

Title: Point-of-Care Testing for Non-Communicable Diseases in Community Pharmacy Practice

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Background: Community pharmacists are accessible health professionals who play a key role in the prevention and management of non-communicable diseases (NCDs). Point-of-care testing (POCT) service provision by community pharmacists has the potential to facilitate collaboration between pharmacists and physicians with respect to interventions for NCDs.

Purpose: The aim was to assess the feasibility and impact of POCT offered in community pharmacies in the management of NCDs. The objective was to develop a framework for a collaborative care model to ensure consistency and standardisation in the provision of POCT services by community pharmacists.

Methods: A POCT service covering blood glucose, total cholesterol and triglycerides, blood pressure and body composition measurement was planned. A framework consisting of a data collection sheet and an action plan was developed and validated. The action plan reflecting test results at time of recruitment (t1) consisted of lifestyle advice, referral to general practitioner (GP), referral to emergency department, and retesting after 3 (t3) and 6 months (t6). A toolkit was prepared and used to ensure standardisation and consistency by community pharmacists in offering the POCT service. Reliability, practicality, and feasibility in compiling the data collection sheet and of the testing process were established. The POCT service was implemented in 4 community pharmacies on patients identified by convenience sampling.

Results: Eighty patients were recruited; 43 female, mean age 60 years (range 19-85 years) with a mean intake of 2 medications daily (range 1-6 medications). The most prevalent comorbidities were hypertension (n=27), hyperlipidaemia (n=22) and diabetes (n=10). At t1, patients were offered

lifestyle advice (n=80), referred to a GP due to elevated blood pressure (n=17), elevated blood pressure and fasting blood glucose (n=4) and elevated fasting blood glucose levels (n=2). Two referred patients were started on antidiabetic treatment by the GP. Of the 80 patients, 56 patients were asked to retest at t3 and 24 patients at t6. At t3, 23 patients were tested and a statistically significant improvement ($p<0.05$) was observed through reduction in systolic blood pressure (n=11), total cholesterol (n=9) and fasting blood glucose (n=6). At t6, 10 patients were tested, maintaining all parameters within range.

Conclusion: The outcome was the development of a framework to ensure standardisation and consistency in the provision of POCT services by community pharmacists. The results indicate that provision of blood pressure, blood glucose and lipid profile POCT in community pharmacies is feasible and effective since improvement in test parameters at follow-up was observed.