

(P12-010-23) Food Purchasing Pattern and Nutrition Quality Changes in the Time of the COVID-19 Pandemic

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Objectives: Food purchase and consumption behaviors were likely affected by the COVID-19 pandemic and stay-at-home mandates, leading to short and even long-term changes in nutrition intake and health outcomes. This study aims to investigate food purchasing pattern and nutrition quality changes during the COVID-19 pandemic and lockdowns, compared to pre-pandemic levels.

Methods: Universal Product Code (UPC)-level household food purchase information from the US Nielsen Consumer Panel Datasets (2017-2020) were used for the evaluation of food purchasing behaviors of single-household families. Purchased food products were linked by UPC code to USDA Branded Food Products Database, which contains nutrition information. Machine learning algorithms were applied to estimate the healthfulness of foods using the FSANZ nutrient profiling system, based on nutrition composition and ingredient list. Descriptive stats were calculated for average household spending on each food sub-category in Nielsen consumer panel data. Difference-in-difference method was used to evaluate the effects of the COVID-19 pandemic on food purchases.

Results: Household food purchases significantly increased in most of the food categories during the pandemic, compared to previous years. Purchases in categories of fresh meat, canned vegetables, pasta, soup, baking and cooking related products surged in the second quarter of 2020 and fell thereafter, indicating the possibility of stockpiling. Moreover, the stable increase throughout 2020 for many other categories (e.g., bread and baked goods, frozen breakfast food, tea, coffee, carbonated beverages, packaged meats, frozen vegetables, cereal, cookies, cheese, nuts, and ice cream) suggests a habitual change that was more than a short-term shock, possibly due a shift to eating at home more often, due to stay-at-home mandates. There was no significant difference between the overall healthfulness of food purchases during the COVID-19 pandemic compared to previous years.

Conclusions: This research indicated that the COVID-19 pandemic changed household food purchasing patterns, depending on food categories. This study provides evidence for policymakers to design targeted food policies during the pandemic and recovery stages.

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