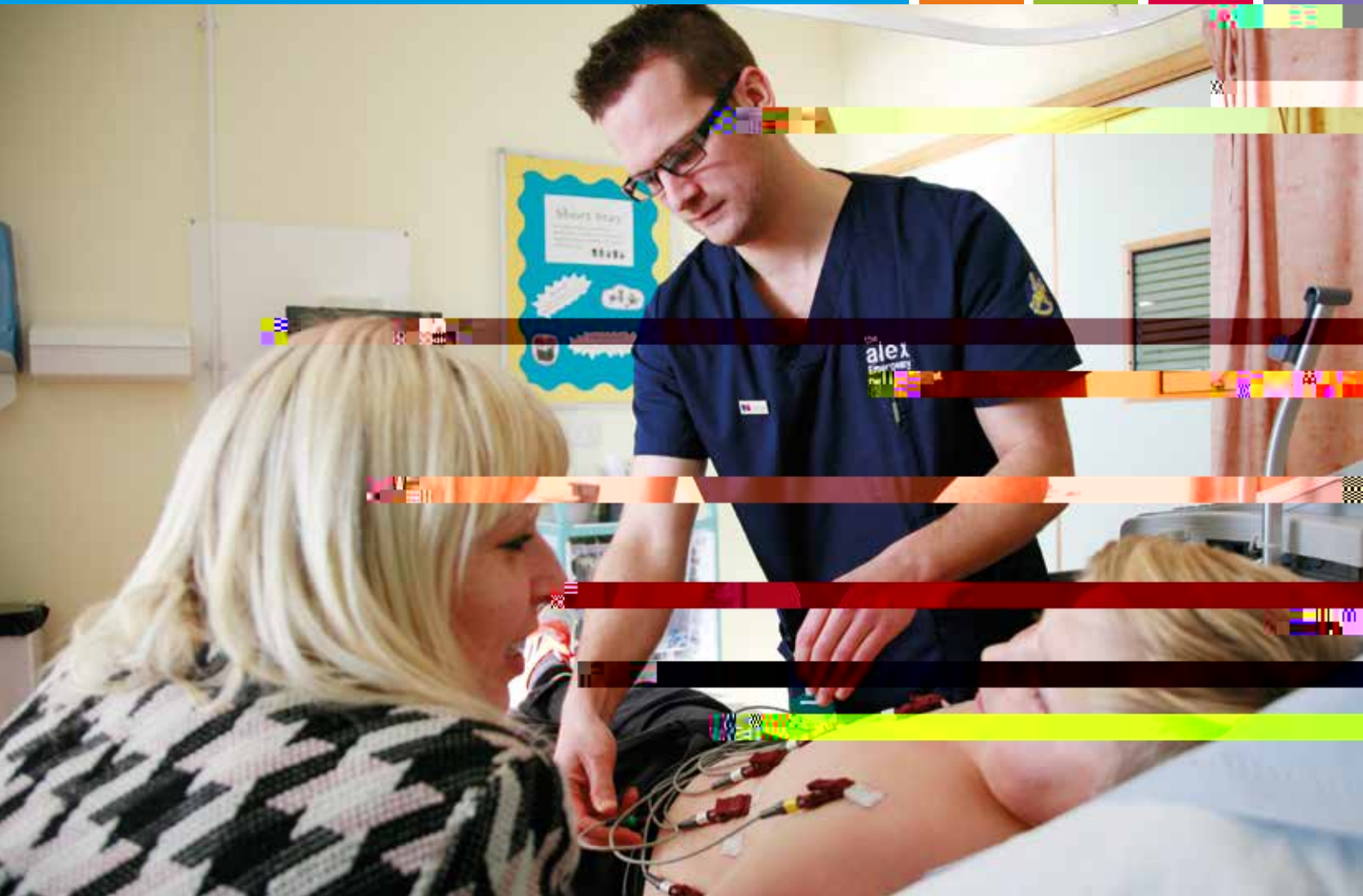


S M A M S I C R

CLINICAL PROFESSIONAL RESO RCE



P

This is an RCN practice guidance. Practice guidance are evidence-based consensus documents, used to guide decisions about



1. Introduction	4
2. Education and training	7
3. Teaching children, young people and parents/carers	8
4. Assessing and measuring vital signs	9
5. Record keeping	17
6. Medical devices and equipment	18
Appendix 1: APLS normal values	19
Additional resources	20
References	21



The monitoring and measurement of vital signs and clinical assessment are core essential skills for all health care practitioners working with infants, children and young people (Cook and Montgomery 2010). This guidance applies to professionals who work in acute care settings, as well as those who work in GP surgeries, walk-in clinics, telephone advice and triage services, schools and other community settings.

