



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 Discovery

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 as part of an antimicrobial resistance and healthcare associated infection dashboard. The following measures are available at NHS board level:

- Total antibiotic use in humans expressed as DDD per 1000 inhabitants per day
- Primary care total 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 100,000 bed days
- Acute hospital use of broad spectrum antibiotics (carbapenems, cephalosporins, clindamycin, co-amoxiclav, fluoroquinolones and piperacillin/tazobactam
- Acute hospital use of WHO Access antibiotics (modified for UK) expressed as percentage of total antibiotic items total antibiotic prescription DDD.

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

Primary care antibiotic use

Local surveillance of primary care antibiotic use should also use the 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. This should include annual analysis of total antibiotic use and use of broad spectrum antibiotics at GP practice level to identify and engage outliers in improvement action.

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.

Acute hospital antifungal use

Local surveillance of antimicrobial use in acute hospitals should be extended to include use of antifungals to address the emerging priority of antifungal stewardship. Data on issues to intensive care units and haematology/oncology units of azoles, echinocandins and parenteral amphotericin B should be obtained from pharmacy stock management system to monitor use and target improvement interventions. Antifungals should also be included in local PPS programmes.

Acute hospital point prevalence surveys

In addition to mandatory national PPS carried out every 5 years AMTs should agree a programme of regular point prevalence surveys to complement the quantitative surveillance of antimicrobial use. These may be carried out across a whole hospital or through a rolling programme of ward/department surveys.