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KITCHENER WATERLOO COMMUNITY FOUNDATION

Left Behind:
The State of Oral Health in Waterloo Region

Territorial Acknowledgement

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Kitchener Waterloo Community Foundation (KWCF) is situated on the lands within the Haldimand Treaty of 1784, a formally ratified agreement acknowledging six miles on either side of the Grand River as treaty territory belonging to Six Nations of the Grand River. KWCF serves a region that is located within the traditional territories of the Neutral, Anishinaabe, and Haudenosaunee peoples. This territory is within the lands protected by the Dish with One Spoon wampum. We acknowledge the enduring presence, knowledges and philosophies of Indigenous peoples. We acknowledge the continuing accomplishments and contributions Indigenous Peoples make in shaping Waterloo Region. We are committed to understanding the impact of settler colonialism on the Indigenous experience in order to vision and co-create collaborative, respectful paths together in mutuality and reciprocity.

Thank You

Thank You

Left Behind: The State of Oral Health in Waterloo Region would not have been possible without the support of individuals and organizations across our community.

It could not have happened without the funding, advice and content provided by Green Shield Canada.

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For this report, we interviewed individuals who are working on improving oral health in Waterloo Region and wanted to acknowledge their contributions. We hope we have not missed anyone in this list. All opinions and interpretations in this report are the opinions, interpretation, or perspectives of the author and editorial team and do not necessarily reflect the opinions of any organizations or people we acknowledge here.

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About Kitchener Waterloo Community Foundation

Kitchener Waterloo Community Foundation (KWCF) is focused on Granting, Impact Investing and Convening to make measurable and sustainable impacts in Waterloo Region. We collaborate with partners to develop forward-thinking innovative solutions and seize opportunities to meet current and future needs of our community. We enable people, companies and organizations to do more good by making it easy for Fundholders and Donors to give and invest, and for charities to receive money. Gifts are directed to KWCF's endowed funds that drive positive change in two ways: through grants and impact investments that deliver both financial returns as well as positive social and environmental outcomes. We work with our Fundholders to distribute the income generated through grants to support a wide range of charitable causes within our community. As a leading community-building organization we also work to amplify voices and issues of importance by convening conversations and sharing information, while approaching our work with an equity mindset. If you want to join us in making an impact in Waterloo Region, visit **www.kwcf.ca**

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Executive summary

Across Canada, one in three people lack coverage for dental care, while low-income Canadians are four times more likely to avoid seeing a dentist because of cost and two times more likely to have poor dental outcomes. Access to dental care is often overlooked and underfunded, and is deeply intertwined with complex social issues, from the rise of precarious employment to increasing food insecurity. One thing is clear – for many of the most vulnerable people in our communities, the current system has left them behind and without support. How did we get here, and what can be done?

Oral health needs of Waterloo Region residents in 2017/2018

138,000
did **not** have **dental insurance** in (+30,000 from 2005)

104,000
people **avoided going to the dentist due to cost** in the last 12 months

54,000
residents go to the dentist only for **emergency care**

46,000
residents report **persistent pain in their mouths**

25,000
report **dissatisfaction** with the **appearance of their teeth** or **dentures**

Source: Canadian Community Health Survey, 2017/2018.[1]
Note: This only includes residents aged 12 and older.

This report highlights the importance of oral health and analyzes the state of oral health in Waterloo Region compared to other regions. It also takes a deeper look at who has dental insurance in Waterloo Region and who doesn't, and provides recommendations for how oral health outcomes can be improved in the region. It outlines community organizations, public health efforts, and initiatives underway in Waterloo Region that are providing critical oral health programs.

This study draws on data from the 2017/2018 Canadian Community Health Survey (CCHS), which includes responses from more than 1,216 respondents from the Waterloo Region aged 12 and older and offers a glimpse into the state of oral health in the community, further summarized throughout this report. This study also draws on the existing oral health literature and interviews with local oral health experts. The survey estimated about 485,000 residents aged 12 and older resided in the region as of the 2017/2018 analysis.

Waterloo Region is prosperous, with higher-than-average median household after-tax income.[2] Nevertheless, approximately 138,000 residents (30%) are falling through the cracks and do not have dental insurance. The problem is especially acute for racialized residents, 39% of whom lack insurance.[3] While this rate of dental insurance coverage is close to the average for larger regions of the province, the fact that children in Waterloo Region persistently have higher oral health issues than the rest of Ontario underscores the challenges.

And rather than seeing progress, rates of dental insurance coverage are declining in Waterloo Region – from 72% in 2005 to 70% in 2017/2018, with an even bigger decrease among private dental insurance programs, from 64% in 2005 to 60% in 2017/2018, though comparisons over time need to be interpreted with caution.[4]

These challenges resulted in more than 100,000 residents in Waterloo Region avoiding the dentist due to cost in 2017/2018, with more than 46,000 reporting persistent pain in their mouths.[5]

The implications of these problems ripple across so many domains of health. Whether it be the association between oral inflammation and heart disease, or growing evidence that tooth pain causes depression and that depression worsens oral health, or findings that employment opportunities decrease for those with worse oral health, or that tooth loss can contribute to locking individuals in a cycle of homelessness, or that low-income students having higher rates of dental pain contributing to worse academic performance – poor oral health is linked to worse physical, mental and social outcomes, and represents a pressing and underserved health-care issue. These challenges and more are discussed in this report.

With an ageing population and an increase in precarious gigs and jobs without guaranteed salaries or benefits, this problem will likely be exacerbated over the next few years unless there is action. During the pandemic, food insecurity has soared, with the Waterloo Food Bank reporting a 307% increase in food bank usage in the early months of the pandemic.[6]

As Waterloo Region has become an increasingly expensive housing market (home prices are up by 282% between January 2005 and July 2021 while the rent of a vacant bachelor apartment increased by 122% from October 2008 to October 2020[7]), this has and will continue to leave residents with fewer resources for dental care and other critical health needs. Already, renters report much worse oral health and much fewer visits to the dentist, primarily because of cost.

Together, all of this paints a clear picture – access to dental care is not only a health concern, but also represents a significant social issue that is intricately connected to broader the wellbeing of the community.

During the pandemic, it has become even more clear (although already well-established) that gaping inequalities exist in our society, and Canada's dental care system is no exception. Improved access to oral health care could be a plank of any 'build back better' initiatives. Essential workers, who are more likely to be racialized, have borne the brunt of the pandemic and are more likely to lack dental insurance. Even as these workers have kept society functioning, many of them lack access to basic benefits, including dental care.

Method

02

This study makes use of the Canadian Community Health Survey (CCHS) from 2017/2018.

The survey is a voluntary, cross-sectional survey that collects information related to health status and health systems utilization and health determinants, including dental care, dental insurance, and oral health information.

The CCHS surveys approximately 65,000 people aged 12 and older from across Canada each year and provides reliablehealth information at the regional level every two years. This report uses the combined data from 2017 and 2018.

The public use microdata file (PUMF) was used for this analysis. The Region of Waterloo Public Health, referred to in this report as Waterloo Region as its borders coincide, had 1,216 responses in the PUMF.

Limitations

All data is self-reported and may not be recalled accurately. The survey is offered in English and French. While the CCHS is the most widely used source for understanding regional health trends, like any survey, it tends to underrepresent low-income populations, people who do not speak official languages, newcomers, precariously housed individuals, and other populations of interest and likely underestimates some challenges because of this.

In this report, sub-regional segmentation is used, which should be interpreted with caution.

This data makes comparisons between the 2005 and 2017/2018 Canadian Community Health Surveys. In 2015, a new collection and sampling strategy was implemented and any comparisons should be interpreted with caution.

The state of oral health in Waterloo Region

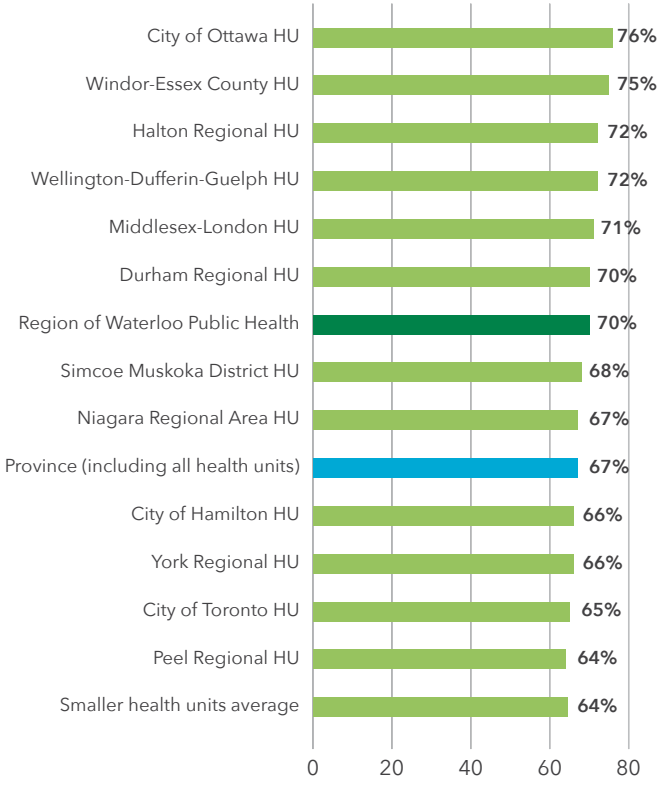
03

Dental insurance coverage in Waterloo Region is slightly above the provincial average

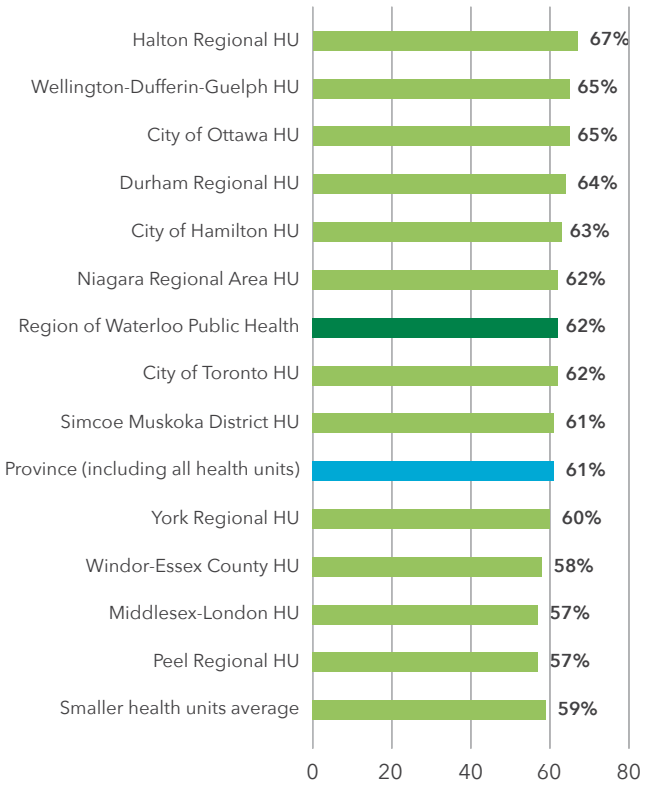
The high cost of dental care in Ontario means that most people need to rely on private insurance or pay out-of-pocket. About 50% of oral health spending comes from employer-provided benefits, and 44% is paid out-of-pocket.[8]

Across Ontario, 67% of people have dental insurance, and the situation in Waterloo Region is slightly above average as 70% of residents have coverage. These private dental insurance programs have played an essential role in maintaining good levels of oral health among people who are fortunate enough to have insurance.

