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# Queensland Surgical Antibiotic Prophylaxis: The barriers-enablers-ownership approach

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## Summary

The Queensland Surgical Antibiotic Prophylaxis study (QSAP) is a multi-centre, mixed-methods study designed to address barriers and enablers to Surgical Antibiotic Prophylaxis (SAP) compliance. It

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also facilitates engagement in self-directed audit/feedback and assess the efficacy of the intervention in improving compliance with SAP guidelines. The implementation was assessed using a 24-month interrupted time series design, coupled with a qualitative evaluation.

QSAP utilised the strong social influences on surgical antibiotic prophylaxis decision-making to design a quality improvement intervention to develop ownership of the improvement within surgical units.

## Key dates

Jan 2017

Jan 2021

## Implementation sites

Three hospitals in Queensland

## Partnerships

Prof Alex Broom, University of Sydney; Prof Marianne Wallis, University of the Sunshine Coast; Prof Chris Anstey, Griffith University Queensland Statewide Antimicrobial Stewardship Service

## Key Contacts

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## **Aim**

To address barriers and enablers to SAP compliance and facilitate engagement in self-directed audit/feedback and assess the efficacy of the intervention in improving compliance with SAP guidelines.

## **Benefits**

1. Key understandings around the factors critical for surgical antibiotic prophylaxis improvement were generated, including the importance of senior clinical leadership, and the key contextual factors which can limit this leadership/engagement.
2. At the site with consistent senior engagement there was demonstrated consistent improvement with surgical antibiotic prescribing.

## **Background**

The QSAP project was based on an extensive research programme investigating the complex dynamics that underpin antimicrobial prescribing decisions within Queensland hospitals. QSAP was a translational project, funded by an Advance Queensland Fellowship, and examined the use of social influences in combination with audit and feedback, in an intervention to improve surgical antibiotic prophylaxis prescribing.

## **Solutions Implemented**

Intervention:

QSAP was an intervention which embedded quality improvement in SAP within surgical teams and used while utilising known social influences to address barriers, to and enablers of optimal SAP prescribing.

Ownership was implemented across three sites over a 12-month intervention period.

Participants:

SAP prescribing decisions for 1757 patients [n=1757] undergoing general surgical procedures from three health services were included. Six bi-monthly time points, pre and post implementation of the

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intervention, were measured. Qualitative interviews were performed with 29 clinical team members. SAP improvements varied across site and time periods.

## Evaluation and Results

**Evaluation** The implementation was assessed using a 24-month interrupted time series design coupled with a qualitative evaluation. **Results**

The site that reported senior surgeon engagement showed steady and consistent improvement in prescribing over 24 months (pre study and post study). Multiple factors, including resource issues, influenced engagement and sites/time points where these were present had no improvement in guideline compliance. **Conclusions**

The barriers-enablers- ownership model shows promise in its ability to facilitate prescribing improvements and could be expanded into other areas of antimicrobial stewardship. Senior ownership was a predictor of success (or failure) of the intervention across sites and time periods. The key role of senior leaders in change leadership indicates the critical need to engage other specialties in the stewardship agenda.

## Lessons Learnt

Senior engagement is critical for improvements but is also contextually determined. Broader health service issues can limit the ability of senior clinicians to engage in a quality improvement process and therefore limit prescribing improvements.

## Further Reading

[Barriers-enablers-ownership approach: a mixed methods analysis of a social intervention to improve surgical antibiotic prescribing in hospitals | BMJ Open](#)