Guideline

Management of patients with acute behavioural disturbance

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Supercedes	1.0				
Applicable to	Children's Health Queensland Medical and Nursing staff				
Authorisation	Executive Director Clinical Services (QCH)				

Purpose

This guideline provides recommendations regarding best available evidence to support the management of patients presenting to Queensland Children's Hospital (QCH) Emergency Department (ED) with acute behavioural disturbance. Although this guideline is applicable for children and adolescents 6-18 years of age, the principles of management still apply for patients the QCH ED may need to treat that are over 18 years of age.

This guideline does not specifically address QCH ED responsibilities with regard to the *Mental Health Act 2016* (Qld) or *Public Health Act 2005* (Qld).

This guideline has incorporated the state-wide QH-GDL-438:2016 Management of patients with Acute Severe Behavioural Disturbance in Emergency Departments guideline.

Scope

This guideline applies to all clinical staff involved in the treatment of patients within the QCH ED.

Related documents

Policy, Procedures, Guidelines

- Guide to Informed Decision-making in Healthcare (2nd edition). Queensland Health, 2012
- *Guardianship and Administration Act 2000* (Qld)
- *Criminal Code Act 1899* (Qld)
- Physical restraint safety risks (Patient Safety Communiqué No. 03/2016). Queensland Health, 2016
- *Mental Health Act 2016* (Qld)

- *Public Health Act 2005* (Qld)
- Emergency Examination Authorities (Public Health Act 2005) – Fact Sheet. Queensland Health
- Fact Sheet: Powers and Responsibilities of Emergency Department Staff. Public Health Act 2005 https://www.health.qld.gov.au/__data/assets/pdf_file/0033/635469/powers-responsibilities-ed-staff.pdf
- Ambulance Powers and Responsibilities (Mental Health Act 2016 & Public Health Act 2005) – Fact Sheet. Queensland Health
- Powers and Responsibilities of Police Officers (Mental Health Act 2016 & Public Health Act 2005). Queensland Health
- Safe transport of people with a mental illness: Queensland interagency agreement. Queensland Health (including Queensland Ambulance Service and Queensland Police Service), 2014
- QH-HSDPTL-025-5:2015 Protocol for Road Inter Hospital Transfer of critically ill patients. Queensland Health, 2015
- QH-HSDPTL-025-4:2015 Protocol for Inter Hospital Transfers of the non-time critical patient. Queensland Health, 2015
- Joint Clinical Policy. P03 Guidelines for Transport of Critically Ill Patients. ANZCA, ACEM and CICM http://www.anzca.edu.au/documents/ps52-2015-guidelines-for-transport-of-critically-i
- Guideline: acute behavioural disturbance management (including acute sedation) in Queensland Health Authorised Mental Health Services (children and adolescents). Queensland Health.
- QH-GDL-438:2016 Management of patients with Acute Severe Behavioural Disturbance in Emergency Departments

Guideline

Background

Acute behavioural disturbance (ABD) has been defined by NSW health as "behaviour that puts the patient or others at immediate risk of serious harm and may include threatening or aggressive behaviour, extreme distress, and serious self-harm which could cause major injury or death"[1].

Patients exhibiting ABD and the staff treating them are at risk of both short and long term, physical and mental health complaints. Unfortunately, the number of aggressive children and adolescents is likely to be an increasing issue for EDs.

The purpose of this guideline is to provide a framework for consistent evidence based care of patients with ABD in the QCH. **This Guideline does not cover every possible clinical situation and it does not replace clinical judgement**; the decision to proceed with emergency care as outlined in this document are made on clinical grounds and are authorised by appropriately trained medical and / or nursing staff.

This document is guided by the principles of least restrictive, collaborative, patient centred care and offers guidance on the following aspects of behavioural management and sedation:

- Assessment of the patient with ABD in a safe environment.
- Use of de-escalation techniques that focus on engagement of the person with ABD to allow for assessment.

- Ensuring that legal requirements are adhered to, particularly in relation to the *Mental Health Act 2016* (Qld)*, Criminal Code Act 1899* (Qld) and the clinician's duty of care to the patient.
- Medication management of the patient whose behaviour puts them or others at immediate risk of serious harm and which is unable to be contained by other means. There is also reference to physical restraint of the patient if required.
- Post-medication management of the patient including observations and documentation.
- Disposition decisions and transport of the patient from the ED to the most appropriate area for continuation of their care.