Rates of dental insurance, 2017/2018, Ontario



Rates of self-perceived "excellent" or "very good" oral health, 2017/2018, Ontario



Source: Canadian Community Health Survey, Public Use Microdata File, 2017/2018. Waterloo Health Unit. Data reflects non-age standardized weighted numbers. Analysis by author.

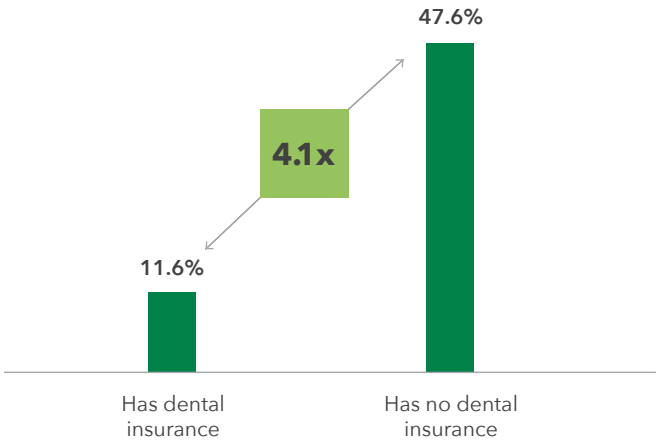
People without dental insurance are avoiding going to the dentist

Regular visits to the dentist are important to maintain both oral and overall health. People who avoid going to the dentist are more likely to suffer severe health consequences in the future.

In Waterloo Region, almost a third of residents (30%) don't have dental insurance, and out of these almost half (48%) avoided going to the dentist in 2017/2018 due to cost. This is unsurprising considering the high costs of oral health care. In fact, the Consumer Price Index shows that over the last 20 years, dental care services have increased at twice the rate of inflation (81% vs 41%).[9] This rate of increase is higher than every other sub-category except tobacco.

In contrast, only 12% of people with dental insurance avoided going to the dentist due to cost. The most likely reason people with insurance still sometimes avoid the dentist due to cost is because many employers cover only a certain portion of dental care, meaning that seeking treatment can still entail significant costs for people with insurance.

Percentage who avoided going to the dentist due to cost, Waterloo Health Unit, 2017/2018



The lack of preventative oral health care leads to ER visits and other costs

One of the primary impediments to expanding dental health care is cost. However, people without access to preventative oral health care often experience compounded health problems, which in turn provokes additional costs.

In 2015 in Ontario, there were 61,000 emergency room (ER) visits for dental problems, which cost the health care system around $31 million. The 2,445 ER visits in Waterloo Wellington Local Health Integration Network (LHIN) area contributed about $1.25 million to this amount (in the Waterloo Region's three hospitals, there were 1,295 visits by 1,174 patients, costing $664,000).[10] In 2014, there were also 9,527 visits to physicians for dental problems in the WWLHIN area, costing at least $321,000 (based on a minimum cost to OHIP of $33.70 per 15-minute visit).

Beyond the immediate costs of treating dental problems in physicians' offices and in emergency rooms, inequitable access to preventative oral health care also leads to long-term costs associated with all the other diseases and conditions that may develop because of poor oral health.

A 2014 Canadian study found that more than one in five Canadians were avoiding the dentist due to cost, and discovered that these individuals "had more untreated decay, missing teeth, and reported having poorer oral health and oral pain more often."[11]

The study also demonstrated that reducing financial barriers to accessing oral health care could lead to a healthier and more productive society and could have significant economic benefits by reducing cardiovascular disease (which costs the Canadian economy $20.9 billion every year), and by limiting hours lost hours due to dental pain (an estimated $40 million annually in Canada), which results in over $1 billion in lost productivity.

Why oral health is important

Oral diseases, including tooth decay and gum disease, are among the most common chronic diseases affecting millions of Canadians. Oral health is highly interconnected with overall health and wellness, and poor oral health makes it difficult for people to live healthy and fulfilling lives.

General physical health

Poor oral health is associated with higher rates of heart disease and respiratory illness, causes complications with diabetes,[12] and has broad implications for quality of life. People who have no access to preventative oral health often develop serious conditions that need to be treated in hospital emergency rooms.

Mental health

Longitudinal studies have shown that oral health issues such as persistent pain trigger depression[13] and that mental health issues can also contribute to poor oral health.[14] Poor oral health reduces self-confidence and can make it harder for people to socialize.[15] People with severe mental illnesses are 2.7 times as likely to lose all their teeth compared to the general population.[16]

Education

Students with more oral health issues have lower attendance, lower grades and higher odds of dropping out[17]. Schools across Ontario screen students for oral health problems, and students from marginalized communities are more likely to have oral health problems. Over 24,000 students were screened in Waterloo Region schools during the 2018-2019 school year, and 7% were identified as having urgent treatment needs.[18]

Employment

Dental pain leads to lower productivity and higher absences from work,[19] which is an issue for both employees and their employers. Poor oral health can make it more difficult for people to get a job,[20] and employment programs with added oral health components have seen better employment outcomes.[21]

The rise of precarious jobs without dental insurance poses a major risk to the oral health of Canadians, especially those from marginalized communities.

Food security

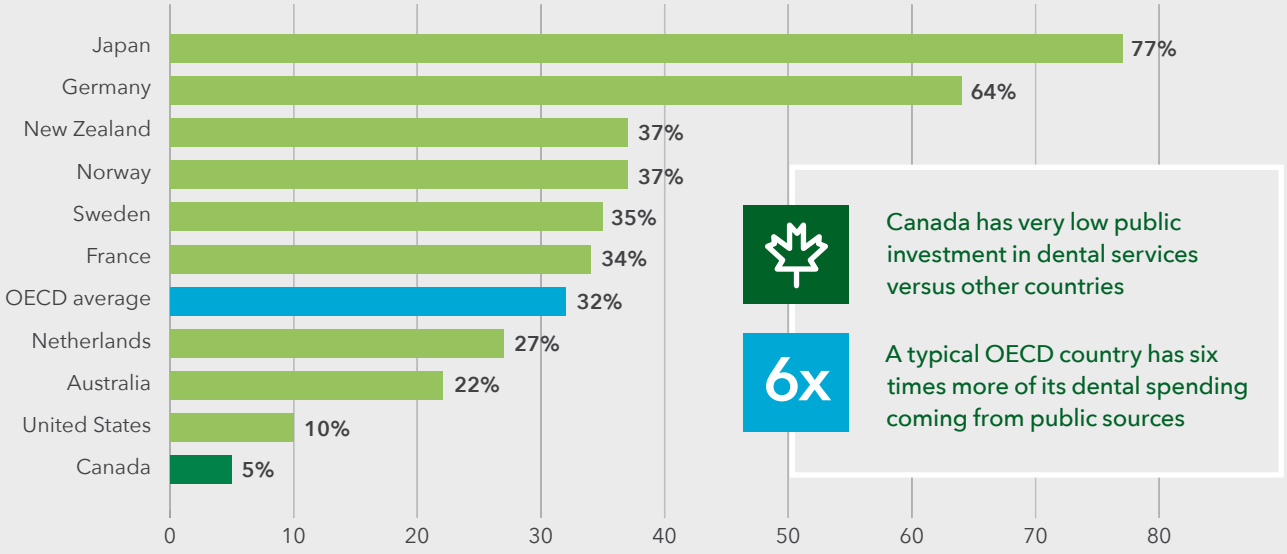
Low-income Canadians and the working poor struggle to buy healthy food, and therefore are at risk of poor oral health. More than a third of food insecure individuals in Ontario report frequent discomfort eating food, indicating potential oral health issues.[22]

Connection with affordable housing

For many Canadians, housing costs have been taking a larger percentage of income in recent years,[23] meaning they have less money to spend on other necessities such as dental visits. As rent and mortgage costs continue to soar across in Waterloo Region, the inability of many people to attend to their oral health will most likely increase.

Canada and Ontario have underinvested in oral health

Percentage of dental spending from public sources, select OECD countries, 2013



Source: Dentistry in Alberta. Time for a Checkup[24]

The story of oral healthcare in Canada, and in Ontario specifically, is one of chronic underinvestment.

Canadians are generally proud of our universal health care, but dental care is one of the major omissions of the system.[25]

Canadians like to favourably compare our healthcare to the more private American system, and yet only 5% of dental spending in Canada comes from public sources, compared to 10% in the US.

When comparing Canada's public investment in dental care with other high-income countries the picture becomes even bleaker. In OECD countries, an average of 32% of dental spending comes from public sources, and this figure is significantly higher in both Germany (64%) and Japan (77%).

