Ashford and St. Peter's Hospitals
NHS Foundation Trust

GUIDELINE FOR THE MANAGEMENT OF ABDOMINAL TRAUMA IN PAEDIATRC ED

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Guideline History		
Date	**Comments**	**Approved By**
February 2014	Written by Dr Erin Dawson	
Revised March 2017	Revised by Dr Erin Dawson	
Revised January 2022	Put into Trust format and reviewed by Dr Usman Mansoor	Paediatric Guideline Group

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1.

Guideline for the Management of Abdominal Trauma on Paediatric ED

Introduction

Abdominal trauma is not common, but the severity of injury is often underestimated and a high level of suspicion is required This guideline aims to increase the awareness of the mechanisms of injury, and outline the initial management.

Abdominal Trauma

Blunt trauma causes the majority of abdominal injuries in children

- RTC
- Recreational activities
    - Contact sports
    - Bicycle or scooter handlebar injuries
    - Horse riding
    - Fall from a height

A high index of suspicion is necessary to ensure abdominal trauma is not missed

Abdominal contents are very susceptible to injury in childhood

- Relatively thin abdominal wall
- Diaphragm more horizontal causing the liver and spleen to lie lower and more horizontally
- Ribs are more elastic and offer less protection to liver and spleen
- Bladder is more intra-abdominal rather than pelvic
- Respiratory compromise may occur due to diaphragmatic splinting or irritation

History

An accurate history of the mechanism of injury is required

- Rapid deceleration e g RTC causes abdominal compression
- Direct blow from punching or handlebar injury may damage solid organs
- Straddling injuries with perineal haematoma or urethral bleeding may indicate bladder injury

Examination

Inspection

- Bruising
- Lacerations
- Penetrating wounds

NB major trauma can occur without bruising, but its presence makes serious injury more likely. Any abdominal bruising should be considered significant.

Palpation

- Tenderness
- Rigidity

Auscultation

- Bowel sounds

Rectal and vaginal examinations are rarely indicated in the injured child

The abdomen may be more easily assessed if it is decompressed with NG tube

Catheterisation of the bladder should take into account any possible urethral injury

Investigations

Blood

- FBC
- U&E
- Amylase
- Group & Save
- Clotting screen
- Urinalysis

Imaging

- Plain films of chest, abdomen and pelvis are not adequate to rule out intra-abdominal injury
- Single contrast CT of the abdomen is the investigation of choice
    - Identifies solid organ injury
    - Confirms renal perfusion
    - Free air in the peritoneum is pathognomonic of perforated viscus
    - Significant free fluid without solid organ damage suggests bowel, or, less commonly, bladder injury

Ultrasound

- FAST scanning is commonly used in A&E departments, but a normal early scan does not exclude trauma

Management

Most children are managed conservatively with analgesia, fluids and repeated assessment

A surgeon who is trained to operate on the paediatric abdomen should be available, if not the child should be transferred to another centre

Indications for operative intervention

- Refractory shock with evidence of solid organ injury on CT
- Penetrating injury
- Bowel perforation

2. Supporting References

APLS Edition 5E

ILCOR 2020

3. Supporting relevant trust guidelines

None available

2. Guideline Governance

a. Scope

This guideline is relevant to all staff caring for all children from 0-18 years old across the emergency department, inpatient ward and outpatient department.

b. Purpose

i. This guidelines aims to facilitate a common approach to the management of children. At times deviation from the guideline may be necessary, this should be documented and is the responsibility of the attending consultant.

ii. This guideline is subject to regular review to ensure ongoing evidence based practice.

c. Duties and Responsibilities

All healthcare professionals responsible for the care of all children 0-18years should be aware of practice according to this guideline.

d. Approval and Ratification

This guideline will be approved and ratified by the Paediatric Guidelines Group.

e. Dissemination and Implementation

i. This guideline will be uploaded to the trust intranet 'Paediatric Guidelines' page and thus available for common use.
ii. This guideline will be shared as part of ongoing education within the Paediatric Department for both medical and nursing staff.
iii. All members of staff are invited to attend and give comments on the guideline as part of the ratification process.

