Results

Out of 2367 blood cultures analysed, 116 (5%) were positive for an organism. These were made up of 70 (60%) Coagulase Negative Staphylococcus, 13 (11%) Group B Streptococcus, 12 (10%) coliforms, 8 (7%) Enterococcus faecalis and 6 (5%) Staphylococcus aureus. The remaining were rarer Gram positive organisms and 1 Haemophilus influenzae. 100% of organisms that commonly cause early-onset sepsis (GBS and Escherichia coli n = 19) were sensitive to the recommended antibiotic combination of penicillin and gentamycin. 100% of non-CoNS pathogens were sensitive to the Amoxicillin and/or Gentamycin in the late onset sepsis regimen of Amoxicillin/Flucloxacillin/Gentamycin. Sensitivity to Flucloxacillin was measured at 22% of positive cultures tested. Only 54% of CoNS was tested for sensitivity to Vancomycin, which is the recommended antibiotic for suspected CoNS (eg. central line in situ). 100% of these were sensitive.

Conclusions

Initial analysis shows that guidelines are appropriate for early-onset sepsis and non-CoNS late-onset sepsis. However, the data questions the need for Flucloxacillin in the LOS regimen. There is apparent inconsistency in testing of CoNS for sensitivity to Vancomycin, not allowing a full judgement as to whether this provides adequate cover. The need for Cefazidime (recommended with Vancomycin when a baby remains sick despite the Amoxicillin/Flucloxacillin/Gentamycin regimen) is questioned by this study.

Aims

NICE projected cost savings of £50 million per annum with its guideline on “Antibiotics for early-onset neonatal infection’. We assessed the impact of implementing this guideline in a Level 2 Neonatal Unit.

Method

Retrospective case notes review of neonates born in our hospital who received antibiotics within 72 h of birth. We compared a pre-guideline implementation cohort (March–April 2012) and a post-guideline cohort (March–April 2013). Data on characteristics of the neonates, reasons for starting antibiotics, length of antibiotics course and adherence to the guidelines were collected.

Results

138 neonates were identified, 57 in the pre-guideline cohort and 81 in the post-guideline cohort (Figure 1). From the pre-guideline cohort, 39 were included. From the post-guideline cohort, 59 were included. The cohorts were matched. Overall, post-guideline implementation, there is a 51% increase in the number of neonates receiving antibiotics, with the main reason being for neonatal signs and symptoms in both cohorts (72% and 77%) (Figure 2). However, there was a 9% rise in neonates being started on antibiotics because of maternal risk factors alone in the post guideline cohort. This is due to the increasing number of mothers started on intravenous antibiotics for suspected invasive bacterial infection, although the criteria defining ‘suspected invasive bacterial infection’ are unclear. Post-guideline implementation, the number of neonates receiving more than