Pharmacist-Led Thyroid Point-of-Care Testing

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Pharmacist-led point-of-care testing (POCT) supports evolvement of the provision of clinical pharmacy services in primary care settings and can contribute to timely patient management including referral for further investigations. The aim was to establish a framework for pharmacist-led thyroid POCT.

The method consisted of: i) Validating a thyroid POCT kit by comparing it to a laboratory-based method (20 participants), ii) Developing a framework for pharmacist-led thyroid POCT, and iii) Feasibility testing of the developed framework in a community pharmacy (50 participants). Inclusion criteria were participants taking levothyroxine or medications which may alter Thyroid-Stimulating Hormone (TSH) levels.

The qualitative TSH Rapid Test Cassette (AcroBiotech), with a sensitivity of 5µIU/ml and providing results in 10 minutes was selected following appraisal of kits available. Concordance between the POCT kit and laboratory-based method was 95% (κ=0.773). The developed framework consists of a data collection tool which examines risk factors associated with hypothyroidism and medication management, an action plan intended to standardise patient advice according to test results, and a leaflet providing information related to hypothyroidism. From the 50 participants assessed (40 female, mode age 45-54 years n=18), 15 participants were identified to have hypothyroidism; 10 were already being treated for hypothyroidism, indicating nonadherence or dosage insufficiency, while 5 were taking medication which may alter TSH levels.

Through this study, a POCT kit that is suitable for use within a framework for community pharmacist-led assessment of hypothyroidism in a collaborative care context was identified. The framework can support pharmaceutical service development in the primary care setting.