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Assistant Professor

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"This award will provide me with the training and hands-on experience needed to use linked EHR and national nursing home data to better detect malnutrition risk and advance my research on improving how aging-related conditions are measured in long-term care."

Dr. Yuan is an epidemiologist and assistant professor in the Department of Population and Quantitative Health Sciences at UMass Chan Medical School. Her research uses real-world data, including the Minimum Data Set (MDS) and Medicare claims, to examine trajectories and heterogeneity of frailty, cognitive impairment and other aging-related conditions among older adults. She also studies medication safety and effectiveness in national nursing home cohorts. Building on this foundation, her research aims to develop clinically meaningful, data-driven approaches to improve identification of aging-related conditions among older adults in long-term care settings and generate evidence to improve care.

Advancing Malnutrition Measurement Using Linked EHR and MDS Data

Malnutrition is a common but often underrecognized problem among older adults in nursing homes and is associated with frailty, hospitalization, and mortality. While the Minimum Data Set (MDS) captures indicators of nutritional risk, its structured assessments may not fully reflect how risk evolves over time. This project will leverage electronic health record (EHR) data from the Long-Term Care (LTC) Data Cooperative to develop and evaluate EHR-derived indicators that capture nuanced clinical context and improve identification of malnutrition risk in routine nursing home care. This award will provide Dr. Yuan with training and experience using LTC Data Cooperative EHR data linked with MDS and Medicare data to: (1) Assess the availability and documentation patterns of EHR-derived malnutrition risk indicators; (2) Evaluate concordance between EHR-derived indicators and MDS-based malnutrition measures; and (3) Examine the construct and predictive validity of these indicators using nutrition orders and health outcomes. By generating foundational evidence on the availability, validity, and clinical relevance of EHR-derived malnutrition indicators, this project will clarify whether these measures complement existing MDS assessments and support earlier identification of nursing home residents at elevated malnutrition risk. These findings will inform the use of EHR-derived indicators in studies and initiatives aimed at improving nutrition-related care in long-term care settings. This work will lay the foundation for future research developing and validating EHR-based measures for aging-related conditions in long-term care.