2018
Social Determinants of Health Status Report

This report is available at https://bi.wdgpublichealth.ca/reports/

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Executive Summary

Background

The social determinants of health are the socioeconomic factors, within the broader determinants of health, that relate to a person's status in the socioeconomic hierarchy, such as relative income level, educational attainment, and employment status. These factors encompass the conditions in which people are born, grow, live, play, work, and age, which influence an individual's access to good health. These conditions are shaped by the distribution of power and resources at global, national, and local levels, which are themselves influenced by political systems.

Purpose

The purpose of the ***Social Determinants of Health Status Report*** is to provide a view of selected social determinants of health in Wellington-Dufferin-Guelph (WDG) communities using data from the 2016 and 2006 Census of Populations issued by Statistics Canada. The interactive nature of the report allows users to explore indicators in greater depth in relation to their communities. The following social determinants of health and indicators were selected based on consultations and a review of the literature:

- Early Life
  - Percent of Children under Six years Living in Low-Income Households
- Education
  - Percent of People 25-64 Years Who Do Not Have a Certificate, Diploma, or Degree
- Employment
  - Percent Unemployed People 15 Years and Over
- Housing
  - Percent of Tenant Households Spending 30% or More of Household Income on Shelter Costs
  - Percent of Owner Households Spending 30% or More of Household Income on Shelter Costs
- Immigration
  - Percent of Immigrant Population Who Immigrated Within the Last Five Years
- Income and Its Distribution
  - After-Tax Household Income
  - Median After-Tax Household Income
  - Percent Low-Income Households
  - Ontario Marginalization Index
- Social Support
  - Percent Lone-Parent Family Households

Methods

Data from the 2016 and 2006 Census were collected, processed, and modeled upon data release from Statistics Canada. Indicators for each of the social determinants of health were derived and examined at the municipal level for the WDG region. To facilitate examinations of trends at higher levels of geography, municipality data were grouped and aggregated. Models were built to capture the counts for the social determinant of health indicators derived from census variables. Enumerated counts were expressed as a percentage of the group to which the indicator applied. These percentages were compared with those in Ontario (less the WDG population). Percent changes from 2006 to 2016 were also calculated. Unless otherwise stated, all findings represent 2016 Census data.

A community profile report was created as an appendix to this report in order to provide an in-depth look into specific at-risk communities[1]. Similarly, at-risk population groups were examined in more depth compared with the total population, and inserted as an appendix to this report.

Income

According to the Low-Income Measure After Tax (LIM-AT), 14% of children under six years in WDG were in low income. This percentage is lower to the one reported for Ontario (20%). Overall, Dufferin County had the lowest percentage (11%). Melancthon had the highest percentage (26%) among WDG municipalities, whereas East Garafraxa had the lowest percentage (4%). At an overall household level, 10% were in low income. This percentage was lower to the one reported for Ontario (15%). Other than Guelph, Municipalities in the southern region of Wellington County (e.g., Puslinch) had the lowest percentages. Conversely, municipalities in the northern region of Wellington County (e.g., Wellington North), as well as Melancthon, had higher percentages. These findings were replicated in income trends with lower incomes observed in the northern region of Wellington County. Mono, East Garafraxa, Puslinch and Guelph/Eramosa each had the highest median after-tax household income, as well as highest percentage of high-income households.

Ontario Marginalization (ON-Marg) Index

The ON-Marg Index combines various indicators into four distinct dimensions of marginalization in order to understand inequalities. Consistent with the income trends, Melancthon had the highest material deprivation, whereas Mono, East Garafraxa, Puslinch, and Guelph/Eramosa and the lowest material deprivation. Guelph had the highest residential instability, as well as highest ethnic concentration. Minto had the lowest ethnic concentration.

Education

11% of people 25-64 years in WDG had no certificate, diploma, or degree, representing a decrease since 2006. In comparison, 10% of people 25-64 years in Ontario had no certificate,

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[1] For more information on the Community Profile Report please refer to the Community Profiles summary report

diploma, or degree. Municipalities in Wellington County, especially Mapleton (38%), had the highest percentages, whereas Mulmur (8%) had the lowest percentage.

Employment
The unemployment rate in WDG has remained steady at about 5% from 2006 to 2016, a rate below that of Ontario (8%). Despite higher percentages of people without a certificate, diploma, or degree in Wellington County, unemployment rates were comparatively low. Unemployment rates tended to differ by sex with high unemployment in Amaranth (7%) for males and Grand Valley (12%) for females. Conversely, unemployment rates were low in Mapleton (1%) for males and East Garafraxa (2%) for females.

