BETWEEN THE FLAGS - CLINICAL EMERGENCY RESPONSE SYSTEM - SCHN

PROCEDURE ©

DOCUMENT SUMMARY/KEY POINTS

- The Between the Flags (BTF) program has been implemented in all public health care facilities throughout NSW, to support clinical staff to better recognise and manage patients who are clinically deteriorating.
- A range of NSW Health Standard Observation Charts incorporating a colour coded 'track and trigger' tool have been implemented as part of this program including the Standard Paediatric Observation Chart (SPOC) and the Standard Adult General Observation (SAGO) chart. The appropriate chart is automatically selected within PowerChart.
- If a patient's observations are documented in either the blue, yellow or red zone on the Standard Observation Chart, care must be escalated as per the Clinical Emergency Response System (CERS) protocol. The CERS protocol is a facility specific process for escalation of care and the response to be activated as a result of patients' clinical deterioration. Patients in the Emergency Department (ED), Intensive Care Unit (ICU) and Neonatal intensive Care Unit (NICU) have their care escalated as per departmental protocols.
- When the CERS is activated, this must be documented in the patients' electronic medical record (eMR) via PowerChart.
- A patient and family model for initiating escalations in care has been implemented throughout all general wards. It is an extension of the BTF program and aims to empower families to engage with staff if they notice a worrying change in their child's clinical condition, and to independently activate a Rapid Response if they are seriously

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concerned.

- The BTF program is supported by a mandatory education program. The education program includes aspects of clinical assessment of the patient, the CERS protocol and appropriate care to provide while waiting for assistance.
- The site specific CERS Committees provide the governance structure for the overarching BTF program including processes for escalation of care for patients who are clinically deteriorating and/or require resuscitation, as outlined in the NSW Health Policy Directive 'Recognition and Management of Patients Who Are Clinically Deteriorating' (PD213_049). Compliance with this policy is mandatory.

CHANGE SUMMARY

- Creation of a Network document incorporating site specific procedures where appropriate.
- Incorporation of the electronic Standard Observation Charts in PowerChart.
- Inclusion of the SAGO chart for use across the Network for patients 16 years and over.
- Inclusion of the Patient and Family escalation of care process for Sydney Children's Hospital.

READ ACKNOWLEDGEMENT

Training/Assessment Required

- All clinical staff and students must complete 'BTF- Tier 1: Awareness, Charts and Escalation' and 'BTF- Tier 2: Communication, Teamwork and Documentation' e-learning via HETI online, every five years.
- All Nursing staff involved in direct patient care must complete 'DETECT Junior' e-learning and practical components.
- Members of the Rapid Response Team are required to have advanced clinical and resuscitation skills, for example Advanced Life Support.

Read Acknowledgement

- All Medical, Nursing and Allied Health staff and students (including VMO's) working in clinical areas should read and acknowledge this document.

Discretionary

- Local managers to determine which Medical, Nursing and Allied Health staff and students working in non-clinical areas should read and acknowledge this document.

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1 Purpose

The purpose of this document is to describe the Between the Flags (BTF) and Patient and Family Activated Rapid Response programs, and associated procedures for recognising and responding to a deteriorating patient at the Sydney Children's Hospitals Network (SCHN): The Children's Hospital at Westmead (CHW) and Sydney Children's Hospital, Randwick (SCH).

A deteriorating patient refers to any patient whose clinical condition is felt to be worsening; such deterioration will often be accompanied by alterations in one or several of their clinical observations outside of the normal range for their age. The purpose of this policy is to describe how the NSW PD2013_049 Recognition and Management of Patients who are Clinically Deteriorating applies to the SCHN. References to the NSW PD2013_049 will be made throughout this document using section/page numbers and must be read in conjunction with this policy.

2 Background

- Failure to recognise and appropriately manage deteriorating patients has been identified as a contributing factor in many adverse events in hospitals and health care organisations around the world.
- The BTF program has been designed by the Clinical Excellence Commission (CEC) in consultation with clinical experts to establish a 'safety net' that reduces the risks of patients deteriorating unnoticed and ensures they receive appropriate care in response if they do.
- The BTF program and is based on investigation of adverse events involving failure to identify and respond to patients who are clinically deteriorating and has been implemented in all public health care facilities in NSW. The program incorporates a track and trigger tool and uses the analogy of Surf Life Saving Australia's lifeguards and life savers, who keep people safe by ensuring they are under close observation and rapidly rescue them should something go wrong.
- As a part of this program, a range of NSW Health Standard Observation Charts have been implemented to support early identification of patients at risk of and/or clinically deteriorating.
- Facility specific Clinical Emergency Response System (CERS) protocols outline the process for escalating care of deteriorating patients.
- The five key elements of the BTF program are:
    i. A clear governance structure
    ii. Standard Observation Charts incorporating criteria for Clinical Review and Rapid Response
    iii. Facility specific CERS protocols

iv. Education and training

v. Indicators for measuring performance

For additional information refer to Section 1 of the NSW PD2013_0491

3 Governance - Clinical Emergency Response System (CERS) Committee

- The site specific multidisciplinary CERS Committees provides the governance structure for the BTF program including clear processes for escalation of care for patients who are clinically deteriorating and/ or require resuscitation.
- The Committee provides a forum to review and discuss all urgent and strategic issues relating to the CERS and resuscitation at SCHN, in accordance with the NSW Health Policy Directive 'Recognition and Management of Patients who are Clinically Deteriorating'
- The Committee reports to site specific Safety and Quality Improvement Committee's (SQIC) and the Ministry of Health on Key Performance Indicators (KPIs) on a monthly basis.
- The Director of Clinical Governance and Medical Administration (DCG) provides Executive sponsorship for the Committee's and the overall BTF program.

