CLSA Approved Project

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Project Title
Leveraging high-volume data to characterize age and individual-specific vital signs and to develop novel geriatric vital signs that optimally predict clinical outcomes in older adults

Project Summary
Vital signs are used every day by healthcare professionals to quickly screen and assess the health status of patients. They are the backbone of clinical management by informing how sick a person might be and how urgently care must be provided. However, vital signs and normal reference ranges currently used in older adults were developed many decades ago using the health characteristics of a younger population. As the Canadian population is aging, the appropriateness of current vitals signs and their reference ranges that would best inform triage and care has not been evaluated in contemporary older adults. In this research, we seek to identify reference range for vital signs that are specific to older age groups and to each older adult individually, investigate whether different ways of combining multiple values over time (modelling) can improve the predictive performance of vital signs, expand the health characteristics and type of data considered as vital signs.

Keywords
Aging, Vital signs, Clinical epidemiology, Older adults, Reference ranges, Big data, Triage, Heterogeneity