f. Review and Revision Arrangements

a. This policy will be reviewed on a 3 yearly basis by the appropriate persons.
b. If new information comes to light prior to the review date, an earlier review will be prompted.
c. Amendments to the document shall be clearly marked on the document control sheet and the updated version uploaded to the intranet. Minor amendments will be ratified through the Paediatric Guidelines Group. A minor amendment would consist of no major change in process, and includes but is not limited to, amendments to documents within the appendices.

g. Equality Impact Assessment

Background • Who was involved in the Equality Impact Assessment
Author and the supervising consultants.
Methodology • A brief account of how the likely effects of the policy was assessed (to include race and ethnic origin, disability, gender, culture, religion or belief, sexual orientation, age) • The data sources and any other information used • The consultation that was carried out (who, why and how?)
All groups of staff and patients were taken into consideration and there is no bias towards or against any particular group.
Key Findings • Describe the results of the assessment • Identify if there is adverse or a potentially adverse impacts for any equalities groups
There is no evidence of discrimination.
Conclusion • Provide a summary of the overall conclusions
There is no evidence of discrimination.
Recommendations • State recommended changes to the proposed policy as a result of the impact assessment • Where it has not been possible to amend the policy, provide the detail of any actions that have been identified • Describe the plans for reviewing the assessment
This guideline is appropriate for use.

h. Document Checklist

To be completed (electronically) and attached to any document which guides practice when submitted to the appropriate committee for approval or ratification.

Title of the document:

Guideline for the Management of Abdominal Trauma in Paediatric ED

Policy (document) Author: Dr Erin Dawson

Executive Director: N/A

		Yes/No/ Unsure/NA	Comments
1.	**Title**		
	Is the title clear and unambiguous?	**Yes**	
	Is it clear whether the document is a guideline, policy, protocol or standard?	**Yes**	
2.	**Scope/Purpose**		
	Is the target population clear and unambiguous?	**Yes**	
	Is the purpose of the document clear?	**Yes**	
	Are the intended outcomes described?	**Yes**	
	Are the statements clear and unambiguous?	**Yes**	
3.	**Development Process**		
	Is there evidence of engagement with stakeholders and users?	**Yes**	
	Who was engaged in a review of the document (list committees/ individuals)?	**Yes**	
	Has the policy template been followed (i.e. is the format correct)?	**Yes**	
4.	**Evidence Base**		

		Yes/No/ Unsure/NA	Comments
	Is the type of evidence to support the document identified explicitly?	**Yes**	
	Are local/organisational supporting documents referenced?	**Yes**	
5.	**Approval**		
	Does the document identify which committee/group will approve/ratify it?	**Yes**	
	If appropriate, have the joint human resources/staff side committee (or equivalent) approved the document?	**Yes**	
6.	**Dissemination and Implementation**		
	Is there an outline/plan to identify how this will be done?	**Yes**	
	Does the plan include the necessary training/support to ensure compliance?	**Yes**	
7.	**Process for Monitoring Compliance**		
	Are there measurable standards or KPIs to support monitoring compliance of the document?	**Yes**	
8.	**Review Date**		
	Is the review date identified and is this acceptable?	**Yes**	**2025**
9.	**Overall Responsibility for the Document**		
	Is it clear who will be responsible for coordinating the dissemination, implementation and review of the documentation?	**Yes**	**Paediatric Guidelines Group**
10.	**Equality Impact Assessment (EIA)**		

		Yes/No/ Unsure/NA	**Comments**
	Has a suitable EIA been completed?	Yes	

Committee Approval (Paediatric Guidelines Group)			
If the committee is happy to approve this document, please complete the section below, date it and return it to the Policy (document) Owner			
Name of Chair	**Dr Claire Mitchell**	**Date**	**02/02/2022**
Ratification by Management Executive (if appropriate)			
If the Management Executive is happy to ratify this document, please complete the date of ratification below and advise the Policy (document) Owner			
Date: n/a			