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Ontario Marginalization Index:
Updates and Uses

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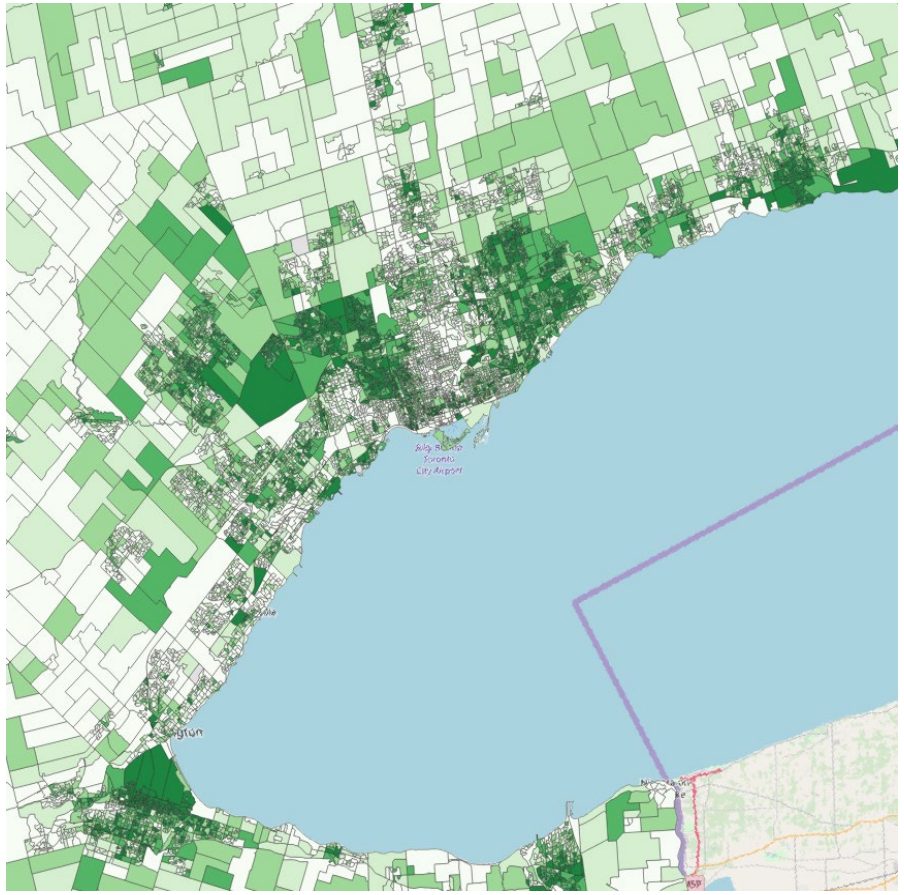
Overview