Assessment

Like many clinical conditions in Emergency Medicine, ABD requires concurrent assessment and management. In some cases, assessment may need to be facilitated by using de-escalation techniques and medication. An **initial, brief assessment is required to determine the most likely cause of agitation and the level of risk of injury / violence**. Once the patient is less agitated, a more in depth assessment can be made.

ALERT

Once an assessment and appropriate treatment has been completed, and the patient is deemed safe for discharge from the QCH ED, further episodes of aggressive behaviour should be managed by calling a **Code Black** rather than this guideline.

Environment & Safety

Environmental factors have a key role not only in ensuring safer workplaces but also mitigating aggressive behaviour.

The choice of the environment where the patient is initially assessed and managed will depend on the staffing available, the level of agitation of the patient and the likely cause of agitation. A proportion of patients may benefit from being assessed and managed in a low stimulus environment in a quiet area of the ED.

The environment should facilitate the management of the patient. It is possible that as the clinical situation changes, it may be necessary to move the patient into a more appropriate environment to optimise management and assessment (e.g. from an acute bay to a resuscitation bay).

Medical Evaluation

There are many causes of ABD and often the cause of a particular patient's ABD will be multifactorial (refer to Table 1). It should not be assumed that the cause of ABD is due to a psychiatric aetiology.

The purpose of the medical evaluation in ED is to ascertain the most likely cause of the ABD. At times this evaluation may need to be facilitated using a variety of techniques, including de-escalation measures and appropriate pharmacological therapy.

Table 1:

Causes of Acute Behavioural Disturbance
• **Medical condition** including: encephalitis, post-ictal period, glucose and electrolyte disturbances, pain.
• **Drug intoxication or withdrawal** including: alcohol, prescription medications, cannabis, amphetamines, hallucinogens.
• **Exacerbation of existing intellectual disability, autism or other behavioural disorder**.
• **Mental health conditions** including: psychotic disorders, mania, anxiety disorders, borderline and anti-social personality disorders.
• **Other factors** including: situational crisis, impulse control disorders, inability to effectively communicate.

Management

The crux of management is to use the least restrictive means of controlling the situation to enable appropriate assessment of the patient. When attempting to control the situation it is essential that a graded response is utilised, with appropriate timely escalation to ensure safety of the patient and staff. Typically de-escalation techniques are tried first, however it is recognised that in a small subset of patients, physical and chemical restraint may be required as the initial means of obtaining control of a situation.

Legal Framework and Consent

The use of restrictive interventions (such as restraint and sedation) may only occur in the management of minors with acute behavioural disturbance under the following circumstances:

1. With the consent of the individual patient or their parent/s.
2. To complete an examination, if a patient is transported to the ED under an Emergency Examination Order (EEA), (as per the *Public Health Act 2005* (Qld) Chapter 4A:

   157N Use of reasonable force to detain person

   (1) This section applies if, under an emergency examination authority, a person may be detained in a public sector health service facility or an authorised mental health service.

   (2) The person in charge of the public sector health service facility or the administrator of the authorised mental health service, and anyone lawfully helping the person in charge or the administrator, may exercise the power to detain the person in the facility or service with the help, and using the force, that is necessary and reasonable in the circumstances.

   157O Examination of person without consent and with use of reasonable force

   (1) An examination of a person subject to an emergency examination authority may be made under this chapter without the consent of the person or anyone else.

   (2) A person lawfully examining the person, or lawfully helping to examine the person, may use the force that is necessary and reasonable in the circumstances to examine, or help examine, the person.
3. Where authorised under the relevant sections of the *Mental Health Act 2016* (Qld).
4. Without consent in exceptional circumstances where there is an imminent risk to the life or health of the patient or others and there are no other less restrictive means available.

Section 282 of the Criminal Code operates by excusing an individual from criminal responsibility for what would otherwise be an unlawful surgical or medical act, where the act is undertaken in good faith; with reasonable care and skill and is reasonable having regard to all the circumstances of the case. It does not relieve a practitioner from other civil or regulatory processes.

De-escalation

The initial approach to a person with behavioural disturbance should be focused on attempts to de-escalate the behaviour through the use of specific de-escalation techniques and engagement of the person in conversation. All staff involved in this process should be trained and skilled in de-escalation.