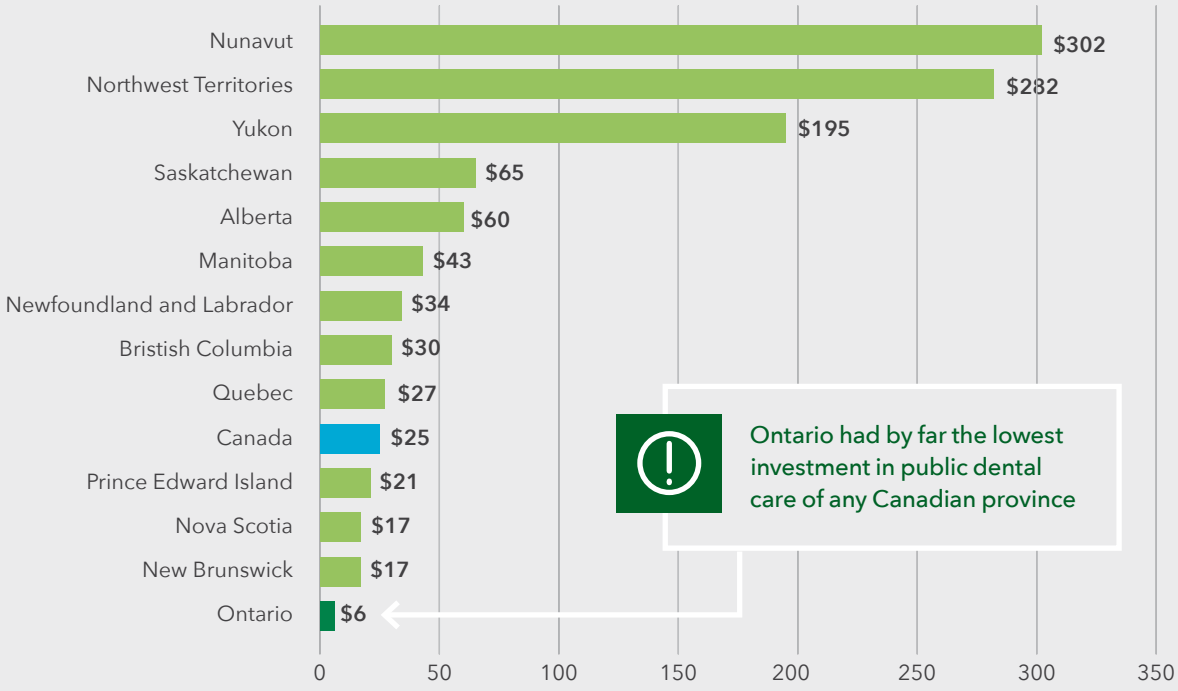
Per capita spending on dental care also differs widely across Canada. The three territories (Nunavut $302, Northwest territories $282, and Yukon $195) each spend significantly more than any of the provinces. The Canadian average is $25, and the prairie provinces are all significantly above average.

In 2017, Ontario spent only $6 per capita on oral health care, less than half of New Brunswick ($17), which had the second lowest spending. While the implementation of new programs such as the Ontario Seniors Dental Care Program in 2019 have boosted this spend significantly in recent years, Ontario still lags behind other provinces in its public investments in oral health.

Ontario is by far the most populous Canadian province and accounts for more than a third of the country's population. The fact that public spending in Ontario is so low means that millions of Canadians are living without comprehensive coverage.

Canada and Ontario have underinvested in oral health

Public dental care expenditure in Canada, by juristidction, 2017, current dollars



Source: Dentistry in Alberta. Time for a Checkup.[26]

Note: This chart was developed before a new seniors dental program was introduced, but due to its very focused spending on low-income seniors, with about 50,000 of the 2.5 million seniors in the province enrolled (see section on seniors later in the report), it would not substantially change the portrait of oral health spending in Ontario.

Oral health, affordability, and dental insurance in marginalized communities

Overall oral health

When asked about oral health, food insecure households reported the lowest oral health of any segment we analyzed in the Canadian Community Health Survey. More than three-quarters (78%) of those who were severely food insecure reported poorer oral health (see figure), compared to more than half of those who were moderately food insecure (54%), and 35% of those who were food secure. In general, low income was also a strong predictor of lower-than-typical oral health, with individuals with a household income of less than $20,000 reporting the worst oral health, while all of those with household incomes below $80,000 per year had below average oral health. Recent immigrants and renters also tend to have particularly poor oral health.

Although 70% of Waterloo Region residents have dental insurance, and oral health in the region is about average for the province overall, certain groups of people are far more likely to lack insurance, avoid going to the dentist due to cost, and to rate their oral health as poor (see chart).

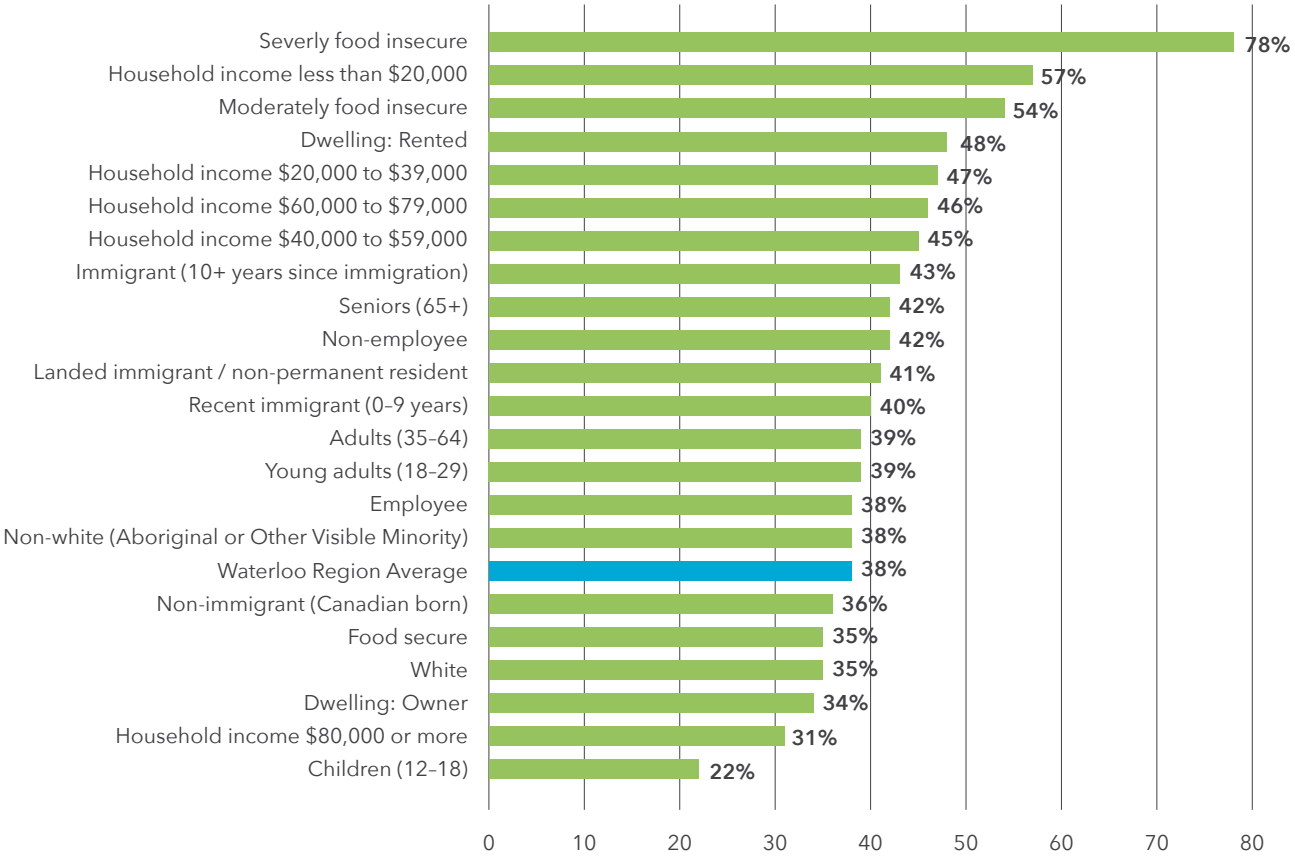
Only six groups of people are doing better than average in terms of their oral health:

1. Canadian-born residents
2. Those who are food secure
3. White residents
4. Homeowners
5. Households with incomes above $80,000
6. Children aged 12-18

Conversely, other groups are more likely to lack insurance and have poor oral health. The following pages will look at the realities faced by these groups:

1. Racialized people
2. Immigrants (especially those who have lived in Canadafor less than 10 years)
3. Seniors
4. Food insecure individuals
5. People struggling to find affordable housing
6. Low-income and part-time workers

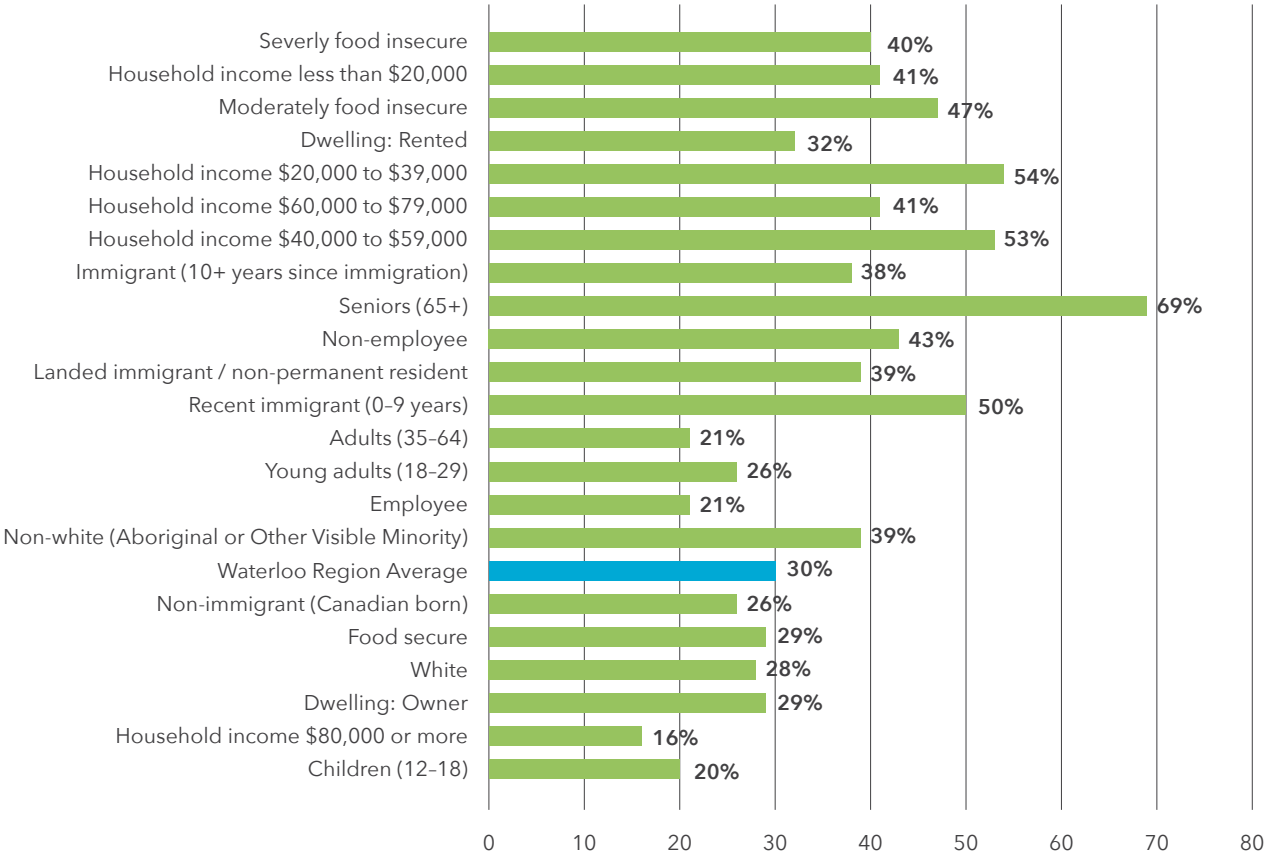
Percentage with self-perceived lower oral health, 2017/2018, Waterloo Region



