INTRODUCTION


Species tested were:

- Streptococcus pneumoniae, Haemophilus influenzae and Moraxella catarrhalis from CO-LRTI
- Staphylococcus aureus, Pseudomonas spp., Acinetobacter spp. and Enterobacteriaceae from clinically significant HO-LRTI

The latest three seasons of data (Oct 2013 - Sept 2016) are presented.

METHODS

Consecutive isolates (n=6919, Fig. 1) causing CO-LRTI (community or hospitalised ≤48 hours), or HO-LRTI (hospitalised >48 hours) were collected at 24-40 sites across the UK and Ireland. Each site was asked to collect a set quota (7-20) isolates/species/season.

Duplicates and isolates from patients with cystic fibrosis were excluded.

Minimum inhibitory concentrations were determined centrally by BSAC agar dilution. Rates of non-susceptibility in Enterobacteriaceae from clinically significant HO-LRTI lower respiratory tract infections (LRTI), Oct 2013 – Sept 2016.

RESULTS

- Consecutive isolates (n=6919, Fig. 1) causing CO-LRTI (community or hospitalised ≤48 hours), or HO-LRTI (hospitalised >48 hours) were collected at 24-40 sites across the UK and Ireland.
- Each site was asked to collect a set quota (7-20) isolates/species/season.

- Minimum inhibitory concentrations were determined centrally by BSAC agar dilution.

- Results are presented for agents/organisms when EUCAST breakpoints (bpts) and testing data for all three seasons are available.
- Rates of non-susceptibility in S. pneumoniae were: penicillin, 13.6% (all intermediate); tetracycline, 16.8%; erythromycin, 18.5%, and 8.5% were resistant to all three agents (Fig. 2). The most prevalent pneumococcal serotype was 15A (9.3%) (Fig. 2).
- Almost all H. influenzae (93%) and M. catarrhalis (99.5%) were susceptible to amoxicillin-clavulanate, tetracycline and ciprofloxacin.
- Rates of MRSA causing HO-LRTI continued to decrease compared with previous years (15.5% in 2015/16 vs. 25% 2012/13).
- ESBLs were identified in 11% E. coli; 8% Klebsiella spp., and 3.6% Enterobacter spp. (Fig. 3).
- Colistin resistance was 10-fold more prevalent (7.5%) in Acinetobacter spp. (other than A. baumannii) than Pseudomonas spp. (0.7%); rates were 0-1% in E. coli and Klebsiella spp. but 6.7% in E. cloacae complex (Fig. 3). Resistance does not appear to be caused by mcr-1.
- Carbapenemases were common in Acinetobacter spp. (n=23, OXA-23; n=5, OXA-58) but rare in Pseudomonas spp. (n=4, VIM; n=1, NDM) and Enterobacteriaceae (E. coli (n=1), OXA-48), E. cloacae (n=2, OXA-48) and K. pneumoniae (n=3, KPC, n=2, NDM; and n=1, OXA-48).

CONCLUSIONS

- Rates of non-susceptibility in S. pneumoniae were similar to previous years, though predominant serotypes have changed.
- H. influenzae and M. catarrhalis remain largely susceptible to existing antimicrobials.
- MRSA continues to decrease in HO-LRTI.
- Carbapenemase-producing Enterobacteriaceae are rare; most are K. pneumoniae.
- Colistin resistance was most common in Acinetobacter spp. (other than A. baumannii) and isolates of E. cloacae complex.

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REFERENCES

2) http://www.eucast.org/clinical_breakpoints/

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