De-escalation frequently takes the form of a verbal loop in which the clinician actively listens to the patient, finds a way to respond that agrees with or validates the patient's position as far as possible, and then explains what the clinician wants the patient to do (e.g. accept medication, sit down with the clinician). The loop repeats, as the clinician listens again to the patient's response, seeking to understand the patient's point of view and to negotiate a resolution.

The following are strategies that can be utilised in de-escalation:

- Check with and, where appropriate, involve parents / guardians in utilising calming or de-escalation techniques that they have used.
- Approach in a calm, confident and non-threatening manner, with a non-aggressive stance with arms relaxed.
- A non-judgemental attitude towards the behaviour of the child or adolescent is critical to gaining engagement.
- Be empathic and respectful. Listen to the patient's concerns.
- Introduce yourself, your role and the purpose of the discussion, lead the discussion and engage the patient. Whilst other staff should remain in the vicinity to offer support, it is imperative that only one staff member verbally engage the patient.
- Emphasise your desire to help. Ask what they want and what they are worried about.
- Focus on the here and now, identify what is achievable, rather than declining all requests, small concessions can build trust and rapport.
- Try to identify the patient's unmet needs and help them explore their fears.
- Use short clear statements which do not include medical jargon. The patient may not have the capacity to process information. For patients with a disability ensure communication aligns with the considerations in the patients' communication plan.
- Use a slow, clear and steady voice and don't raise your voice. If the patient raises their voice, pause and wait for an opening and allow the patient to vent some of their frustrations.
- Courtesies such as a cup of (lukewarm) tea, sandwiches, access to a telephone (or a staff member making a phone call on their behalf) and attending to physical needs can be very helpful.
- Where relevant, the patient should be given the option of taking oral medication (see Appendix 1).
- If appropriate, offer a choice of Nicotine Replacement Therapy (e.g. gum / lozenges, patches or a nicotine inhaler if the patient requests a cigarette). Refer to CHQ-WI-50082 Management of nicotine dependence

and tobacco and related products on 8b. Avoid entering into discussions about leaving ED to have a cigarette and focus these conversations on keeping the patient within the safety of the ED.

- Getting trusted relatives or staff to talk to the patient may help. If the patient persists in directing their anger or suspicion directly at the clinician, it may be appropriate for you to ask another staff member to attempt de-escalation.
    - Often Acute Response Team (ART) members may have been involved in assisting managing the patient in the past, and it is recommended their expertise and experience is sought by the ED staff.
- Avoid potentially provocative statements such as "calm down" or "if you don't settle down ….x will happen" "you'd better stop that right now…or else" as this is likely to escalate the patients behaviour in response to the perceived threat.
- Reassuring and helping parents / guardians to contain their own anxiety can assist in the management of children and young people. If it is felt that the presence of the parents / guardian / family / friends is increasing the child / adolescent's level of agitation then separating them within the department may be beneficial. Individuals who appear to calm the situation can be asked to stay.

Medication

The use of sedative medication may facilitate assessment and aid in controlling a dangerous situation. When prescribing sedatives to a patient, it is essential that where possible, clinicians seek any existing medication plans / history from the medical record, from parents / guardians or treating team.

The choice of sedative and the route of administration will depend on the level of agitation of the patient, senior, supervising clinician's preference and the availability of agents.

Patients should be offered oral medication in the first instance. If the patient's condition requires that they remain in ED for further assessment and/or treatment and they refuse oral sedation and whilst exhibiting dangerous, violent or unpredictable behaviour that poses a safety risk to the patient or staff or other patients and visitors, parenteral sedation should be considered. **Prior to the administration of any parenteral sedation for the management of ABD, the supervising ED consultant should be informed. If this cannot occur in a timely fashion, they should be informed as soon as possible.**

The aim is to achieve an appropriate and safe level of sedation quickly with sufficient medication to manage ABD and to facilitate an accurate assessment and appropriate management of the patient's underlying condition. **The optimal endpoint when giving sedation should be a compliant patient that is rousable (e.g. Sedation Assessment Tool (SAT) score 0 or -1). The procedure is not intended to render the patient unconscious.**

- Intramuscular (IM) administration of sedative agents in highly agitated patients is preferable as the first line of parenteral sedation. IM injection is typically able to be administered more rapidly and carry less risk when compared with attempting intravenous (IV) cannulation in an aggressive patient.
- In situations when the patient already has IV access in situ, it may be quicker and safer to administer medication via the IV rather than IM.