Good record keeping is essential for effective monitoring and interpretation of vital signs. The NMC (2015) *The Code: Professional Standards of Practice and Behaviour for Nurses and Midwives* tells nurses that they must: *'Keep clear and accurate records relevant to your practice'*. Good record keeping is essential to the provision of safe and effective care.

H

Each topic covered in this publication includes the standard itself, a set of practice criteria and information on underpinning literature.

The standards provide criteria for practitioners in achieving high quality nursing care. They will be of help in guiding local policies and procedures in relation to vital sign monitoring, performance improvement programmes and education programmes for registered nurses, nurses in training and health care assistants.

The practice criteria will provide the specific information to underpin the standards. They will help health care professionals in developing care plans and performing safely and effectively when assessing, measuring, monitoring and recording vital signs.

References to relevant supporting literature and further reading are also included. The reference list will help practitioners enhance their knowledge and understanding of vital signs.



E



1

2



3

4

5

S

S

When assessing, measuring and monitoring the infant, child or young person's vital signs, their psychological needs should be recognised and appropriate action taken.

Clear explanation is given to parents/carers and where possible, children and young people, concerning vital sign assessment and the data

Paediatrics and Child Health (RCPCH), 2016).

A systematic process is used when assessing, measuring and recording vital signs. In an acutely unwell child the ABCDE approach

Visual observation, palpation (touch), listening and communication, are used when assessing and measuring vital signs. This includes taking

England, 2015, RCPCH, 2016).

In a primary health care, palliative care or community setting, vital sign assessment, measurement, recording and monitoring is at an appropriate level to meet the needs of the infant,

H /

- Parents/carers/health play specialists can assist in distracting the child to reduce anxiety whilst the child/young person's heart rate/pulse is measured.
- An appropriately sized stethoscope should be used to auscultate the apex heart rate of children less than two years of age.
- The pulse of an older child is taken at the radial site at the wrist. Palpate the artery

- The cuff should be sufficient size to ensure overlap to cover 100% of the circumference of the arm and 2/3 of the length of the upper arm or leg. The bladder must cover 80% of the arm's circumference (but not more than 100%) and should be positioned over the artery from which the blood pressure will be
 - cleaned between patients must be used and the healthcare professional should document
 -
- 6(RW00)*

- fifteen minutes after the start of the transfusion assess, measure and record heart rate, blood pressure and temperature. If there is a deviation from the child's normal parameters respiration rate must also be assessed, measured and recorded
- if there are any signs or symptoms of a possible reaction assess, measure and record heart rate, blood pressure and temperature and respiratory rate and stop the infusion. Appropriate action must be taken according to local guidelines
- post-transfusion assess, measure and record heart rate, blood pressure and temperature not more than 60 minutes after the transfusion is completed
- inpatients must be observed over the next 24 hours and children who have been discharged given appropriate safety netting advice. The safety net should provide the parent or carer with verbal and or/written information on late symptoms and how and when to access further advice (Roland et al., 2014).
- a post-operative assessment should include the level of consciousness and level of pain
- a post-operative care plan should clearly state the frequency and duration for assessing and measuring vital signs. The frequency should vary in accordance with the child's condition or if any of the values fluctuate (Hockenberry and Wilson, 2014, Aylott, 2006)
- following a simple procedure – heart rate, respiratory rate and blood pressure should be recorded every 30 minutes for two hours, then hourly for two to four hours until the child is fully awake, eating and drinking. It can be good practice to include pulse oximetry and an assessment of capillary refill time. A temperature should be recorded once and at intervals of one, two or four hours according to the infant, child or young person's general condition. A further set of vital signs should be recorded prior to discharge
- in the case of day surgery where children may be discharged more quickly a full set of observations should be undertaken on discharge. This should include: temperature, pulse, respiratory rate, blood pressure and oxygen saturations

