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My improvement problem & evidence base



Explore your ONE thing

Describe the ONE thing you want to work on

Creating a clear investigation and treatment pathway for children being managed in and/or admitted from PED with CAP or Wheeze, and disseminating this so all colleagues are aware of it and it becomes embedded in our culture.

What around you and observe what is happening

What do you SEE or HEAR that tells a story about why this is a problem worth working on? In e.g. How would patients describe how this affects their care?

Describe and share your observations by making a note, creating a picture or sharing some photos and/or video of the ONE thing?

Where is the commonest cause of absence at PED?

Patients are admitted unnecessarily for overnight stays, necessitating the family taking away both a bed and financial resources from other patients.

Problems are not resolved due to poor communication and discharge planning.

Patients are not assessed due to an inability to discharge (waiting for investigations and/or education and training of staff).

Staff are not fully trained in managing children with CAP or Wheeze, or confused by the clinical guidelines such as fever in the stable (EFS) or Children are frustrated that children are being able and inappropriate treatment e.g. antibiotics leading to antibiotic resistance in the paediatric ward.

Children are exposed to unnecessary antibiotics and to their parents and doctors in CAP.

Children are required to attend the hospital for well child assessments (well children are required).

Investigation and/or treatment is not appropriate.

Staff time is wasted in waiting for tests, unnecessary waiting, unnecessary investigations and/or unnecessary investigations.

Is it a PED problem? (Does it happen hourly, daily, weekly, monthly, yearly?)

- Multiple times daily
- Commonest cause of absence at PED
- Commonest reason for the patient to be in PED
- Repeat doctor visits

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Understanding the problem (the diagnostics)

My improvement aim

What are we trying to accomplish?

Improve the quality of care children with Community Acquired Pneumonia or Quercus Etiology's Wheezing receive, by increasing the percentage receiving evidence based care as documented in the BTS guidelines.

Improve the quality of care children with Community Acquired Pneumonia or Quercus Etiology's Wheezing receive, by increasing the percentage receiving evidence based care as documented in the BTS guidelines from 0% to 100% by December 2018.

SPECIFIC
MEASURABLE
ACHIEVABLE
RESULTS FOCUSED
TIME-BOUND

An iterative process



My change ideas

Your change Ideas

Review all CXRs with CAP/Wheeze in Radiology meeting to clarify which actually have Cap and should be prescribed abx, and each time state the abx length and dose. → emphasise CXR not that helpful, help people distinguish between wheeze and CAP changes. Junior Dr and Cons buy-in.

Ask pharmacist checking TTDs to challenge all prescribing doctors who have not prescribed first line recommended abx for CAP → Prompt them to reconsider their choice in accordance with guidelines

Ask Nurse dispensing from ward stock to do above (ditto)

Only stock first line abx on ward for quick TTDs. → incentive to prescribe that abx.

Implement an electronic prescribing template that automatically prescribed the correct abx for CAP → removes human error/choice

Update the local micro guidelines for CAP so they reflect the BTS ones → makes guidance consistent so choice easier.

Encourage Junior Drs to download the micro app and childrens bnf to their phone → makes accessing info easier so more correct Rx.

Introduce teaching in various formats (formal shechuled teaching, micro teach in handover, video/bullet points in whats app group on CAP abx → increases awareness of guidelines

Extend the CAP trial from Lewisham to Greenwich (same trust) → research nurses present to prompt correct management.

Create a patient video of impact of CAP and abx choice → explain importance (if any!) of intervention to Drs.

Get Drs to audit team's prescribing → engagement

Cost benefit analysis of first line abx prescribing, present at Consultant meeting with senior management reps present → engages senior WR decision makers in reasons to prescribe reccomended abx.



Choose & define your baseline measures

7 steps to measurement

Chosen measure: Number of CAP inpatients prescribed correct antibiotic (oral amoxicillin), dose and length on electronic discharge TTD.

Inclusions: >1y CAP inpatient, discharged. Admitted within 1 week.

Exclusions: >1y Significant co-morbidities e.g. Malnutrition, CI.

Sampling method & frequency: Can you do this for cases retrospectively? Review the baseline data which supports all hypotheses. Identify those with CAP which need attention. List of those who were discharged in the PED admission period.

How long would it take to generate 70 data points for your baseline?

Table 1: 20 inpatient CAP patients.

My PDSA cycles

PDSA Test Cycle

ACT on your learning by adapting your next plan. Go through the first cycle again.

PLAN how you are going to conduct your test.

DO your test.

STUDY the results from your test. Analyse what happened and what you can learn from this.

DO your test.

PDSA: Plan

Change idea: PED CAP proforma

ONE thing to test: If developing and piloting a one page CAP proforma in PED would improve leading doctors awareness of the BTS guidelines.

What to do: Develop a basic proforma, show it to at least 5 doctors in PED and ask them in real time for their qualitative feedback on it, and to answer 3 short questions to gauge their awareness of BTS guidelines.

When to do it: Wednesday in December 2018

Where to do it: QEH PED

Who to do it: 3 NCL medical students

Predict outcome: Discussing proforma before piloting awareness will educate junior doctors and improve their awareness of BTS guidelines as demonstrated in the short questionnaire. Balancing measures e.g. not overwriting steps or need including.

Data to collect: Self-reported awareness of BTS guidelines. 5 questions relating to correct management of PED CAP to demonstrate actual awareness.

My PDSA cycles

PDSA Test #	PLAN	DO	STUDY	ACT
1. Don't Reinvent the wheel	Discover if other trusts have a CAP proforma	Looked on Guideline Exchange and downloaded ECH one	Reflected on how it would apply to QEH	Asked students to modify it to fit our PED set-up
2. What you measure matters	Optimise drafted proforma	Condensed to one page. Added balancing measures.	Create questionnaire to measure baseline knowledge and get feedback on proforma	Asked students to create questionnaire
3. Use it or lose it	Educate doctors in proforma and guideline use.	Showed PED Drs proforma and completed questionnaire	Poor baseline knowledge in PED	Add CAP severity criteria and which antibiotic to prescribe on proforma
4. Wearing our caps backwards	Repeat cycle 3 with modified proforma	Showed PED Drs proforma and completed questionnaire	Diagnostic uncertainty means unsure if right proforma to use	Add alternative diagnoses + guidelines at decision points

Baseline data and Proforma

Febrile respiratory distress in children

Fever and Tachypnoea

Any other of additional Power under 16?

Investigate to assess severity

Consider additional investigations

Consider additional investigations

Additional investigations at NEE advice.

Reasons for deviation from BTS CAP guidelines: Figure 2: Illustrating reasons why clinicians deviate from BTS CAP guidelines

37% Unaware
16% Clinical Judgement
16% Exclude Differential Diagnosis
16% Contradict Local Guidance
5% Other
21% Investigate to assess severity

My reflections and learning

AIM ← What do I want to achieve?
Increased clinician awareness of BTS Paediatric CAP guidelines

MEASURES ← How will I know that I've achieved it?
% of PED Drs correctly answering question on management of Pediatric CAP increases from 0%

CHANGE IDEAS ← What ideas have I got to help me achieve it?
Engage Junior Doctors in formal questionnaire feedback on a CAP proforma, educating them whilst improving the proforma.

ACT PLAN DO STUDY ← How do I test my idea?
Iterative cycles of formal proforma feedback using questionnaire with review of results via PDSA cycles.