Conclusion and recommendations Using our data and incorporating DATIX and SI reporting, we secured financial and managerial investment to implement our recommendations. Our primary intervention was the creation of an in-hours nurse-led jaundice clinic. This alternative pathway is intended to relieve burden in ED and facilitate access to faster assessment and treatment. For patients presenting out of hours, we improved point of care testing by obtaining a transcutaneous bilirubinometer and recalibrating the blood gas analyser to improve accuracy thus removing the need for processing lab serum samples. Education targeted at triage nurses in ED has enabled them to initiate basic investigations and management whilst awaiting medical assessment. Going forward, we have also been able to secure an application for a Biliblanket which will aid the timely administration of phototherapy in ED.

A re-audit of three months of data following implementation of these initiatives has shown a 56% reduction in mean waiting time for bilirubin results and 49% reduction in mean time spent in ED.

This project highlighted the benefit of a multifaceted approach to quality improvement, incorporating multiple pillars of clinical governance to advance patient care.

G347(P) IMPLEMENTING CLINICAL PATHWAYS IN A PAEDIATRIC EMERGENCY DEPARTMENT

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Background Despite the fact that evidence based guidelines are widely available adherences to them remains unsatisfactory.¹ Embedding guidance and decision support into clinical work processes at the bedside might improve this.

Aim We turned eight existing clinical guidelines into 'clinical pathways' embedded in paediatric Emergency Department (ED) workflow, which obviates the need to learn or look up a guideline, and gives clinical decision support at the bedside. We hypothesise that this would improve guideline compliance and reduce unwarranted clinical variation.

Methods Clinical pathways were created for the most common and/or important presentations to paediatric ED, namely 'The Wheezy Child under 5 years of age', 'Diarrhoea and Vomiting under 5', 'Child with Stridor', 'Febrile convulsion', 'Asthma in over 5's', 'The Child with a limp', 'Non-blanching rash', 'The child with fever and cough'. Activation of the pathway is symptom- rather than disease-based, and the pathway forms part of the ED clinical notes. The pathway guides clinician decision making, from treatment and investigations options (including reminders of unnecessary or non-evidence-based interventions); criteria for discharge, referral and admission; and patient information.

Results Pathways were well received and comprehensively implemented. At time of writing, clinical outcomes are available for four of the pathways. Results include reduction of the inappropriate use of nebulisers from 75% to 25%, reduced reattendances from 29% to 0%; more appropriate use of prednisolone and reduced requests for chest x-rays (for wheeze); increased urine sampling from 28% to 52% and more appropriate admissions and halved reattendance rates for diarrhoea and vomiting; reduced reattendances from 22% to

0% for stridor; reduced admission rate from 75% to 40% for febrile convulsion.

Conclusion The creation of clinical pathways, embedding existing clinical guidelines into routine care processes, have improved guideline adherence, improved clinical outcomes and reduced clinical variation.

REFERENCE

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G348(P) USE OF THE 'STEP-BY-STEP' APPROACH IN IDENTIFYING LOW RISK FEBRILE INFANTS IN THE EMERGENCY DEPARTMENT

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Aims The European 'Step-by-Step' algorithm (Gomez et al) has been shown to be superior in the management of febrile infants compared with the Rochester and Lab-Score criteria, especially identifying low risk patients.

If we applied the 'Step-by-Step' algorithm retrospectively to an audit could we identify areas to improve our capability and confidence of recognising low risk patients, including the use Procalcitonin (PCT).

Methods An audit over 6 months from November 2016 to April 2017 at Evelina Children's Hospital Paediatric Emergency Department recorded the investigation and management of all infants aged 1-3 months who had a fever recorded at triage or a history of fever recorded in nursing triage.

We excluded patients less than 4 weeks old as fever in the neonatal period is treated as high risk.

Results Sixteen infants aged 1-3 months presented with a fever (only two with a fever >24 hours), thirteen were admitted and given intravenous antibiotics, the average length of admission was twenty-eight hours. Only one had a CRP >20, two had leukocyturia and none had a raised WCC or neutrophil count.

Forty-two infants aged 1-3 months were triaged with a history of fever, nineteen were admitted for intravenous antibiotics, the average length of admission was fifteen hours. Two had a rise in CRP, three showed leukocyturia and two showed raised neutrophils.

No cases of isolated bacterial pathogen in blood or CSF were identified in either group.

Using the 'Step-by-Step' approach seven (54%) with fever and six (32%) with a history of fever who were admitted and treated could be identified as low risk. The most reliable identification for high risk is clinical appearance.

Conclusion The 'Step-by-Step' approach is a valuable and a more applicable tool than previous methods in the management of febrile infants. This approach shows we can improve our method of identification of low risk patients in infants aged 1-3 months that present with fever, possibly reducing admissions. PCT could also be a further useful step in identifying low risk patients.

REFERENCE

1. Gomez, et al. Validation of the 'step-by-step' approach in management of young febrile infants. *Paediatrics* 2016;138. doi:10.1542/ped.2015-4381