ALERT

It is recommended that where possible, patients are given parenteral sedation in a resuscitation cubicle, with airway equipment prepared.

There may be a small cohort of patients where despite appropriate, escalating management, their ABD persists. In this cohort it may be necessary to anaesthetise and intubate the patient in order to prevent harm to the patient and the treating team.

Sedation Scale and use of a Sedation Assessment Tool

The level of sedation of the patient should be monitored. The SAT is a simplified version of the Altered Mental Status Score and is a 7-point scale assessing levels of agitation and sedation using only two descriptors (see Appendix 2).

Use of the SAT is recommended to assist in determining the need for sedation and assessing the effectiveness of sedation. If there is increased agitation (e.g. an increase in the SAT score) despite the use of oral medications, then escalation to parenteral medication should be considered.

Effective sedation can be defined as a reduction of 2 levels in the SAT score or a return to a score of zero.

Recommended Pharmacological Agents

There is a paucity of high level, literature with regard to the optimal pharmacological agent for the treatment of ABD in the paediatric ED. As such, evidence is transposed from other patient cohorts and clinical environments. It is important to consider the senior clinician's and treating team's familiarity with specific agents and preference when deciding which drug to use. The patient's physical health, usual medications and the patient's response to other drugs they have received prior to ED arrival (e.g. acute ethanol ingestion, administration of droperidol by paramedics or clonidine given at home by the parents) need to be taken into account when considering a sedative agent.

Complications

There is a wide variability in response to medications and thus the safety margin also varies between patients. It must be remembered that if more than one agent is used, the effect is additive (both in terms of being therapeutically beneficial and side effect risk). The route of administration and time to medication onset varies between medications and patients.

Complications related to the administration of sedatives include:

- Respiratory depression.
- Diminished airway reflexes.
- Depressed ventilation.
- Over sedation (e.g. SAT -3).

Complications associated with the specific parenteral agents used in this Guideline include:

Droperidol: adverse effects include hypotension, respiratory depression (especially if administered with benzodiazepines), extrapyramidal side effects (although quite rare may require benztropine) and QT prolongation associated with intravenous route (rarely clinically significant at doses commonly used for ABD).

Olanzapine: respiratory depression (especially if administered with benzodiazepines or in the context of acute ethanol ingestion), extrapyramidal side effects (although quite rare may require benztropine) and QT prolongation associated with intravenous route (rarely clinically significant at doses commonly used for ABD).

Lorazepam: respiratory depression may occur and airway and ventilatory support may be required; hypotension. Intoxicated patients (particularly with alcohol and opiate intoxication) are at higher risk of

complications and respiratory depression when using benzodiazepines. On occasion, paradoxical excitation may occur, with agents like midazolam.

Ketamine: increased secretions; tachycardia; hypertension, emergence hallucinations.

If present, the carers of all patients and all 'Gillick' competent patients that have received olanzapine OR droperidol in the QCH should be given an "Acute Behavioural Disturbance Post Sedation Handout" see Appendix 3. The rationale for the sedation and the potential side effects of should be explained the patients and/or their carers. If the patient is being admitted to the LCCH or transferred, a copy of the Acute Behavioural Disturbance Post Sedation Handout should be given to the receiving ward or hospital so it can be supplied to the patient on discharge.

Post sedation Care

Following parenteral sedation of any acutely behaviourally disturbed patient, monitoring of vital signs and level of sedation (e.g. using the sedation assessment tool - see Appendix 1) is required. Continuous pulse oximetry and close observation is recommended in all patients until they are able to respond to verbal stimuli.

It is recommended that vital signs observations are completed every five (5) minutes for the first 20 minutes after each parenteral sedative administration and then every 30 minutes.

All clinical staff should be empowered to escalate any concerns regarding the patient (e.g. abnormal vital signs, evidence of airway obstruction or respiratory depression) to the relevant medical staff at any time.

It is acknowledged that it may not be possible to continuously monitor all of the vital signs if, by doing so, safety of the staff or patient is compromised. However, in those circumstances, continuous visual observation is required to ensure patient safety.

Medical officers must be notified if the patient triggers a Children's Early Warning Tool score greater than or equal to 2 for any of the domains (HR, BP, GCS, RR, and SpO2).

Physical Restraint

Physical restraint should only be used in extreme circumstances, should not be used if there is a less invasive method of treatment and should only be considered after all de-escalation techniques and other less invasive methods of treatment have been attempted.