Note: All terminology is as described in the Canadian Community Health Survey in this chart. Terms like Aboriginal and Visible minority are used in this chart to be consistent with the original data source, but elsewhere are described as racialized and Indigenous.

Lower oral health is identified as good, poor, or fair on a five-point scale that includes excellent and very good.

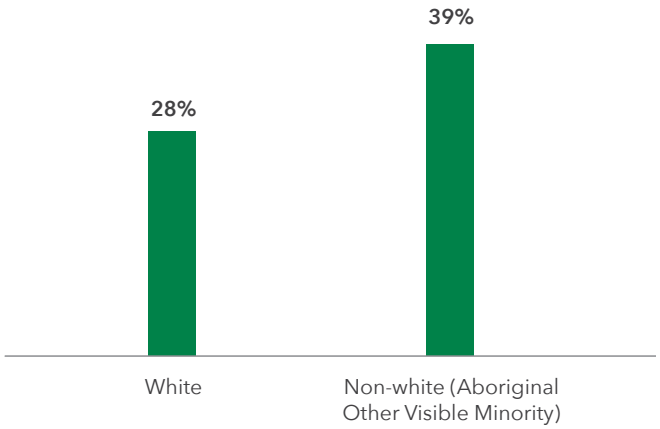
Percentage with no dental insurance, 2017/2018, Waterloo Region



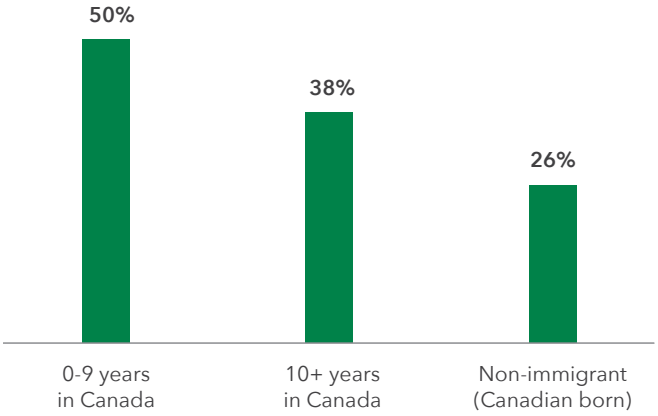
Source: Canadian Community Health Survey, Public Use Microdata File, 2017/2018. Region of Waterloo Public Health. Data reflects non-age standardized weighted numbers. Analysis by author.

Racialized people and recent immigrants are far less likely to have dental insurance

Percentage without dental insurance, by racialized status, Waterloo Region, 2017/2018



Percentage without dental insurance, by immigration status, Waterloo Region, 2017/2018



Source: Canadian Community Health Survey, Public Use Microdata File, 2017/2018. Region of Waterloo Public Health. Data reflects non-age standardized weighted numbers. Analysis by author.

Almost one third (30%) of Waterloo Region residents don't have dental insurance. However, racialized residents (including Indigenous peoples) are far more likely to not have insurance (39%) compared to white residents (28%).[27] This points to how expanding dental coverage could play an important role in achieving racial equity in the region. A third of racialized residents (33%) were avoiding the dentist due to cost compared to only 22% of residents of the region overall.

Recent immigrants in the Waterloo Region are also far less likely to have dental insurance. In fact, 50% of immigrants who have been in Canada for less than 10 years lack insurance. This number drops to 38% for immigrants who have been in Canada for longer than 10 years, but this still differs significantly from the 26% of Canadian-born residents who lack insurance.

Lack of dental insurance compounds other challenges faced by newcomers, including low wages, language barriers and limited knowledge of available services. 35% of immigrants in Waterloo Region who have been in Canada for less than 10 years avoided the dentist due to cost.

Oral health in Indigenous communities

> Over 70% of Indigenous people in Ontario live in urban areas, but existing data is not representative of the population.[28] For example, a study of the Indigenous population in Toronto found that the 2011 Canadian census underestimated the size of the Indigenous population in Toronto by a factor of 2 to 4.[29]

Our Health Counts is a research initiative has been addressing these data gaps through an inclusive community-driven survey for Indigenous peoples in different cities across Ontario. Although data is not available for Waterloo Region, the data from other Southern Ontario cities can be illustrative.

Our Health Counts found that Indigenous adults in Toronto have significantly poorer oral health than the general Canadian population. Only 60% of Indigenous adults in London[30] and 54% in Toronto[31] rate their oral health as good, very good, or excellent, compared to 85% of Canadian adults. Only half of Indigenous adults in both London and Toronto have seen a dentist in the last year, compared to three quarters of Canadian adults.[32,33]

Poor oral health in Indigenous populations is concerning considering the link between poor oral health and other health issues like diabetes, heart disease and respiratory ailments that disproportionately impact Indigenous communities.[34]

Poor oral health and the legacy of colonialism and residential schools

Prior to 1979, despite treaty promises of health care, the federal government made little effort to provide quality dental care to Indigenous peoples. The provided treatments were inadequate, and Indigenous peoples had much lower rates of dental provision and higher levels of tooth extractions than non-Indigenous peoples, which has had ongoing consequences for their oral health.[35] Survivors told the Truth and Reconciliation Commission of Canada the little dental care they did receive in schools was both rushed and painful.[36] People sometimes experienced multiple teeth extractions without anesthetic, and dentures were not provided.[37]

Non-Insured Health Benefits (NIHB)

The federally funded **Non-Insured Health Benefits (NIHB)** program was introduced in 1979 and provides eligible First Nations and Inuit people a range of health benefits not covered by provincial programs, including dental care.[38] About 300,000 people annually receive oral health services through the NIHB.[39]

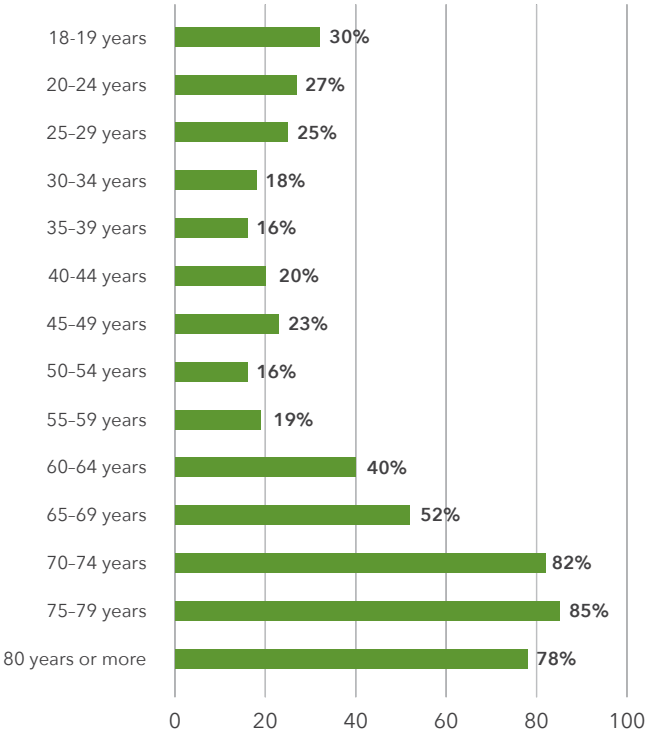
A 2017 Auditor General report echoed other research and found that "First Nations and Inuit populations had nearly twice as much dental disease and more unmet oral health needs compared with other Canadians."[40] The report also found that "The Department did not know how much of a difference it was making to Inuit and First Nations people's oral health. Despite knowing for many years about the poor oral health of Inuit and First Nations people, the Department had never finalized a strategic approach to help improve it."

The Auditor General's report underscores how, in the words of academics Catherin Carstairs and Ian Mosby, "the Non-Insured Health Benefits (NIHB) Program constantly frustrates both patients and service providers, remains inefficient and inconsistent, and fails to address the underlying causes of poor oral health among Indigenous people."[41]

Seniors in Waterloo Region have low rates of dental coverage

Seniors have very low rates of dental insurance coverage, which is in part explained by lack of employer-sponsored plans after retirement. This is a problem that threatens to get worse as the population ages.

Percentage without dental insurance, by age, Waterloo Region, 2017/2018



Source: Canadian Community Health Survey, Public Use Microdata File, 2017/2018. Region of Waterloo Public Health. Data reflects non-age standardized weighted numbers. Analysis by author. Note: In 2019, Ontario launched the Seniors Dental Care Program, which has enrolled approximately 50,000 seniors by May 2021 (approximately 2-3% of seniors in the province), which would slightly change the numbers in the chart.

