

AI shows the need for healthier diets in long-term care homes

March 29 2023



Credit: CC0 Public Domain

A detailed analysis of consumed food showed there is a need to improve diets in long-term care (LTC) homes to make them healthier for residents.

The analysis found that eating more whole grains, plant-based proteins, and plain fruits and vegetables would help residents meet government guidelines and reduce their risk of inflammation.

Researchers at the University of Waterloo developed new artificial intelligence (AI) technology to examine data on food and fluids consumed by more than 600 residents over three days at 32 LTC homes.

Results were compared to recommendations in the 2019 Canada's Food Guide on [healthy eating](#) and expert information on foods that could cause inflammation, contributing to [chronic diseases](#) including diabetes, cardiovascular disease, arthritis and dementia.

"These food analytics can support LTC menu planning and provide data-driven insights to support nutritional interventions geared at improving clinical outcomes and quality of life," said Dr. Kaylen Pfisterer, an adjunct assistant engineering professor at Waterloo and a scientific associate at the Center for Digital Therapeutics within the University Health Network.

Although they identified room for improvement in diet quality, the researchers acknowledged several challenges when changing food in LTC homes.

One is that older adult residents must enjoy the [food](#) and drinks they consume since it affects their [quality of life](#).

Another is that most LTC residents are at risk of malnutrition, so simply ensuring they receive enough calories can be difficult. Budgetary constraints and the seasonal availability of certain foods can also come into play.

The new AI tool the researchers developed automated a process that has

long been a time-consuming manual task subject to bias and error.

"The ability to do such massive categorization using AI in an automated fashion allowed us to get much deeper, much more comprehensive insights into the inflammatory potential of what is currently eaten in LTC," said Dr. Alexander Wong, a professor of systems design engineering at Waterloo.

Dr. Heather Keller, a professor of kinesiology and [health studies](#) at Waterloo, and Dr. Robert Amelard, a post-doctoral fellow at the Schlegel-University of Waterloo Research Institute for Aging and the University Health Network during the study, also contributed to the research.

A paper on the study, [Characterizing Canadian long-term care home consumed foods and their inflammatory potential: a secondary analysis](#), appears in the journal *BMC Public Health*.

More information: Kaylen J. Pfisterer et al, Characterizing Canadian long-term care home consumed foods and their inflammatory potential: a secondary analysis, *BMC Public Health* (2023). [DOI: 10.1186/s12889-022-14934-8](#)

Provided by University of Waterloo

Citation: AI shows the need for healthier diets in long-term care homes (2023, March 29) retrieved 10 May 2024 from <https://medicalxpress.com/news/2023-03-ai-healthier-diets-long-term-homes.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.