

## Topic Area: Vulnerable Groups and their Nutritional Needs

**Abstract Title:** Vitamin and mineral supplement use by older adults with complex medication needs: Potential for adverse drug-nutrient interactions  
Ford K<sup>1</sup>, Whiting S, PhD<sup>1</sup>, Jorgenson D, BSP, PharmD<sup>1</sup>, Landry E, BSP<sup>1</sup>  
<sup>1</sup>College of Pharmacy and Nutrition, University of Saskatchewan, Saskatchewan

**Objective:** Vitamin and mineral supplements have been increasingly available for decades. The increase in availability of supplements and their use in combination with prescription drugs suggests that the risk of an adverse drug-nutrient interaction has drastically increased. This is especially concerning in populations with greater medication use. The purpose of this study was to assess vitamin and mineral supplement use in older adults with complex medication use to identify supplement overuse and use from multiple sources. The results of this study will aid in identifying potential adverse drug-nutrient interactions.

**Methods:** A retrospective chart review was completed on 229 medically-complex patients 50+ years of age who had new medication assessments completed between January 2014 and January 2017.

**Results:** Data indicate that 76% of patients (mean: 69 years) reported using  $\geq 1$  vitamin and/or mineral supplement daily. Total product count (oral prescriptions, over-the-counter (OTC) products, dietary supplements) ranged from 1-48 per day, with a mean 10 and median of 9. The tolerable upper intake level (UL) for nutrients was exceeded by 33% of reported supplement users. One case exceeded the UL for 6 different nutrients, from supplemental intake alone.

**Conclusions:** Vitamin and mineral supplement use in conjunction with prescription drugs and OTC products was observed in this population, with reported intake of many supplemental nutrients that exceeded the UL.

**Significance:** This study sought to identify data needed to investigate the potential for adverse drug-nutrient interactions. Additionally, the data from this study will aid in the development of resources aimed at maximizing the benefits of vitamin and mineral supplements while mitigating the potential effects related to overuse of these supplemental nutrients. The population captured in this study represents a difficult to reach population as they are community dwelling individuals with complex medical histories.