

Developing Talent in Population Analytics in Aging Societies

THE POLICY PROBLEM

How to face the health and social services needs of an increasing aging population.

As adults 65 years and over now outnumber children 14 years and under, more Canadians transition from work to retirement than from school to work. This momentous demographic change will require social innovation reaching far beyond health and social care policies for older adults.

A large potential for innovation remains untapped in the data to decision-making pipeline. Lack of training is a bottleneck: 65% of employers report a skill shortage in data analytics. But beyond data science skills, substantive knowledge and the capacity to communicate results meaningfully to a wide range of stakeholders are essential to support data-driven decision-making.



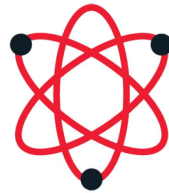
THE SOLUTION

The Consortium on Analytics for Data-Driven Decision-Making (CAnD3) will collaboratively develop, implement and deliver an innovative training program, Population Analytics in an Aging Society, to complement formal training in population research with skills to support evidence-informed decision-making.

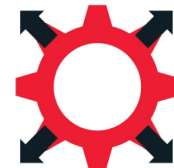
KEY FEATURES



International, and anchored in interdisciplinary and intersectoral exchange



Leading-edge suite of data science, policy and knowledge mobilization skills



Nimble program structure responsive to partner needs

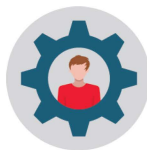
THE PROGRAM IN NUMBERS



32 partners including Canadian and international universities, government, private & not-for-profit sectors



12-month program



130 hours of online training



20 hours of cross-sectoral mentoring



20 hours of peer-to-peer collaboration



A minimum of 160 hours of experiential learning



\$2.5M from SSHRC, with \$4.1M in matched funding from partners

THE GOALS

- Increasing employability both in and out of academia
- 150 core CAnD3 awardees trained over six years
- 360 participants from our partner organizations (both academic and non-academic)
- Prepare the next generation and upskill current population researchers to work in academia, government, policy think tanks, not-for-profit organizations, and private sector companies
- Contribute to decision-making informed by the highest quality empirical evidence



Population Analytics in an Aging Society: Developing talent to inform data-driven decision-making

The Need: Developing Capacity in Population Analytics

90% of humanity's data were generated over the past two years. The velocity of the creation of this massive volume of data is only predicted to increase further. Much of these data are germane to population research, and yet we are not preparing our students and researchers to contribute to this data revolution to the best of their potential. Hence, we propose to complement the rigorous substantive and statistical curriculum that our institutions offer in population studies programs across Canada with training in Population Analytics (Figure 1). We have developed a training program with our partners targeting skills in **data science, data visualization, information management, and knowledge mobilization**.

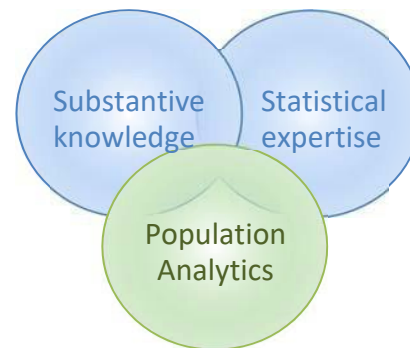


Figure 1. Core existing (in blue) and proposed (in green) elements of the training program in Population Dynamics

The Challenge: Policy in an Aging Society

A profound natural demographic experiment is afoot in Canadian society. For the first time in recorded history, Canadians 65 years and over now outnumber children 14 years and under (Statistics Canada, 2015). And this unprecedented demographic shift is here to stay: the proportion of Canadians 65+ grew from 10% to 16 % since the 1980s and will continue to grow to a projected 20 % of the population by 2024 (Statistics Canada, 2015). Despite their imminent demographic and political importance, there are **significant gaps in our understanding of the projected social policy needs of this heterogeneous age group**. Accordingly, we substantively orient our training along four axes that offer traction on the major policy challenges facing aging societies: **Family and Social Inclusion, Labour and Inequality, Migration and Ethnicity and Well-being and Autonomy**.

The Solution: 12-months Population Analytics training program

Offered to graduate students and post-doctoral fellows in population research-related fields, the program* is structured around three 3-day, in-person symposia at the onset, midpoint and end of program, complemented by monthly on-line seminars and skills modules. Topics covered include data science, data management, data visualization, knowledge synthesis, knowledge mobilization, policy analysis, and interdisciplinary research and collaboration in addition to substantive coverage of the aforementioned four axes. Trainees are also offered **applied project and internship opportunities** with our partners outside of academia. Most online and in-person training activities are also available to our partners' researchers and other staff.

Invitation to Join the Consortium on Analytics for Data-Driven Decision-Making (CANd3)

The CANd3 has brought together Canadian population research academic units, federal government agencies (e.g. Statistics Canada), private partners (e.g. Environics Analytics), not-for-profit organization (e.g. SE Health) and data stewards (e.g. CRDCN) to provide state-of-the-art training in Population Analytics. Under the leadership of Professor Amélie Quesnel-Vallée, McGill University is hosting the partnership with partner institutions participating in CANd3 governance, leading training modules and hosting CANd3 symposia.

If you share our enthusiasm for building student and researcher capacity in Population Analytics, consider joining CANd3. Membership benefits include staff training and access to high quality doctoral students for paid internships at partner organizations. **For more information:** <https://www.mcgill.ca/cand3/partners>. **To discuss joining CANd3, please email us at** cand3@mcgill.ca.

*Due to COVID-19, all CANd3 training activities and events are currently taking place online. In-person training and events will resume after restrictions are lifted.