P -

All vital signs can be affected by surgery and anaesthesia and research suggests that monitoring of vital signs has traditionally been routine and regulated (Zeitzi and McCutcheon, 2006). Frequency of observations should therefore reflect the child's level of sickness or instability. Although there is no specific evidence base from which to determine best practice in recording vital signs post-operatively (Aylott, 2006), the following guidance will enhance practice in this area:

- in the recovery unit – heart rate, ECG, respiratory rate, oxygen saturation, non-invasive blood pressure and skin temperature should be recorded (Trigg and Mohammed, 2010) continually until they can maintain their own airway, have stable cardiovascular and respiratory systems and are awake and able to communicate (Association of Paediatric Anaesthetists of Great Britain and Ireland (AAGBI), 2013)
- after the immediate recovery period following adeno/tonsillectomy, pulse, respiratory rate, blood pressure and oxygen saturations should be recorded every 30 minutes for four hours, or more frequently if there is any evidence of bleeding.
- following complex procedures – in addition to monitoring blood pressure and temperature, continuous cardio-respiratory monitoring and pulse oximetry should be in place for a minimum of four hours, in the following circumstances: theatre time greater than six hours, significant fluid loss, under one year of age, physiological instability pre-operatively, physiological instability during

L

- is integral to assessing the acutely unwell child and should be recorded routinely (NICE, 2014). In the neurosurgical and neurological child conscious level should be assessed using an age appropriate Glasgow

the AVPU system is sufficient for all other children and young people.

- In children and young people with an altered level of consciousness, neurological observations should be undertaken and recorded on a half hourly basis until their

- Children and young people admitted to hospital with a head injury who have a

- half hourly for two hours
- then hourly for 4 hours
- then 2 hourly

• after the initial two hour period

- hourly

- hourly
- ou 005 BDC

•

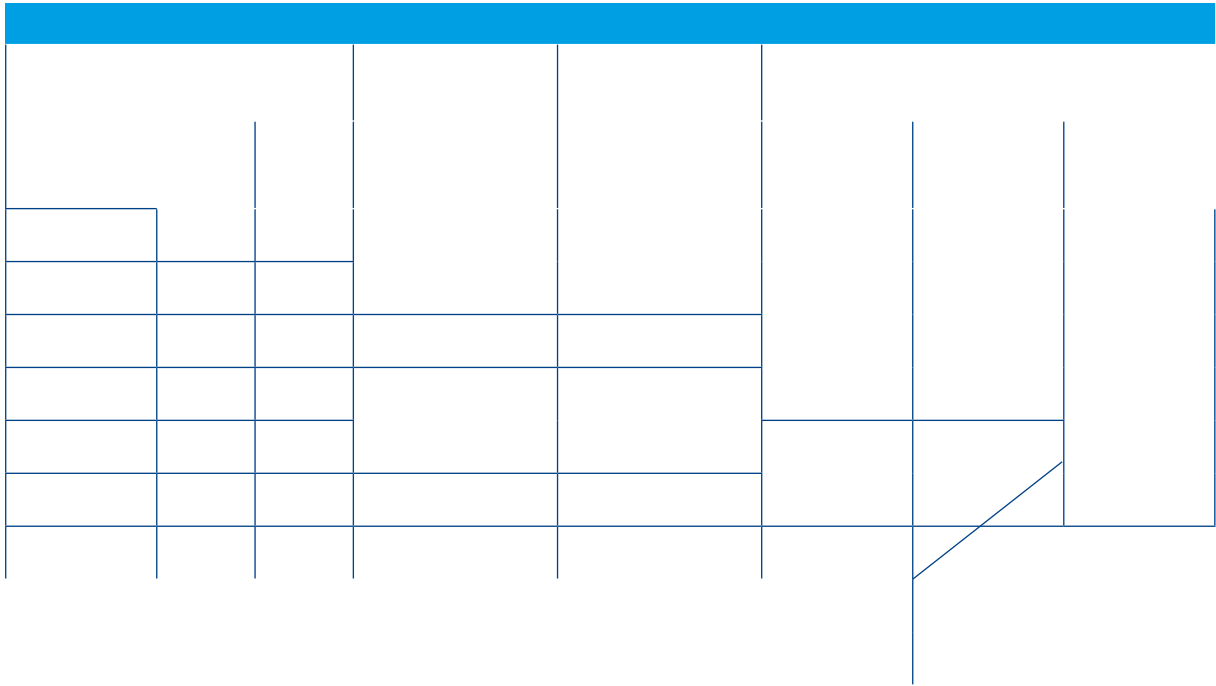
S

All medical devices must have a CE marking. This indicates that the product specification meets certain key criteria stipulated by European standards. However, it does not automatically guarantee that the device is either appropriate or configured for use with infants, children or young people or that it is appropriate for use in

A



APLS



Advanced Paediatric Life Support: A Practical Approach to Emergencies (APLS). 6th Edition. Wiley Blackwell.