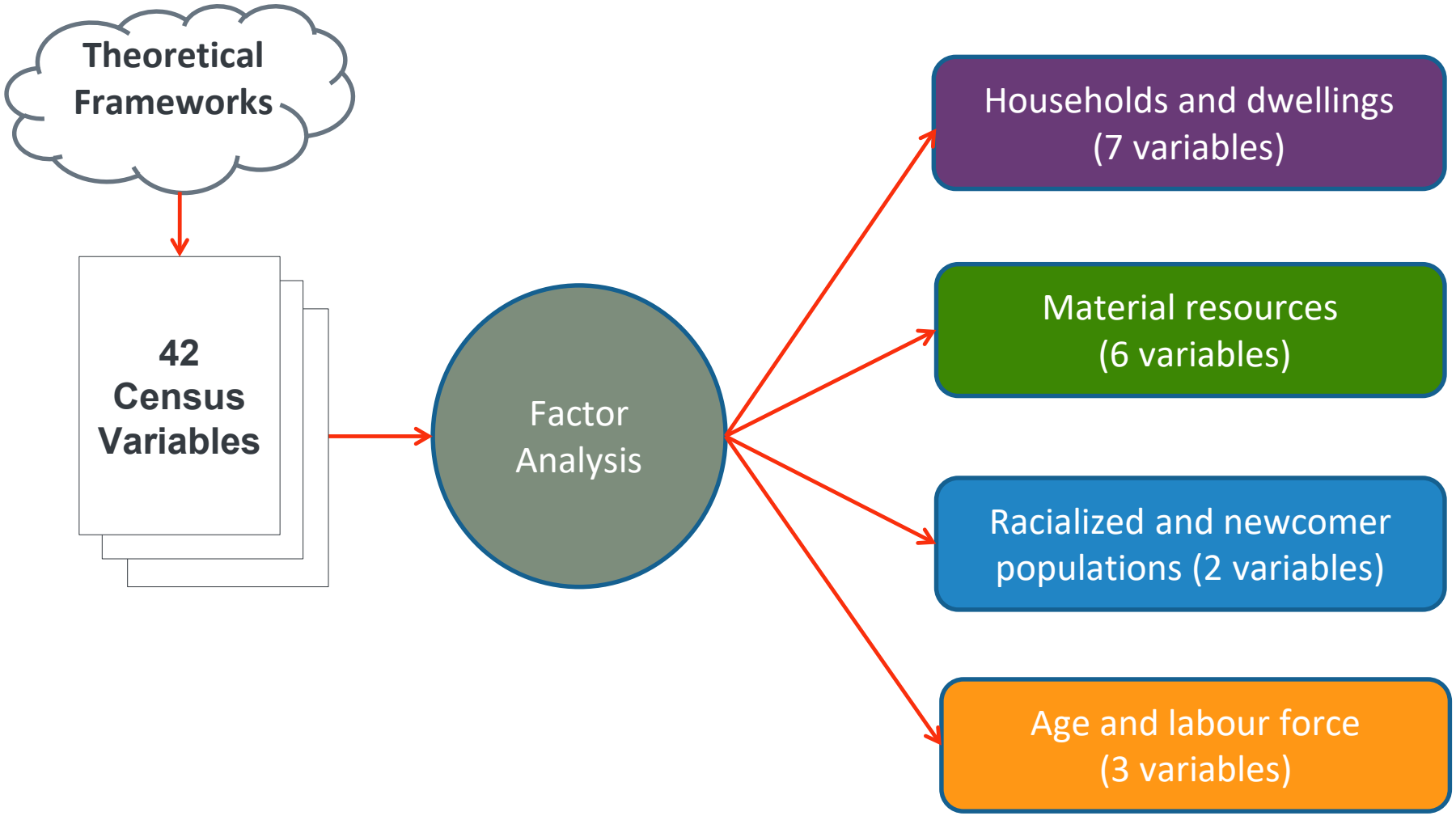
- Background on the Ontario Marginalization Index (ON-Marg)
- Ontario Marginalization Index Map demonstration
- Limitations and considerations

What is the Ontario Marginalization Index?

- Area-level index showing differences in marginalization between areas.
- Allows users to understand inequities in health and socio-behavioural outcomes, either between population groups or between geographical areas.



How is ON-Marg derived



ON-Marg dimensions

- The four dimensions are linear combinations of the 18 input variables that independently explain the greatest possible variance in the data.

- Each dimension can be thought of as a *separate index* with a standardized factor score for each area
  -e.g., the material resources dimension scores range from a score of -2 (low marginalization) to +7 (high marginalization).

- Each dimension is also available in quintiles.
  -Q1 represents least marginalized (e.g., more material resources) and Q5 the most marginalized (e.g., fewer material resources).

ON-Marg dimension names

- Original dimension names were selected by a community advisory panel assembled to interpret the pattern of variables loading on each factor.

  -These names emphasized the deficits faced by marginalized groups and communities (i.e., 'deprivation'), a practice which may pose the risk of stigmatizing those communities.

- To mitigate these potential harms, community partners were again consulted to update the dimension names for the 2021 version of ON-Marg. The names have been changed to avoid deficit-based language and more closely reflect the census measures that are associated with each dimension.

Households and dwellings (previously residential instability)

- This measure relates to family and neighbourhood stability and cohesiveness.
- The indicators included in this dimension measure the types and density of residential accommodations, as well as certain characteristics of family structure.
- Stable neighbourhoods promote cohesive communities which provide a positive, socially supportive environment that promotes resiliency, mental health and wellbeing.

Material resources (previously material deprivation)

- This measure is closely connected to poverty and refers to the inability for individuals and communities to access and attain basic material needs relating to housing, food, clothing, and education.
- The indicators included in this dimension measure income, quality of housing, educational attainment, and family structure characteristics.
- Differences in health status across this dimension reflect the pervasive impact that socioeconomic position has on a person's access to necessities for good health, exposure to unhealthy stress and instability, and support for healthy behaviours.