Physical restraint is the intentional restriction of a person's voluntary movement by the use of any manual, physical or mechanical means, which cannot be easily removed and involuntarily restricts the freedom of movement or normal access to one's body, material or equipment.

Brief 'hands-on' physical restraint is utilised as part of most episodes of parenteral sedation of patients with Acute Severe Behavioural Disturbance (ASBD). Immobilisation of the patient through control of the limbs and head is the safest mechanism for restricting movement while medication is administered and until calming of the patient is achieved.

This is generally achieved through the use of 'hands-on' physical restraint.

Rarely the use of a mechanical restraint device (MRD) may be required. The use of MRD must comply with relevant legislation, Queensland health policies and communiques namely:

- *The Mental Health Act 2016* (Qld)
- *The Public Health Act 2005* (Qld)

- Mechanical Restraint (Mental Health Act 2016) – Chief Psychiatrist Policy. Queensland Health, 2017
- Physical restraint safety risks (Patient Safety Communiqué No. 03/2016). Queensland Health, 2016

Management of Children with an existing intellectual disability, autism or other behaviour disorder

Like all patients, ABD in children with an existing intellectual disability, autism or other behavioural disorder may be due to a multitude of reasons and prompt, targeted assessment and management of the suspected aetiology should occur. Family members are valuable in assisting in interpreting the child's behaviour.

In addition to the management measures outlined above, early consultation with the treating team is essential. EDs are bright, noisy, busy places and this level of stimulus maybe distressing for patients with behavioural disorders. Staff should attempt to assess these children in an environment which minimises exposure to stimuli that may further distress the child.

Documentation

Accurate and timely recording of information related to sedation of the behaviourally disturbed patient is essential and should include:

- Consent
  - Document patient competency for decision making (e.g. delirium, drug or alcohol intoxication, child, no insight of risk to themselves, staff or others)
  - Where possible, document which legislation has been enacted (e.g. Mental Health Act, Guardianship and Administration Act, Criminal Code)
- Indication for sedation
  - Record what de-escalation techniques were undertaken prior to sedation (e.g. verbal and nonverbal techniques) and if there were no attempts made to de-escalate, then the reasons why no attempts were made, recognising that this may occur on occasion.
- Medications administered
  - Rationale for any medications administrated and details.
- Observations undertaken
  - Include patient positioning during and after sedation (e.g. supine, prone, recovery position).
  - Frequency of observations pre and post sedation (visual and physical).
- Physical restraint
  - Why utilisation of restraint (e.g. risk of absconding, patient risk to self, staff or others).
  - Form of restraint (e.g. handcuffs, staff restraint).
  - Risk of using restraints (e.g. restricted breathing, metabolic disturbance, risk to self, staff or others).
- Adverse events
  - Include examples such as harm to self, staff or others, physical damage to environment and adverse effects to any medications.

When caring for children and adolescents, the involvement of parents / guardian should be included in the documentation. The person responsible for the child / adolescent following discharge and for follow up care should also be documented.

Patient disposition

After appropriate de-escalation has occurred, the patient should receive a targeted clinical assessment. If the patient is sedated, aspects of this examination may need to be deferred until the patient is able to co-operate with the assessment. Further clinical assessment may be required by non-ED clinicians (e.g. ART, paediatric inpatient team), and the location of this assessment will be negotiated between senior ED and non-ED clinicians.

The final disposition of the patient will depend on the underlying cause of the ABD and the outcome of the clinical assessment. The final disposition decision must be made in conjunction with the responsible senior medical practitioners of the teams involved in the patient's care.

It is recognised that the ED may not be the appropriate place for prolonged ongoing monitoring and definitive clinical management of sedated patients with ABD. These patients often require extended periods of care for definitive treatment, or before eventual safe discharge, and this ongoing care may need to be provided in the Paediatric Intensive Care Unit or within an appropriate inpatient unit setting.