Association of Paediatric Anaesthetists of Great Britain and Ireland (APAGBI) (2012) Good practice in post-operative and procedural pain management. *Pediatric anaesthesia*, 22,

Association of Paediatric Anaesthetists of Great Britain and Ireland (2013) *AAGBI Safety Guideline: Immediate Post Anaesthesia Recovery* 2013. *Anaesthesia*, 68: 288-97.

Aylott M (2006) Developing rigour in observation of the sick child. *Paediatric Nursing*. 18(8):38-44.

Blood Pressure Measurement with Electronic Blood Pressure Monitors.
at: www.bhsoc.org/files/8413/4390/7770/BP_Measurement_Poster_-_Electronic.pdf
(accessed 9 March 2017).

Blood Pressure Measurement with Manual Blood Pressure Monitors.
at: www.bhsoc.org/files/9013/4390/7747/BP_Measurement_Poster_-_Manual.pdf
(accessed 9 March 2017).

Child Growth Foundation (2012) *n55 (c)T.4 @Rou5 M2s6 (s)641 (n-4.6 (n)2.3 (t w)-8.3d7 (s)-17d 0.01 Tw 08 (h)0255[P]*

McCabe A, Duncan H, Heward Y (2009). Paediatric early warning systems: where do we go from here? *Paediatric Nursing*. 21(1):14-7.

England. Available at: www.england.nhs.uk/patientsafety/re-act (accessed 9 March 2017).

National Institute for Health and Care Excellence (2010) *Meningitis (bacterial) and meningococcal septicaemia in the under 16s: recognition, diagnosis and management*. NICE. Guideline.

Royal College of Nursing (2009) *The recognition and assessment of acute pain in children*, www.rcn.org.uk/publications (accessed 9 March 2017).

Royal College of Nursing (2010) *Restrictive physical intervention and therapeutic holding for children and young people*. Guidance for www.rcn.org.uk/publications (accessed 9 March 2017).

Royal College of Nursing (2014) *Delegating record keeping and countersigning records*.

Available at: www.rcn.org.uk/publications (accessed 9 March 2017).

Royal College of Nursing (2015) *Accountability and delegation A guide for the nursing team*, www.rcn.org.uk/publications (accessed 9 March 2017).

Royal College of Nursing (2017) *The Standards for the weighting of infants, children and young people in the acute health care setting*, www.rcn.org.uk/publications (accessed 11 May 2017).

Royal College of Paediatrics and Child Health (2016) *A safe system framework for recognising and responding to children at risk of deterioration* www.rcpch.ac.uk/safe-system-framework (accessed 9 March 2017).

Trigg E and Mohammed TA (Eds) (2010) *Practices in Children's Nursing*. 3rd edition.

Managing pain in children: a clinical guide for nurses and healthcare Professionals, 2nd edition. Oxford: Wiley Blackwell.

to changing the culture of caring for the acutely unwell patient at a large UK teaching hospital: A service improvement focus on Early Warning *Intensive Critical Care Nursing* 31(2):106-15.

World Health Organization (2008) *Training Course on Child Growth Assessment: WHO Child Growth Standards. Measuring a Child's Growth*. Geneva: WHO. Available at: www.who.int/childgrowth/training/module_b_measuring_growth.pdf (accessed 9 March 2017).

Zeitz K and McCutcheon H (2006) Observations and vital signs: ritual or vital for the monitoring of postoperative patients? *Applied Nursing Research*, 19: 204-211.

~> C «>

C «>

C D
. . . . /
/ / >>> //

<> >> >> >> < G «>

∫ C / >>>
G / >>

/ ∫ >> / >>>>

∫ >> E >> ∫ >>
<> >> >> // >>
I B >> 7 . . / >> / >>