

Canada's response to an ageing population: the Canadian Longitudinal Study on Aging

The Canadian Longitudinal Study on Aging's three principal investigators, Drs Raina, Wolfson and Kirkland, discuss their approach to the design of Canada's landmark study on ageing

IN Canada, as in the majority of EU countries, low birth rates and high life expectancy are drastically changing the population structure. In 2016, for the first time, the number of Canadians aged 65 and older was larger than the number of children under age 15.¹ Reports of these demographic shifts towards an older population are often accompanied by the portrayal of ageing as a challenge for the individual and for society and a tendency to look at ageing as a set of physical symptoms, organ by organ, illness by illness, along with a tally of the personal, social and financial burdens imposed on families and public systems and services. Ageing has been presented as simply an issue of decline and loss. This negative perception of what it means to be in one's 70s, 80s, and 90s has not changed despite advances in medicine that have and will continue to allow us to optimise these added years. The potential contribution of older adults and seniors as engaged and productive members of society will not be realised if a change in the perception of ageing as inevitably negative does not occur. Re-imagining ageing as a process of continuous development over the life course, where both growth and decline can co-occur and adaptations can mitigate some of the losses, will allow societies to capitalise on the positive aspects of ageing and to invest in policies and programmes that promote not only living long but also living well. The challenge, though, is how do we transition to a more positive view of ageing? An essential step is to create a platform to collect information in real time that can provide an evidence base for action. Collecting longitudinal data with the goal of advancing science and informing policymaking to support healthy ageing is essential, and these data can be used to avert the problem of acting upon myths, common beliefs, or anecdotal information

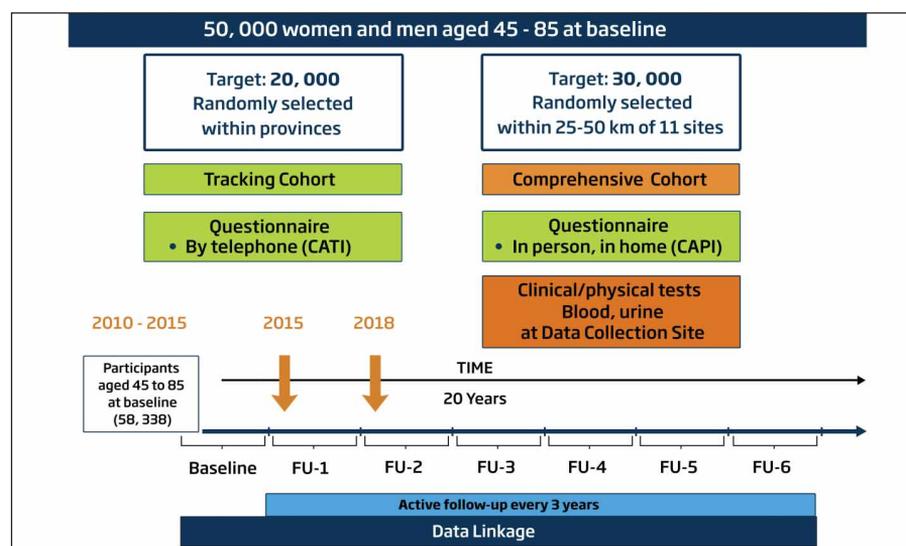


Fig. 1 The CLSA research platform design overview

about ageing. The Canadian Longitudinal Study on Aging (CLSA) was conceived with the vision to generate new knowledge in order to better understand why some people age healthily while others do not. The CLSA is a strategic initiative of the Canadian Institutes of Health Research (CIHR) with operational funding from the CIHR and a national infrastructure funded by the Canada Foundation for Innovation.

The changing face of ageing research

Along with changing the perception of ageing and the impact of an ageing population, there are also new opportunities to study the dynamics of ageing from an interdisciplinary perspective. Recent advances in biosciences (e.g. genetics, epigenetics, and metabolomics), informatics, data science analytics, and population health research are changing the face of research, presenting new and exciting possibilities for scientific discovery. To maximise the potential of these emerging sciences

and to convert it into groundbreaking research and knowledge, the CLSA bridges and integrates the biosciences with the social, psychological, population and public health sciences. As a research platform, the CLSA provides opportunities to study biological and 'omics' data, in conjunction with physical, lifestyle, economic, environmental and psychosocial factors in the same individuals over time. The depth and breadth of data available along with a large sample size and repeated measurements over time provide increased statistical power to address complex interrelationships and a multitude of outcomes.

The CLSA platform is designed to support the collection, preparation, and release of data and biospecimens, building capacity for high-quality research on ageing in Canada and internationally. It enables researchers to respond nimbly to a wide variety of research questions that inform policy and practice, without the need for expensive and time-consuming *de novo* primary data collection.

