

Using a Mobile Application to evaluate and support improved antimicrobial stewardship practice

BACKGROUND

- The use of mobile applications “apps” in healthcare is increasingly common
- In 2017 the **Scottish Antimicrobial Prescribing Group (SAPG)** implemented a decision support app to aid clinical antimicrobial decision-making, including gentamicin and vancomycin calculators, and prescribing guidance
- The app also incorporates an audit tool for collecting prescribing quality indicator data for local improvement and national reporting
- The few studies in the literature of using mobile technology for clinical audit reported enhanced data completion and quality although none were in relation to antimicrobial stewardship

The aims of this study were to describe the early experience of using the SAPG app in NHS Tayside (NHST) and explore Foundation Year (FY) doctors’ attitudes to mobile technology in relation to stewardship

METHODS

- The Antimicrobial Stewardship Team (AST) were shadowed collecting quality indicator data and entering them into the app, from a sample across 4 wards, two medical and two surgical, in NHST from **August 2017 – October 2017**
- An anonymous SurveyMonkey questionnaire was sent via email to all 177 FY doctors in NHST
- It contained seven short questions about junior doctors’ willingness to participate in quality improvement projects, their preferred method of data collection, and an estimation of how much time they could commit to data collection

RESULTS

- **Only the AST currently use the SAPG app for audit in NHST**
- This was reported as being due to the need for users to have training and registration, and for quality assurance purposes
- The frequent movement of FY doctors between units may prevent junior doctors from becoming involved

Of 110 patients sampled for data collection, the compliance with quality indicators was:

Indicator	Compliance
Indication for prescription recorded	98%
Oral Prescriptions: Duration/stop date recorded	49%
IV/combinations: 72hr review recorded	92%

43 FY1 and 47 FY2 doctors completed the survey

(Overall response rate 50.8%)

Statement	Positive Response
Interested in taking part in quality improvement	92%
Aware of training requirement to take part in quality improvement	98%
Has a personal device they are willing to use for work purposes	97%
For the management of infection, use mobile device for audit/data collection	3%
Would rather data collection was by a mobile app	57%
Would spare thirty minutes to be trained in mobile data collection	90%
Could spare 20– 60 minutes on a fortnightly basis for data collection	70%

CONCLUSIONS

- Participation in SAPG quality indicator collection using the app could be done throughout FY rotations using transferable skills
- FY doctors in NHS Tayside already use mobile technology to support their antimicrobial prescribing practice
- They are willing to engage in audit and quality improvement, and prefer technological to paper methods
- The use of a mobile application for data collection and audit is a novel approach in Antimicrobial Stewardship

This has potential to be a sustainable and scalable approach to audit and quality improvement for antimicrobial stewardship



REFERENCES

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