Lessons Learned: Mechanics of operating a large-scale COVID-19 immunity study in long-term care residents

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Introduction

Long-term care (LTC) studies are notoriously difficult to conduct given challenges including recruiting the population, obtaining consent, accessing participant data, and developing appropriate methodologies (1,2). Pandemic-related challenges necessitated innovation in how research is conducted in LTC, retirement homes (RH), and assisted living facilities (AL).

Objective

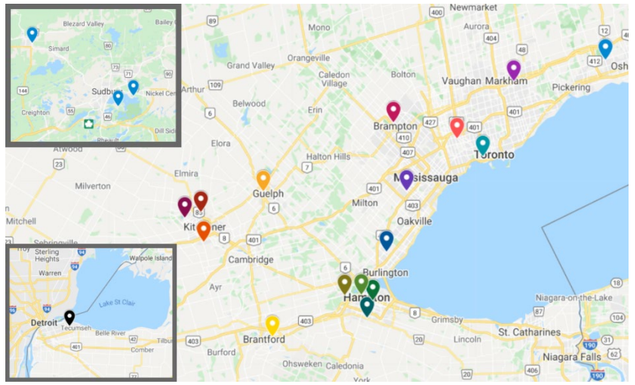
Our objective is to describe our unique operationalization of this multidisciplinary study, which aims to understand COVID-19 immunity in residents of LTC, RH, and AL.

Methods

1267 participants were recruited from 27 partner homes across 7 unique organizations (Fig. 1).

Study logistics included hiring:
- 18 staff from within the partner homes,
- a dedicated phlebotomist,
- a dedicated courier.

Figure 1: Map showing geographical breadth of partner homes



Results

The pandemic has created both challenges and opportunities for our study related to areas including study participation (Fig. 2), protocol deviations, and research questions (Fig. 3).

Figure 2. Study recruitment and active participation over time.

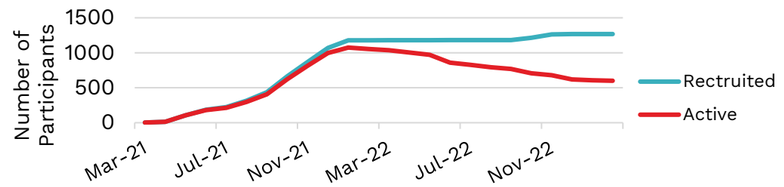
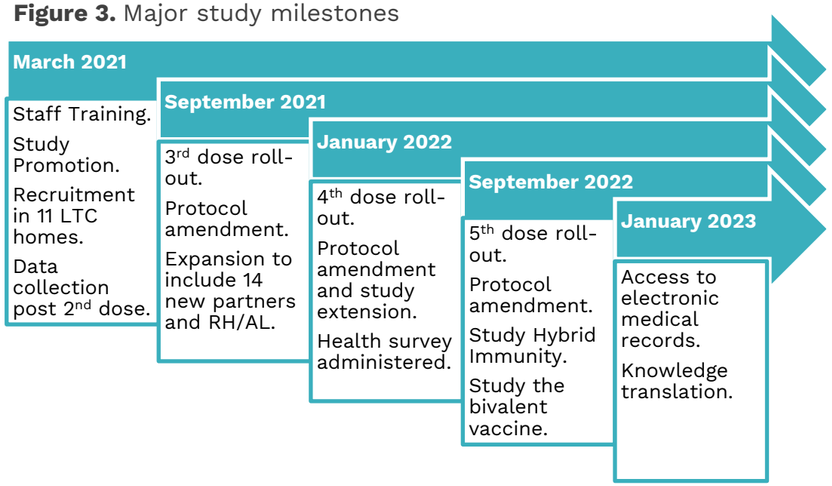


Figure 3. Major study milestones



Data collection

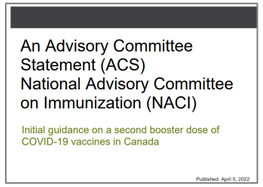
Our study integrates data and expertise from three primary disciplines: Immunology, Healthcare, and Epidemiology (Fig. 4).

Figure 3. Multidisciplinarity of our study.

Multidisciplinary Research		
Immunology Team	Care Partner Team	Epidemiology Team
Biological Samples (blood samples, DBS, Saliva samples, nasopharyngeal swabs)	Participant data (e.g. COVID-19 infection & vaccine data, and basic health & demographic data)	Electronic Medical Records

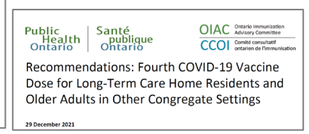
Knowledge Translation

A major study priority is the translation of knowledge to our participants, partners, and general public, as well as to public health and scientific communities to yield the highest impact.


An Advisory Committee Statement (ACS) National Advisory Committee on Immunization (NACI)

Initial guidance on a second booster dose of COVID-19 vaccines in Canada

Published: April 5, 2022


Public Health Ontario | Santé publique Ontario

OIAC Ontario Immunization Advisory Committee
CCOI Comité consultatif ontarien de l'immunisation

Recommendations: Fourth COVID-19 Vaccine Dose for Long-Term Care Home Residents and Older Adults in Other Congregate Settings

29 December 2021

Conclusions

Doing high impact research in LTC and RH at scale requires:
- Strong partnerships
- Regular communication with all staff, partners, and participants.
- Collective commitment to the same goal.

References

1. Lam, H.R., Chow, S., Taylor, K. *et al.* Challenges of conducting research in long-term care facilities: a systematic review. *BMC Geriatr* 18, 242 (2018). https://doi.org/10.1186/s12877-018-0934-9
2. Resnick,B. et al. (2022) Pragmatic trials in long-term care: research challenges and potential solutions in relation to key areas of care, *J Am Med Dir Assoc*, 23(3), 330-338. https://doi.org/10.1016/j.jamda.2021.12.011

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