

Standard Operating Procedures

MRI scans under General Anaesthetic for Children and Young People at Kidderminster Treatment Centre

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Approved by:	Theatre, Anaesthetic Governance June 2025 Paediatric governance August 2025
Approved by Medicines Safety Committee: <i>Where medicines included in guideline</i>	Not applicable
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Aim and scope of Standard Operating Procedure

Aim of this SOP is to set out the process of booking, pre-assessing and facilitating MRI scans of patients in children and young people requiring a General Anaesthetic to obtain diagnostic images.
It refers only to the process of performing scans at KTC.

Target Staff Categories

**All Anaesthetists
Anaesthetic and Recovery Practitioners
Paediatricians
Paediatric nursing staff including Children's Clinic Nurses
Play specialists teams
MRI radiographers at KTC**

Key amendments to this Standard Operating Procedure

Date	Amendment	Approved by:
	New document	

Introduction

This SOP sets out the operation of GA for MRI Scans at Kidderminster Treatment Centre.

MRI sessions are planned to run on paediatric days at the KTC site. There should be a named paediatrician on site with specialist paediatric nurses available for perioperative care.

Purpose

The planning, operation and quality assurance of MRI scans at KTC.

Abbreviations

MRI	Magnetic Resonance Imaging
CYP	Child or Young Person
GA	General Anaesthetic
AP	Anaesthetic Practitioner (includes ODP: Operating Department Practitioner)
LMA	Laryngeal Mask Airway

Staffing groups involved, including roles and responsibilities

- Referring clinician
 - Explain risks and benefits of MRI to CYP and carers
 - Obtain written consent to be available on day of MRI scan
 - Clearly identify those that are for GA on the MRI referral
 - Identify any implants or surgeries that may contra-indicate MRI and provide details of this
- Booking team
 - Populate MRI GA lists at KTC
 - Ensure list is booked to fill session (see list utilisation) and plan admission times once full list is known. Admissions can be staggered into 2 cohorts as appropriate, admitted at 8am, and 10am
 - Ensure children are booked according to behavioural requirements. The list should be booked according to age (younger CYP at start of list) unless CYP have significant learning disability and require an earlier slot.
- Pre-op team
 - Undertake timely pre-assessment
 - Identify if other investigations are required (i.e. blood tests)
 - Liaise with Paediatric Anaesthetic Lead for any CYP with more complex comorbidities or concerns to determine suitability for KTC
 - Give information leaflet to CYP and carers regarding MRI scan under GA
 - Ensure patients meet KTC criteria as shown in Appendix 1
- Consultant anaesthetist
 - Pre-op review of CYP requiring MRI scan. Pre-medication prescription as required.

- Attend relevant WHO Team Brief and associated checks
- Remains in the MRI area until the last patient has been transferred to 2nd stage recovery
- Liaise with the starred anaesthetic consultant if any problems anticipated
- Consultant paediatrician
 - Present on site between 0900-1700 for liaison, immediate action and cover in an emergency on bleep 3110
 - To obtain consent for any CYP undergoing an MRI where consent is not already provided by referring clinician
- Anaesthetic and Recovery Practitioner (AP) (i.e. ODP/anaesthetic/recovery nurse)
 - There will be 2 AP designated to the list: one for induction and scan, one for recovery
 - Ensure non-MRI Conditional anaesthetic machine and monitoring is moved from main KTC theatres to MRI suite and transferred back to theatres after completion of list
 - Ensure cardiac arrest trolley is moved from KTC Children's Clinic to MRI suite prior to list and transferred back to Clinic after completion of the list
 - Familiar with paediatric practice and MRI safety
 - Ensure all pre-list checks are complete, and the necessary equipment is available (see Equipment needed)
- Theatre support worker
 - Available for the MRI list
 - Escort patients to and from the MRI suite, with the support of the nursing staff and theatre practitioners
- Nursing staff
 - Set up an admission area for admitting CYP before the MRI scan
 - Apply LA cream to all patients (unless there is a contraindication)
 - Undertaking weight, height and baseline observations as able
 - Admit CYP and complete relevant paperwork
 - Administer pre-medication as prescribed by the anaesthetist
 - Carry the portable 2nd stage recovery phone (55233 or a Bleep if available).
- Play specialist
 - To work with CYP and family to reduce anxiety and support the process for an MRI scan
- Radiographer
 - Completing MRI checklists for the CYP and staff
 - Set up of the anaesthetic induction area and recovery area for use for this list

- Display emergency drugs poster in induction area, recovery area and control room
- Starred consultant anaesthetist
 - Doubled up with an appropriate anaesthetist
 - Must carry the emergency bleep (3113) and respond to emergencies as required.