Age and labour force (previously dependency)

- This measure relates to the impacts of disability and dependence. It refers to area-level concentrations of people who do not have income from employment, including older adults, children, adults whose work is not compensated and/or those unable to work due to disability.

- This measure may also be connected to the economic vitality of the community and the ways in which resources and infrastructure are allocated. For example, ageism can result in fewer community resources made available, reduction in quality of health care, and social exclusion.

Racialized and newcomer populations (previously ethnic concentration)

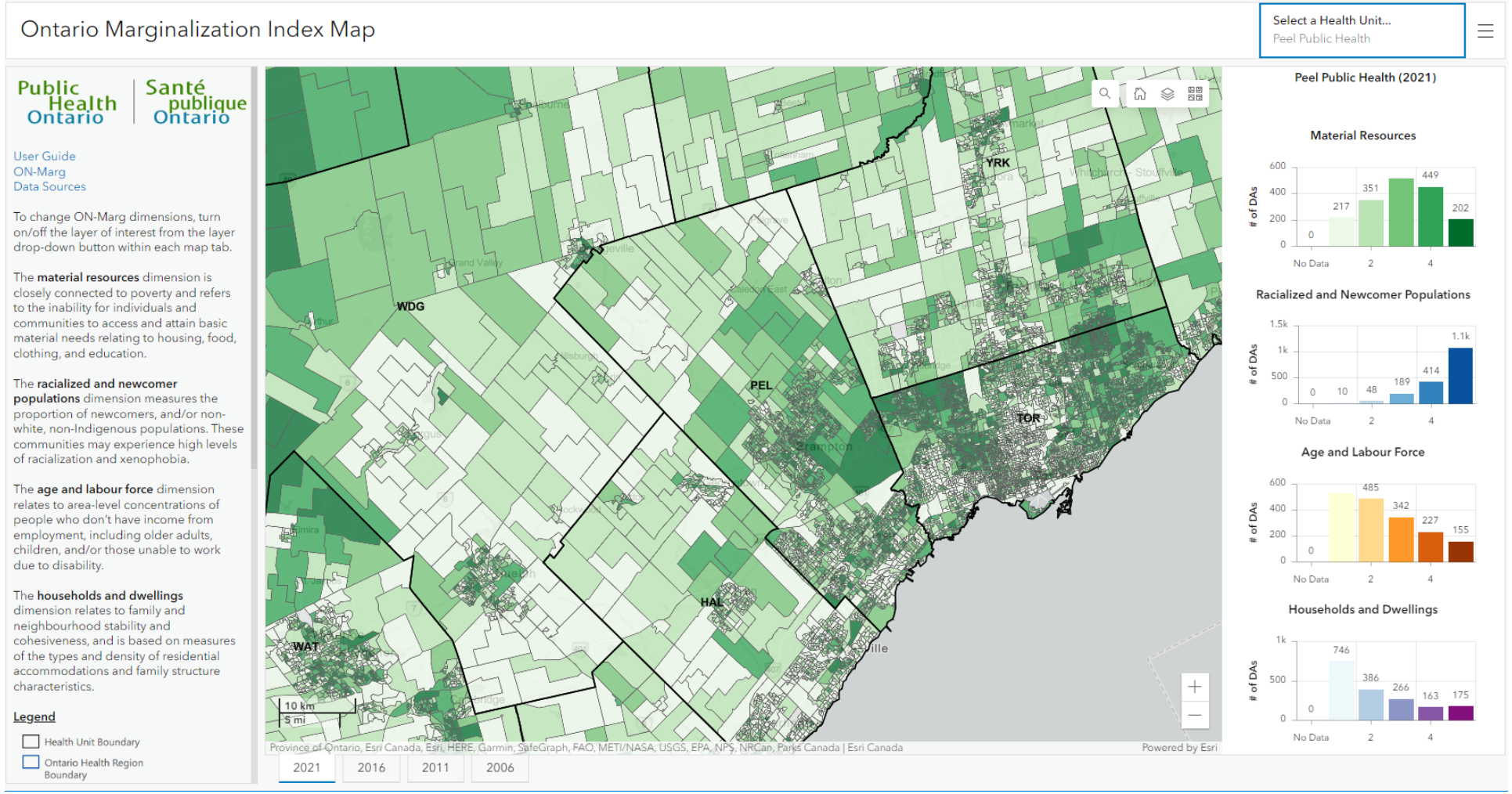
- High area-level proportions of recent immigrants and/or people belonging to 'visible minority' group.
- Racialized groups* include people who experience differential treatment on the basis of race, ethnicity, language, religion or culture.
- Newcomers to Canada often initially have better overall health outcomes, a phenomenon commonly known as the "healthy immigrant effect."
- At the same time, research is clear that both structural racism and anti-immigrant discrimination have profound impacts on individual, community and population health.

