

# Improving the Quality of Care for Community Acquired Pneumonia using a Care Bundle Approach



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## Aim

To improve the management of community acquired pneumonia (CAP) by introducing a care bundle and to investigate whether treating patients according to the care bundle has an effect on mortality.

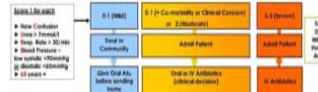
## Methodology

This is a prospective study carried out by the Scottish National Audit Project funded by the Health Foundation's Engaging with Quality Initiative. The CAP care bundle includes 5 essential elements of care proven by high level evidence to improve patient outcomes. Data are collected locally and posted on an extranet provided by the Institute for Healthcare Improvement (IHI). The extranet provides sites with immediate feedback so bundle compliance can be monitored each month. Sites are encouraged to use rapid cycle tests of change (Plan, Do, Study, Act) to improve patient care.

**Community Acquired Pneumonia Care Bundle**  
 Definition: Apply the Care Bundle to new cases of CAP. Base cases showing symptoms and signs of acute respiratory tract infection, with confirmed by [www.scottishnaap.org](http://www.scottishnaap.org)

**FOR ALL PATIENTS ON PRESENTATION**  
 (1) OXYGENATION: to be assessed during the first 4 hours. If required, oxygen supplemented to maintain saturations  $\geq 92\%$  and monitor oxygen saturations and blood gases as necessary for a minimum of 24hrs.

(2) OBTAIN A SCORE: CURB-65  
 (3) TREAT WITH CAP: AT HOME WITH ORAL ANTIBIOTICS  
 (4) ADJUST THERAPY: CASE AND USE OF ANTIBIOTICS

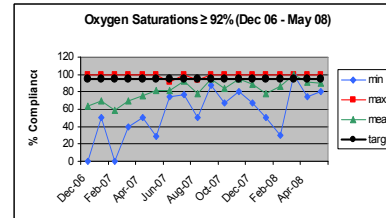


(5) FIRST DOSE ANTIBIOTIC WITHIN 4 HOURS OF ARRIVAL FOR ALL PATIENTS. Possible according to local practices

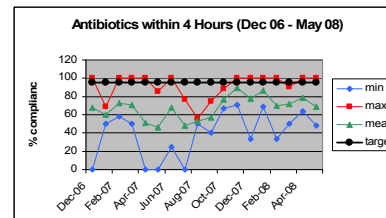
**ESSENTIAL ELEMENT OF CARE:**  
 PATIENT INFORMATION WITHIN 4 HOURS OF ARRIVAL - Provide patient/family/care with verbal and written explanation of diagnosis and treatment plan.

## Outcomes / Results

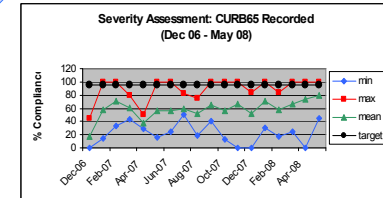
Ten hospitals across Scotland are involved with the project. Mean results show improvement in individual care processes from December 2006 up to May 2008: oxygen saturations  $\geq 92\%$  (from 64% to 88%), antibiotics within 4 hours (68% to 69%), CURB65 recorded (from 17% to 80%) and overall bundle compliance (from 18% to 60%).



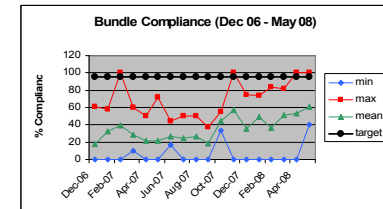
Oxygen Saturations  $\geq 92\%$



Antibiotics within 4 Hours



CURB65 Recorded



Bundle Compliance

Data linkage between the General Register Office and Scottish Morbidity Record (SMR01) will be used to assess whether the implementation of the CAP care bundle has an effect on mortality.

## Conclusion

Compliance with individual care processes and the entire bundle has increased in the first 18 months of data collection towards the target of 95%. Using the care bundle approach we have demonstrated improvement in the quality of care for community acquired pneumonia.