Healthcare Improvement Scotland | SAPG Safeguarding antibiotics

Local surveillance of antimicrobial use: framework for Antimicrobial Management Teams

Background

An essential component of antimicrobial stewardship programmes is surveillance of antimicrobial use. At local level surveillance of antimicrobial use enables the Antimicrobial Management Team (AMT) to plan, prioritise and evaluate the impact of stewardship interventions. Feedback of surveillance data to clinicians in hospital and primary care supports better informed clinical decisions to ensure better patient outcomes. SAPG has developed this framework to support AMTs with local surveillance of antimicrobial use. To facilitate engagement with primary care clinicians AMTs should liaise with local prescribing support teams.

Antibiotic use measures within NSS Discovery

NSS Discovery is an information system that provides approved users with access to comparative healthcare information to support performance and quality improvement in across NHS Scotland. It is an ongoing collaboration between NHS boards, the Scottish Government and NHS National Services Scotland (NSS). Discovery contains measures on antimicrobial use (updated quarterly) as part of an Antimicrobial Resistance and Healthcare Associated Infection (ARHAI) dashboard. The following antimicrobial use measures are available at NHS board level:

- Total antibiotic use in humans expressed as DDD per 1000 inhabitants per day
- Primary care (excluding dental) antibiotic use expressed as items per 1000 inhabitants per day
- Primary care use of broad spectrum antibiotics (cephalosporins, co-amoxiclav and fluoroquinolones) expressed as items per 1000 inhabitants per day and percentage of total antibiotic items
- Primary care use of WHO Access antibiotics (modified for UK) expressed as percentage of total antibiotic items:
- Acute hospital total use of antibiotics expressed as DDD per 1,000 bed days
- Acute hospital use of broad spectrum antibiotics (carbapenems, cephalosporins, clindamycin, co-amoxiclav, fluoroquinolones and piperacillin/tazobactam expressed as DDD per 1,000 bed days and percentage of total antibiotic DDDS
- Acute hospital use of WHO Access antibiotics (modified for UK) expressed as percentage of total antibiotic DDD.
- IV Antibiotics in Secondary Care expressed as IV DDDs per 1000 inhabitants per day

AMTs should monitor and discuss antimicrobial use measures in Discovery on a quarterly basis.

Primary care antibiotic use

GP Practices receive feedback reports by NHS National Services Scotland showing their practice data compared to NHS board and national benchmarks (25th percentile). Medicines Management Teams should use these reports as a focus for discussion of antimicrobial prescribing with GP practices and to identify areas for improvement. Additional standard reports in Prescribing Information System (PIS), the national web-based DataMart on medicines use in the community hosted by Information Services Division of NSS can be used to explore any specific data required for improvement work that is not included in Discovery and GP Feedback Reports.

Acute hospital antibiotic use

Local surveillance of acute hospital antibiotic use should also use data obtained from pharmacy stock management system to monitor use of antibiotics in particular wards/clinical settings when particular problems with high volume of antibiotic use, resistant infections and/or quality of antibiotics use are identified. This should be extended to include use of antifungals in intensive care units and haematology/oncology units to support antifungal stewardship.

In addition to mandatory national PPS carried out every 5 years, AMTs should consider regular whole hospital and/or targeted point prevalence surveys to support quality improvement and complement the quantitative surveillance of antimicrobial use.