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Temporal trends in the utilization of preventive medicines by older people: A 9-year population-based study

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Preventive medicines are beneficial for disease-specific management. For older people with multi-morbidity the appropriateness of prescribing these medicines is challenging. We investigated the prevalence and temporal trends in the utilisation of preventive medicines in older New Zealanders from 2005–2013 stratified according to age, sex, ethnicity and district health board domicile. A repeated cross-sectional analysis was conducted on pharmaceutical dispensing data for individuals' ≥65 years. Variable medication possession ratio (VMPR) for all individuals was calculated by aggregating days' supply from the first to the last prescription divided by time between the last prescription date plus days' supply and the first prescription date. Low-dose aspirin, clopidogrel, dipyridamole, warfarin, dabigatran, statins and bisphosphonates with a VMPR ≥0.8 were examined. The results highlighted an increase in the utilisation of aspirin by 19.55% (95% CI: 19.39 to 19.70) and clopidogrel by 2.93% (95% CI: 2.88 to 2.97). Utilisation of dipyridamole decreased by 0.65% (95% CI -0.70 to -0.59). Warfarin use decreased by 0.87% (95% CI: -0.96 to -0.78), in contrast, dabigatran increased by 0.65% (95% CI: 0.60 to 0.70). Statin use increased by 7.0% (95% CI: 6.82 to 7.18) and bisphosphonates decreased by 2.37% (95% CI: -2.44 to -2.30). Utilisation of aspirin, clopidogrel, dabigatran and statins showed a greater increase in males. Interestingly, clopidogrel, warfarin and statins use increased in older adults ≥85 years compared to younger age groups (65-84 years). The results presented in this study may facilitate further research to examine the appropriateness of prescribing these medicines in older people with multi-morbidity.

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Optimized formulation, preformulary characterization and evaluation of Diethylcarbamazine citrate - Medicated chewing gum

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Truncate infections caused by Helminthes, or parasitic worms, affect more than two billion people worldwide. Looking at this situation, an attempt has been made to formulate a novel drug delivery system known as medicated chewing gum containing masticatory gum base with pharmacologically active ingredient Diethylcarbamazine citrate (used as a first-line agent for control and treatment of Lymphatic filariasis and for therapy of tropical pulmonary eosinophilia caused by *Wuchereria bancrofti and Brugia malayi*). Optimized formulations of medicated chewing gum with varying concentration of gum base were formulated. Evaluation parameter like Texture analysis (Hardness, Firmness and Springiness test) is carried out by Texture analyzer apparatus (TAXT plus). Improved essentials of casting & in-vitro release profile of drug in saliva was obtained by formulation Fc3 (96.2%). Buccal absorption studies showed that 39.2% of drug absorbed within one minute when available to buccal mucosa at pH 5.5, commensurate with explain diethylcarbamazine citrate- medicated chewing gum (DEC-MCG) can be considered as better formulation for buccal drug delivery system in which drug is absorbed buccally and reaches the systemic circulation via jugular vein.

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