4 NSW Health Standard Observation Charts

4.1 Standard Observation Charts

Standard Observation Charts are located within PowerChart and observations are documented electronically. There are six age specific Standard Observation Charts available. The correct chart for the patient's age is automatically loaded to the 'BTF Observation Chart' Tab in PowerChart.

- All Standard Observation Charts incorporate colour coded zones which are part of a 'track and trigger' tool designed to alert to early signs of clinical deterioration and the action required when a physiological threshold is breached.
- Clinical observations are recorded graphically so that trends can be 'tracked' visually. The coloured zones are the physiological thresholds ('trigger' zones) beyond which a standard set of actions are required if a patient's observations breach this threshold.
- Standard Observation Charts incorporate three colour coded zones:
  - The *blue zone* represents criteria for increased patient observation and surveillance (SAGO charts do not have a blue zone)

- The *yellow zone* represents criteria for which a Clinical Review should be considered
- The *red zone* represents criteria for which a Rapid Response call is required

- Additional criteria for activating a Clinical Review or Rapid Response call can be accessed via the Additional Criteria tab within the BTF Observation Chart.

4.1.1 Supplementary Observation Charts

Other NSW Health, CHW, SCH and/or SCHN approved charts that are designed to monitor clinical condition, such as neurological and neurovascular observations, should be used in collaboration with the Standard Observation Charts to assess the patients overall clinical status. Some of these charts will be available electronically and others will remain paper based until full integration into the electronic domain is achieved.

4.2 Monitoring Observations

- Monitoring observations is an essential component of patient care in order to identify early signs of clinical deterioration, assess treatment efficacy and detect procedural complications.
- All inpatients must have their observations recorded in the BTF Observation Chart at a frequency appropriate to clinical need or at the minimum standard frequency.
- Observations must be recorded at the time they are taken.

4.2.1 Special Considerations

Emergency Department (ED)

The Paediatric General Neurological Assessment (Glasgow Coma Scale) must be used to assess level of consciousness in the ED rather than Alert, Verbal, Pain and Unconscious (AVPU). All patients must have at least one assessment completed and additional as clinically indicated.

Intensive Care Unit (ICU)

Patients in the Intensive Care Unit (ICU) and the Grace Centre for Newborn Care receive closer monitoring and surveillance and do not require observations to be recorded on the BTF Observation Chart until they are ready for transfer to a general ward or an external facility. At least one set of observations must be documented prior to transfer.

Resuscitation and Critical Events

The BTF Observation Chart is not for use during resuscitation or critical events. The paper based State wide Paediatric Ward Resuscitation Form or Paediatric Emergency Resuscitation Form should be used.

4.3 Minimum observation requirements

- In the absence of a valid Variation to Frequency of Observations order, all patients must have a complete set of observations conducted at least six times per day, at four hourly intervals. The frequency of observations should be increased as indicated by the patient's condition, treatment specific practice guidelines/protocols and clinical judgment of the clinicians, but may not be decreased below the minimum frequency unless there is a documented Variation to Frequency of Observations order.
- Observations must also be conducted on all patients:
  - On admission to the ward
  - Prior to and after transfer from one ward or procedural area to another
  - Prior to and after transfer from ED and ICU.
- A full set of observations includes:
  - Respiratory rate
  - Respiratory distress
  - Oxygen saturation
  - Heart rate
  - Blood pressure - required at least once per admission then as clinically appropriate
  - Capillary refill
  - Level of consciousness (AVPU)
  - Pain score, and
  - Temperature.
- AVPU (Alert, Verbal, Pain, Unresponsive) is a tool for rapid assessment of level of consciousness (alertness and arousal). If a more detailed neurological assessment is required, an age appropriate Glasgow Coma Scale (GCS) score should be obtained.
- Abnormal blood pressure readings that have been measured on an automated machine should be checked manually.

Minimum observation requirements for patients admitted to the child and adolescent mental health service

The child and adolescent inpatient mental health service (Hall Ward and C3SW - Saunders Unit) is classified as a designated acute psychiatric unit and as such patients in this ward require a complete set of observations three times a day at eight hourly intervals for the first 48 hours and then daily thereafter

4.3.1 Varying the frequency of observations

- Variations to the frequency of observations may be made based on a patient's clinical condition and health care requirements.
- Decreasing the frequency of observations from the minimum required may only be performed if it is ordered by a Medical Officer via the 'ACC/Vary Freq.' button in the BTF Observation Chart. Any prescriptions varying the frequency of observations must be made in consultation with the Attending Medical Officer (AMO).

- Any clinician may increase in the frequency of observations as indicated by a patient's clinical condition. A variation to frequency of observations order is not required when increasing the frequency.
- Orders varying the minimum frequency should be re-evaluated if there is a change in clinical condition and at all times clinicians should use their clinical judgement regarding the frequency and timing of observations. Unstable patients may need frequent or continual assessment of observations until they are reviewed and stabilised.
- The medical officer prescribing the Variation to Frequency of Observations must be logged into PowerChart using their own login when completing the order.

5 Clinical Emergency Response System (CERS)

- The CERS is a clearly defined process for escalation of care and the response required for patients identified as clinically deteriorating. If a patient's observations are graphed in the blue, yellow or red zone on the BTF Observation Chart, a pop-up alert will be activated and care must be escalated as per the CERS protocol (Appendices 1 and 2).

If a pop-up alert appears, you MUST select 'Immediately' from the re-alert options. The 'After 15 minutes' and 'After 30 minutes' re-alerts MUST not be selected. The exception is for the first set of observations in Post Anaesthetic Care Unit/Post Anaesthetic Recovery Unit following transfer from the Operating Theatre. For this first set of observations only, any of the re-alert options can be selected.

