

Assessment of problem and analysis of its causes Initial assessment involved audit of investigation and treatment of CAP.

Investigation The BTS suggests “Chest radiography (CXR) should not be considered a routine investigation” and that “acute phase reactants (C Reactive Protein (CRP), White blood cell count (WCC)) ... should not be tested routinely.” It also states that “Microbiological diagnosis should be attempted in children with severe pneumonia sufficient to require paediatric intensive care admission, or those with complications of CAP.” It should “not be considered routinely in those with milder disease.”

With reference to this the audit found that, like hospitals throughout the UK, we were over investigating.

In children with CAP seen between 1 November 2012–31 January 2013 we found:

59% had a blood culture (national 51%)

73% had a WCC (national 63%)

71% had a CRP (national 62%)

98% had a CXR (national 90% (in year 2011/12))

Treatment The BTS suggests “Antibiotics administered orally are safe and effective for children presenting with even severe CAP” provided they can tolerate oral fluids, absorb oral antibiotics and do not have evidence of septicaemia or complicated pneumonia.

Yet despite these rather strict criteria we gave IV antibiotics (IVABx) to 63% of children with CAP despite only 39% requiring IV fluids.

A key issue identified in both investigation and treatment was differences in practice between clinicians.

Intervention A new Guideline was written for the management of CAP within the Trust. This was in line with the BTS National Guidance with particular emphasis on investigation and antibiotic treatment.

Strategy for change Presentations were made to both Trainee and Consultant Paediatricians with emphasis on the audit results and the new Guideline. The evidence for when investigation is needed and when it is appropriate to give oral antibiotics was discussed.

The new Guideline was uploaded to the Trust’s intranet.

Measurement of improvement Management of CAP was re-audited approximately six months after the implementation of the new Guideline.

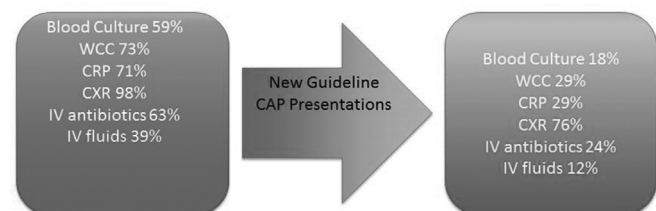
Effects of changes Improvements were seen across all areas.

Investigation In children with CAP seen in December 2013 we found:

- 18% had a Blood culture (59% in previous year)
- 29% had a WCC (73% in previous year)
- 29% had a CRP (71% in previous year)
- 76% had a CXR (98% in previous year)

Treatment IV Antibiotic use fell to 24% (from 63%) and IV fluid use to 12% (from 39%).

All this suggests the Trust is now managing CAP considerably closer to the BTS Guidance.



Abstract G559(P) Figure 1

Also with decreased investigation and IV treatment, the cost of CAP to the Trust should be reduced.

Lessons learnt This project has shown how an audit cycle can bring positive change both for improved patient care and in terms of financial savings for the Trust.

Next time it would be helpful to look more closely at quantifying these financial savings.

Message for others There are two key messages:

The first is that Health Professionals need to know why a change is being made. Here the combination of discussing the audit and the evidence behind the Guideline was key to changing practice.

The second is that despite national guidance being available it needs to be brought to people’s attention for a change to be effected.

G560(P) IMPROVING THE STANDARD OF PAEDIATRIC WARD ROUNDS

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Context We identified a quality issue related to ward rounds in a 25-bed paediatric unit in a District General Hospital. Paediatric trainees, consultants and nursing team were involved in the improvement process.

Problem A safe and efficient service needs to ensure that there is a structured and high quality ward round (WR) including documentation of activities undertaken during WR. The core team (1 trainee, 1 Consultant and 1 nurse) observed that clinicians vary in their style for conducting ward rounds and trainees give variable emphasis on documenting these activities. We devised a list of 10 activities that needed proper documentation during WR.

Assessment of problem and analysis of its causes An audit was undertaken to review documentation of the post-take ward round. Same trainee looked at 46 medical records on 2 random days over a 7 week period.

Acceptable documentation was found for date, time, signature and name in 97.8%, discussion of management and discharge plans in 89.13% and recording focussed examination in 93.4% case notes.

There was inadequate record of who was present on WR at 78.2%, whether a nurse accompanied WR at 50% and whether the nursing observation chart was reviewed at 56.5%; although these charts were reviewed for nearly all patients.

There was poor documentation for recording parental concerns in 10.8%, recording investigation results in notes in 28.2%, documenting hydration status or fluid balance in 10.8%

Activities carried out during ward round:

Update obtained from nurse----- Y / N

PEWS observation chart reviewed---- Y / N

Drug KARDEX reviewed----- Y / N

Feed chart/ hydration assessed----- Y / N

Investigation results reviewed----- Y / N/ n.a

Abstract G560(P) Figure 1

and whether medication prescription chart was reviewed in 23.9% case notes.

