

Shortage of antimicrobial agents in Europe: Results of an international survey

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Background

Shortages of antimicrobial agents have affected the U.S. since the late 1990s. In two IDSA surveys conducted in 1999 & 2000, members indicated that shortages had affected numerous therapeutic indications.

There is little information available regarding the shortage of antimicrobial agents in Europe.

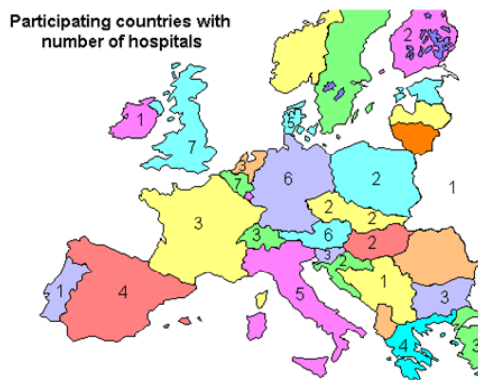
Objectives

This survey attempted to determine to what extent shortages have already influenced prescribing practices in European hospitals.

Methods

The study was conducted as an international, 9-item survey sent out via email in October 2006 to 384 hospitals throughout Europe. The subjects were infectious disease physicians, clinical microbiologists or pharmacists. Data were entered in a spreadsheet, checked for accuracy, and transported to SPSS for descriptive analysis.

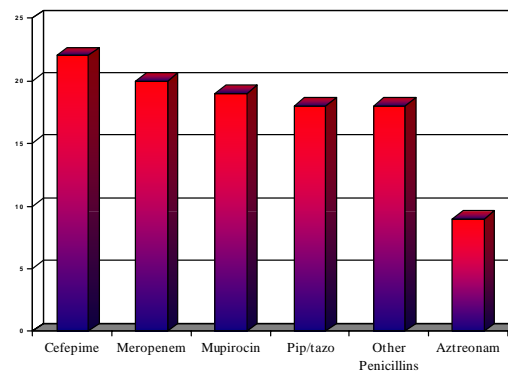
Participating countries



Results

- Participants from 28 countries and 83 hospitals responded (response rate, 22%).
- 59/83 (71%) of the respondents had experienced a shortage of antimicrobial agents within the last 12 months.
- Shortages were not evenly distributed among countries. Only 4 countries did not report any shortage.
- There was great variability in the duration of the shortages (range: 1 week - 18 months).

Most frequently affected agents



Results (2)

- **Other shortages:** Shortages of other cephalosporins, colistin, doxycycline, rifampicin, vancomycin, nitrofurantoin, fosfomycin, amphotericin B, amikacin and tobramycin occurred infrequently.
- **Substitutes** were either more expensive (e.g. carbapenems instead of cefepime), more broad-spectrum (e.g. cefuroxim, ceftriaxone or co-amoxiclav instead of oxacillin and penicillin), or less efficacious (e.g. neomycin and chlorhexidine instead of mupirocin nasal ointment).

Consequences

- 45 hospitals (54%) had to develop alternative policies or adapt their hospital practice guidelines due to the shortage.
- 27 hospitals (33%) had trouble finding equivalent drugs for substitution.
- Only 16 hospitals (19%) reported that they had always been adequately informed by the producer or distributor about the upcoming shortage.

Conclusions

- A substantial number of hospital pharmacies in Europe have experienced antimicrobial drug shortages within the last 12 months.
- Shortage of meropenem, mupirocin and cefepime were considered to have the largest impact on patient care.
- Shortage-triggered policy changes may negatively affect antimicrobial prescribing patterns and expenses.
- This survey provides important information that will guide further ESGAP initiatives to document and ultimately prevent shortages.