- Patients in the ED, ICU, theatres and in Post Anaesthetic Care Unit/Post Anaesthetic Recovery Unit have access to closer surveillance and higher level care, and as such, care is escalated as per existing departmental protocols.

Escalation of care should also occur when clinical deterioration occurs, other than that identified by the BTF Observation Chart, or where sound clinical judgement would suggest that escalation is in the best interest of the patient.

- For patient with an active Allow a Natural Death / Resuscitation Plan – Paediatric, refer to the End of Life Care Section

5.1 Earlier escalation of patients at risk

Earlier escalation should be considered for the following patients as they are particularly vulnerable to physiological instability and therefore are at a greater risk of rapid deterioration:

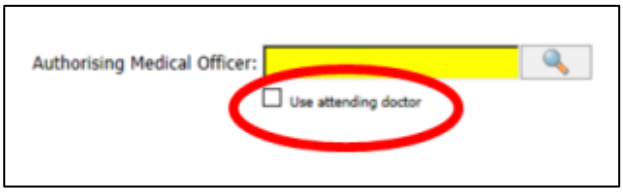
- Preterm/ neonates - outside the ICU environment
- Patients less than 3 months of age
- Patients with chronic or complex conditions
- Post-operative patients
- Patients with pre-existing cardiac or respiratory conditions
- Patients receiving parental opioids

5.2 Ordering Alterations to Calling Criteria (ACC)

- Calling criteria thresholds (i.e. coloured zones) for Clinical Review and Rapid Response may be altered up or down, to better reflect individual patients usual and/or expected clinical condition.
- Alterations to calling criteria must be prescribed by a medical officer via the 'ACC/Vary Freq.' button in the BTF Observation Chart. Any prescriptions altering the calling criteria must be made in consultation with the Attending Medical Officer (AMO).
- The medical officer prescribing the ACC must be logged into PowerChart using their own login when completing the order.
- A clear rationale for the ACC must be documented as part of the order.

Alterations to red zone calling criterion should be undertaken with great caution. Red zone calling criterions are late signs of deterioration and may indicate acute on chronic changes.

- The following clinicians are able to order alterations to calling criteria:
  - Admitting Medical Officer (AMO)
  - A treating Medical Officer (MO) in consultation with the AMO
  - A member of the PICU Outreach Team (CHW only)
- The ***Authorising*** Medical Officer in the ACC/Vary Freq. form refers to the ***Admitting*** Medical Officer and when the 'Use attending doctor' check box is selected, this is YOUR confirmation that you have discussed the ACC order with the ***Admitting*** Medical Officer.



- An ACC is valid for a maximum of 48 hours. It is recognised that the instructions on the SAGO chart identify that the order is valid for a maximum 72 hours, however the expectation at SCHN is that a maximum period of 48 hours will be observed.
- At all times staff should use their clinical judgement and re-evaluate the order and/or escalate care if there is a change in a patient's clinical condition.
- At the end of the ACC review period, the patient is to be assessed by the treating team to determine if the ACC is to be *reviewed with no change* or reverted back to *standard calling criteria*.

5.2.1 Non acute changes in physiological parameters

- Where a patient's abnormal observations are in fact normal for that individual and do not reflect an acute deterioration in clinical condition, it may be appropriate to alter the calling criteria. For example:

- An infant with cyanotic congenital heart disease whose normal oxygen saturation level is significantly lower than healthy infants
- A young, fit adolescent with a resting heart rate that is normally low for them

- Clinicians should assess the patient and obtain a thorough history, in order to identify possible effects of a chronic disease/diagnosis that would be expected to effect the patient's clinical observations.

5.2.2 Peri-procedural changes in physiological parameters

- Where a patient's abnormal observations do reflect a change in normal status, but active treatment measures have been initiated, it may be appropriate to alter the calling criteria as long as there is a plan in place for further review. For example:
  - A normal physiological change post-surgery and influenced by the effects of anaesthetic may indicate a change in calling criteria for 4 hours post operatively
  - A child receiving regular salbutamol therapy with an expected increased heart rate during the treatment regime

Alterations to calling criteria in peri-procedural patients should be made with caution, being aware that the patient may actually be deteriorating.

5.2.3 End of life care

- Where a patient's abnormal observations reflect deterioration in clinical condition but escalation of care is not required, the calling criteria and/or frequency of observations should be ordered via the 'ACC/Vary Freq.' button in the BTF Observation Chart. This should reflect the patient's management plan as documented in the Allow Natural Death (AND)/Resuscitation Plan – Paediatric. In the absence of a documented variance on the BTF Observation Chart, care must be escalated as per the CERS escalation process.
- In circumstances where cardiopulmonary arrest or death is considered a likely possibility in a child with a known condition, treatment decisions should be discussed with the family and outcomes documented on the AND/Resuscitation Plan - Paediatric form.

5.3 Escalations in Care

5.3.1 Clinical Review

- If one or more yellow zone observations or additional criteria are breached, interventions should be put in place to reverse and/or halt the deterioration. If the patient's clinical condition does not stabilise and/or staff or family are concerned, care should be escalated to a Clinical Review. A Clinical Review must be attended by the medical officer/team within 30 minutes of the request being made.
- If any 3 or more yellow zone criteria are met during a single assessment of clinical observations, this must be escalated to a Rapid Response.
- If the patient's observations enter the red zone whilst awaiting a Clinical Review, a Rapid Response must be activated.

- The patient's family should be informed when a Clinical Review has been activated.

Refer to Appendix 1 and 2 for facility specific CERS Posters

Refer to Appendix 3 for the Mandatory Responders List

5.3.2 Rapid Response

- If one or more red zone observations or additional criteria are breached, staff must initiate appropriate clinical care and activate a Rapid Response. A Rapid Response must be attended by the medical officer/team within 5 minutes of the request being made.
- The medical registrar is responsible for notifying the AMO of any Rapid Response calls for their patients, including subsequent treatment instigated and all outcomes of treatment as soon as possible.
- The patient's family should be informed when a Rapid Response has been activated.
- All patients requiring a Rapid Response during the previous shift should be tabled at the hospital wide evening to night shift handover and individual interdepartmental handovers.

