



## Example of a Planning Framework for Data Management: Prophylactic Antibiotics for Surgery

Overall goal	Objectives/ improvement criteria	Target populations	Data requirements	Data collection methods	Data analysis	Data resource needs
Improve appropriate use of antibiotics in surgical prophylaxis across all surgical areas	<ul style="list-style-type: none"> <li>○ Increase percentage of patients receiving the correct antibiotic for prophylaxis</li> <li>○ Increase percentage of patients receiving prophylaxis at or before commencing surgery</li> <li>○ Increase percentage of patients receiving appropriate duration of prophylaxis</li> <li>○ Improvement/no negative impact on postoperative infection rates</li> <li>○ Reduce percentage of patients receiving antibiotic prophylaxis inappropriately</li> </ul>	<ul style="list-style-type: none"> <li>○ Clinical intervention – all patients undergoing surgery</li> <li>○ Implementation strategies – all surgical and nursing staff</li> </ul>	<p><b>Current procedures</b></p> <ul style="list-style-type: none"> <li>○ Nature of current procedures and how they compare with best practice (therapeutic guidelines)</li> </ul> <p><b>Actual clinical practice</b></p> <ul style="list-style-type: none"> <li>○ Type of surgery</li> <li>○ Duration of operation</li> <li>○ Patient characteristics (age, gender, comorbidities and other factors likely to influence the need for antibiotics)</li> <li>○ Whether antibiotics prescribed or not</li> <li>○ If prescribed – time of administration of the first dose of antibiotic; choice of antibiotic; dose of antibiotic; frequency and duration of administration, including discharge</li> <li>○ Post-operative infection</li> </ul> <p><b>Current attitudes of surgical staff</b></p> <p><b>Human factors analysis</b></p>	<ul style="list-style-type: none"> <li>○ Initial meeting with surgeons and other staff to identify area of concern</li> <li>○ Prospective audit over two weeks, prior to intervention, three months following and nine months following</li> <li>○ Process mapping to identify areas for improvement</li> <li>○ Staff forums to present initial data, gauge attitudes and barriers to change</li> <li>○ Nature of current antibiotic restrictions</li> <li>○ Financial reports of antibiotic expenditure</li> </ul>	<ul style="list-style-type: none"> <li>○ Qualitative comparison of current documented protocols with recent evidence</li> <li>○ Quantitative analysis of preintervention and post-intervention prescribing data, with breakdown by type of surgery; comorbidities, post op infection.</li> <li>○ Thematic analysis of feedback from staff forums in relation to attitudes and barriers</li> </ul>	<ul style="list-style-type: none"> <li>○ 0.5 EFT project manager for 12 months (including involvement in other aspects of implementation)</li> <li>○ Database to record and analyse prescribing data</li> <li>○ Independent facilitator to conduct staff forum</li> </ul>