*Indigenous status indicators did not load on any factors during factor analysis, and so are not incorporated in the index.

ON-Marg geographies

- Ideally, ON-Marg should be used at the dissemination area (DA) level. DAs have an average population of 400 to 700 persons, and are the smallest standard geographic area for which all census data are disseminated.
- ON-Marg is also available for other geographies including census tracts, aggregate dissemination areas, public health units, census divisions and census sub-divisions.
- ON-Marg scores and quintiles can be derived for custom geographies, such as Toronto neighbourhoods (supported by Ontario Community Health Profile Partnership).

Ontario Marginalization Index Map demonstration



Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). Ontario Marginalization Index Map[Internet]. Toronto, ON: King's Printer for Ontario; c2023 [cited 2023 Aug 31].

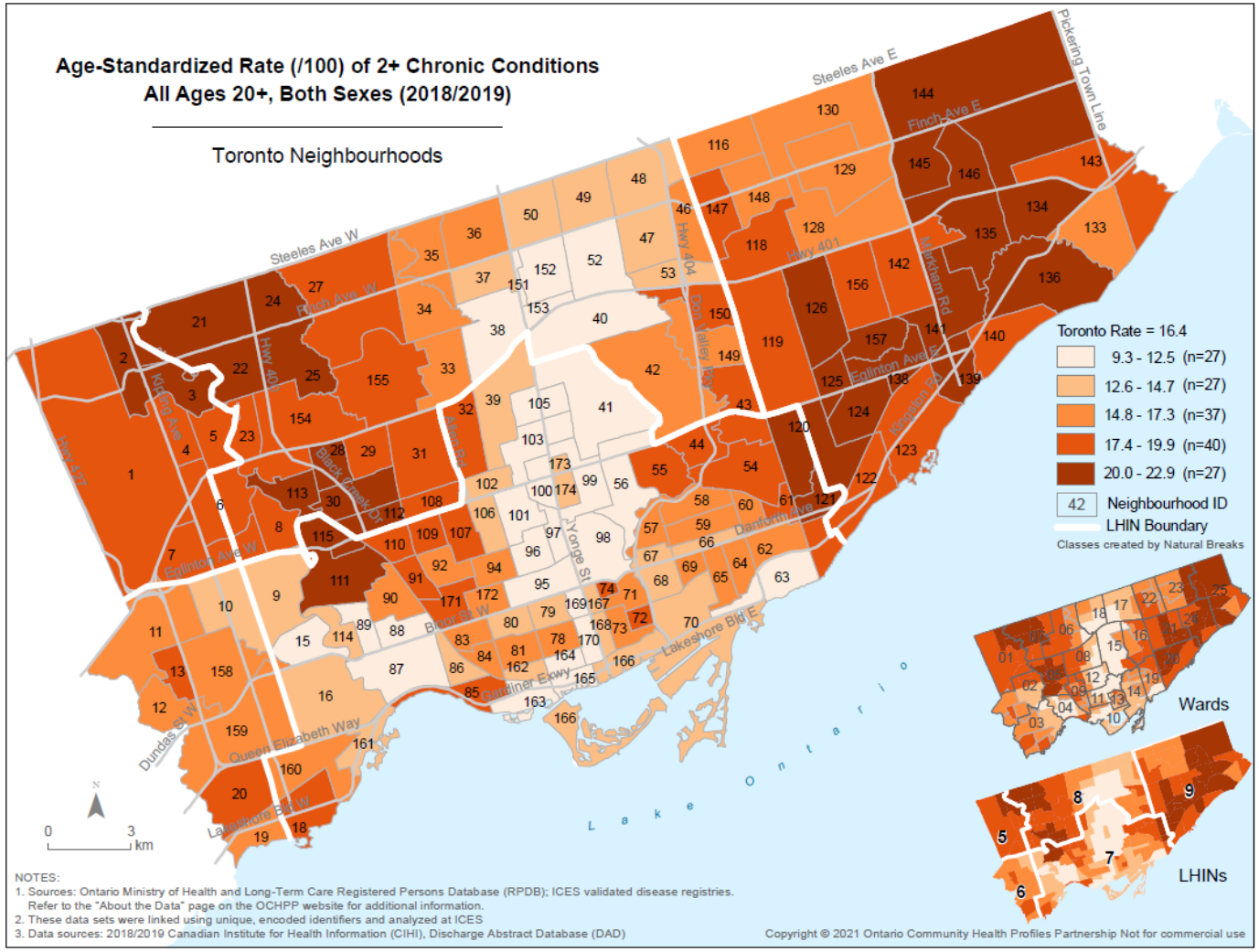
Poll

After seeing the demonstration of the Ontario Marginalization Index Map, how could you see yourself using the map in the future?

