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Abstract (oral session)

**Gender differences in English *Staphylococcus aureus* bacteraemia surveillance reports: examination of age-specific patterns**

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**Objective:** *Staphylococcus aureus* is a major cause of infection. English *S. aureus* surveillance data consistently shows a male excess. The mechanism is unknown, but a similar pattern is cited internationally. We examined time trends by gender & age group and present preliminary analysis of bacteraemia source bacteraemia using *S. aureus* surveillance data. **Methods:** Voluntary (LabBase2) and mandatory English surveillance data for January 2007-September 2011 were extracted. Comparative voluntary data on 8 pathogens (*Escherichia coli*, coagulase-negative staphylococci, *Enterococcus* spp., *Klebsiella* spp., *Streptococcus pneumoniae*, *Enterobacter* spp., *Bacteroides* spp., *Streptococcus* Group A & B) commonly causing bacteraemia were extracted. Mandatory MSSA data is available from January 2011. Gender, age and source of bacteraemia were examined. Time trend by gender and age was examined with LabBase2 data allowing analysis of a longer period for methicillin-resistant *S. aureus* (MRSA). Source of bacteraemia is collected via mandatory data but is a voluntary field; it was analysed for 2007-2011 for methicillin-resistant *S. aureus* (MRSA) and 2011 for MSSA. **Results:** From 2007-2011 >56,000 voluntary *S. aureus* bacteraemia reports were made; >75% were MSSA. Overall 63% of reports were amongst men. This was consistent with comparative pathogens except *Streptococcus* Group A & B and *E. coli* where overall equal or slightly more reports were amongst females. Amongst MRSA reports 65% were of men, ranging from 69% (65-74yrs) to 55% (<1yr) [ $p<0.001$ ], whilst overall for MSSA reports 62% were of men; ranging from 66% (45-64yrs) to 57% (<1yr) [ $p<0.001$ ] (Figure 1). Over time the male excess has remained fairly constant but with variation by age group. Where reported, the main sources of MRSA and MSSA bacteraemia were lines (36% & 28% respectively) and skin and soft tissue infections (28% & 30% respectively), with much variation by methicillin-resistance, gender and age group. Amongst those aged <1yr lines predominated for both genders (60-70%). Urinary tract infections (UTIs) were more common amongst males compared to females (MRSA 15% vs 5% [ $p=0.0011$ ]; MSSA 9% vs 5% [ $p=0.154$ ]) however this variation was minimal in the <1yr group and most apparent in the 75+ group. **Conclusions:** Over 60% of *S. aureus* reports are amongst men, however analysis by organism and age group shows variation. The source of bacteraemia may be driving the gender and age specific trends observed but further analysis is required.

Figure 1: Voluntary *Staphylococcus aureus* bacteraemia reports (2007-2011)