Refer to Appendix 1 and 2 for facility specific CERS Posters

Refer to Appendix 3 for the Mandatory Responders List

5.3.3 Simultaneous Rapid Response calls

In the event that a Rapid Response call is activated while another is still in progress, the following response is required:

- The Rapid Response Team attending to the initial call will conduct a clinical assessment and then negotiate who is the most appropriate person to remain with the patient (usually the medical team involved in the patient's care).
- The remaining available member/s of the Rapid Response Team will attend the second call.

5.3.4 Code Blue/Arrest Call

- A Code Blue/Arrest Call must be activated for any patient in an established or imminent arrest state. Any staff member can activate a Code Blue/Arrest Call for significant clinical concern.
- The Code Blue/Arrest Team will respond to all emergency calls and is made up of various expert clinicians including intensive care.
- **At SCH:** All paediatric Code Blue Calls are responded to by CICU for the Randwick Hospitals Campus. This includes: Prince of Wales Hospital (POWH), The Royal Hospital for Women and Prince of Wales Private Hospital. For all paediatric Code Blue calls occurring within POWH, including the Bright Alliance Building, the adult Code Blue Team will attend until the paediatric team has arrived to assume care.

- Refer to site specific guidelines for further information:
  - CHW: Cardiopulmonary Resuscitation and Equipment – CHW
  - SCH: Paediatric Basic Life Support (BLS) for Healthcare Rescuers – SCH

Refer to Appendix 1 and 2 for facility specific CERS Posters

5.3.5 Medical Officer's roles and responsibilities

- The medical officer/team must conduct a patient assessment, review the management plan and implement interventions to reverse or halt the clinical deterioration. Assistance from more senior staff, in a timely manner, should be sought if required.
- The admitting team Registrar or After Hours Registrar assumes the Team Leader role and is responsible for ensuring there is an agreed management plan before leaving the patient.
- The Registrar is responsible for notifying the AMO of any reviews on their patients, including subsequent treatment instigated and all outcomes of treatment as soon as practical and/or as clinically indicated. The primary responsibility for the clinical care of the patient rests with the Admitting Medical Officer (AMO).

Prompt and effective review is an essential element in managing patients who are clinically deteriorating.

5.3.6 Documenting Reviews

- All Clinical Review, Rapid Responses and Code Blue/Arrest Calls must be documented in the patient's medical record in PowerChart using the appropriate Adhoc Form:
  - **Clinical Review**

    CHW: Clinical Review

    SCH: Clinical Review (Yellow Zone)
  - **Rapid Response**

    CHW: Rapid Response

    SCH: Rapid Response Team (Red Zone)
  - **Code Blue/Arrest Call**

    CHW: Rapid Response

    SCH: Rapid Response Team (Red Zone)

    Note: The NSW Health paper based Paediatric Resuscitation form should be used in addition to the above form as required.
- Documentation on the above forms is a mandatory requirement and no additional documentation is necessary.

5.3.7 Computer Downtime

- If PowerChart is unavailable to document escalations in care, the paper based 'Clinical Review Downtime Form' or 'Rapid Response Downtime Form' should be used to record this information.
- Clinical Review and Rapid Response Downtime Forms can be accessed from:
  - The Disaster Kit/Downtime folder
  - Via the eMR/Forms on the SCHN Intranet Page

Paper based Standard Observation Charts (for downtime use only)

Paper versions of the Standard Observation Charts and other related forms are available in circumstances where there is no access to the electronic medical record (e.g. eMR downtime). Charts available for use during downtime includes:

- Five Standard Paediatric Observation Charts (SPOCs)
  - Under 3 months
  - 3-12 months
  - 1-4 years
  - 5-11 years
  - 12 years and over (for patients up to 15 years old)
- Five Paediatric Emergency Department Observation Charts (PEDOCs)
  - Under 3 months
  - 3-12 months
  - 1-4 years
  - 5-11 years
  - 12 years and over
- Standard Adult General Observation Chart (SAGO) (for patients 16 years and over)
- Adult Emergency Department Observation Chart (ED SAGO) (for patients 16 years and over)
- Clinical Review Form
- Rapid Response Form
- HHFNPO_2 – Equipment Chart [Humidified High Flow Nasal Prong Oxygen]
- Paediatric Neurological Observation Form

6 Patient and Family Activated Rapid Response Calls

- Patient and Family Activated Rapid Response Calls are a patient and family-centred approach to escalating care which acknowledges that parents and carers often recognise subtle changes in their child's condition even before it becomes clinically evident. The Patient and Family Activated Rapid Response Call model is a graded approach to patient and family activated escalation. See Appendices 6 and 7 for the facility specific escalation posters for patients and families. The Clinical Governance Unit (CGU) will follow up with the family and staff following a patient/family activated Rapid Response call.
- If a family member or carer requests a Clinical Review or Rapid Response, nursing staff must activate this request in the same way as they would a staff activated review. The Registrar is required to respond as they would for a staff activated call within the specified timeframe.
- Patients and families can activate a Rapid Response call independently and are supported to do so. Responders will be notified by page when the call is a patient or family activated Rapid Response call.

7 Intensive Care Unit Services

Admissions to the intensive care unit are a significant event for the patient, the family and health care team. The Intensive Care Units provide assessment, treatment, management and support for patients outside of the intensive care environment. Any nurse or doctor can contact the ICU teams if they are concerned about a patient. The AMO should be contacted when considering and/or requesting ICU services.