Housing
17% of owner households in WDG were unaffordable, representing a decrease since 2006. In Ontario, a greater percentage of owner households were unaffordable (20%). Melancthon (27%) had the highest percentage of unaffordable housing. In contrast, Mapleton and Centre Wellington each had the lowest percentage (14%). These findings mirrored those observed in the income indicators with Melancthon showing a higher percentage of low-income households.

Immigration
Across WDG municipalities, 10% of immigrants arrived between 2011 and 2016, representing a decrease since 2006. This percentage was less than that observed in Ontario (12%). According to the 2016 census, Mapleton (15%) and Guelph (13%) have experienced a recent influx of immigrants compared with other municipalities, which either had very few immigrants or very few recent ones. These findings confirmed the high ethnic concentration and residential instability observed in Guelph.

Social Support
From 2006 to 2016, there has been a slight increase of 13% to 14% in the percentage of lone-parent families in WDG, although still below that observed in Ontario (17%). Orangeville had the highest percentage (19%) and Mapleton lowest percentage (6%) of lone-parent families. These findings may partially explain the higher percentage of unaffordable tenant housing and lower median household incomes in Orangeville communities.

Population Groups
Among those who identify as Aboriginal Identity, there is a greater percentage of: people 15 years and over with no certificate, diploma, or degree; low-income households, especially for vulnerable age groups; and unemployment. Among recent immigrants and visible minorities, there is a greater percentage of: people who moved one year ago; low-income households, especially for young children; and unemployment. Among low-income households, there is a greater percentage of: people 15 years and over with no certificate, diploma, or degree; people who moved one year ago; people who must take the bus or walk to work (i.e., fewer cars); and unemployment. Among lone-parents, there is a greater percentage of low-income households for people 18-64 years.

Introduction

Social determinants of health are the socioeconomic factors within the broader determinants of health that relate to a person's status in the socioeconomic hierarchy, such as relative income level, educational attainment, and employment status. These factors can influence an individual's health (1,2). Social determinants of health encompass the conditions in which people are born, grow, live, play, work, and age, including the healthcare system. These conditions are shaped by the distribution of power and resources at global, national, and local levels, which are themselves influenced by political systems (1,2). The purpose of the Social Determinants of Health Status Report is to provide a preliminary view of selected social determinants of health in our communities using data from the 2016 and 2006 Census of Populations issued by Statistics Canada. The following appendices were added to the report to provide a closer look into at-risk communities and population groups:

Appendix A: Community Profiles

The Community Profiles Report is a tool built to allow us a better understanding of equitable access to well-being within our communities. Using Statistics Canada's 2016 Census release, this interactive report displays demographic information combined with social determinant of health indicators across Wellington-Dufferin-Guelph, and select geographies within the boundaries of the Waterloo Wellington and Central West Local Health Integration Networks.

Appendix B: Population Groups

The Population Group Report is a tool built to allow us a better understanding of equitable access to well-being within our communities. Using Statistics Canada's 2016 Census release, this interactive report allows us to better understand health equity for at-risk groups using social determinant of health indicators across Wellington-Dufferin-Guelph.

Methods

SDoH Indicators

Indicators for this report were chosen from the list of core indicators recommended by the Association for Public Health Epidemiologists of Ontario (APHEO). APHEO has recognized the need for consistency among health reports (APHEO, n.d.a). Its Core Indicators Working Group (CIWG) has aimed to systematically define and operationalize a core set of health indicators in Ontario, which includes a set of indicators for determinants of health (APHEO, n.d.a). The CIWG works to ensure the Core Indicators are accurate and up-to-date, and reflect the legislative requirements set in the Ontario Public Health Standards (APHEO, n.d.a).

Social determinants of health indicators were also selected based on consultations and a review of the literature.

1. Early Life
In the 2016 census, the Low-Income Measure After Tax (LIM-AT) was used as a measure of low income at the individual and household level. The LIM-AT is a fixed percentage (50%) of median after-tax household income adjusted for household size to reflect the fact that a household's needs increase with more household members. After-tax household incomes below the low-income cut-off are considered to be in low income. All persons living in a low-income household are considered to be living in low income. Percentages were used instead of counts to allow for comparisons across municipalities.

2. Education
In the 2016 census, the variable **Highest Certificate, Diploma, or Degree** was used to measure a person's level of education, specifically the highest level of education attained by a person 25-64 years old. This variable has several categories representing one's specific level of educational attainment (e.g., university undergraduate degree). For the purpose of the Social Determinants of Health Status Report, the category 'no certificate, diploma, or degree' was used to delineate those without a formal education. Percentages were used instead of counts to allow for comparisons across municipalities.

3. Employment
In the 2016 census, **Unemployment** was included as a count of unemployed people 15 years and over in the labour force, as well as derived as the unemployment rate. For the purpose of the Social Determinants of Health Status Report, the total count of unemployed people 15 years and over was obtained and expressed as a percentage of the total labour force aged 15 years and over living in private households. Percentages were used instead of counts to allow for comparisons across municipalities.