Intervention We reflected on the results of our audit and discussed the core activities that must be documented, creating standards for our unit. A helpful suggestion from discussion between trainees and nurses led to creation of a 'Ward Round Stamp' that is a simple tick list of 5 issues (see Figure 1) that is used as part of documenting activities on WR.

Strategy for change The results of our observation were discussed in the monthly departmental governance meeting. There were concerns raised about variable standards of ward rounds and their documentation. Few clinicians expressed a view that documenting key aspects of ward rounds are medico-legally important and a thorough documentation supports investigations when case notes are retrospectively scrutinised. Brainstorming further in a focussed team of trainees, consultants and nurses led to the practical decision to use the WR stamp identifying 5 activities that can be ticked. The use of stamp was easy to implement as it was an idea from trainees that their colleagues readily accepted. The use of WR stamp is now routinely discussed at induction whenever the trainees changeover. We are re-auditing the documentation during ward rounds. Interim results show that trainees remember to use the WR stamp on >80% occasions. At other times, the general improvement in documentation is noticeable.

Effects of changes There has been changeover of trainees and written feedback suggests that all trainees find paediatric ward rounds to be more structured than other departments they had rotated in. There has been no resistance from trainees or nurses in adapting the WR stamp. We still find occasions when trainees don't use the WR stamp, but these are busier times or locum doctors. Trainees find structured ward rounds are helpful for training future doctors by providing a good example of safe service provision and good documentation.

Lessons learnt I have rotated to another unit and have continued a thorough documentation of all activities during ward rounds.

Message for others I found that lack of structure that can be responsible for poor quality within healthcare and solutions can be simple to devise and implement.

G561(P) SAFE USE OF INSULIN

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Context The project involves all paediatric inpatients with type 1 diabetes on a general paediatric ward in a district general hospital. The staff involved include paediatric specialist nurses, ward nurses, ward-based doctors, the ward pharmacist and the clinical lead for diabetes.

Problem Errors were occurring with prescribing and administration of insulin, including dosing errors, type of insulin, missed doses and untimely doses. This was leading to poor blood sugar management significant risk to patient safety. Parents were reporting to the diabetes specialist nurses that they lacked confidence in the ward staff's abilities to understand glycaemic control and one teenage patient self-discharged as he felt unsafe.

Assessment of problem and analysis of its causes Construct a process map from a multidisciplinary discussion to diagnose the

variations in care during the patient journey. The discussion helped determine:

1. Problems with the prescription chart, e.g. insulin prescribed on different pages; text boxes too small with inappropriate subheadings; not suitable for variable doses.
2. Lack of staff understanding, compounded by high turnover of medical staff sometimes with no paediatric experience and lack of exposure due to low admission rates of diabetics.
3. The lack of clarity of the prescription was leading to an unnecessary step of the nurse calling the doctor to check the quantity of insulin required based on each blood sugar result.

Patient engagement: contact with recent inpatients/their carers to discuss perception of care.

Intervention A search was conducted to see how other departments are approaching this problem and then critically appraise whether these methods would be suitable in our setting. As a starting point we introduced a separate specific insulin prescription chart securely attached to ward drug chart. The chart allowed sufficient space for each type of insulin prescribed, with prompts to guide staff in decision-making regarding dose and to encourage appropriate timing of administration of doses.

Study design Due to the low admission rate of diabetic patients and high risk of harm from drug errors, analysis using real patients would delay the implementation of the safer prescription chart. Therefore initial tests of the chart's suitability were carried out with simulation exercises and repeatedly tested on groups of doctors and nurses, who provided feedback on the charts. The feedback and charts were then analysed by the author along with the ward pharmacist.

Strategy for change The new drug chart will be kept in the same place as the standard drug charts. Use of the chart will be incorporated into the diabetes study day for the nursing staff and the doctors' departmental induction.

Measurement of improvement Run charts of the number of errors found on charts tested out on doctors and nurses with the dummy patients.

Simultaneous analysis of confidence of prescribing and interpretation of prescriptions by nurses.

Once the chart has been through the trust's clinical governance systems and is implemented for real patient use, the incidence of drug errors will be monitored using the incident reporting system and feedback from the ward pharmacist.

Effects of changes It is hoped that there will be a reduction in drug errors and an improvement in the timely, accurate administration of the correct insulin type. It is expected that as a result of improved confidence of the staff and consistency of prescriptions that patient confidence will improve.

Lessons learnt By standardising part of the pathway we predict a reduction in treatment variation.

Message for others Safe insulin prescribing is now mandatory training throughout the NHS. This chart allows this training to be incorporated into best practice.

G562(P) MEDICAL PRODUCTIVITY: QUALITY CARE AND QUALITY TRAINING

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Context Inpatient general paediatrics is provided by a variety of medical staff, including Paediatric trainees, General Practice