FEBRILE CHILDREN

Assessing management, care, and outcome of febrile children up to 3 months of age who present in Darling Downs Hospitals

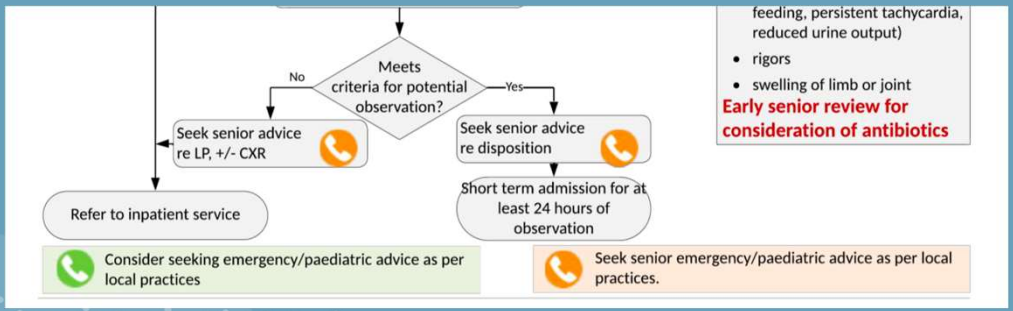
Presented by: Jessica Dale, Jacob Stevens & Maddison Lucas

Introduction

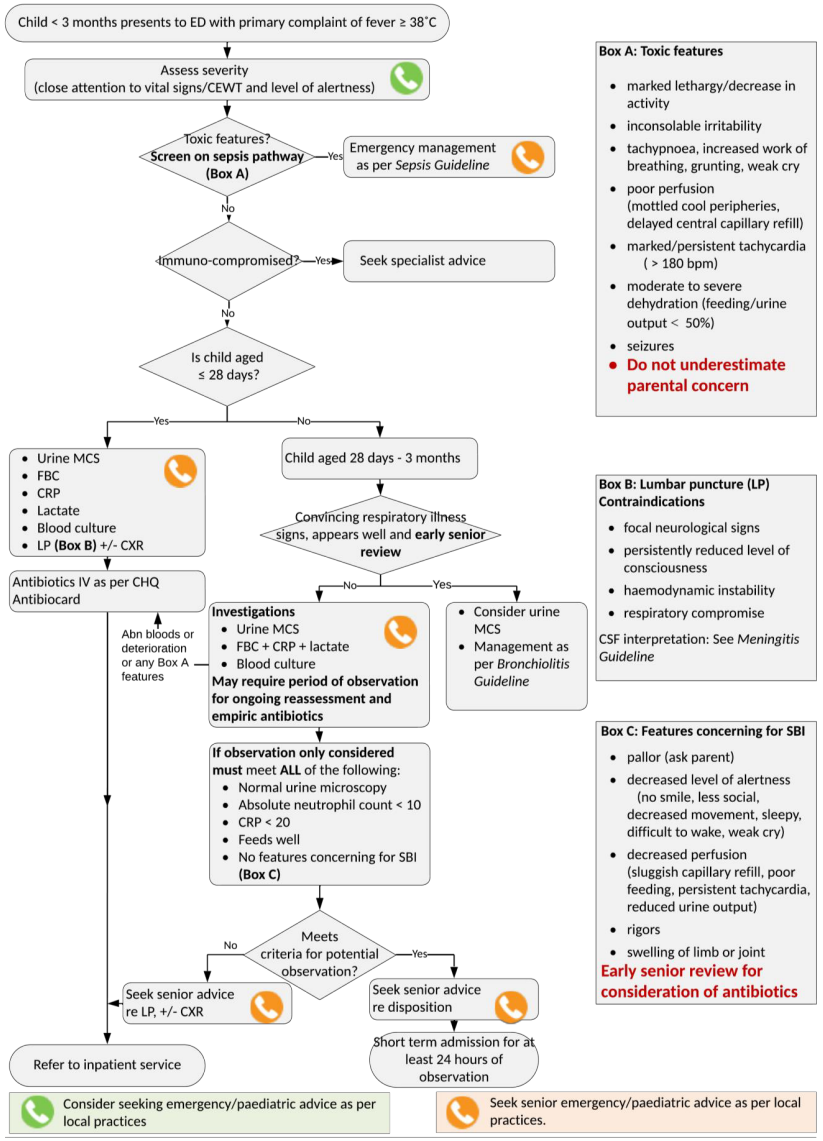
1 **Children <28 days:**
- Urine MCS, FBC, CRP, lactate, BCs
- **LP**