For information on the intensive care outreach service and review processes refer to:

Appendix 4- CHW

Appendix 5- SCH

The teams can be contacted on the following AFTER reviewing the process in the Appendices:

- **CHW PICU Outreach Service**

  Pager 6664

- **SCH CICU Consult Line**

  0484 609 156

An ICU review is a request for additional expertise and support, rather than a request for an ICU bed. Every effort will be made to keep the patient on the ward as along as it is safe to do so.

7.1 Transfer to ICU - Patient Transfer process

- Patients must not be transferred between wards, to home or other health care facilities when clinical judgment has identified the need for a Clinical Review or, the patient's clinical observations indicate the need for a Rapid Response (unless as part of the escalation of care process).
- If following a Clinical Review or Rapid Response the patient requires transfer to another location for continued management, this should occur in consultation.
  - For patients being transferred from one ward area to another (including ICU and Grace Centre for Newborn Care), this includes consultation with the AMO, Patient Flow Manager/After Hours Nurse Manager and Nurse Unit Manager/Team Leader from both ward areas.
  - For patients being transferred from Post Anaesthetic Care Unit/Post Anaesthetic Recovery Unit to a ward area, this includes consultation with the Anaesthetist and Nurse Unit Manager/Team Leader of Post Anaesthetic Care Unit/Post Anaesthetic Recovery Unit and the receiving ward.
  - For patients being transferred home, this includes consultation with the AMO.

8 Education

The BTF program is supported by a specifically designed education program for all clinicians involved in the detection and management of patients at risk of clinical deterioration.

Mandatory elements

The education program includes an introduction to the BTF program, use of the Standard Observation Charts, CERS protocols, clinical assessment, basic life support and advanced life support. The education program is structured in three tiers and completion of each tier is a mandatory requirement for clinicians identified in the target audience.

- Tier 1
  - Awareness, charts and Escalation
- Tier 2
  - Communication, Teamwork and Documentation
  - Systematic Assessment – Paediatric
  - Case Studies – Paediatric
  - Between the Flags- DETECT Junior
- Tier 3
  - Resus4Kids (or equivalent)
  - Advanced clinical and resuscitation skills, for example Advanced Paediatric Life Support.

Elements of the education program have been included in the 'pre-employment education program', and Nursing and Medical Orientation programs. Regular education sessions and updates are also provided periodically throughout the year and clinicians are encouraged to attend.

9 Evaluation

- All public health care facilities are required to collect and monitor data to assess performance and outcomes of the BTF program. At SCHN data is extracted from PowerChart for Clinical Review, Rapid Response, PICU Outreach (at CHW) and Arrest/Code Blue call activations.
- At CHW, ward specific activity reports are generated from the data each month and includes details of all Clinical Review and Rapid Response calls. These reports are automatically generated and are sent to the main printer on the corresponding ward on the 1st day of each month, for the preceding month. At SCH, a weekly calls report is sent to the Director of Nursing, Nursing Unit Managers/Nurse Managers, Clinical Program Directors and Clinical Nurse Educators.
- At CHW, a 'shift summary' report is automatically generated for the After Hours Nurse Mangers to support identification and management of at risk and/or deteriorating patients after hours. These reports are automatically generated and sent to the printer in the Nursing Liaison Office at 3pm and 9pm each day.
- Hospital wide activity data is reviewed by the facility specific CERS Committees monthly.
- The CERS Committee provides KPI's to the Safety and Improvement Committee monthly.
- The following Key performance Indicators (KPI's) for SCHN are collated by the CGU and submitted to the Ministry of Health monthly:
  - Number of Rapid Responses per 1000 admissions
  - Number of cardiorespiratory arrests per 1000 admissions
- All inpatient units are expected to participate in regular audits of the Standard Observation Chart to ensure compliance with monitoring of observations and the escalation of care process as per the CERS protocol.
- Any incidents relating to a Standard Observation Chart and/or escalations in care must be documented on an incident notification form, in the Incident Information's Management System (IIMS)

10 Additional Resources and Information

10.1 Related intranet/ websites

- Clinical Excellence Commission – Between the Flags:

http://www.cec.health.nsw.gov.au/patient-safety-programs/adult-patient-safety/between-the-flags

- SCHN Clinical Emergency Response Systems Intranet Page

10.2 Abbreviations

- **AHNM** - After Hours Nurse Manager
- **AMO** - Admitting Medical Officer
- **AVPU**- Alert, verbal, Pain, Unresponsive
- **BTF** - Between the Flags
- **CEC** - Clinical Excellence Commission
- **CERS** - Clinical Emergency Response Systems
- **CHW** – The Children's Hospital Westmead
- **CICU** – Children's Intensive Care Unit (SCH)
- **IIMS** - Incident Information Management System
- **KPIs** - Key Performance Indicators
- **MO** - Medical Officer
- **PEDOC**- Paediatric Emergency Department Observation Chart
- **PICU** - Paediatric Intensive Care Unit (CHW)
- **RRT** - Rapid Response Team
- **SAGO** – Standard Adult General Observation chart
- **SCH** - Sydney Children's Hospital
- **SCHN** - Sydney Children's Hospitals Network
- **SPOC** - Standard Paediatric Observation Chart
- **VMO** – Visiting Medical Officer