The accommodation and facilities required to support the MRI list consist of:

- Reception/admissions area with a waiting area for CYP and their families
- Admission to 2nd stage recovery area
- Anaesthetic induction area outside MRI scan room on level 1 with anaesthetic machine and monitoring to be transferred from theatres the day before the planned list.
- MRI scan room and control room (with MRI Conditional anaesthetic machine and telemetric monitoring)
- Recovery area on level 1, by MRI scanner, with monitoring
- Second stage recovery – trolley area within discharge lounge
- Seated area within the discharge lounge

Equipment needed

- Anaesthetic machine with piped oxygen available in the induction area
- Cannulation equipment
- Anaesthetic drugs in lockable trolley to be brought from Theatres (propofol, rocuronium, atropine and saline ampoules. Suxamethonium pre-filled syringes to be added from fridge on morning of list)
- Syringes and filter drawing up needles
- Airway equipment – appropriately sized LMAs (2 - 5), ETT (cuffed 4 - 6.5), south-facing RAE-tubes (4-6.5), masks, oropharyngeal airways (ISO 5.5 to 8.0), ambu-bag (1Litre and 2 Litre), Ayre's T-piece, laryngoscopes sizes 2,3 and 4, adult bougie, paediatric bougie
- MRI safe patient trolley
- MRI conditional monitoring and electrodes
- MRI conditional anaesthetic machine
- Standard monitoring in the anaesthetic and recovery area including end-tidal CO2 monitoring to be brought from theatres
- Paediatric emergency cardiac arrest trolley
 - To be transferred from Paediatric Outpatients
- Transfer bags appropriate to ages of CYP on list, Oxygen on trolleys and portable suction should also be available for the transfer post-GA.

Utilisation of list

We expect to be able to complete 4 scan slots in a morning session. We would expect to be sending for the 1st patient on the list at 9am, with the last patient off the MRI scanner at 12.30pm. Radiology will work with the booking team to determine how many slots each scan will require. E.g

Simple MRI Head 1 slot

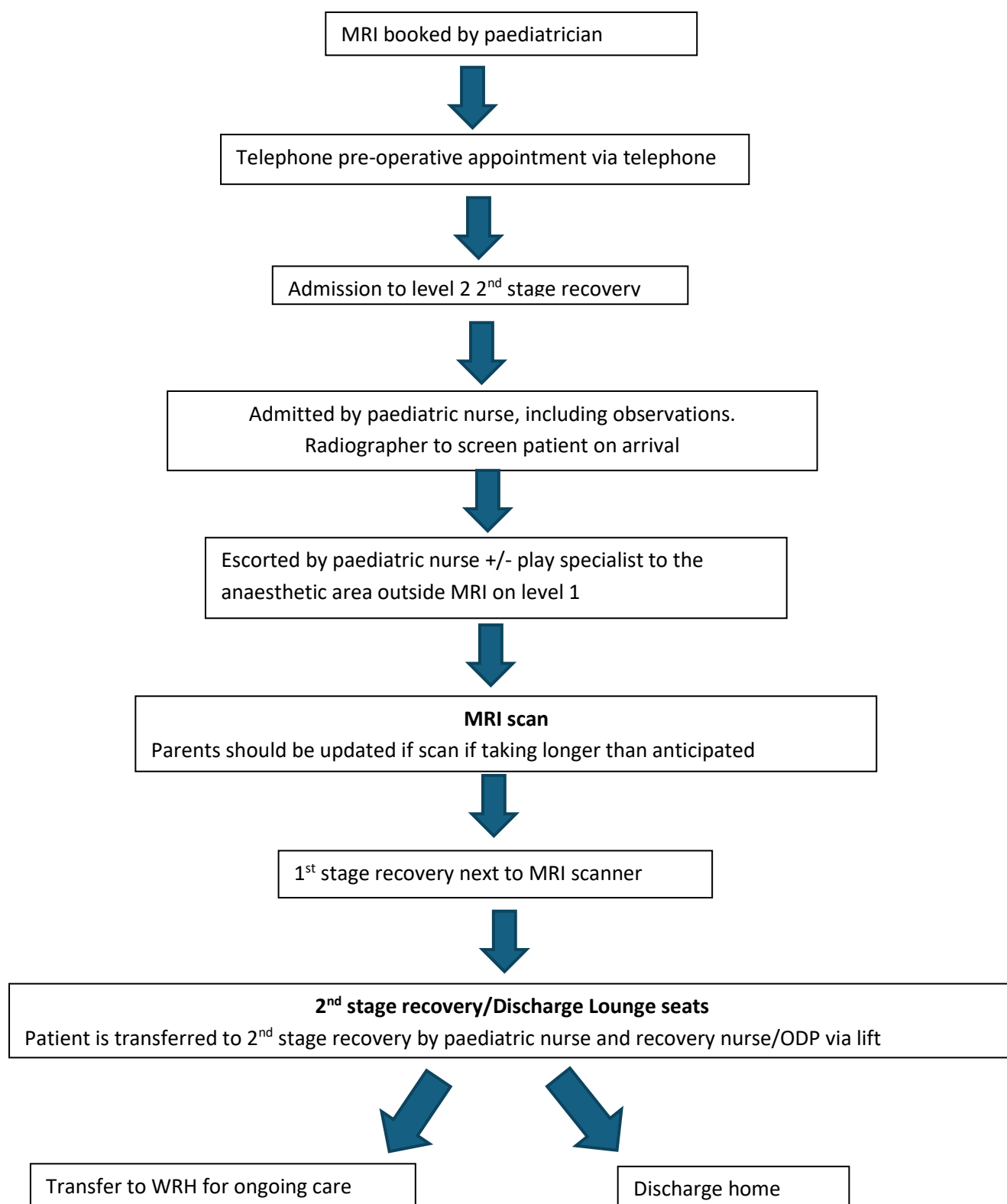
MRI head with spine likely to require: 2 slot

This will be kept under review and updated with the schedulers, as required.