2 **Children >28 days:**
- Urine MCS, FBC, CRP, lactate, BCs
- Deviation to bronchiolitis guideline for URTI symptoms

3 **Specialist care & disposition:**



Appendix 1: Febrile illness – Emergency management in children < 3 months - flowchart



Study parameters

FEVER IN CHILDREN

Temperature in hospital must be recorded at >38 degrees Celsius.

SITES INVOLVED & CONTEXT

3 hospitals:

	Site 1	Site 2	Site 3
# of doctors	22	21	35
# of beds	59	22	67
Investigation services			
Lab on site?	yes	no	yes
Imaging	XR, CT	XR	XR, CT
April – June 2024 Quarterly Data			
Emergency admissions	569	365	1201
Non-admitted service events	6401	1129	3084

INCLUSION & EXCLUSION CRITERIA

Inclusions: Children presenting to ED under 3 months old, temperature >38 degrees Celsius at triage.

Exclusions: Children between 1 and 3 months old with a convincing respiratory illness.

Methods

1

Task Planning & Ethics Approvals
Team meetings with project leads to establish study, write up and ethics approvals, and plan the year.

2

Data Collection
Request data from the sites from coders. *2023 data collected first, due to insufficient data, expanded to Ethics limit which was 2019.* Total of 1257 encounters were examined individually through the Viewer or EDIS.

3

Data Acquisition
Once children were identified as meeting inclusion criteria, whether or not they had a FBC, CRP, blood culture, urine or lactate taken was recorded as a binary yes or no. For children under 28 days, whether or not they had an LP was also recorded.

4

Analysis and Project Finalisation
Children were compared against the gold standard of having all investigations taken per the guideline.