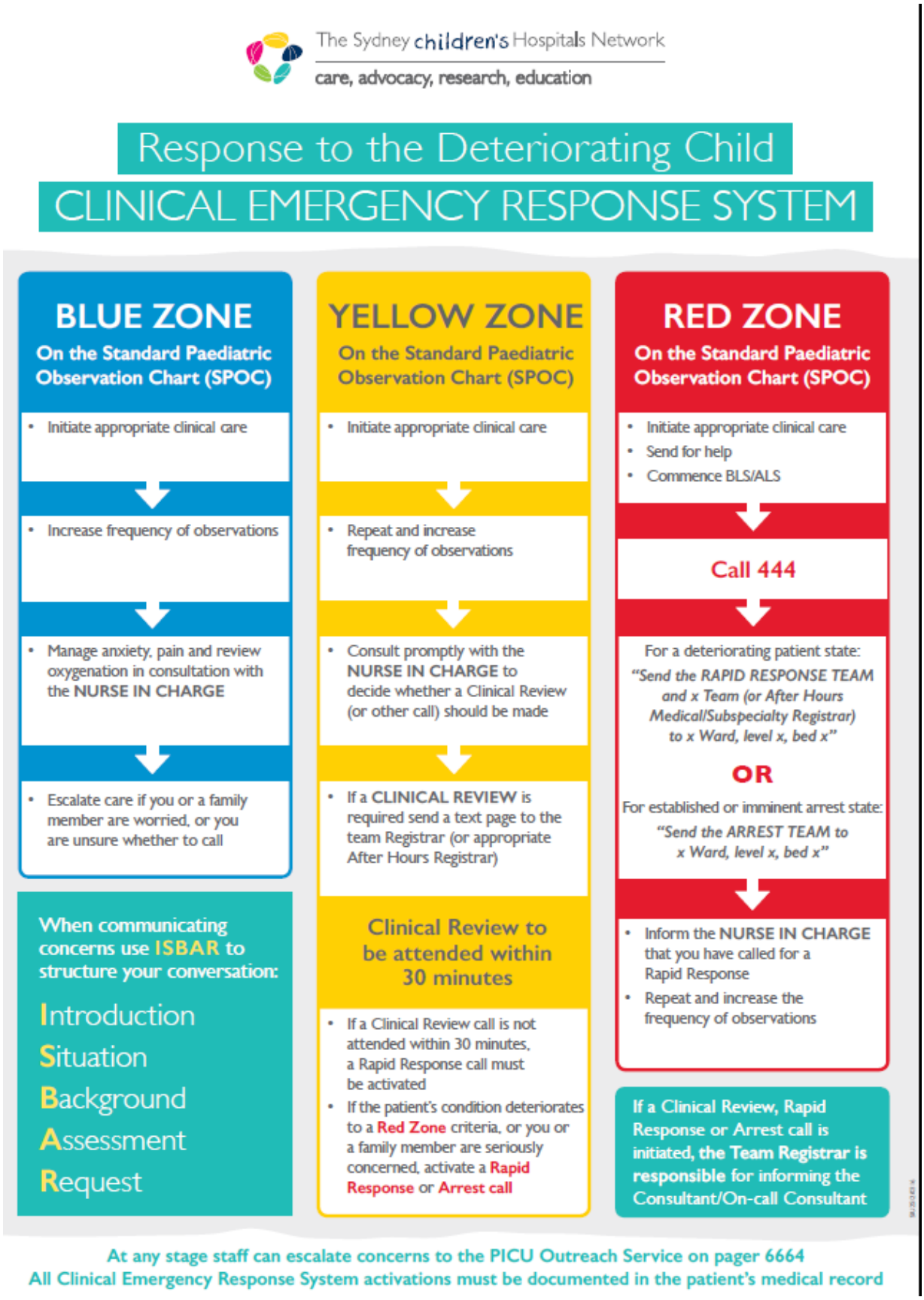
10.3 Related policies

- Children and Adolescents - Admission to Services Designated Level 1-3 Paediatric Medicine & Surgery:

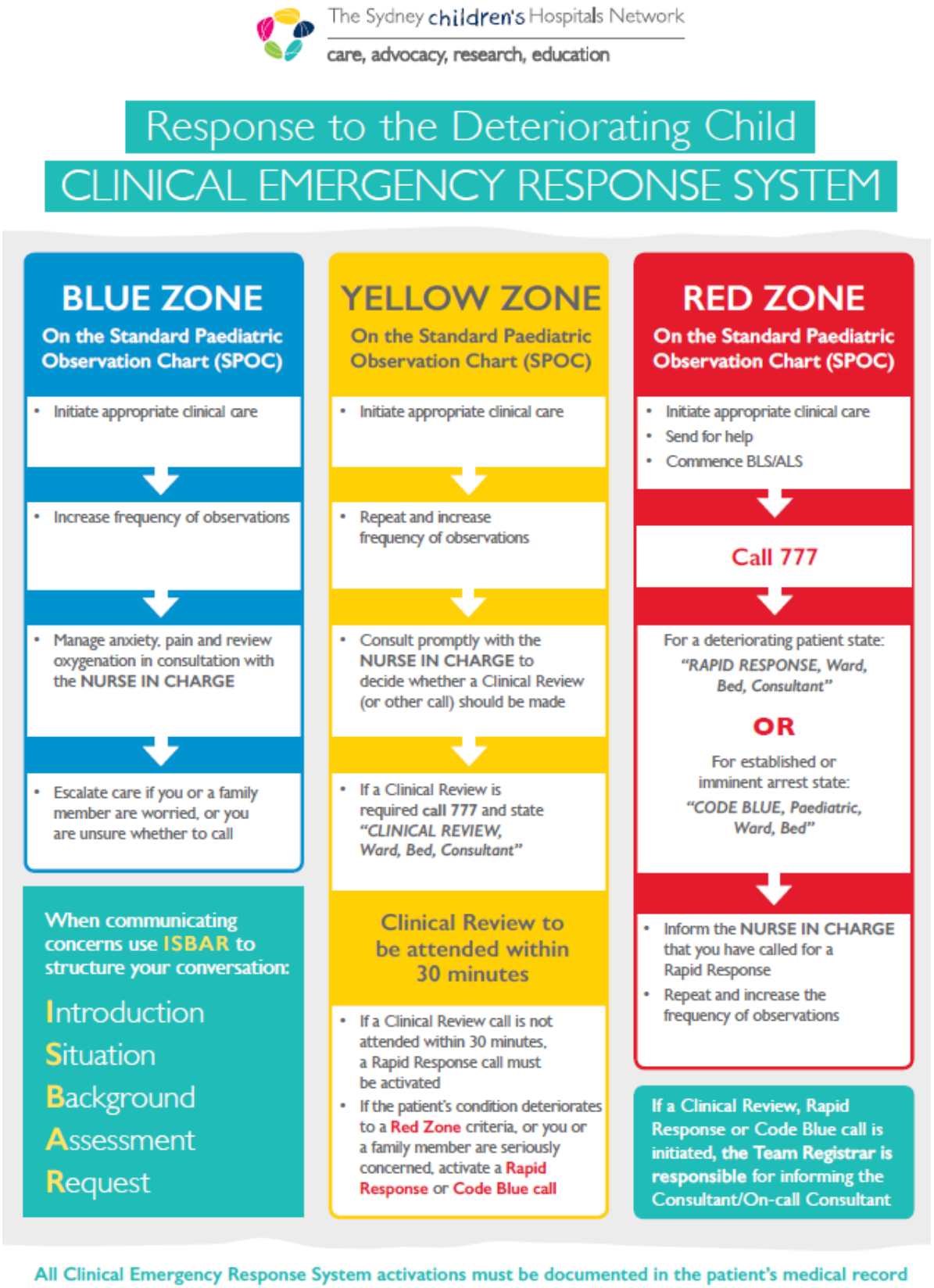
  http://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2010_032.pdf