In 2019, Ontario launched the Ontario Seniors Dental Care program, which provides free dental care for low-income seniors. Since the program's launch, over 50,000 seniors from across the province have enrolled in the program,[42] out of a total of 2.5 million seniors.[43]

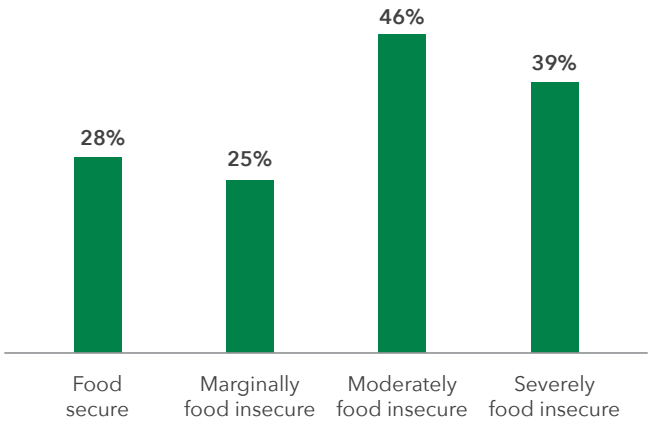
Income thresholds will be updated in August 2021, and single Ontarians aged 65 and over with incomes under $22,200 will be eligible. Couples with combined incomes under $37,100 will also be eligible. As a result of these changes, 7,000 more seniors will be able to access the program.[44]

Although the Ontario Seniors Dental Care program is an important step in expanding coverage for a group often lacking insurance, the income thresholds mean that most seniors across the province still lack insurance.

Many food insecure Waterloo Region residents struggle to access dental care and find it uncomfortable to eat

Food insecure individuals have much lower rates of insurance and worse oral health outcomes compared to people who are food secure. Out of all the segments we had data for, food insecure individuals reported the worst oral health. The severely food insecure and the moderately food insecure both had low rates of dental coverage, often avoided the dentist due to cost and had very low rates of dental insurance. And even when they did have insurance coverage, it was more likely to be paid out-of-pocket or through a government assistance program that provided oral health benefits instead of provided through their employer . Many were not eligible for government programs but could still not afford dental services.

Percentage without dental insurance, by food security status, Waterloo Region, 2017/2018



Source: Canadian Community Health Survey, Public Use Microdata File, 2017/2018. Region of Waterloo Public Health. Data reflects non-age standardized weighted numbers. Analysis by author.

Food insecurity increased significantly in the Waterloo Region in 2020 due to COVID-19, and the Food Bank of Waterloo Region reported a 307% increase in emergency food requests from March 23 to August 31, 2020.[45] In its 2018/2019 annual report, the Food Bank also reported that 34,552 people accessed emergency food assistance, the equivalent of 1 in 20 households.[46] A later report noted the total weight of food distributed by the Food Bank of Waterloo increased 26% in the first year of the pandemic.[47]

More than a third of food insecure individuals report frequent discomfort eating food in Ontario in 2017/2018, according to our analysis of the Canadian Community Health Survey. Almost 1 in 5 (18%) of severely food insecure report finding it often uncomfortable to eat due to problems with their mouth, which is five times higher than food secure individuals.

A 2009 Canadian study also found that "Food-insecure working poor persons reported relinquishing goods or services in order to pay for necessary dental care."[48]

Research in the US has a shown a link between food insecurity and untreated dental caries (tooth decay) among children, and the researchers identified four potential explanations:[49]

1. Food insecurity may force caregivers and children to make food-purchasing decisions that optimize for quantity rather than quality (for example, sugar-sweetened beverages).
2. Food-insecure households may live in food deserts, or neighborhoods where purchasing options are limited to convenience stores, corner markets, and fast-food restaurants.
3. Children living in food-insecure households may take responsibility for managing food resources for example, by eating smaller amounts more frequently to make food last longer.
4. Food insecurity may be a proxy for other markers of social inequality and deprivation, including low social capital and biological stress, both of which are associated with caries in children.

Waterloo Region's affordable housing crisis means people have even less money for oral health

In October 2021, Kitchener Waterloo Community Foundation is releasing a Vital Signs report focused on affordable housing in the region. Two major affordability challenges in the Region include:

- Home prices in Kitchener and Waterloo increased by 282% between January 2005 and July 2021
- The monthly rent of a vacant bachelor apartment increased by 122% from October 2008 to October 2020, from $489 to $1089

A recent study from the City of Waterloo found that based on 2019 stats, a household would need to earn over $102,000 to purchase a condo apartment, and over $189,000 to afford a detached house and home prices have increased sharply since then.[50,51]

Renters

In the 2017/2018 Canadian Community Health Survey, **renters in Waterloo Region were almost twice as likely to not have dental coverage as home owners**

(29.2% of renters aged 30 to 59 had no dental coverage versus 15.5% of owners in the same age category).

Renters are more likely to have self-perceived lower (not rating themselves as excellent or very good) oral health (48%) than homeowners (34%), and renters are also more likely to avoid the dentist due to cost (30% versus 20% for homeowners). In 2017/2018, 37% of renters reported going to the dentist less than once a year compared to 17% of people living in an owned home. Illustrating this issue, a study of 3,344 children in Australia found that "renters in both high- and low-income categories had the highest risk of tooth loss compared to owners."[52]

Homeless and precariously housed

No data is available on homeless populations or the precariously housed in the Canadian Community Health Survey. Past Canadian studies have suggested essentially all homeless people in other communities have untreated oral health issues.

For example, a 2013 survey found that 97% of people in Toronto shelters required dental treatment (compared to 34% of the general population), and that 35% of them had not visited a dentist in the last four years.[53]

The study also found that 42% sometimes or often find it uncomfortable to eat because of mouth problems, and 35% sometimes or often do not eat because of these problems. The researchers also conducted clinical exams, and they found tooth decay or the need to replace existing defective fillings in 88% of the participants, compared with only 16% of the general population.

> Kitchener-Waterloo housing has gotten way out of proportion. A one-bedroom right now is like 1200 bucks, and not even getting something that's decent. A one-bedroom is $1100-1200 a month, which basically takes more than 50% of your income, even if you have an $18 an hour job.
>
> **Joe Mancini**, *The Working Centre*

The working poor are even less likely to have insurance than the poorest Waterloo Region residents

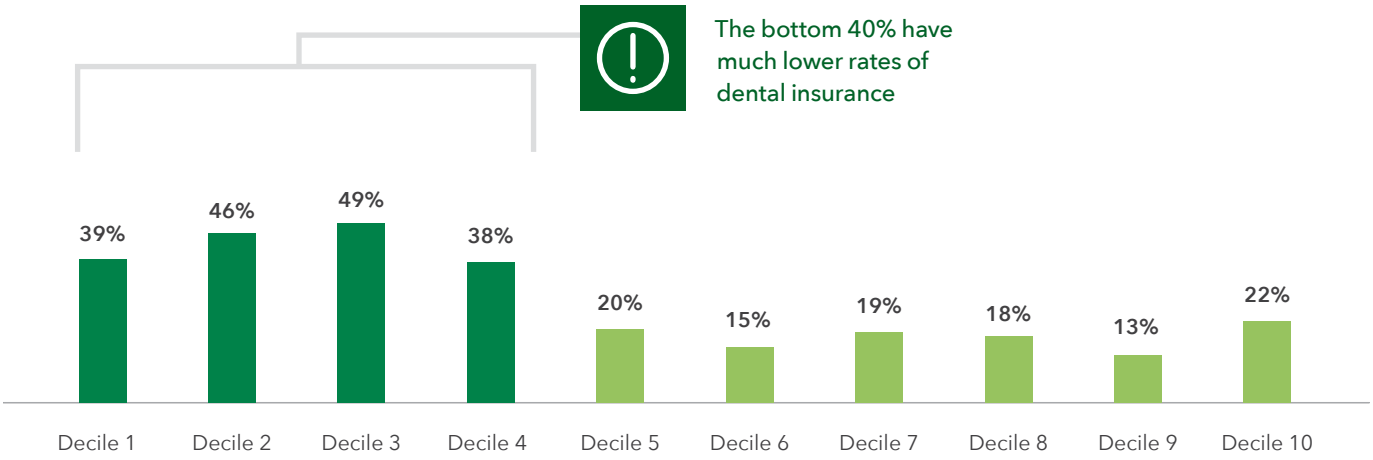
Overall, data from the Canadian Community Health Survey in 2017/2018 for Waterloo Region shows that full-time workers were more likely to have dental insurance coverage than those who are part-time workers (17.8% of full-time workers lacked coverage versus 23.4% of part-time workers). For the self-employed, the differences were even more stark, with 53.7% of the self-employed lacking dental insurance. Those who were did not have a job also tended not to have insurance, with 42.9% of those without a job last week reporting they did not have insurance.

Since dental insurance is usually obtained as an employment benefit, it is unsurprising that higher income households are more likely to have to have coverage. Households in the bottom 40% of the income distribution are much less likely to have insurance.

What is perhaps counterintuitive is that the lowest 10% of households by income are much more likely to have insurance compared to households in the 10-30% range. This is because people without incomes or extremely low incomes often do qualify for the limited public dental programs. However, the working poor often make too much money to qualify for these government benefits, and yet they are usually working precarious jobs that offer no dental insurance or other benefits.