A cohort of patients may need to be transferred from the QCH ED to another health care facility. The clinical level of escort will be dictated by the individual patient circumstances and should be in keeping with appropriate protocols and agreements namely:

- Safe transport of people with a mental illness: Queensland interagency agreement. Queensland Health (including Queensland Ambulance Service and Queensland Police Service), 2014
- QH-HSDPTL-025-5:2015 Protocol for Road Inter Hospital Transfer of critically ill patients. Queensland Health, 2015
- QH-HSDPTL-025-4:2015 Protocol for Inter Hospital Transfers of the non-time critical patient. Queensland Health, 2015
- Joint Clinical Policy. P03 Guidelines for Transport of Critically Ill Patients. ANZCA, ACEM and CICM

Consultation

Key stakeholders who reviewed this version:

- Emergency Staff specialist, QCH
- Director, Emergency Department, QCH
- Nurse Unit Manager, Emergency Department, QCH
- Nurse Practitioner, Emergency Department, QCH
- Medical Director Child and Youth Mental Health Service, QCH
- Director Legal Services, Children's Health Queensland
- Pharmacist Critical Care Lead, QCH

Definition of terms

Term	Definition	Source
Acute Behavioural Disturbance	Behaviour that puts the patient or others at immediate risk of serious harm and may include threatening or aggressive behaviour, extreme distress, and serious self-harm which could cause major injury or death.	Management of patients with severe behavioural disturbance in emergency departments http://www1.health.nsw.gov.au/pds/ActivePDSDocuments/GL2015_007.pdf
De-escalation	The process of engaging the patient as an active partner in the process of assessment, treatment and recovery with the express purpose of alleviating their current distress and de-escalating their level of ABD in order to reduce risk.	Management of patients with acute severe behavioural disturbance in emergency departments QH-GDL-438:2016
Sedation	The process of reducing agitation, irritability and ABD through administration of sedative medications for the purpose of assessment, treatment and restoring therapeutic alliance.	Management of patients with acute severe behavioural disturbance in emergency departments QH-GDL-438:2016
Physical restraint	The intentional restriction of a person's voluntary movement by the use of any manual, physical or mechanical means, which cannot be easily removed and involuntarily restricts the freedom of movement or normal access to one's body, material or equipment.	Management of patients with acute severe behavioural disturbance in emergency departments QH-GDL-438:2016

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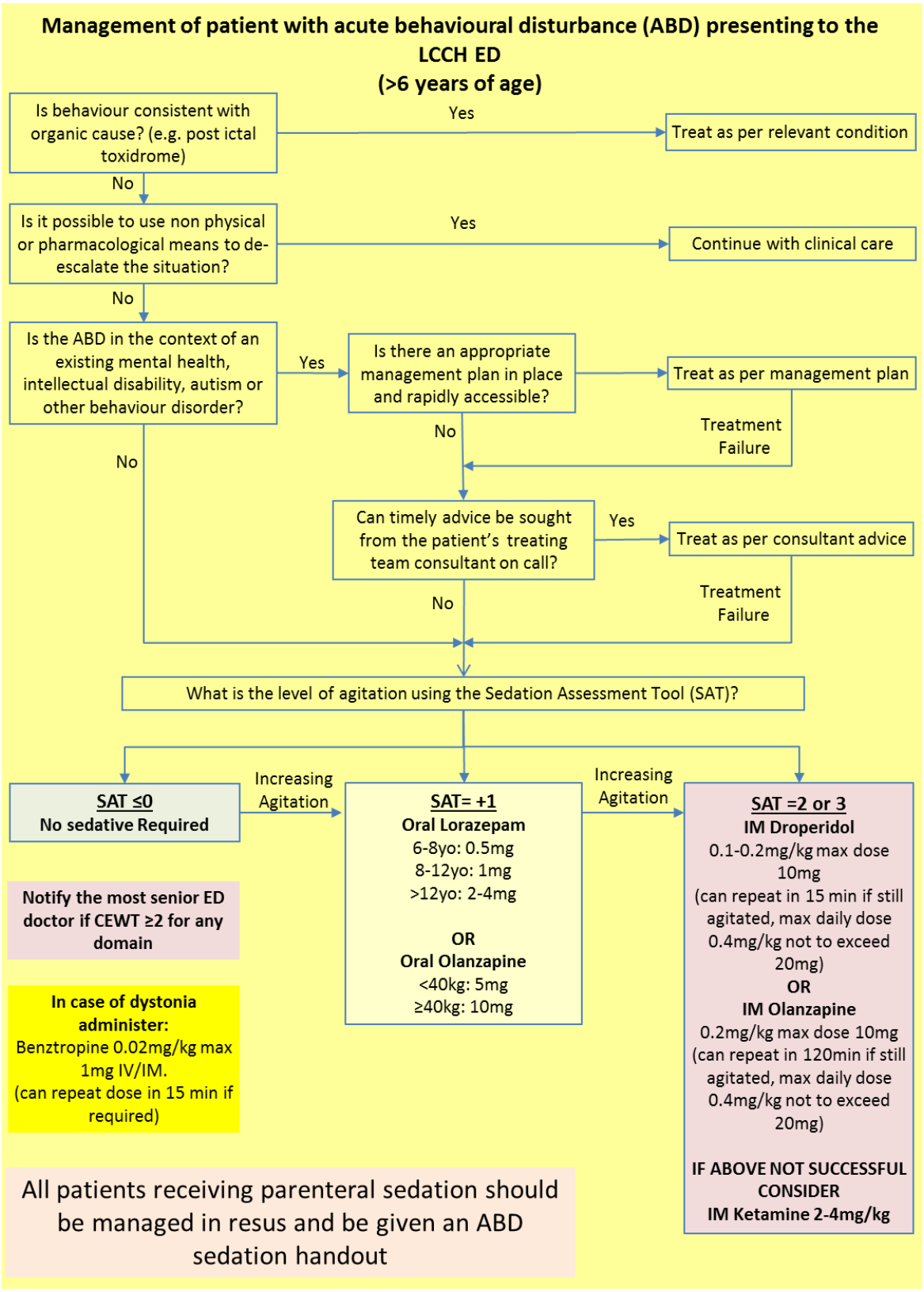
Guideline revision and approval history