(select all that apply)

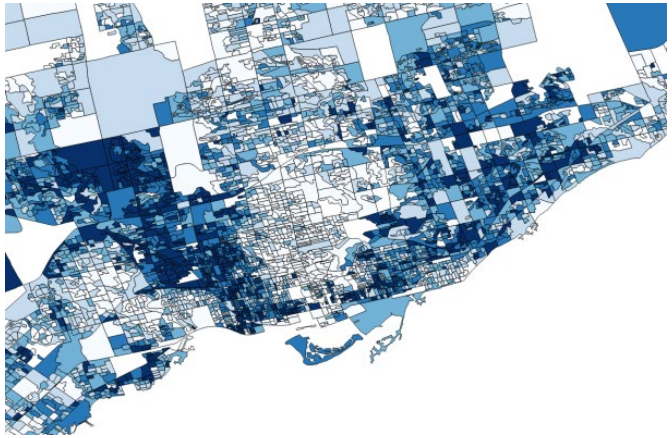
1. General awareness
2. Facilitating discussions on health equity with stakeholders
3. Identifying areas of interest (high marginalization DAs)
4. Comparing changes over time
5. Other (please provide detail in comments)
6. I don’t see myself using the map

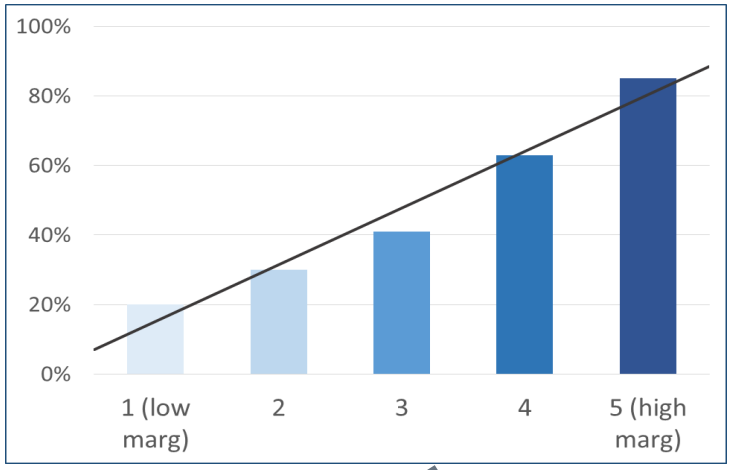
Linking health data with ON-Marg (1 of 2)



Source: Ontario Community Health Profiles Partnership. Toronto neighbourhoods; age standardized rate of patients with 2+ chronic conditions (/100), all ages 20+, both sexes (2018/19) [Internet]. Toronto, ON: Ontario Community Health Profiles Partnership; c2021 [cited 2022 Nov 30].]. Available from: https://www.ontariohealthprofiles.ca/o_documents/TM_allCateg_maps/TM_maps_AHD/nNB_TOR_LHIN_7/2019_Toronto_2pCC_7.pdf

Linking health data with ON-Marg (2 of 2)





Summary Measure of Inequality	*2011*
Rate Difference:	51.2%
Rate Ratio:	3.6
Slope Index of Inequality:	55.7%
Relative Index of Inequality:	4.1

