Using a quality improvement approach to optimise antimicrobial prescribing

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EAHP ACADEMY SEMINAR
Antibiotic Stewardship for Beginners
Disclosure of Relevant Financial Relationships

NO DECLARATIONS
Questions about quality improvement in antimicrobial stewardship

- Quality improvement interventions require collection of large amounts of data

- A point prevalence survey is a type of audit

- Quality indicators allow trends to be measured
Overview of session

- Antibiotic use in hospitals - what are the problems
- Quality improvement methodology
- Audit and feedback
- Quality indicators
- Sharing results of interventions
Problems with antibiotic use in hospitals

- Unnecessary use
  e.g. viral infections, self-limiting infections, uncertain diagnosis

- Sub-optimal use
  Remember the 5 rights: RIGHT CHOICE
  RIGHT DOSE
  RIGHT FREQUENCY
  RIGHT ROUTE
  RIGHT DURATION
Measurement for improvement

• Measurement has traditionally been used in research but more recently has been used in benchmarking and scrutiny within healthcare.

• Quality improvement methodology within healthcare has expanded rapidly over the past ten years but effective data capture is a key factor in success.

• Electronic systems can capture data to provide quantitative and qualitative information for monitoring longitudinal trends and changes in practice. However manual collection of data through clinical audit may be required in many hospitals.

• When collecting data we need to think carefully about our specific reasons for collecting it, as this will inform the type and quantity of data needed.
## Types of data collection

<table>
<thead>
<tr>
<th>Purpose</th>
<th>IMPROVEMENT</th>
<th>ACCOUNTABILITY</th>
<th>RESEARCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding of Process</td>
<td>Evaluation of change</td>
<td>Comparison</td>
<td>To discover new knowledge</td>
</tr>
<tr>
<td>To bring new knowledge</td>
<td>into daily practice</td>
<td>Reassurance</td>
<td></td>
</tr>
<tr>
<td>Data</td>
<td>Gather just enough data to learn and complete</td>
<td>Large amounts of data on ongoing basis</td>
<td>Gather as much data as possible ‘just in case’</td>
</tr>
<tr>
<td></td>
<td>another cycle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>Short period of time - weeks, months</td>
<td>Medium - long duration</td>
<td>Can take long periods of time to</td>
</tr>
<tr>
<td></td>
<td>Small ‘tests of change’ accelerates the rate of</td>
<td>Longitudinal trends and historic data</td>
<td>obtain results</td>
</tr>
<tr>
<td></td>
<td>improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis</td>
<td>Run charts or statistical process control charts</td>
<td>League tables/benchmarking achievement of target</td>
<td>Traditional statistical tests</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Choice of approach for antimicrobial stewardship

- Within antimicrobial stewardship programmes qualitative data is often used to influence antimicrobial prescribing behaviour.

- If an urgent change in antimicrobial prescribing practice is required a quality improvement approach is best as this can have an impact on a small scale in a matter of days or weeks.

- For larger scale changes an accountability approach may be better, with audits over several wards and feedback to staff. This will take time to establish a baseline, set targets and regular re-audit to determine if practice is changing.

- A research approach is useful for generating robust data about the impact of changes in prescribing on both process and patient outcomes.
Quality Improvement methodology

- There are several quality improvement methodologies used in healthcare, e.g. the Model for Improvement, LEAN, Six Sigma, but all use similar components.

- The **Model for Improvement** provides a simple, yet powerful tool for accelerating improvement based on three fundamental questions:
  - What are we trying to achieve? A clear aim - what, how much, by when?
  - How will we know that change is an improvement? Measuring processes and outcomes.
  - What ideas for changes can we identify that will result in an improvement? Test some ideas to see which changes may work.

- If you would like to learn more about quality improvement methodology in healthcare the following resources provide further information:
  - [Institute for Healthcare Improvement](https://www.ihi.org)
  - [The Health Foundation](https://www.healthfoundation.org.uk)
Improvement cycles - PLAN DO STUDY ACT

Plan
- Objective
- Questions & predictions
- Plan to carry out: Who? When? How? Where?

Do
- Carry out plan
- Document problems
- Begin data analysis

Study
- Complete data analysis
- Compare to predictions
- Summarize

Act
- Ready to implement?
- Try something else?
- Next cycle

Start with one patient and test some changes, once something works move on to try on 3 patients then 5 patients then whole ward.
“Won’t measurement and QI mean more work when we are already busy”

“Every system is perfectly designed to get the results it gets.”

“Everyone in healthcare has two jobs when they come to work; to do their work and to improve it. This is the essence of Quality Improvement (QI).”