> There aren't a ton of public dental options available for adults. Most of the adult dental is related to social assistance programs.
>
> *Expert interview with oral health professional in Waterloo Region*

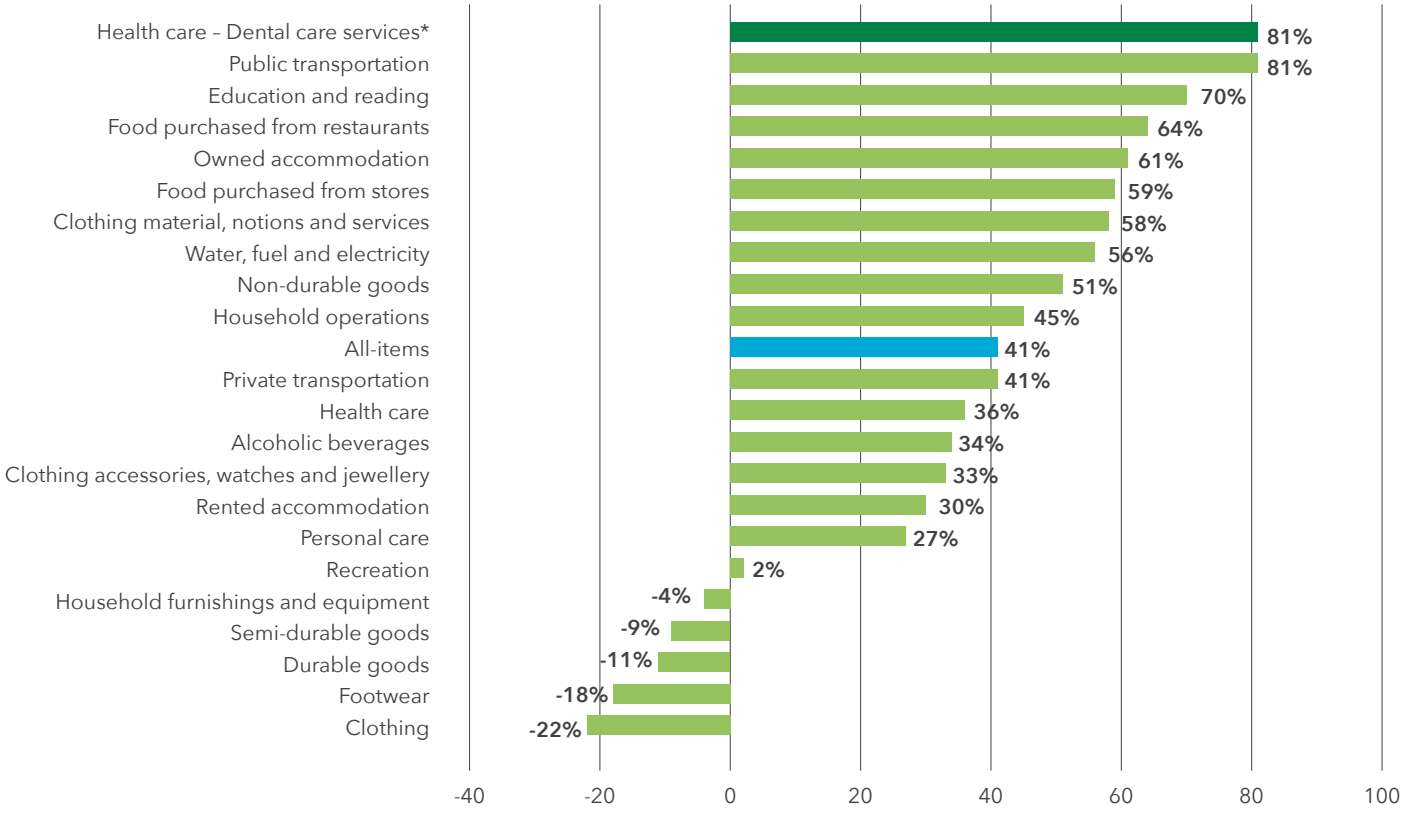
Percentage without dental insurance, by household income distribution, Waterloo Region, 2017/2018



Source: Canadian Community Health Survey, Public Use Microdata File, 2017/2018. Region of Waterloo Public Health. Data reflects non-age standardized weighted numbers. Analysis by author.

Dental care is increasing in cost faster than nearly every other type of cost

Consumer Price Index, 2001-2020, all sub-categories of inflation*, Ontario

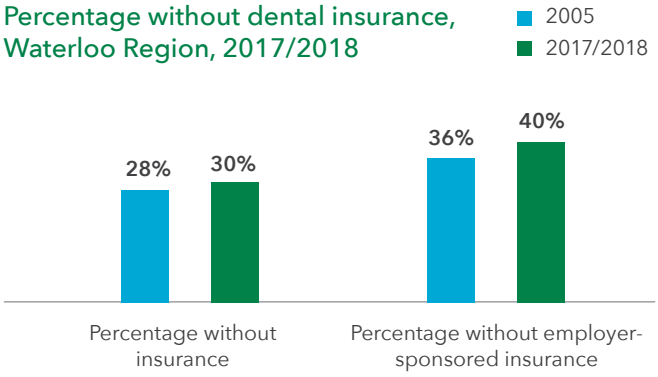


Note: Data in the chart reflects every sub-category of the consumer price index, excluding tobacco, which increased by more than 250%. Dental care services is one of the -subcategories of the consumer price index under health care – which has increased at slightly less than the cost of inflation overall – and reflects a different level of the hierarchy than the rest of the items in the chart above. The data for dental care services is at the national level since it is not available at the provincial level or below.

Lack of dental insurance is a longstanding problem in Waterloo Region, and the increase in gig economy jobs suggest the problem will only get worse

The percentage of Waterloo Region residents without dental insurance has increased slightly, from 28% in 2005 to 30% in 2017/2018. The percentage of people without employer-sponsored insurance has jumped slightly, from 36% to 40%, though the differences should be interpreted with caution due to changing sample strategies for the survey.

Percentage without dental insurance, Waterloo Region, 2017/2018



Source: Canadian Community Health Survey, Public Use Microdata File, 2017/2018. Region of Waterloo Public Health. Data reflects non-age standardized weighted numbers. Analysis by author.

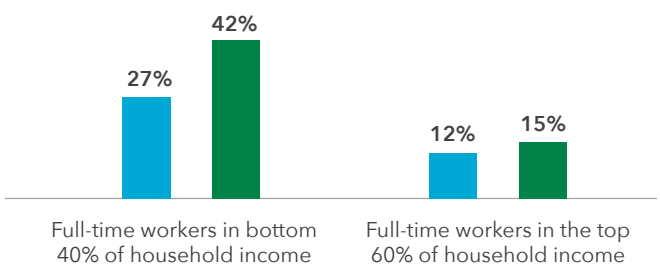
Note: As the sampling strategy of the surveys changed, these differences should be interpreted with caution and be viewed as illustrative.

Temporary and self-employment were growing at more than twice the rate of full-time jobs

All types of employment grew in Waterloo Region between 2006 and 2019, but self-employed individuals and temporary employment grew much faster than full-time employment. This has health ramifications because temporary workers and self-employed individuals are much more likely to lack dental coverage.

Even full-time workers in the bottom 40% of household income are becoming less likely to have dental insurance. In 2005, 27% of these workers were without dental insurance, a figure which has jumped to 42% in 2017/2018, meaning that the odds of a full-time, low-income worker not having employer-sponsored dental insurance increased by **56%** between 2005 to 2017/2018 (see notes for interpretation in the chart). This represents about 8,200 fewer full-time lower income workers without employer insurance than if the 2005 rate had held constant (and this also affects the dependents of these workers who also would have received coverage). Full-time workers in the top 60% of households without insurance have also increased, although at less than half the rate of those in the bottom 40%.

Percentage of full-time workers without employer-sponsored dental insurance, Waterloo Region, 2017/2018

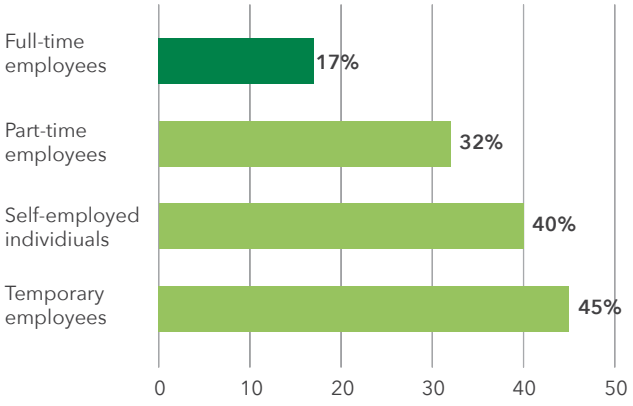


Source: Canadian Community Health Survey, Public Use Microdata File, 2017/2018. Region of Waterloo Public Health. Data reflects non-age standardized weighted numbers. Analysis by author.

Note: As the sampling strategy of the surveys changed, these differences should be interpreted with caution and be viewed as illustrative. While the differences between 2005 and 2017/2018 are statistically significant, the margins of error are large and the exact differences should be interpreted with caution, especially given the changing methodology.

This is a challenging trend, because the types of high-quality jobs that provide dental insurance have been increasingly disappearing over the past few years, and this is likely only to continue with the rise of precarious jobs and as employers continue to try to minimize their costs by reducing benefits and adopting a more casual workforce.

Growth in employment, by type, Kitchener-Waterloo-Cambridge CMA, 2006 to 2019



Jobs with low rates of employer supported dental insurance are growing faster than full-time permanent jobs

Source: Labour Force Survey. Analysis by Author.

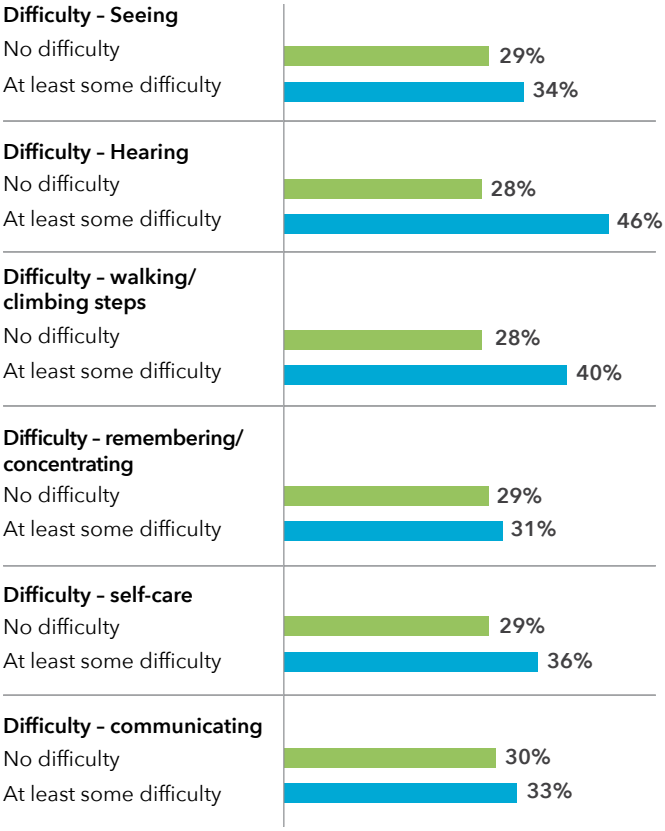
People with disabilities

The Canadian Community Health Survey asked respondents a series of questions to determine whether they had any difficulty with six functional health components: vision, hearing, mobility (walking or climbing steps), cognition, self-care and communication. These questions were developed by the Washington Group on Disability Statistics. Although not comprehensive, the Washington Group questions cover the most common difficulties and allow for some understanding of the prevalence of functional difficulties in society. However, these questions do not cover the full range of disabilities, notably omitting mental health-related disabilities and learning disabilities. Because of these limitations, some of the Washington Group questions have been abandoned by Statistics Canada, and others have been altered as part of the updated Disability Screening Questions (DSQ).[54]

In Canada, 38% of adult men and 41% of adult women have at least one functional difficulty, including 59% of male seniors and 60% of female seniors.[55] 28% of people with functional difficulties in Waterloo Region avoided going to the dentist in the past 12 months, compared to 19% of people without difficulties.