4. Housing
In the 2016 census, the **Shelter-Cost-to-Income Ratio** was used as a proxy measure of housing affordability. This measure refers to the proportion of average household income allocated to shelter costs. For owner households, these costs include those associated with owning a house. For tenant households, these costs include those associated with renting. According to the Canada Mortgage and Housing Corporation (CMHC), a household that spends more than 30% of before-tax household income on shelter costs is considered to be in unaffordable housing. For the purpose of the Social Determinants of Health Status Report, the shelter-cost-to-income ratio was divided into two indicators. Percentages were used instead of counts to allow for comparisons across municipalities.

5. Immigration
In the 2016 census, the variable **Period of Immigration** refers to the period during which an immigrant first obtained landed immigrant or permanent resident status. For the purpose of the Social Determinants of Health Status Report, the count of immigrants who immigrated within the last five years was obtained and expressed as a percentage of the total immigrant population. Percentages were used instead of counts to allow for comparisons across municipalities.

6. Income
- **After-Tax Household Income** includes all income sources from household members, before income taxes and deductions. In the 2016 census, this variable was divided into dollar categories from 'under $10,000' to '$100,000 and over'
- **Median After-Tax Household Income** is the amount that divides the income distribution of population into two halves. It describes the center of a distribution.
- **Percent Low-Income Households** refers to the percentage of low-income households according to the Low-Income-Measure After Tax (LIM-AT). The LIM-AT is a fixed percentage (50%) of median after-tax household income adjusted for household size to reflect the fact that a household's needs increase with more household members. Households and household members are considered low-income when household income is below the low-income cut-off.
- The **Ontario Marginalization Index** (ON-Marg) is a data tool that combines various indicators into four distinct dimensions of marginalization. The aim of the ON-Marg is to understand inequalities in various measures of health and social well-being either between population groups or between geographic areas.

7. Social Support
In the 2016 census, **Census Families** were classified as married couples (with or without children of either or both spouses), common-law couples (with or without children of either or both partners), or lone-parent families by sex of parent. For the purpose of the Social

Determinants of Health Status Report, counts of lone-parent family households were obtained and expressed as a percentage of total census families. Percentages were used instead of counts to allow for comparisons across municipalities.

Levels of Geography

Data were shown for Wellington-Dufferin-Guelph and for the province of Ontario to provide a comparison. Additionally, where possible, figures were calculated for both Wellington and Dufferin Counties and the City of Guelph. However, in some cases small numbers prevented the release of figures for these stratified geographies.

Time Period

2006 and 2016 Census data are provided, as well as percent change in data values from 2006 to 2016.

Data Sources

The data source used in this report was the Statistics Canada Census of Populations.

Data Processing Procedure

Data from the 2016 and 2006 Census were collected, processed, and modeled upon data release from Statistics Canada. Data are presented at the level of the municipality within Wellington-Dufferin-Guelph. To facilitate examinations of trends at higher levels of geography, municipality data were grouped and aggregated.

Data primarily represented enumerated counts of people, dwellings, households, or families depending on the census variable and variable categories. Means, medians, and percentages were also provided for certain census-derived variables. For the 2016 Census, data were collected using two questionnaires: the short-form questionnaire and the long-form questionnaire. The long-form questionnaire included the same questions as the short form, as well as a series of questions aimed at providing more information on the Canadian population, as well as households. The long-form questionnaire was sent to a sample of 25% of all Canadian households. Income data were obtained from personal income tax and benefits files.

Models were built to capture the counts for the pre-determined social determinant of health indicators derived from census variables. Enumerated counts were expressed as a percentage of the group to which the indicator applied (i.e., the population).