Version No.	Modified by	Amendments authorised by	Approved by
1.0 (18/01/2019)	Director Paediatric Emergency Department	Divisional and Medical Director Critical Care	Executive Director Clinical Services (QCH)
2.0 (08/08/2019)	Director Paediatric Emergency Department	Divisional and Medical Director Critical Care	Executive Director Clinical Services (QCH)

Keywords	Acute behavioural disturbance; Sedation; 00732
Accreditation references	NSQHS Standards: 1, 2, 4, 6, 8, 9

Appendix 1 - Suggested management of patients presenting with ABD

(Adapted from QH-GDL-438:2016 Management of patients with Acute Severe Behavioural Disturbance in Emergency Departments)



Appendix 2 - Sedation Assessment Tool

Responsiveness	Speech	Score
Combative, violent, out of control	Continual loud outburst	**+3**
Very Anxious and agitated	Loud outburst	**+2**
Anxious/restless	Normal/talkative	**+1**
Awake and calm/cooperative	Speaks normally	**0**
Asleep but rouses if name is called	Slurring or prominent slowing	**-1**
Responds to physical stimulation	Few recognisable works	**-2**
No response to stimulation	None	**-3**

The optimal endpoint when giving sedation should be a compliant patient that is rousable (e.g. SAT score 0 or -1). The procedure is not intended to render the patient unconscious.

Appendix 3 - Acute Behavioural Disturbance Sedation Handout

Children's Health Queensland Hospital and Health Service

Lady Cilento Children's Hospital

Sedative medications for acute behavioural disturbance

Your child was given a sedative medication as part of their emergency treatment to help make them less agitated and to better allow us to assess their needs.

The most commonly used sedative medications in the Lady Cilento Children's Hospital emergency department are Olanzapine and Droperidol. Your child will have received this medication in the form of a tablet, an injection into a muscle, or via an intravenous injection (i.e., through a drip).

In rare cases (about one per cent of patients), both Olanzapine and Droperidol can cause muscle restlessness or muscle spasms. These spasms may involve:

- the muscles that control eye movements (eyes rolled up, eyelid spasm),
- neck muscles (twisted neck),
- back muscles (stiffness and abnormal posturing),
- face muscles (grimacing).

The muscles that control the vocal cords may also be affected (causing noisy breathing), but this is very rare.

Your child may find these symptoms distressing and/or painful. These symptoms will typically occur within two days of receiving the drug but they can occur up to five days later.

These side effects are readily treatable and if you are concerned you should see your general practitioner, call 13HEALTH or go to your local emergency department.

Contact us

Lady Cilento Children's Hospital
501 Stanley Street, South Brisbane
t: 07 3068 1111 (hospital switchboard)

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All information contained in this sheet has been supplied by qualified professionals as a guideline for care only. Seek medical advice, as appropriate, for concerns regarding your child's health.

Queensland Government