People with functional difficulties are less likely to have dental insurance than people without difficulties. This is true for all categories of functional difficulty, but the difference is especially pronounced for people with difficulty hearing (only 46% lack insurance compared to 28% of those without difficulty hearing) and people with difficulty walking/climbing steps (40% lack insurance compared to 28% of those without difficulties).

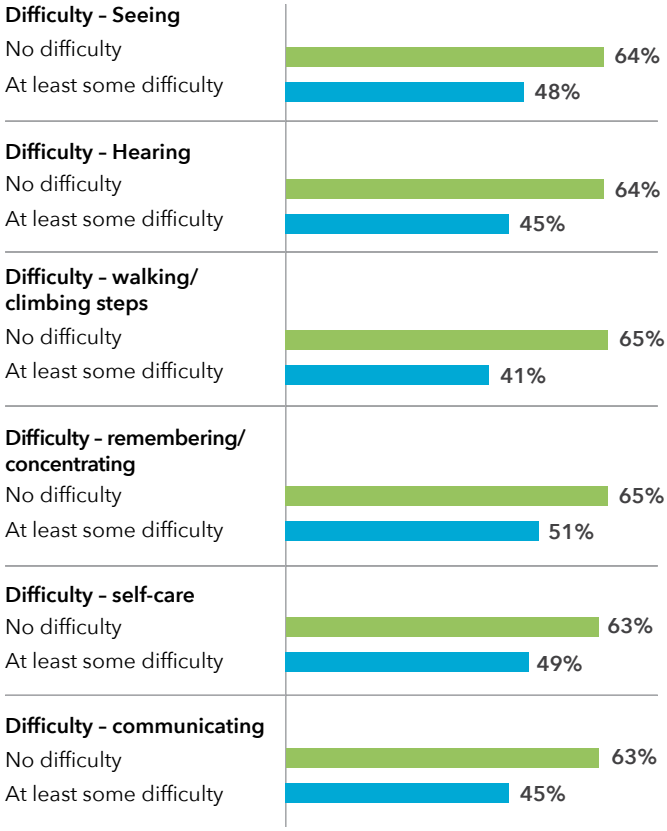
Percentage of people without dental insurance, Waterloo Region, 2017/2018



Source: Canadian Community Health Survey, Public Use Microdata File, 2017/2018. Region of Waterloo Public Health. Data reflects nonage standardized weighted numbers. Analysis by author.

Similarly, people with functional difficulties have much lower self-perceived rates of oral health. Between 63-65% of people without functional difficulties rate their oral health as excellent or very good, compared to only 41-51% of people with functional difficulties. People with difficulties hearing and/or difficulty walking/climbing steps are the groups least likely to have dental insurance and they also have the lowest levels of perceived oral health.

Percentage of people who perceive their oral health as excellent or very good, by functional difficulty, Waterloo Region, 2017/2018



We also know from other research that people with disabilities have greater rates of poverty and often have trouble accessing oral health.[56] Individuals with developmental disabilities have poor oral health compared to non-disabled populations, due in part to the inability to maintain adequate oral hygiene and difficulty accessing affordable and timely care. Oral health professionals also have limited training in treating the specific needs of people with developmental disabilities.[57]

In Ontario, people receiving Ontario Disability Support Program Income Support (ODSP) are eligible to receive basic dental services. Spouses and dependent children are also eligible for coverage.

Oral health of children in Waterloo Region

04

Children in Waterloo Region generally have better dental coverage than adults

Despite advances in prevention, early childhood caries (ECC) is one of the most common childhood diseases and can be accompanied by serious comorbidities. ECC can require dental surgery under anesthesia, which is the most common day surgery procedure at many pediatric hospitals in Canada.[58] Children with poor oral health also receive lower grades than other children and are more likely to miss school days.[59] Children who immigrated to Canada are also likely to have worse oral health than their Canadian-born peers.

Low-income children aged 17 and under across Ontario are eligible for free dental care through the Healthy Smiles Ontario program. A similar program does not exist for adults, meaning that children often have access to better dental care than adults and are at risk of developing oral health problems once they turn 18. Between 2011 and 2018, children and youth accounted for 79%-97% of clients accessing public health dental clinic services in Waterloo Region.[60]

Children (or their families) who receive any of: 1) temporary care assistance, 2) assistance for children with severe disabilities, 3) Ontario Works or 4) Ontario Disability Support, are automatically enrolled in Healthy Smiles, and other children can be enrolled by contacting Waterloo Public Health or by applying online.

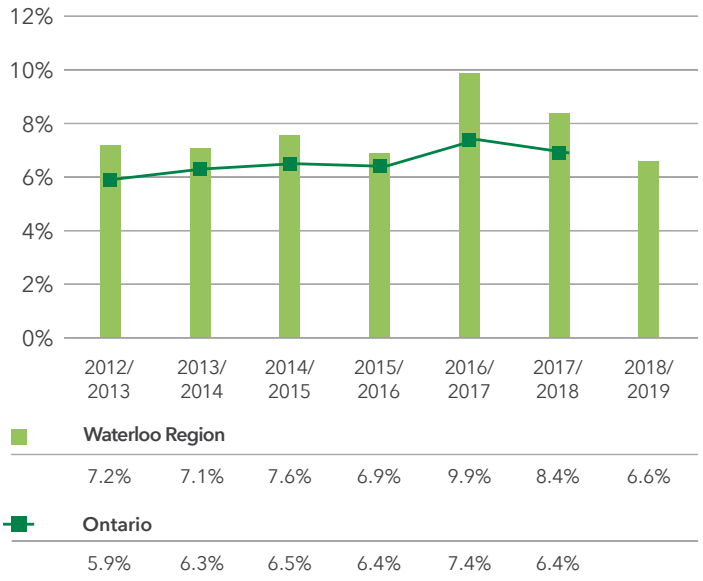
Screenings in schools

Region of Waterloo Public Health-registered dental hygienists and dental assistants conduct free dental screenings in elementary schools across the region, and they provide information to parents on how children with dental problems can access care.

Over 24,000 students were screened in Waterloo Region schools during the 2018-2019 school year. The proportion of students with urgent treatment needs has remained relatively stable since 2012/2013, between 7% and 10%, which is a bit higher than the provincial average.[61]

Students in the townships are less likely to have decayed teeth or urgent treatment needs compared to students in the cities. It is also likely that individual schools have a higher proportion of children with problems, but school-by-school data is not available.

Proportion of students with urgent treatment needs, 2012/2013 to 2018/2019 school years, Waterloo Region and Ontario



Source: Dental Program School Statics Tracking, OHISS, retrieved September 2019, via Region of Waterloo *Children and Youth Dental Health Program Report 2019*

Oral Health and COVID-19

The pandemic has led to significant economic challenges which have negatively impacted oral health in the region. 17,000 fewer residents were in the labour force in February 2021 compared to February 2020, and some of them (along with their families) will have lost dental coverage.

In addition, many public dental programs that serve the most vulnerable populations were operating at drastically reduced capacity due to the social distancing required by the pandemic. Since March 16, 2020, the Region of Waterloo Public Health dental clinics have only been providing emergency dental services, and the staff person responsible for oral health at Region of Waterloo Region Public Health was reassigned due to the pandemic.

In an interview for this project, a public health official in another jurisdiction estimates that it would take **four or five years** to get through the oral health backlog from COVID-19.

A study in Qatar led by researchers at McGill University found that people with gum disease (periodontitis) experienced more severe COVID-19 symptoms.[62] According to the study, "the patients were 3.5 times more likely to be admitted to the intensive care unit, 4.5 times more likely to require a ventilator and 8.8 times more likely to die from COVID-19 compared to those without gum disease."

People have been putting off going to the dentist during the pandemic

According to a January poll conducted by Abacus Data for the Canadian Dental Hygienists Association (CDHA), only 46% of Ontarians had seen their dental hygienist since March 2020, which was slightly higher than the national average of 43%.[63] The reasons cited for not receiving dental care included "putting off appointments that can wait" (37%), concerns about safety (32%), household finances taking a hit (14%) and loss of dental benefits (12%).

People aged 18-29 were most likely to have lost benefits (19%), and people making less than $50,000 (18%) were also more likely to have put off appointments due to income loss.

The fact that "putting off appointments that can wait" was the top reason suggests that many Canadians may underestimate the importance of routine dental care.

Improving oral health infrastructure in Waterloo Region

06

Filling the Gaps

Despite the gaps that exist in Ontario's oral healthcare system, cities and regions do have some tools to make dental care more accessible, and Waterloo Region has some successes on this front, highlighted in the following section.

The Region of Waterloo Public Health, in addition to implementing the provincially funded programs, also provides discretionary coverage to low-income individuals who cannot afford dental care.

Several non-profits working with marginalized populations in Waterloo Region, such as the Working Centre and Sunbeam Community & Developmental Services, also provide free oral health treatments to their populations of concern.

