Investigator Spotlight

James L. Rudolph Career Development Award

NIA IMPACT COLLABORATORY
TRANSFORMING DEMENTIA CARE

Chan Mi Park, MD, MPH
Instructor in Medicine
Hebrew SeniorLife's Hinda and Arthur Marcus Institute for Aging Research, Harvard Medical School

"This award will provide me with the training and mentorship to develop scalable AI-enabled outcome measures from nursing home EHR data and to translate them into pragmatic, implementation-ready interventions that improve medication safety and care quality for people living with dementia."

Dr. Park is a geriatrician and an assistant scientist at the Hinda and Arthur Marcus Institute for Aging Research and an instructor in medicine at Harvard Medical School. Her research focuses on improving medication safety and care quality for people living with dementia using large-scale real-world data, including Medicare claims and nursing home electronic health records. She has developed and validated novel dementia severity measures and leads pharmacoepidemiologic studies evaluating medication use and outcomes in frail older adults. Through this Career Development Award, she seeks to advance expertise in artificial intelligence (AI)-enabled outcome measurement, implementation science, and embedded pragmatic clinical trials to design scalable interventions that improve care in long-term care settings.

Developing an AI-based Measure for Behavioral and Psychological Symptoms of Dementia Using Nursing Home Electronic Health Records Data

People living with dementia (PLWD) in nursing homes frequently experience behavioral and psychological symptoms (BPSD), which drive antipsychotic use, care burden, and adverse outcomes, yet these symptoms are poorly captured in structured data. Current measurement approaches lack scalability and fail to leverage rich information embedded in unstructured clinical notes in electronic health records (EHR). This project addresses this gap by developing and validating an artificial intelligence (AI)-enabled, natural language processing (NLP)-based measure of BPSD using nursing home EHR data. This Career Development Award will provide training in clinical NLP, AI-based outcome measure development, implementation science, and embedded pragmatic clinical trial (ePCT) design to support the development and real-world integration of scalable dementia outcome measures. This training will support the following Specific Aims: (1) To develop an AI-enabled, NLP-based measure of BPSD using unstructured nursing home EHR data, and (2) To externally validate this measure across diverse long-term care settings for use in pragmatic clinical trials. This work will establish a scalable, EHR-based outcome measure that enables efficient evaluation of interventions targeting BPSD in real-world settings. It will lay the foundation for future ePCTs to improve medication safety and care quality for PLWD in nursing homes.