- Cardiopulmonary Resuscitation & Equipment (CHW): http://chw.schn.health.nsw.gov.au/o/documents/policies/guidelines/2006-8239.pdf

Appendix 1: CHW CERS Escalation Process



Appendix 2: SCH CERS Escalation



Appendix 3: Mandatory Responders List

	CHW		SCH	
	In-hours	**After-hours**	**In-hours**	**After-hours**
Clinical Review	- Admitting team Registrar and or Fellow	- Appropriate Registrar (Medical or Subspecialty)	- Admitting team Registrar and or Fellow	- Medical Officer allocated to the ward.
Rapid Response	- Admitting team Registrar and or Fellow - PICU Outreach Service	- Appropriate Registrar (Medical or Subspecialty) - PICU Outreach Service	- Admitting team Registrar and or Fellow	- Medical Officer allocated to the ward. - Senior on Site (SOS) Registrar
Code Blue/Arrest Call	PICU Outreach Service	PICU Outreach Service	CICU Code Blue Team	CICU Code Blue Team

Appendix 4: CHW PICU Outreach Service

Paediatric Intensive Care Outreach Service (CHW ONLY)

- The Paediatric Intensive Care Unit (PICU) Outreach Service provides assessment, treatment, management and support for patients outside of the PICU. Any clinician may refer a child who is felt to be clinically deteriorating on the ward to the PICU Outreach Service by paging 6664, regardless of whether their observations fall within a coloured zone on the Standard Observation Chart.
  - **If you are a nurse:** call the relevant Medical/Surgical team (or the appropriate After Hours Registrar) after calling PICU Outreach Team, if not already done.
  - **If you are a doctor and are not part of the patient's admitting team:** call the relevant Medical/Surgical team after calling PICU Outreach Team, if not already done. It is preferable that the patient's Medical/Surgical team (or the appropriate After Hours Registrar) is already aware of or have seen the patient.
- The PICU Outreach Team will triage the call and prioritise the response in relation to other clinical responsibilities in the PICU and other referrals, and advise the referring clinician if there will be a delay. Initial phone advice will be provided if necessary.
- The patient will be seen by the PICU Outreach Team and a comprehensive assessment will be made of the patient's medical requirements as well as the resources available in the patient's location.
- Outcomes arising from the review may include:
  - Further investigations
  - Changes to current treatment or instigation of new treatments
  - The PICU Outreach Team may remain with the patient on the ward to assist and support the ward staff
  - Immediate admission to the Intensive Care Unit. In this situation, it is the responsibility of the PICU Outreach Team to ensure that the patient receives an adequate and appropriate level of care between the time of their assessment and admission to the PICU
  - An undertaking that the patient is reviewed again within a set period of time by the PICU Outreach Team.
  - That the patient is reviewed by the Admitting team again, and requests subsequent PICU reviews as deemed appropriate
- The patient's primary Medical/Surgical team will be contacted and informed directly of the assessment and suggested plan.
- Details of the outreach call are to be documented in the patient's electronic medical record (eMR) by a member of the PICU Outreach Team using the 'Rapid Response' form, located within Ad Hoc charting in PowerChart.

- Referring staff should feel free to promptly discuss any questions or issues relating to a ward review with the on call PICU Consultants or Fellow.

Appendix 5: SCH CICU Consultation

Children's Intensive Care Unit Consultation (SCH Only)

Children's Intensive Care Unit (CICU) admissions are a significant event for the patient, the family, and the health care team, as well as having resource implications for the hospital. It is appropriate that such admissions are conducted in an appropriate, efficient and safe manner, which ensures that all members of the health care team are apprised of the situation.

Note: Not all patients receiving CICU consultations will result in CICU admission.

Any nurse or doctor can call ***CICU consult line: 0484 609 156*** if they are concerned about a patient. However the patient should firstly be discussed with AMO. The outcome of the phone call to the AMO is to be documented by the nurse or doctor calling.

CICU Consult process

Discuss what time frame you would like the patient to be reviewed within. Document the time & person in CICU spoken with in the patients medical record.

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Team/Ward Registrar must be available at the time of the review to provide a hand over to the CICU team.

