

Research Poster Awards 2023



Title: Implementation of the point-of-care testing program in community pharmacy to improve antimicrobial stewardship in respiratory tract infections: results of a scoping review

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INTRODUCTION

- Diagnostic uncertainty in the type and severity of respiratory tract infections (RTIs) drives unnecessary and inappropriate use of antibiotics [1].
- Point-of-care testing (POCT) program improves diagnostic certainty, appropriate patient referral and general practitioner (GP)-community pharmacist collaboration to optimise antibiotic use in primary care [2].
- Though POCT-based RTI management services are growing in GP settings [3], it remains unclear whether POCT screening and treatment services are effective and feasible to implement in community pharmacy.

OBJECTIVE

- To systematically map out the breadth of evidence and to explore POCT implementation in community pharmacy for antimicrobial stewardship in RTIs.

METHOD

- **Design:** Scoping review (Published study protocol: <https://bmjopen.bmj.com/content/bmjopen/13/2/e068193>)
- **Searching Databases :** Medline, Emcare, PubMed, Health, Technology Assessment, Cochrane Central Register of Controlled Trials and Google Scholar databases.
- **Inclusion criteria:** Studies used either randomised controlled trial, non-randomised controlled trial, before-after study, observational study or pilot feasibility study design to evaluate POCT services in community pharmacies for antimicrobial stewardship in RTIs.
- **Outcomes:** Effectiveness, clinical and operational feasibility, cost-effectiveness and implementation factors of POCT services.

RESULTS

Outcome 1: study demographics

Study Characteristics	No. of studies
Total No. of study	20
Feasibility study	19
Randomised controlled trial	1
LMICs Study	2
Rapid Antigen testing (RATs)	15
C Reactive Protein (CRP)	5
Country of study: UK (5), USA (5), Australia(3), Canada (2), Nigeria(1), Syria(1), Ireland (1) and France (1)	

Outcome 2: Feasibility of the POCT program

- POCT services were delivered by community pharmacists to 78% of 26822 RTI patients.
- 24% [range 17%-28%] of 20288 RTI patients were RADT positive and only 13-16% of them received antimicrobial prescription.
- 14% (range 8%-16%) of 811 RTI patients who had tested CRP were indicative to receive antibiotic prescription.
- >50% (range 40%-60%) of RTIs patients who received POCT services from pharmacists were referred by GPs.
- 12% (8%-14%) RTI patients were referred to GPs immediate after POCT screening by pharmacists.

Outcome 3: Patient experiences

- Three studies [4,5,6] measured patient experiences and satisfaction of POCT services.
- Most patients (93.4%, 123/131) would very likely utilise the POCT service again [4].
- 51% (54/114) had changed their perceptions of antibiotic need [4].
- Patient (N=89) satisfaction level was 4.9 out of 5 scale [6].

DISCUSSION

- There are growing literature reporting feasibility studies of POCT testing services in community pharmacy
- The effectiveness and cost-effectiveness evidence remains extremely limited to make policy recommendations for routine POCT CRP and RATs services in community pharmacy.
- Future randomised controlled trials are needed to better understand the effectiveness and cost-effectiveness of POCT services in community pharmacy to reduce and optimise antimicrobial use in patients with RTIs.
- Incentives, training, standard clinical governance, and GP-pharmacy collaborative models of care may increase the uptake of POCT services by RTI patients from community pharmacists.

CONCLUSION

- The POCT services are feasible to implement in community pharmacy to improve antimicrobial stewardship in RTIs.
- Randomised clinical trials are lacking globally for policy support to integrate POCT CRP services in community pharmacy for antimicrobial stewardship.

REFERENCES

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ACKNOWLEDGEMENTS

Authors acknowledges for the funding support from Deakin University Executive Dean Health Research Fellowship 2022-2024 for supporting this work



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