Waterloo Region does have some existing coverage for low-income people that doesn't exist in other regions

The Region of Waterloo Public Health runs one dental clinic in Waterloo and one in Cambridge. These clinics serve both children and adults who meet the financial eligibility requirements. Through the Public Health Clinics, children from low-income households "receive free basic services, including checkups, preventive services (such as scaling, fluoride and sealants) and fillings."[64] The income threshold is higher than the Healthy Smiles Ontario program, meaning that some children from low-income families who are not eligible for the Healthy Smiles Ontario program are able to receive treatment from the Public Health clinics.

Low-income adults, on the other hand, are only able to "receive limited services such as extractions or fillings to eliminate pain."[65]

> Five years ago we asked our clients, our staff, our community partners, 'what do you want the health centre to advocate about,' because we get asked to advocate on a dozen issues a year. And they said advocate for health care, and the two biggest needs are pharma care and dental care. Those are the two biggest gaps for folks, so that's what we focused on, and oral health really became a priority. It's probably the biggest gap we see. And it contributes to poor health status in a significant way.
>
> Doug Rankin, Community Health Worker at Kitchener Downtown Community Health Centre

Water fluoridation is cost-effective solution to improve oral health

Deciding whether to add fluoride to water is one of the key decisions made by local governments affecting the oral health of their residents. Residents of the City of Waterloo, St. Jacobs, and Elmira voted to remove fluoride from its water in 2010, as some anti-fluoride groups and city councillors cited environmental concerns and developmental issues associated with excessive fluoride consumption. This decision has saved these communities the cost of fluoride, but it has most likely led to worse oral health and increased dental costs.

According to the American Center for Disease Control, "water fluoridation remains the most equitable and cost-effective method of delivering fluoride to all members of most communities, regardless of age, educational attainment, or income level."[66] The Canadian Dental Association says roughly $1 spent on fluoride per person would save $38 in dental costs.[67]

In order to improve oral health in the community, the Waterloo Region could decide to introduce fluoride into its water supply, or it could expand fluoride varnish clinics at schools.

A report by the Wellesley Institute entitled *The Real Cost of Removing Water Fluoridation: A Health Impact Assessment* noted that: "Water fluoridation is a safe and cost-effective public health measure that is recommended by over 90 medical, dental, and health organizations at the national and international level."[68]

Windsor saw an immediate steep increase in urgent oral health needs after removing fluoride from its water

In January 2013, Windsor City Council voted to remove fluoride from its water supply after 50 years of fluoridation. This resulted in a 51% increase in the number of children with tooth decay or requiring urgent care between 2011-12 and 2016-17.[69] The Windsor-Essex County Health Unit also found that "From 2011/2012 to 2016/2017, communities that recently ceased fluoridation observed a greater decrease in the percentage (13%) of students without caries (tooth decay) compared to an 8% decrease in the communities that were never fluoridated."[70] In 2018, Windsor City Council voted to reintroduce fluoride into its water supply.

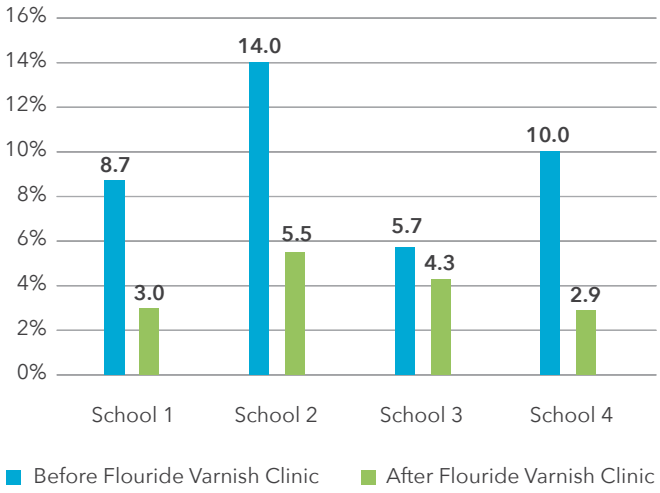
No similar analysis was found for Waterloo Region.

Fluoride varnish clinics at schools provide another way to improve the oral health of children

Another cost-effective way to improve oral health is through fluoride varnishes, which can easily and quickly be applied by either dentists or dental hygienists. Several schools in Wellington-Dufferin-Guelph participated in an initiative to hold fluoride varnish clinics at the schools themselves, and all four participating schools saw a reduction in urgent oral health needs, and the schools with a higher proportion of urgent care needs saw steeper reductions.[71]

These varnishes can be applied relatively cheaply and directly mitigating the concerns of those with concerns about broader fluoride introduction into the water.

Levels of Urgent Oral Health Needs at Four Schools Participating in Fluoride Varnish Initiative in Wellington-Dufferin-Guelph



Source: 2015 Oral Health Status Report, Public Health Wellington-Dufferin-Guelph

Organization profile: **Region of Waterloo Public Health**[72]

Seniors Programming

The Ontario Seniors Dental Care Program (OSDCP) is a provincially-funded program launched in 2019 and delivered by the Waterloo Region. It provides free dental care to seniors with incomes under $19,300 and to couples earning less than $32,300 (the thresholds will be increase in August 2021 to $22,200 and $37,100, respectively).[73]

In Waterloo Region, seniors enrolled in OSDCP receive a dental card and then are able to access treatment at either the Langs Community Health Centre in Cambridge or the Kitchener Downtown Community Health Centre.

Seniors who do not qualify for OSCDP, but who cannot afford dental care, may be able to access the discretionary benefits offered by Region of Waterloo Public Health.

Dental Screening

Region of Waterloo Public Health provides free dental screening to children in kindergarten, grade two and grade eight, and refers those who may be at risk of poor oral health outcomes. Over 24,000 children were screened in 2018-2019.

Healthy Smiles Ontario

Region of Waterloo Public Health also delivers the Healthy Smiles Ontario (HSO), a provincially-funded program providing free preventive, routine, and emergency dental services for children and youth 17 years old and under from eligible low-income households.

Region of Waterloo Public Health Dental Clinics

Region of Waterloo Public Health dental hygienists provide HSO preventive services (e.g. oral hygiene teaching, fluoride varnish applications, dental sealants, cleanings) at their own dental clinics.

Community Health Centres

Oral health workers at each of the region's three Community Health Centres (CHC) – Kitchener Downtown, Woolwich, and Langs, assist families to enrol in HSO and book dental appointments. Preventative services are also provided at the CHCs one day a week.

Discretionary Coverage

In addition to administering the provincially funded programs, the Region of Waterloo Public Health also implements additional discretionary programs funded by the region. The Ontario Works program generally covers emergency dental care, while ODSP covers basic dental services. In Waterloo Region, adults on OW are eligible for emergency and essential dental treatment and denture coverage, and ODSP recipients are also eligible for denture coverage in addition to basic services.

Adults aged 18 and older who meet financial eligibility thresholds can also access limited emergency dental care for pain relief through Public Health Emergency Dental Clinics (although coverage is usually restricted to one visit or one course of treatment).

In 2016, about 40% of the Region's discretionary benefits budget, or $1.8 million, was spent on dental services. The over-expenditure for dental services was 50%, highlighting the level of need among adults.[74]

> "I have no idea what the world post-COVID will look like, but I imagine it won't be the same as it was before. I wonder whether there'll be any opportunity to do more, in a digital format, some type of assessments, whether it's through zoom or whatever kind of software, it might be available to get some of the urgent needs taking care of."
>
> Interview respondent in Waterloo Region

Recommendations and options

The problem of access to affordable, equitable oral health care is complex, and many of the public health policies needed to effect real change rest with the provincial or federal governments. And though ongoing provincial and federal advocacy for improvements to oral health care remain critical, there are still significant and meaningful actions that can be taken at the local and regional level to move the needle on oral health outcomes here in Waterloo Region.

The largest challenge that needs to be addressed is ensuring access to oral health care for low-income adults who do not have insurance or qualify for government support. While there is still a lot of room for improvement with respect to children's oral health (as outlined in the recommendations below on fluoridation), both youth and seniors across the province are now more likely to have access to dental care due to public program expansions across Ontario in recent years.

The people who are left behind are those low-income individuals without insurance, who may also experience compounding factors such as food insecurity, precarious employment and sky-rocketing housing costs, and for whom the cost of dental care remains far out of reach.

Establish a network of individuals working in dental health across Waterloo Region who would be willing to partner with Public Health and local organizations to provide low-cost or free dental care to low-income and marginalized people.

Provide support to organizations like the Working Centre, the Sunbeam Centre, and the Kitchener Downtown Community Health Centre that could expand their dental care programming.

Provide funding for oral health research to better understand the prevalence and causes of poor oral health and its impact on overall physical and mental wellbeing. Prioritize regular data collection to better understand the state of oral health within the region and inform decision-making.

Find ways to get fluoride to those in most need - either through water fluoridation or hold regular fluoride varnish clinics with a focus on schools with the greatest oral health issues.

Create new Public Health Dental Clinics (there are currently only two in the region) and expand eligibility.

Advocate for the expansion of public programs that provide oral health care to vulnerable populations.

> "It's been hard to find enough volunteer dentists. We only operate at maybe 20% capacity...It wouldn't be hard to expand. We never have because we don't have a dentist."
>
> Joe Mancini, The Working Centre

> Oral health is one of the most important things that we try to stay on top of… A lot of our residents here are having a lot of trouble, we're seeing that their oral health has declined over the last year (because of Covid), to the point that has the potential to worsen the rest of their medical health as well... "We're desperately needing funding for a hygienist that can actually do the work and then bring in the dentist, as needed, to continue taking care of our clients."
>
> LaVerne Barnes, Sunbeam Community & Developmental Services

Endnotes

1 Source: Canadian Community Health Survey, Public Use Microdata File, 2017/2018. Region of Waterloo Public Health. Data reflects non-age standardized weighted numbers. Analysis by author.

2 The Waterloo median is $77,229 and the Canadian median is $70,336 according to the 2016 Census. https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hlt-fst/inc-rev/Table.cfm?Lang=Eng&T=102&PR=0&D1=1&RPP=25&SR=1&S=104&O=D

3 Source: Canadian Community Health Survey, Public Use Microdata File, 2017/2018. Waterloo Health Unit. Data reflects non-age standardized weighted numbers. Analysis by author.

4 Source: Canadian Community Health Survey, Public Use Microdata File, 2017/2018. Waterloo Health Unit. Data reflects non-age standardized weighted numbers. Analysis by author.

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