OVERALL STATISTICS

Total data points reviewed: 1257

Site 1: 613

Site 2: 146

Site 3: 498

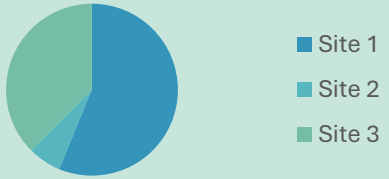
INCLUDED DATA

Total data points: 16

Children <28 days: 4

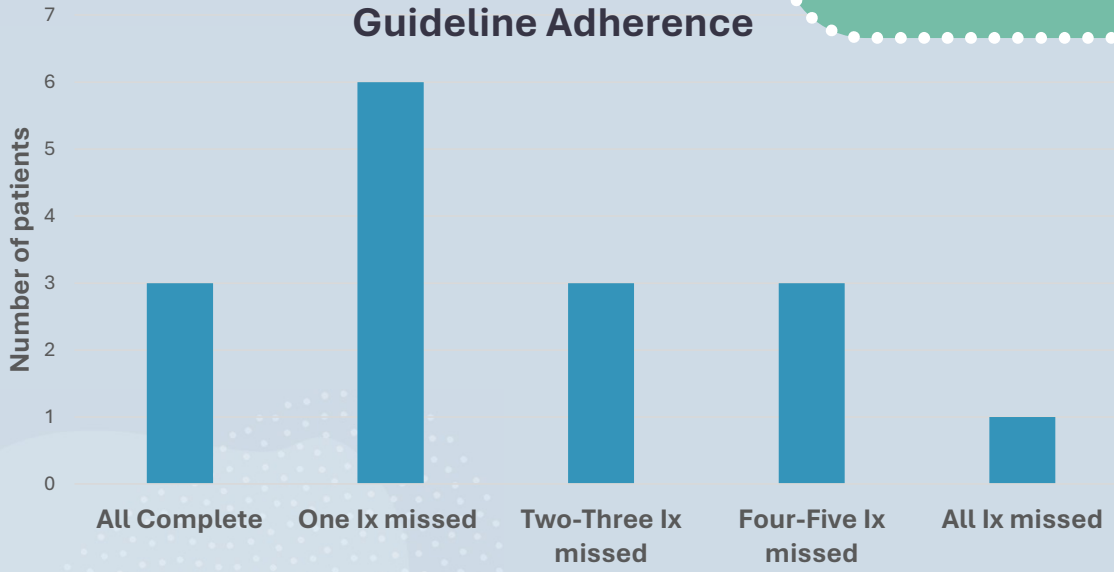
Children >28 days: 12

SITE BREAKDOWN

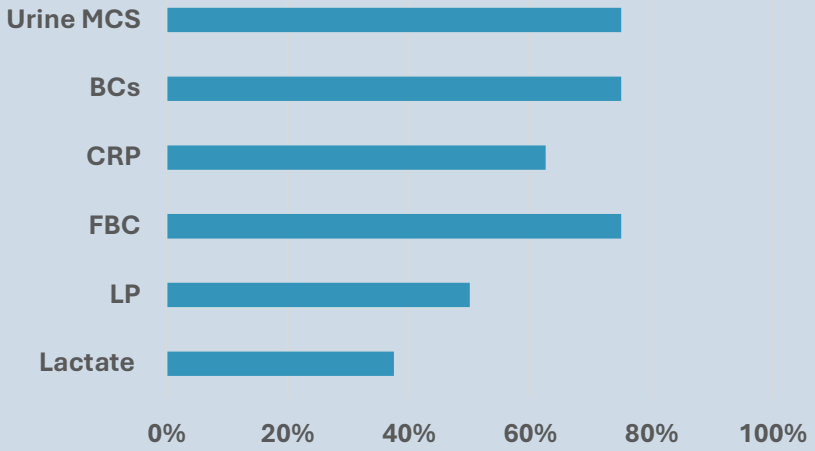


Results

Guideline Adherence



Adherence Breakdown



Further Findings

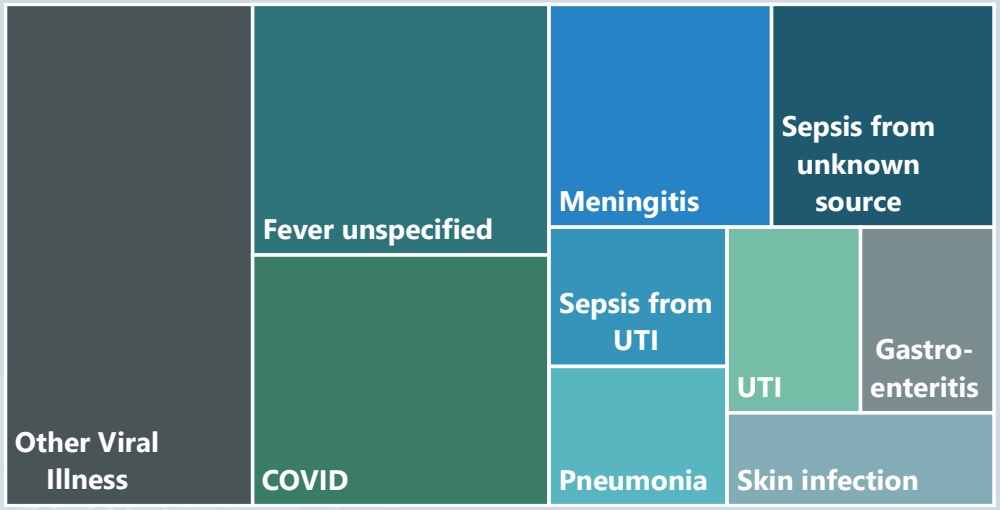
LP IN <28 DAY OLDS:

50% received a lumbar puncture in the local hospital

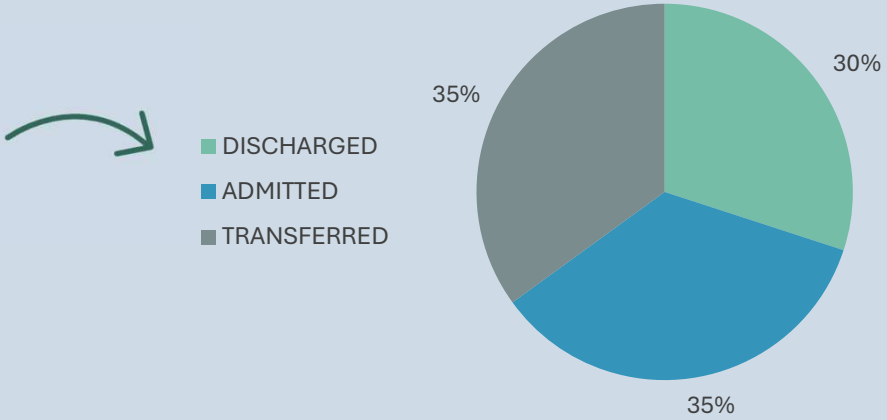
For the 2 children who did NOT get their LP:

- Both located at site 1
- All other investigations were completed for one child, but the other was also missing a urine MCS and lactate
- Both children received antibiotics

EDIS Diagnosis



Patient Disposition



Findings & Recommendations

1

Blood tests

If blood tests were done, urine was less commonly tested, and visa versa.

Lactate & CRP were performed less than other tests. May be due to clinician's view on its utility.

Note: one site did not have a laboratory.

2

Quality of Note Taking

Some cases of "Fever" as presenting complaint had no temperature recorded on EDIS note or in Viewer. *Should vital signs on EDIS notes be standard?*

3

# of Transfers & # of LPs

Discussion with local doctors suggests there could be hesitancy to perform a lumbar puncture on a child <28d. *Is local upskilling required or desired?*

4

Fever pathway vs Sepsis pathway vs ...

Clinician judgement

Accessibility to fever guideline in ED vs having paediatric sepsis pathway on hand.

Future Directions

DEEP DIVE

Looking into values recorded for each investigation, outcomes. Qualitative analysis on clinician judgement.

FEVER PATHWAY

Utility of the fever guideline is outside of scope, HOWEVER, availability of sepsis pathway may skew adherence to fever guideline.

BLOODWORK ON KIDS

Intention for bloodwork vs success of blood draw vs necessity of blood sample

Acknowledgements

Medical Educators: Jessica Hockey and Jess Land

Supported by: William MacAskill, Jill-Ann Wheeler and Brendan Carrigan

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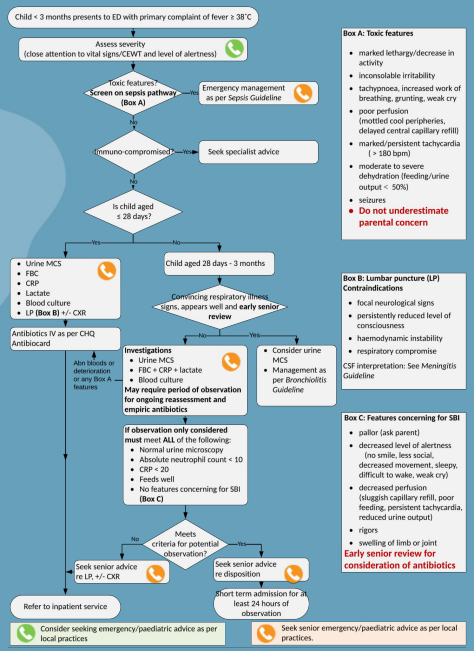

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