Data Limitations

Data may be missing due to the practice of data suppression used by Statistics Canada. This is done for confidentiality and data quality reasons. Specifically, values are randomly rounded either up or down to a multiple of '5' or '10.' As a result, when these data are summed or grouped, the total value may not match the individual values since totals and sub-totals are independently rounded. Similarly, percentages, which are calculated on rounded data, may not necessarily add up to 100%.
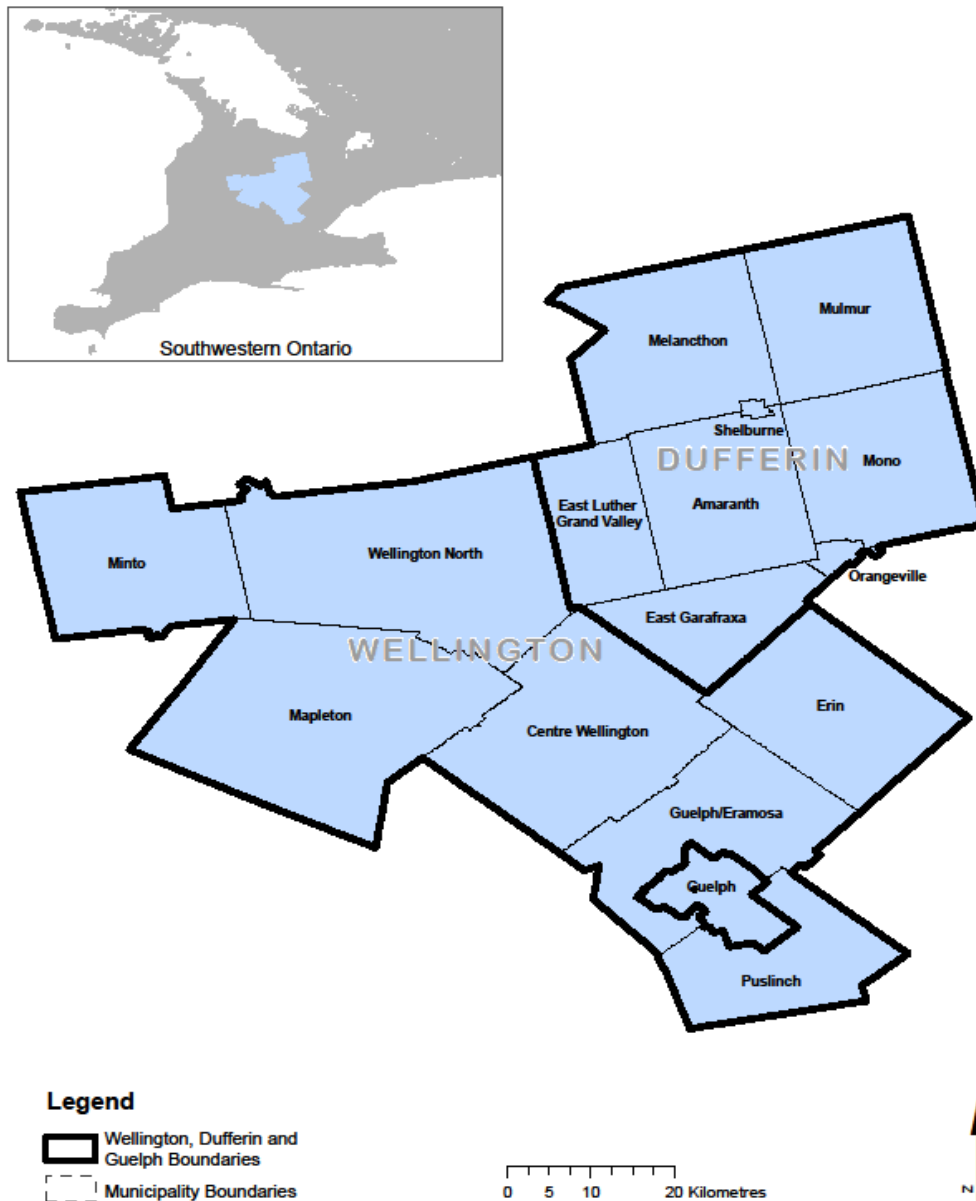
Area and data suppression may result in the removal of data for certain geographic areas with populations below a specified size. For example, areas with a population of less than 40 persons are suppressed; therefore, only the total population counts are available. Missing data due to suppression, as well as high proportions of zero values, may skew distributions and limit the range of quintiles. Furthermore, aggregations of data at the level of the municipality may result in over- or under-estimation of regional data.

Comparison of findings from other reports must be done with caution, as data may not have been analyzed using the same methods. Comparison of findings between 2006 and 2016 census data is not recommended due to differences in methodology, sample, and derivation of the low income measure. High percent changes may arise from differences between low percent values, and thus should be interpreted in the context of percent values and group counts. To learn more about the 2016 Census please click on the following link: http://www12.statcan.gc.ca/census-recensement/2016/dp-pd/index-eng.cfm

A Profile of Wellington-Dufferin-Guelph

Wellington-Dufferin-Guelph Public Health (WDGPH) is one of 36 local health departments in Ontario. The area served by WDGPH is located in southwestern Ontario, approximately 100 km west of Toronto, and comprises two counties: Wellington County and Dufferin County. The municipality of the City of Guelph is geographically located within Wellington County *(See Figure 1).* In this report, the area served by WDGPH is referred to as Wellington-Dufferin-Guelph (WDG).

Figure 1: Municipalities in Wellington-Dufferin-Guelph, Southwestern Ontario

*Post-secondary education includes apprenticeship degrees/certificates, college degrees, and university degrees

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Guelph Office
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Orangeville Office
71 Broadway

Shelburne Office (Mel Lloyd Centre)
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