- Paul B Batalden
Audit of antimicrobial prescribing

Audit is the key method of collecting qualitative data within antimicrobial stewardship programmes.

Audit may be carried out in a variety of ways depending on resources available and objectives for collecting it.

Continuous audit - data on all patients prescribed antibiotics. Rarely practical without electronic data systems

Point prevalence surveys - snapshot audits across the whole hospital or selected wards at regular time intervals to track trends.

Prescribing indicators - collection of selected data to provide information about specific aspects of prescribing practice.
Point Prevalence Survey (PPS) - definition

• Common definition for point prevalence is the amount of people with a particular characteristic at a certain point in time.

• Determined by taking the total number of people with the characteristic divided by the total number of people in the population of interest.

• In healthcare often used to determine prevalence of infection, particularly healthcare associated infection as a performance metric.

• A Point Prevalence Survey (PPS) of antibiotic use will measure the number of people taking antibiotics at a given point in time within a hospital/ward.

• For example - 5 patients in a 20 bed surgical ward receiving antibiotics on the day of the survey gives a prevalence of antibiotic use of 25%
Aim of PPS of antibiotic use

- Identify and monitor rates of antibiotic prescribing in hospitalised patients
- Identify differences between prescribing rates between hospital departments, hospitals, regions and countries
- Determine variation in antibiotics, dose and indication across different locations
- Help to identify targets for quality improvement in antibiotic prescribing
- Identify interventions to promote better stewardship of antibiotics to assist the fight against antimicrobial resistance
- Assess the effectiveness of interventions through repeated surveys
Cycle of AMS activities

PPS provides qualitative INFORMATION

INFORMATION

CLINICIANS

ENGAGEMENT & EDUCATION

QUALITY IMPROVEMENT

Feedback of PPS results

PPS identifies areas for QI

Clinicians = doctors, nurses and pharmacists
Information from PPS of antibiotic use

- Patterns of use of broad and narrow spectrum antibiotics
- Indications for antibiotic treatment of community acquired or hospital acquired infection or medical or surgical prophylaxis
- Which antibiotics are being used for particular infections?
- Are the antibiotics prescribed in line with local prescribing guidelines?
- What is the duration of antibiotics for surgical prophylaxis?
- Has a clear duration of treatment or stop date been recorded?
- Has the treatment been changed in light of microbiology results?
Getting started with PPS data collection

Simple data collection form

<table>
<thead>
<tr>
<th>Patient ID</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of drug</td>
<td></td>
</tr>
<tr>
<td>Route</td>
<td></td>
</tr>
<tr>
<td>Unit dose</td>
<td></td>
</tr>
<tr>
<td>Dosage frequency</td>
<td></td>
</tr>
<tr>
<td>Indication</td>
<td></td>
</tr>
<tr>
<td>Complies with (local) guidance</td>
<td></td>
</tr>
</tbody>
</table>

Using a simple paper form you can easily collect data from patients on one ward on one day, collate and aggregate the data then analyse.

Scale up to small hospital and use Microsoft Excel for data collation and analysis.
Preparing for a PPS - what is required?

- **Data collectors:** to visit wards in the hospital within the survey period. A large team can visit all wards over a relatively short space of time while with a smaller team it will take longer.

- **Protocol and data collection forms:** to specify which ward level data and patient level data to collect. Important to classify indication for antibiotic and anatomical site of presumed infection - usually via a list of codes.

- **Staff training:** focused on completion of the data collection in a consistent manner. Important to ensure data collectors understand all definitions and codes.

- **Communication:** engaging ward staff is important to explain why the survey is being conducted.

- **Information governance and data security:** ensure the hospital’s clinical governance committee are aware the survey is being conducted and are reassured about the safe handling of information.
Simple PPS Data presentation

**Total number of prescriptions by antibiotic (n=50)**

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>Prescriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amoxicillin</td>
<td>12</td>
</tr>
<tr>
<td>Penicillin</td>
<td>10</td>
</tr>
<tr>
<td>Cefuroxime</td>
<td>8</td>
</tr>
<tr>
<td>Ciprofloxacin</td>
<td>6</td>
</tr>
<tr>
<td>Co-amoxiclav</td>
<td>4</td>
</tr>
<tr>
<td>Flucloxacin</td>
<td>4</td>
</tr>
<tr>
<td>Gentamicin</td>
<td>2</td>
</tr>
<tr>
<td>Metronidazole</td>
<td>2</td>
</tr>
<tr>
<td>Vancocycin</td>
<td>0</td>
</tr>
</tbody>
</table>

