

Investigations and management in febrile children under 3 months of age

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Quality Improvement Awards 2024

Diagram 1:

Percent of investigations which are indicated by fever in under 3 months of age, performed

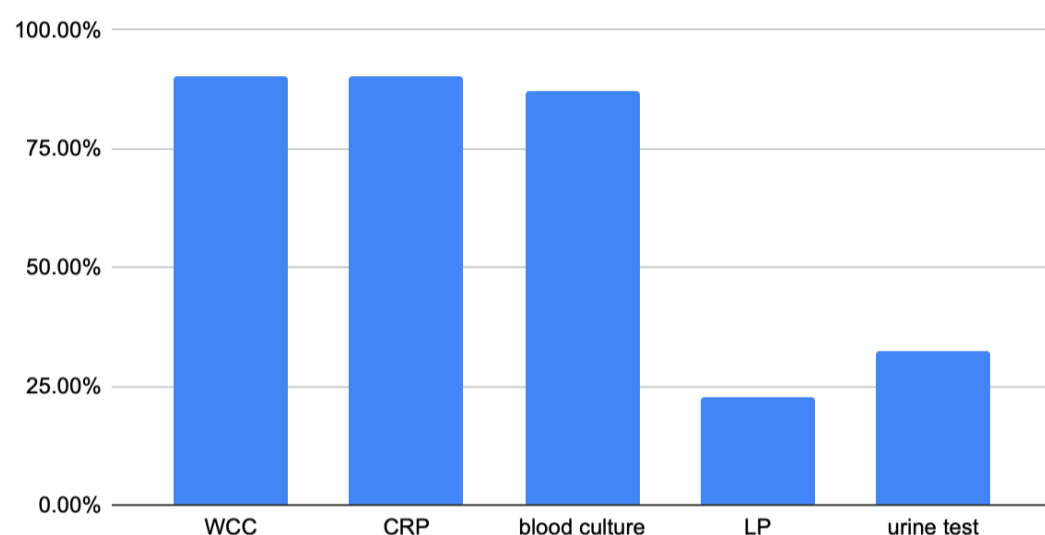


Diagram 2

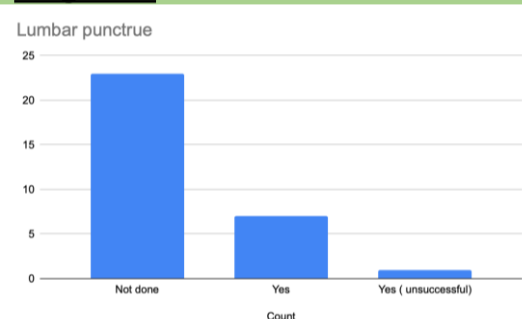


Diagram 3

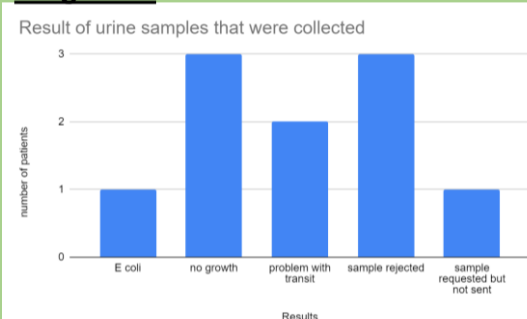


Diagram 4

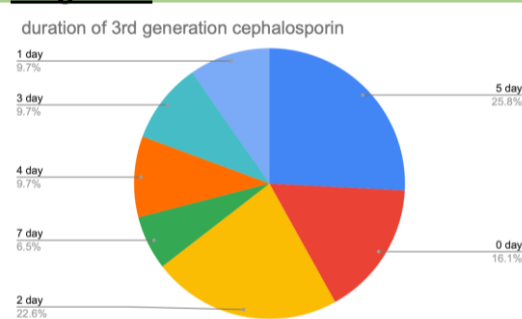
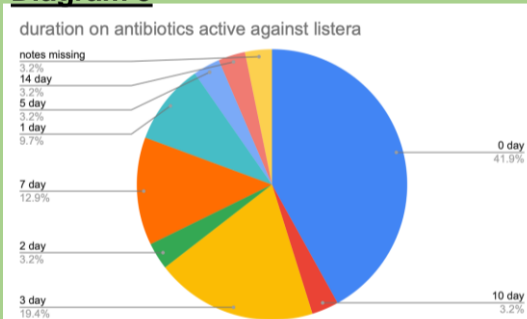


Diagram 5



Recommendations

It may be worth surveying the reasons leading to low LP performance before antibiotic administration. With the current data we possess, here are some potential recommendations:

- Proactiveness from the doctors and nursing staff in completing lumbar puncture in infants <28 days with fever unless strongly contraindicated.
- Encouraging Urine to be sent for MC&S (liaising with microbiology team to smoothen this process)
- Improvement in staffing and rota

Background and Aims

Infants <3 months with a fever >38 degrees are classified as high risk of serious bacterial infection. This audit aims to assess the compliance in management of febrile infants <3 months with the national guidelines in the United Kingdom.

Methods and Demographics

Retrospective data collection in Walsall Manor Hospital (1st July – 31st October 2023). Parameters - demographics, clinical presentation, investigations collected. 31 infant records collected. Median age 37 days (R- 4-91d).

Results

- Referring to Diagram 1, there was generally good adherence to NICE guidance in Initiation of investigations (90.3%)
- FBC, CRP, Blood cultures, and initiation of antibiotics (90.3%; diagram 4 and 5)
- Yet there was lack of adherence to NICE guidance in Lumbar puncture initiation (specially for < 28 days old) - 22.6% (8/31) done. 1 unsuccessful; 0% before antibiotics.
- Urine cultures: 31% (10/31) done.
- Reasons for lack of lab results identified. (as per diagram 3.)

Limitations

- Parts of data missing very occasionally due to disorganised paper notes: data such as duration of antibiotics could not be known completely
- Timelines relating to antibiotic administration and lumbar puncture performance were difficult to comprehend due to parts of data being on paper notes and others being on electronic records.

Pediatrics

Causes of fever can range from simple viral infections to severe bacterial infections (e.g., Kawasaki disease). Due to the difficulty of distinguishing the cause of fever, all infants < 3 months old with fever needs to be refer to secondary care for further assessment and observations. In addition, it is essential to identify the focus of infection in order to tailor the antibiotic treatments.

Working in partnership

The Royal Wolverhampton NHS Trust
Walsall Healthcare NHS Trust