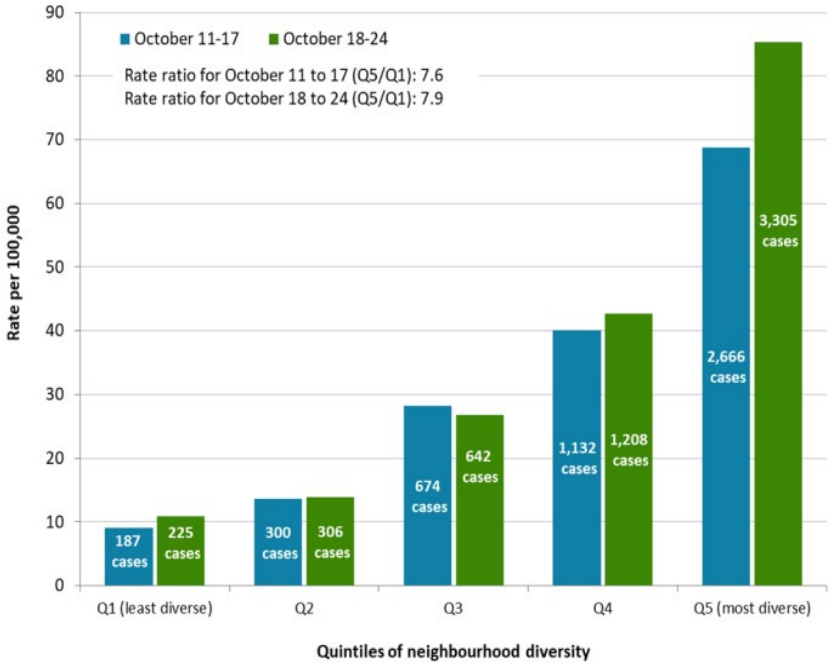
"Premature Mortality rates are 3.6 times higher in the most marginalized quintile compared to the least marginalized quintile."

Potential Uses of the ON-Marg

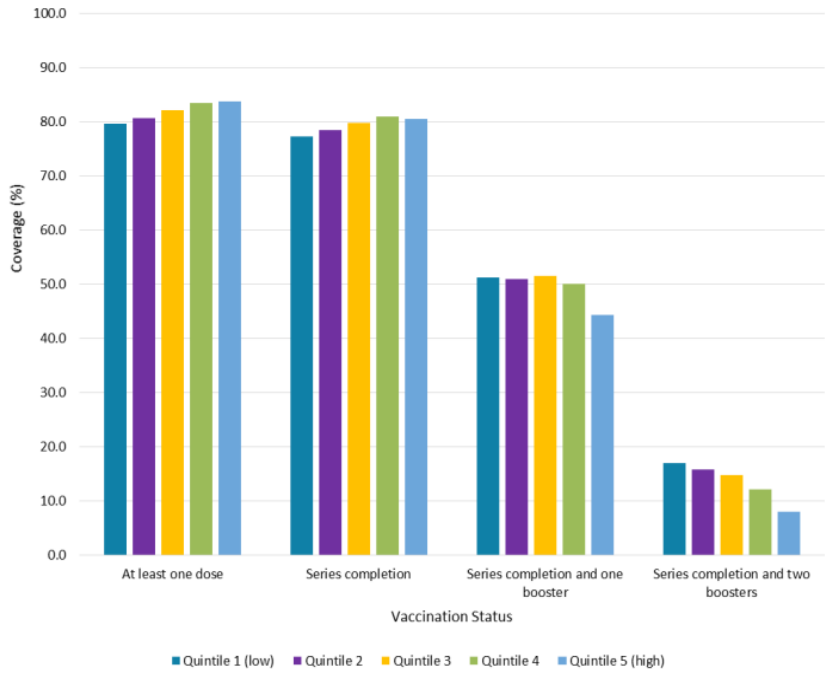
1. Planning and needs assessment
2. Monitoring inequities
3. Resource allocation
4. Research

Use 1: Planning and needs assessment

Figure 6. Rate and number of confirmed cases of COVID-19 for each quintile of neighbourhood diversity: Ontario, week 42 (October 11 to 17, 2020) and week 43 (October 18 to 24, 2020).