**Total number of patients with each infection type (n=50)**

- Acute abdominal infection
- Acute exacerbation COPD
- Cellulitis
- Community acquired pneumonia
- Diverticulitis
- Neutropenic sepsis
- Pyelonephritis
- Urinary tract infection
- Wound infection
Example results from hospital wide PPS

**Recording of indication in notes**

<table>
<thead>
<tr>
<th>Department</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensive care</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Medicine</td>
<td>20%</td>
<td>80%</td>
</tr>
<tr>
<td>Surgery</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>Other</td>
<td>60%</td>
<td>40%</td>
</tr>
</tbody>
</table>

**Compliance with local guidelines**

<table>
<thead>
<tr>
<th>Department</th>
<th>Compliant</th>
<th>No information available</th>
<th>Not assessable</th>
<th>Not compliant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensive care</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Medicine</td>
<td>80%</td>
<td>20%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Surgery</td>
<td>60%</td>
<td>40%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>40%</td>
<td>60%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Route of administration**

<table>
<thead>
<tr>
<th>Department</th>
<th>Oral</th>
<th>Parenteral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensive care</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Medicine</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>Surgery</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>Other</td>
<td>80%</td>
<td>20%</td>
</tr>
</tbody>
</table>

**Duration of surgical prophylaxis by specialty**

<table>
<thead>
<tr>
<th>Specialty</th>
<th>More than 1 day</th>
<th>1 day</th>
<th>Single dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Nervous</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Ear nose throat</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Obstetrician</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Respiratory</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Plastic/orthopaedic</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Urological</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Larger scale PPS


A Global Point Prevalence Survey of Antimicrobial Consumption and Resistance was developed in 2015 and will conduct the next PPS in 2017. The core data set has been based on ECDC European PPS.

Want to know more about PPS?

Next free on-line 2-week course starts on 16th October
Beyond PPS - developing quality indicators

From intermittent antibiotic point prevalence surveys to quality improvement: experience in Scottish hospitals

William Malcolm, Diplo Nathwani, Peter Davey, Tracey Cromwell, Andrea Patton, Jacqueline Reilly, Shona Cairns and Marion Bennie

Abstract

Background: In 2006, the Scottish Antimicrobial Prescribing Group (SAPG) was established to coordinate a national antimicrobial stewardship programme. In 2009 SAPG led participation in a European point prevalence survey (PPS) of hospital antibiotic use. We describe how SAPG used this baseline PPS as the foundation for implementation of measures for improvement in antibiotic prescribing.

Methods: In 2009 data for the baseline PPS were collected in accordance with the European Surveillance of Antimicrobial Consumption (ESAC) protocol. This informed the development of two quality prescribing indicators: compliance with antibiotic policy in acute admission units and duration of surgical prophylaxis. From December 2009 clinicians collected these data on a monthly basis. The prescribing indicators were reviewed and further modified in March 2011. Data for the follow up PPS in September 2011 were collected as part of a national PPS of healthcare associated infection and antimicrobial use developed using ECDC protocols.

Results: In the baseline PPS data were collected in 22 (59%) acute hospitals. The frequency of recording the reason for treatment in medical notes was similar in Scotland (75.9%) and Europe (75.7%). Compliance with policy (81.0%) was also similar to Europe (92.5%) but duration of surgical prophylaxis >24hr (88.9%) was higher than in Europe (48.1%). On discharge, following the development and implementation of the prescribing indicators, monthly monitoring and data feedback in admission units illustrated improvement in indication documented of 290% and compliance with antibiotic prescribing policy increasing from 70% to 90%. The initial prescribing indicator in surgical prophylaxis was less successful in providing consistent national data as there was local discretion on which procedures to include. Following a review and a focus on colorectal surgery the mean proportion receiving single dose prophylaxis exceeded the target of 95% and the mean proportion compliant with policy was 82%. In the follow up PPS of 2011 indication documented (86.3%) and policy compliant (82.9%) were higher than in baseline PPS.

Conclusions: The baseline PPS identified priorities for quality improvement. SAPG has demonstrated that implementation of regularly reviewed national prescribing indicators, acceptable to clinicians, implemented through regular systematic measurement can drive improvement in quality of antibiotic use in key clinical areas. However, out data also show that the ESAC PPS method may underestimate the proportion of surgical prophylaxis with duration <24hr.

Quality Indicators for prescribing

- **DEFINITION**
  
  *explicitly defined measureable* items giving a possible indication on the level of quality.

