Evaluation of current practice to inform a national antifungal stewardship programme

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Introduction
The Scottish Antimicrobial Prescribing Group initiated a national programme to optimise prophylaxis, empirical and targeted treatment strategies for antifungal agents and to minimise unnecessary use and resistance development. The programme is supported by a multi-professional steering group, including clinician representatives from critical care and haemato-oncology, specialties with the highest use of antifungal agents.

To inform development of national consensus guidance, surveys of current practice were carried out.

Method
Surveys were used to capture information about current practice in use of antifungals in intensive care/surgery patients focused on invasive candidaemia (IC) and in haemato-oncology patients. The ‘Smart Survey’ online tool was used and draft surveys were tested by clinicians from the steering group prior to dissemination. The survey link was distributed via existing clinical networks along with a PDF version of the survey to encourage a combined response from each team. Several reminders were sent about completing the surveys. Results were analysed using Microsoft Excel.

Results

Critical care
- 15 responses were received and 8 units have a local guideline for IC.
- Prophylactic antifungals – 3 units never use, 8 units use occasionally and 3 units use routinely for selected patients.
- Fluconazole is the antifungal agent of choice in most units.
- Empirical treatment for potential or suspected IC - 3 teams use routinely for specific patient groups, 8 teams use occasionally, others use on advice of an infection specialist.
- Criteria that inform the decision to start patients on empirical treatment are shown in Chart 1.
- 11 units supported development of national guidance to standardise practice.

Haemato-oncology
- 7 responses were received.
- 5 units have a local guideline for suspected fungal infection.
- Antifungal prophylaxis of fungal infections used in all units and a variety of agents used first line depending on the specific patient group.
- Empirical antifungal therapy used in neutropenic patients and decisions to initiate treatment are informed by a range of criteria shown in Chart 2.
- Only 4 units supported development of national guidance to standardise practice.
- There was universal support for improved access to diagnostics and CT scanning to inform treatment decisions.

Conclusions
There is variation in current practice in management of invasive fungal infection and use of antifungals in critical care and haemato-oncology units in Scotland. Use of existing clinical networks allowed us to engage with a wide group of clinicians for each specialty area to seek their input but a limitation of both surveys was that teams in all NHS board areas did not participate. Survey responses have provided useful information to support development of good practice recommendations to reduce unwarranted variation.

The majority of the critical care survey respondents were supportive of such national consensus guidance. Such guidance for haemato-oncology requires further discussion with clinical networks.