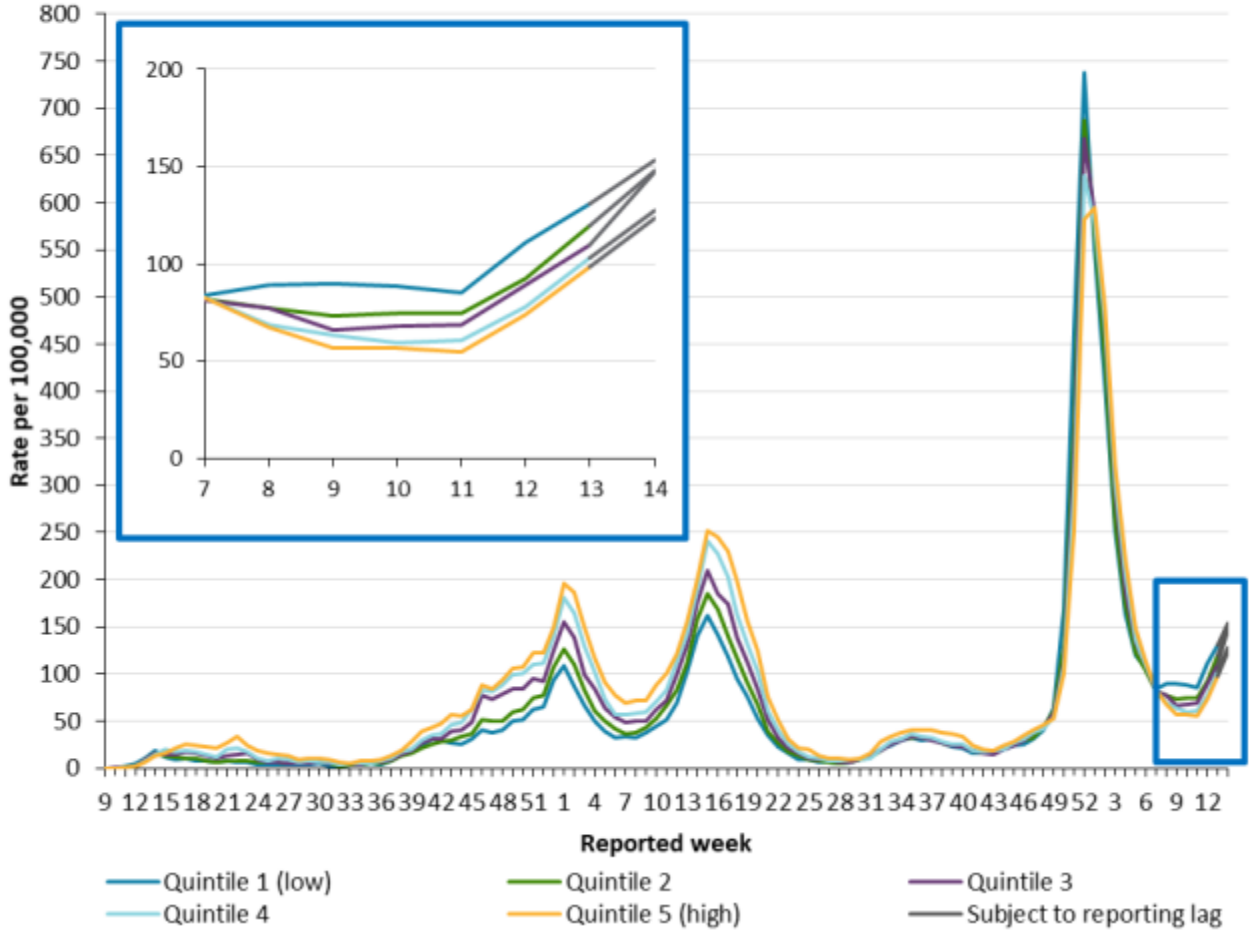
Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). Weekly epidemiologic summary: COVID-19 in Ontario – focus on October 18, 2020 to October 24, 2020. Toronto, ON: Queen's Printer for Ontario; 2020.



Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario) COVID-19 vaccination coverage in Ontario by neighbourhood diversity and material deprivation: December 14, 2020 to August 14, 2022. Toronto, ON: King's Printer for Ontario; 2022.

Use 2: Monitoring inequities

Figure 5. Rate of confirmed cases of COVID-19 per 100,000 population by quintile of neighbourhood material deprivation and public health unit reported week: Ontario



Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). Weekly epidemiologic summary: COVID-19 in Ontario – focus on April 3, 2022 to April 9, 2022. Toronto, ON: Queen's Printer for Ontario; 2022.

Use 3: Resource allocation

"The TCDSB Research Department uses ON-Marg to understand the sociodemographics of both school communities and the neighbourhoods in which students are living to support and resource schools equitably. For example, using the material deprivation index, we provide additional funding to schools where the school population is characterized by a high proportion of students living with socioeconomic stress according to the neighbourhoods they live in."