- Quality indicators allow trends to be measured
  - over time
  - between locations
  - before/after interventions

- There are three main types of indicators - structural, process and outcome.
Types of Quality Indicators used in stewardship programmes

- **Structural indicators** measure whether governance structures are in place for stewardship e.g. does a hospital have an Antimicrobial Team which meets regularly, reports to senior management and has an action plan?

- **Process indicators** measure systems in place for stewardship e.g. surveillance programme for antibiotic use, programme of audits, education for healthcare staff.

- **Outcome measures** are used to measure the impact of a stewardship programme and should include both intended and unintended outcomes such as reduced use of restricted antibiotics (intended) and increase in resistance to recommended antibiotics (unintended).

- **Patient outcome measures** are the most useful but most difficult to collect e.g. mortality rate, cure rate
## Structure indicators for stewardship

### Development and validation of potential structure indicators for evaluating antimicrobial stewardship programmes in European hospitals

F. M. Buyle • S. Metz-Gereek • R. Mechtler • W. V. Kern • H. Robays • D. Vogelaers • M. J. Straelens • on behalf of members of the Antibiotic Strategy International (ABS) Quality Indicators Team


### Performance of 14 Scottish AMTs against 10 European Validated Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Formal mandate for hospital multi-disciplinary antimicrobial management team (AMT)</td>
<td>13</td>
</tr>
<tr>
<td>2. AMT member is a member of Drug and Therapeutics Committee</td>
<td>12</td>
</tr>
<tr>
<td>3. Bedside expert consultant advice regarding antibiotics on request available the same day</td>
<td>14</td>
</tr>
<tr>
<td>4. Regular ward rounds by members of AMT performed at least weekly</td>
<td>9</td>
</tr>
<tr>
<td>5. Clinical audit of prescribers’ compliance with local clinical guidelines by AMT</td>
<td>14</td>
</tr>
<tr>
<td>6. Antibiotic formulary/list updated biannually</td>
<td>14</td>
</tr>
<tr>
<td>7. Local clinical practice guidelines for microbiologically documented therapy updated biannually*</td>
<td>14</td>
</tr>
<tr>
<td>8. Local clinical practice guidelines for empirical therapy updated biannually</td>
<td>14</td>
</tr>
<tr>
<td>9. Local clinical practice guidelines for surgical prophylaxis available</td>
<td>14</td>
</tr>
<tr>
<td>10. Prescriber education by personalised interactive methods (e.g. daily ward rounds)</td>
<td>9</td>
</tr>
</tbody>
</table>

* Not applicable to Scottish Practice
Prescribing Quality Indicators

Prescribing quality indicators in hospital usually focus on the process of prescribing an antibiotic and how this is documented.

What could be measured to determine quality of prescribing and identify which part of process needs improved?
Documentation is key - standards for QIs

**DIAGNOSIS**
- signs and symptoms,
- differential diagnosis,
- results and management plan written in medical notes

**PRESCRIPTION**
- choice, dose,
- frequency, route and duration written on medicine chart or within e-prescribing system

**ADMINISTRATION**
- confirmation of each dose being administered to the patient written on medicine chart or within e-prescribing system
Start Smart Then Focus to inform QIs

Antimicrobial Stewardship (AMS) – Treatment algorithm

**ANTIMICROBIAL STEWARDSHIP**

**Treatment algorithm**

**Start Smart**

**Then Focus**

**DO NOT START ANTIBIOTICS IN THE ABSENCE OF CLINICAL EVIDENCE OF BACTERIAL INFECTION**

1. Take thorough drug allergy history.
2. Initiate prompt effective antibiotic treatment within one hour of diagnosis (or as soon as possible) in patients with severe sepsis or septic shock.
3. Comply with local antimicrobial prescribing guidance.
4. Document clinical indication (and disease severity if appropriate), dose and route on drug chart and in clinical notes.
5. Include review/steps in data or duration.
6. Obtain cultures prior to commencing therapy where possible (but do not delay therapy).

**CLINICAL REVIEW & DECISION AT 48-72 HOURS**

Clinical review, check microbiology and make a clear plan. Document this decision.

1. **STOP**
2. IV to oral switch
3. Change antibiotic
4. Continue
5. OPAT *

**DOCUMENT ALL DECISIONS**


*According to weight/age of children refer to local formulary or BNFs.

*Use appropriate route in line with severity/disease factors.