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CICU Fellow/Registrar and CICU ACCESS RN to review patient.

ICU medical staff are to document the following in patient's notes:

o Time of review

o Patient's condition

o Recommendation of review CICU team.

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Discussion between Team/Ward registrar, ward nursing staff and CICU staff with any recommendations.

↓

Team/Ward registrar to contact AMO and plan of care is made

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Report of patient's condition is to be provided to ICU Fellow/ Consultant by ICU Registrar/Fellow at the earliest opportunity

If patient does not require ICU admission:

• Responsibility of the patient remains with the referring team and ongoing consultation with ICU if required.

If patient requires ICU admission:

- Discussion with the medical team and/or After Hours Nurse Manager (AHNM) must occur prior to escalation if time allows.
- Patient should be escorted to CICU with team members based on:

    1. Condition of child
    2. Risk of deterioration and
    3. Any staffing and/or
    4. Equipment resource, ward team may be appropriate, ICU team may be appropriate or members of both teams may be appropriate. Patient should be transferred to ICU with pulse oximetry, oxygen, suction, self-inflating oxygen bag and other monitoring and resuscitation equipment as deemed appropriate by ICU team.

- Formal patient handover occurs when the patient is admitted to CICU, until that time the responsibility of the patient remains with the referring team.

• A porter should be paged to transport the patient to CICU

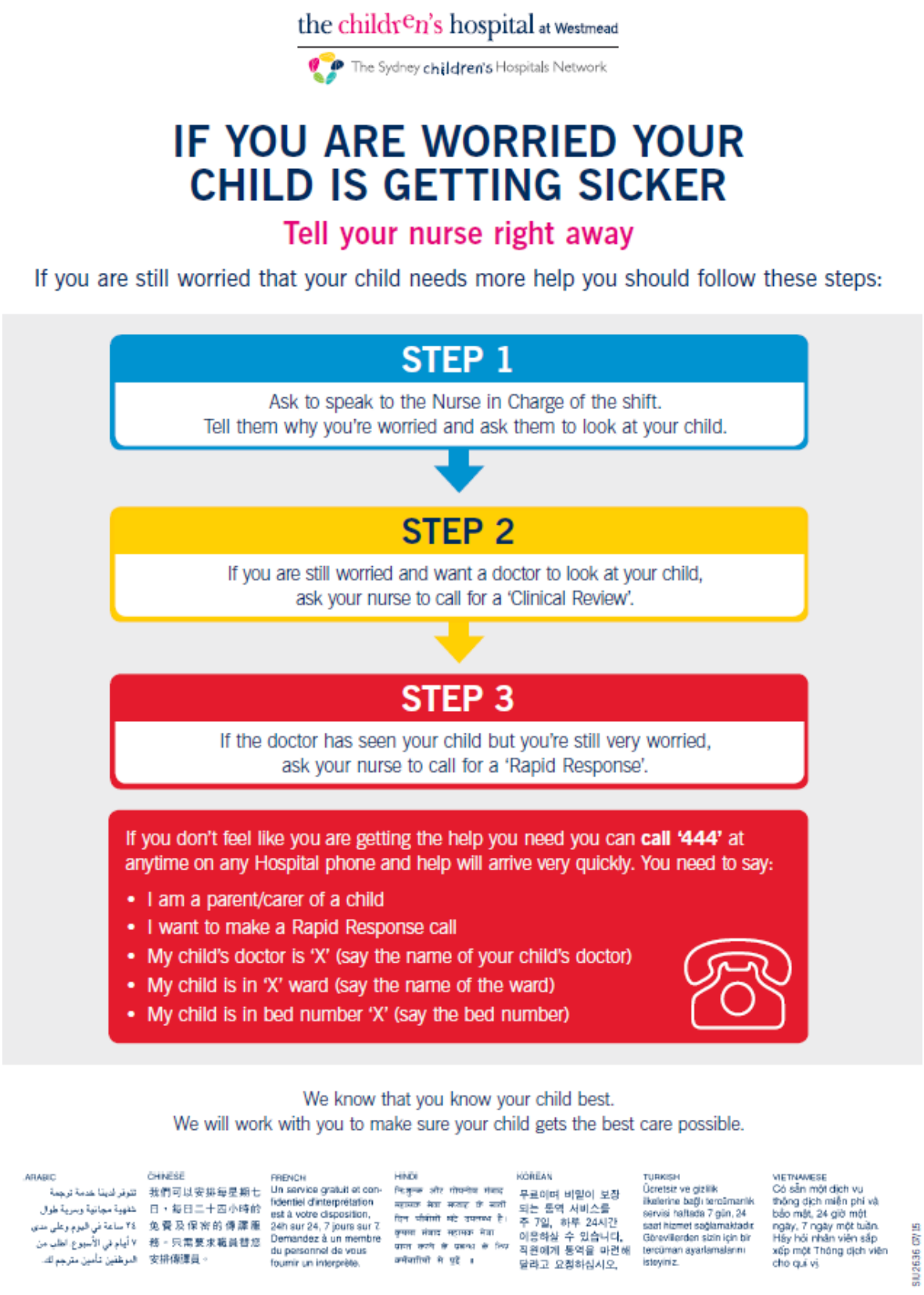
Only if an unreasonable delay is foreseen, which is clinically significant to the patient, may staff transfer the patient without assistance of porters.

Patient requires ICU admission but a delay is foreseen:

• Further ICU medical and nursing review of the patient must take place within a time frame agreed to by the appropriate team.

• Formal patient handover occurs when the patient is admitted to CICU, until that time the responsibility of the patient remains with the referring team in ongoing consultation with ICU.

Appendix 6: CHW Patient and Family Activated Rapid Response



Appendix 7: SCH Patient and Family Activated Rapid Response