IMPACT OF AN EXPANDED WARD PHARMACY TECHNICIAN ROLE ON SCREENING AND TREATMENT FOR VITAMIN D DEFICIENCY IN AN AGED CARE UNIT

To the Editor,

It is well established that ward pharmacy technicians (WPTs) can assist pharmacists with some clinical pharmacy services, thereby improving patient access to these services.[1,2] However, there has been little exploration of whether WPT support improves appropriateness of patient care.

Vitamin D deficiency is common in older people and has been associated with increased risk of falls and fractures.[3] It is recommended that at-risk older people be screened for vitamin D deficiency, and that deficiencies are treated with oral vitamin D3 (cholecalciferol).[3] It is routine for older people admitted to our aged care unit to have their vitamin D levels checked and supplementation commenced if necessary. However, sometimes screening and/or treating vitamin D deficiency is overlooked. The ward pharmacist assists by reviewing patients' measured vitamin D (25(OH)D) levels, requesting levels if they have

not been done and advising on cholecalciferol therapy as part of routine clinical review.

We conducted a retrospective audit to explore whether an expanded WPT role, which included assisting the pharmacist with accessing laboratory data on admission, impacted on the frequency of vitamin D screening and the proportion of vitamin D-deficient patients discharged on an appropriate dose of cholecalciferol.

Prior to the study, in 2010, there was one full-time ward pharmacist providing care for 56 subacute aged care patients, with 0.4 full-time equivalent WPT support – largely confined to assisting with medication supply. A prospective observational study at the time showed that the pharmacist spent 42% of her time undertaking non-clinical tasks and was unable to consistently deliver services such as clinical review.[2] In 2011, the WPT position was increased to 1.0 full-time equivalent, and the WPT was trained to assist with selected clinical pharmacy activities in addition to supporting medication supply.[2] One of the WPT roles was documenting vitamin D levels (and date taken) on a subacute Medication Management Plan, along with a range of other data relevant to drug therapy (e.g. serum creatinine levels), for review by the pharmacist within the first 2–3 working days of transfer to the subacute ward.[2]

The audit included 50 consecutive patients prior to and 50 consecutive patients after the introduction of the expanded WPT role. The target 25(OH)D level in our aged care unit was ≥75 nmol/L and this level was used to define vitamin D adequacy in this study.[4] Appropriate cholecalciferol dosing was defined as 1 microgram for every 1 nmol/L deficiency[4] (rounded up to the nearest 25 micrograms due to dose-forms available). The pharmacist and WPT were unaware of the audit.

The proportion of patients screened and, if deficient, appropriately treated with cholecalciferol increased from 33/50 (66%) to 46/50 (92%) ($p = 0.003$) following the introduction of the expanded WPT role. The improvement was a result of an increase in both the proportion of patients who were screened (from 88 to 98%) and the proportion of deficient patients who received an adequate dose of cholecalciferol on discharge (from 69 to 89%).

These results indicate that increased WPT support, including assistance with screening key laboratory data for pharmacist review, can improve patient care.

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