*Outpatient Parenteral Antibiotic Therapy

Antimicrobial Stewardship (AMS) – Surgical prophylaxis algorithm

**ANTIMICROBIAL STEWARDSHIP**

**Surgical prophylaxis algorithm**

**Clean surgery**

Involving placement of a prosthesis or implant

- Surgical Prophylaxis
- ONE DOSE*
- Within 60 minutes before knife to skin

**Clean contaminated surgery**

Redose for long surgical procedures

- Intraoperative dosing is needed to ensure adequate serum and tissue concentrations of the antimicrobial if the duration of the procedure exceeds two half-lives of the antimicrobial or there is excessive blood loss (i.e., >1500 mL in adults or >250 mL/kg in children). A treatment course of antibiotics may also need to be given (in addition to appropriate prophylaxis) in cases of dirty surgery or infected wounds.

- The appropriate use and choice of antibiotics should be discussed with infection specialists for each case.

**Contaminated surgery**

**DOCUMENT ALL DECISIONS**

*References:
1. NICE clinical guideline 74: Surgical site infection – Prevention and treatment of surgical site infection [http://www.nice.org.uk/guidance/CG74]

Audit tools to create prescribing QIs

- University Hospital Southampton NHS Foundation Trust
  HAPPI audits (Hospital Antibiotic Prudent Prescribing Indicators)

- Audit standards
  1. Indication / provisional diagnosis documented on start date
  2. Antibiotic choice according to guideline (or justified off-guideline choice)
  3. Appropriate dose prescribed
  4. Reviewed at 48-72 hours with documented treatment plan
  5. Total course length ≤ 7 days (or justified)

- Courtesy of K Hand & H Wickens, Consultant Pharmacists - Anti-infectives

Further examples from the UK available via
Start Smart then Focus toolkit
Prescribing indicators - using a quality improvement approach

**AIM**
Start small - focus on one ward with high prevalence of antibiotic use

**MEASURES**
Frequent data collection and feedback - focus on a few measures

**CHANGES**
Test changes and repeat - discuss improvements with clinical team

*Example data collection*

<table>
<thead>
<tr>
<th>Empirical Prescribing indicator</th>
<th>Patient 1</th>
<th>Patient 2</th>
<th>Patient 3</th>
<th>Patient 4</th>
<th>Patient 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indication for Antibiotic Treatment Recorded in Notes?</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
</tr>
<tr>
<td>Antibiotic(s) Compliant with Local Prescribing Policy?</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
</tr>
<tr>
<td>All doses administered as per medicine chart?</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
</tr>
</tbody>
</table>
Prescribing quality indicators - Scotland

<table>
<thead>
<tr>
<th>Measure</th>
<th>Medical</th>
<th></th>
<th></th>
<th>Surgical</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median (%)</td>
<td>Min (%)</td>
<td>Max (%)</td>
<td>Boards compliant</td>
<td>Median (%)</td>
<td>Min (%)</td>
</tr>
<tr>
<td>1. Doses administered</td>
<td>95</td>
<td>91</td>
<td>100</td>
<td>8/14</td>
<td>94</td>
<td>84</td>
</tr>
<tr>
<td>2. Indication documented</td>
<td>96</td>
<td>84</td>
<td>100</td>
<td>10/14</td>
<td>93</td>
<td>86</td>
</tr>
<tr>
<td>3. Duration documented</td>
<td>69</td>
<td>45</td>
<td>95</td>
<td>1/14</td>
<td>54</td>
<td>29</td>
</tr>
<tr>
<td>4. Compliant with policy</td>
<td>94</td>
<td>90</td>
<td>100</td>
<td>8/14</td>
<td>90</td>
<td>82</td>
</tr>
</tbody>
</table>

Median percentage compliance with measures at a national level and number of health boards reaching target 95% compliance.
Antimicrobial stewardship across 47 South African hospitals: an implementation study

http://thelancet.com/journals/laninf/article/PIIS1473-3099(16)30012-3/fulltext

Health-care facilities with limited infectious diseases expertise can achieve substantial returns through pharmacist-led antimicrobial stewardship programmes and by focusing on basic interventions.
What is the 5x5 Antimicrobial Audit?

- A continuous audit activity that collects information about empirical antimicrobial prescribing
- Developed by the Clinical Excellence Commission and based on the work of the Scottish Antimicrobial Prescribing Group
- Auditors answer up to 5 yes/no questions for 5 patients per week, with the audit process combining both data collection and prompted intervention
Using technology to make QI easy
Antimicrobial Companion App.

After login, the audit tool allows submission of audit data.

After submission of data, the audit tool displays the number of submissions for that period within the selected ward.

Reports created monthly by app administrator in each hospital.
Questions about quality improvement in antimicrobial stewardship

- Quality improvement interventions require collection of large amounts of data

- A point prevalence survey is a type of audit

- Quality indicators allow trends to be measured
THANKS FOR LISTENING

ANY QUESTIONS?

Contact details: jacqueline.sneddon@nhs.net