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## Dietary Quality and Nutrient Intakes among Opioid Users in the United States

**Background:** Substantial increases in opioid prescribing practices lead to dramatic increases in opioid-related mortality. Imbalanced diet and nutrition deficiency are linked to many chronic diseases that increase the risk of mortality among opioid users. Investigating the dietary quality and nutrient intake adequacy of opioid users will provide a better understanding of potential risk factors contributing to the high mortality of this population. This practicum project focused on the development of estimates of the nutrient intake adequacy and dietary quality among opioid users in the NHANES program during 2005-2014.

**Methods:** This project was limited to NHANES participants aged  $\geq 20$  years with reliable dietary data from 2005 to 2014. The Healthy Eating Index (HEI) was applied to assess the dietary quality. Recommended Dietary Allowance (RDA) and Adequate Intake (AI) were used for examining the adequacy of nutrient intakes. The data analyses utilized PROC Survey in SAS 9.4 for complex design data. Participants provided written consent and the data was publicly available.

**Results:** During 2005 to 2014, US opioid users reported poorer dietary quality than the general population. More opioid users had insufficient dietary intakes of vegetables and fruits and high consumption of saturated fat and added sugar in comparison to the general population. Insufficient dietary intakes of potassium, vitamin E and choline were common in opioid users especially female opioid

users. Female opioid users aged 31 years and older had a lower dietary quality and consumed significantly lower intakes of most nutrients compared to their counterparts in the general population.

**Conclusion:** US opioid users have poorer dietary quality than the general population. The high deficiency rates for most nutrients in middle- and older-aged female opioid users require particular attention. Health care providers should assess dietary quality and adequacy of nutrient intake when prescribing opioids, particularly in women aged 31 years and older.