MRI Safety

MRI safety is paramount. All practitioners involved in this list must be screened by the radiographers to work within the MRI suite. They must also have completed relevant MRI training and awareness of MRI safety. It is the responsibility of each practitioner, when entering the MRI scan room, to ensure that no contra-indicated equipment or objects and taken into the scan room.

In the event of an emergency within the scan room, help will be sought by dialling 2222 and stating “paediatric emergency, level 1 MRI scanner”. This will alert the on-site paediatrician, the starred anaesthetist and the paediatric ward nurse to the emergency via the bleep system. The patient will be brought out of the MRI scan room, into the anaesthetic area prior to commencing any emergency management of the patient.



Appendix 1.

Kidderminster Criteria for Children and Young People (taken from 'Guidelines for operating on Ear, Nose and Throat patients, Children and Young People WHAT H&N 003).

- Children should be over 2 years old (if 20-24 months discuss with anaesthetist)
- Weight over 12kgs
- Diabetic patients: Suitability of KTC surgery should be agreed with the CYP's Diabetic Consultant.

Exclusion Criteria:

- Severe cerebral palsy
- Hypotonic/neuromuscular disorders (moderately affected)
- Significant craniofacial anomalies
- Mucopolysaccharides
- Severe obesity (over 98th centile)
- Severely underweight (below 0.4th centile)
- Poorly controlled diabetes / epilepsy
- Mild OSA only (1st on list)
- Achondroplasia
- High opioid requirements
- Severe asthma requiring hospital admission within the last 12 months
- CYP with additional needs that will not be safely managed within the KTC environment

Appendix 2. Useful contact numbers as of June 2025

Worcester Hospital Contact Numbers		
Riverbank Childrens Inpatient ward	30116	01905 760588 External DDI
Riverbank Childrens Inpatient ward – Nurse in Charge Office	39107	
Dana Picken -Matron for Paediatrics	30233	01905 763333 (External)
Sarah Weale – Children Outpatients and Day Case Manager	30410	01905 733957 External DDI
Becky Magan Riverbank Childrens Inpatient Ward Manager	39498	
Consultant Paediatrician Consultant of the week	Through switch Blp 676	30112 Riverbank Dr Desk

Kidderminster Hospital Contact Numbers	
Main Admission Unit (reception)	55348
Discharge (2 nd stage) Reception	55234
Discharge (2 nd stage)	Walk Around Phone 55233
Ward One	55229/55230
Childrens Clinic Main office (Childrens Clinic is the base for the Consultant Paediatrician and the Senior nurse covering KTC on Paediatric Surgery Days)	55463
Consulting Room 1 (Childrens Clinic)	55187
Consulting Room 2 (Childrens Clinic)	55172
MRI Control Room	55127
ENP Minor Injuries	55309

Kidderminster Bleep Numbers	
Process to bleep: Dial 62 – enter bleep number- enter extension number	
RMO	3128
Porters	3253
Paeds Consultant	3110
Starred Anaesthetist	3113

Alex Hospital Contact Numbers	
Alex Pharmacy For Morphine prescriptions	42067/42021

Appendix 3 MRI Briefing poster

GA MRI KTC

Team Brief and De-brief



Worcestershire
Acute Hospitals
NHS Trust

TEAM BRIEF: Before each session

People

- **All team members present:** Anaesthetist, ODP, Radiographer, Nurse
- **Introductions.**
- **Confirm starred anaesthetist.**
 - o Confirm theatre.
 - o Confirm bleep number?
- **Confirm Ward nurse carrying bleep.** Confirm nurse number.
- **Confirm paediatrician**

Equipment

- **Confirm equipment is checked and ready**
 - o Anaesthetic machines
 - o MRI monitoring
 - o Recovery monitoring
 - o Airway trolley
 - o Consumables trolley
 - o Suxamethonium on consumables trolley
 - o Resus trolley transported over from Children's clinic

Cases

- **List order**
- **Scan planned**
- **Communication issues or disability**
- **Pre-med requirements**
- **Allergies**
- **Anaesthetic plan**
- **Other tests needed:** blood tests etc

General considerations

- Can any patients on the list drink or eat?
- Sip till send in place?

TEAM DE-BRIEF: after each session

- What has gone well?
- Has the list gone to plan? If no, was this due to beds or equipment?
- Any areas for improvement?
- Any actions from the list?