Information provided by Brandy Doan-Goss, Ph.D. (she/her), Chief of Educational Research, Toronto Catholic District School Board.

Use 4: Research

Table 4: Fully adjusted odds ratios comparing odds of loneliness among immigrant and Canadian-born older adults

Community-Level Factors	Immigrant (aOR, 95% CI)	Canadian-Born (aOR, 95% CI)
Dependency Factor Score	0.92 (0.71–1.19)	1.06 (0.93–1.29)
Ethnic Diversity Factor Score	**0.78 (0.66–0.93)****	0.88 (0.75–1.04)

Note: Data were derived from the Ontario component of Canadian Community Health Survey (Healthy Aging) linked to health administrative databases, weighted using Canadian Community Health Survey sampling weights and bootstrap weights provided by Statistics Canada.
* $P < 0.05$; ** $P < 0.01$; ***$P < 0.001$
aOR = adjusted odds ratio; CI = confidence interval

Source: Lu M, Bronskill SE, Strauss R, Boblitz A, Guan J, Im JHB, Rochon PA, Gruneir A, Savage RD. Factors associated with loneliness in immigrant and Canadian-born older adults in Ontario, Canada: a population-based study. BMC Geriatr. 2023 Jun 21;23(1):380. doi: 10.1186/s12877-023-04092-w.

Poll

If you have used ON-Marg in your work, in which of the following ways have you used it?

(select all that apply)

1. I have never used ON-Marg
2. To monitor inequities (e.g., comparisons over time)
3. For program planning and needs assessment (e.g., identifying high-need neighbourhoods)
4. For resource allocation (e.g., in funding formulae for primary health care services)
5. In research and/or evaluation (e.g., identifying associations between marginalization and health status outcomes)

Limitations

- Does not address all forms of marginalization:
  - -For example: Black populations, Indigenous populations, women, LGBTQ+ experience marginalization in ways that may not be captured by ON-Marg.

- Uses Census data:
  - -Data is refreshed only every five years.
  - -Not everyone is counted (i.e., data suppression of Indigenous reserves, and undercount of Indigenous populations off-reserve, temporary foreign agricultural workers, people living in congregate settings (LTCH)).

- Ecological fallacy:
  - -Some people within a neighbourhood are not represented by the neighbourhood average and may be misclassified if ON-Marg is used as a proxy for individual SES. This risk is lowest when using DA-level ON-Marg data.

Considerations for avoiding unintended harms (e.g., stigmatization)

- Clearly articulate the purpose and use of health equity data and how it benefits impacted communities in addressing inequities.

- Recognize that inequities in health status observed using ON-Marg are caused by underlying social and structural factors. Highlight the role of contextual factors (ongoing and historical structures, policies, and practices) in driving inequities.

- Incorporate the perspectives of impacted communities. Where direct engagement is not possible, you can incorporating existing literature, frameworks, and knowledge informed by the perspectives of impacted communities.

Resources

- https://www.ontariohealthprofiles.ca/onmargON.php
- https://www.publichealthontario.ca/en/Data-and-Analysis/Health-Equity/Ontario-Marginalization-Index

For More Information About This Presentation, Contact:

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ON-Marg Ontario Marginalization Index

Appendix: ON-Marg Indicators

Households and dwellings (previously residential instability)
Proportion of the population living alone
Proportion of the population who are not youth (age 5-15)
Average number of persons per dwelling
Proportion of dwellings that are apartment buildings
Proportion of the population who are single/divorced/widowed
Proportion of dwellings that are not owned
Proportion of the population who moved during the past 5 years
Material resources (previously material deprivation)
Proportion of the population aged 25 to 64 without a high-school diploma
Proportion of families who are lone parent families
Proportion of total income from government transfer payments for population aged 15+
Proportion of the population aged 15+ who are unemployed
Proportion of the population considered low-income
Proportion of households living in dwellings that are in need of major repair
Age and labour force (previously dependency)
Proportion of the population who are aged 65 and older
Dependency ratio (total population 0-14 and 65+ / total population 15 to 64)
Proportion of the population not participating in labour force (aged 15+)
Racialized and newcomer populations (previously ethnic concentration)
Proportion of the population who are recent immigrants (arrived in the past 5 years)
Proportion of the population who self-identify as a visible minority