Status of Mental Health in Renfrew County and District

July 2020

Renfrew County and District Health Unit
"Optimal Health for All in Renfrew County and District"

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Executive Summary

Introduction

Status of Mental Health in Renfrew County and District is part of a situational assessment to inform the planning of comprehensive, evidence-based mental health promotion programming at Renfrew County and District Health Unit. Mental health promotion efforts can increase self-esteem, coping skills, social connectedness and well-being. This contributes to the resiliency of individuals and communities when faced with mental health challenges.

This report examines mental health in the population through 3 indicators of positive mental health and 9 indicators of poor mental health or mental illness:

Positive mental health outcomes:
- Self-rated mental health
- Life satisfaction
- Sense of community belonging

Poor mental health and mental illness outcomes:
- Life stress
- Diagnosis with mood or anxiety disorders
- Mental health concern(s) during pregnancy
- Emergency department visits for mental health and addictions conditions
- Hospitalizations for mental health and addictions conditions
- Physician visits for mental health and addictions conditions
- Emergency department visits for mood and anxiety disorders
- Emergency department visits for intentional self-harm
- Suicide

The purpose of this report is to assess the mental health of Renfrew County and District (RCD) residents, identify trends and changes in mental health status, and examine local data on the influence of social determinants on mental health and well-being. This report includes data from 2019 and earlier; therefore, findings in this report do not reflect the impact that the COVID-19 pandemic may have on the mental health of RCD residents.

Findings

A large majority of RCD residents age 12 and over reported experiencing aspects of positive mental health (2015–2017). Those who graduated from post secondary school, were employed, and were in the highest income quintile were more likely to report positive mental health.

A smaller but substantial proportion of residents age 12 and over reported aspects of poor mental health or mental illness (2015–2017). Residents that were unemployed, and those living in population centres (with 10,000 or more people) were more likely to report having been diagnosed with a mood or anxiety disorder. The proportion of women who reported mental health concerns during pregnancy increased over an eight-year period (2012–2019). Women under age 25 were more likely than older women to report mental health concerns during pregnancy.

In both Ontario and RCD, more and more people sought health care for help with mental health and addictions, mood and anxiety disorders and intentional self-harm over a ten-year period (2009–2018). In RCD this increase was mainly driven by people aged 15 to 24 and females. An exception is that people aged 25–44 showed the largest increase in outpatient physician visits for mental health and addictions conditions.

The use of hospital and physician-based mental health care services were significantly higher in RCD than in Ontario-less-RCD in the most recent years included in this report (2017 and 2018). Use of mental health care services were consistently higher in RCD over the 10-year period examined in this report for three of the five indicators of mental health care use.

Conclusions

Health inequities in self-reported mental health related to income, education, employment and residence (population centre vs. rural area) were identified. These findings of inequities are consistent with inequities in mental health found in other Canadian settings. Mental health concerns during pregnancy have been increasing, particularly among women under age 25. Certain population groups have the greatest need for hospital and physician-based mental health care services (ages 15–24, females, and ages 25–44). The use of these mental health care services have been increasing.

This report can be used by Renfrew County and District Health Unit (RCDHU) and community partners to inform programs, services, and policies that promote positive mental health in our community. Information on populations at greater risk of experiencing poor mental health can be used to help target programs and services to those who need them the most. RCDHU is committed to working in collaboration with the many community partners that are addressing mental health needs, in order to improve the mental health and well-being of Renfrew County and District residents.

Introduction

This report is part of a situational assessment to inform the planning of comprehensive, evidence-based mental health promotion programming at Renfrew County and District Health Unit. The Ontario Public Health Standards, 2018 (1) and the Mental Health Promotion Guideline, 2018 (2) provide direction for public health efforts in the area of mental health promotion.

The purpose of this report is to assess the mental health of Renfrew County and District (RCD) residents, identify trends and changes in mental health status, and examine local data on the influence of social determinants of mental health and mental illness.

The report starts by examining some of the positive mental health outcomes identified in the Public Health Agency of Canada's Positive Mental Health Surveillance Indicator Framework (3). It goes on to examine the use of hospital and physician services for mental health care, as in Ottawa Public Health's Status of Mental Health in Ottawa report (4). Relationships between socioeconomic factors and mental health outcomes are identified where possible.

Definitions

The concepts of mental health, mental illness, mental health promotion and health equity in mental health promotion are important in the context of this report. These concepts are defined below.

Mental Health

The Public Health Agency of Canada defines mental health as "the capacity of each and all of us to feel, think, and act in ways that enhance our ability to enjoy life and deal with the challenges we face. It is a positive sense of emotional and spiritual well-being that respects the importance of culture, equity, social justice, interconnections and personal dignity" (2).

Mental Illness

Mental illness refers to conditions where our thinking, mood, and behaviours severely and negatively impact how we function in our lives. Mental illnesses are affected by a complex mix of social, economic, psychological, biological, and genetic factors. Mental illness may take many forms, including mood disorders, schizophrenia, anxiety disorders, personality disorders, eating disorders, and addictions such as substance dependence and gambling (2).

Mental Health Promotion

Mental health promotion is the process of enhancing the capacity of individuals and communities to increase control over their lives and improve their mental health. Mental health promotion aims to increase self-esteem, coping skills, social connectedness and well-being. It is an approach that fosters individual and community resilience and promotes socially supportive environments (2).

A local example of mental health promotion is an initiative that the Renfrew County Youth Network hosts annually - the *Amplify!* youth summit. *Amplify!* connects, motivates and empowers high school aged youth to make positive changes in their community. The summit features guest speakers, fosters youth leadership, and motivates youth to develop and lead projects following the summit.

The Strengthening Families for Parents and Youth Program is another example of mental health promotion that features local organizations working together. The program helps youth aged 12 to 16 develop resiliency, and helps parents to understand their role in the development of attitudes and behaviours in their children that affect mental health and well-being.

Mental health promotion:

- Focuses on the enhancement of well-being rather than on illness
- Addresses the population as a whole, including people experiencing risk conditions, in the context of everyday life
- Takes action on the determinants of health
- Broadens the focus to include protective factors, rather than simply focusing on risk factors and conditions
- Includes a wide range of strategies such as communication, education, and policy development
- Acknowledges and reinforces the competencies of the population
- Encompasses the health and social sectors, and
- Uses strategies that foster supportive environments and individual resilience while demonstrating respect for culture, equity, social justice, interconnections, and personal dignity (2)

Health Equity in Mental Health Promotion

The mental health and well-being of Ontarians is heavily influenced by the social, economic, and physical environments where people live, learn, work, and play. Risk and protective factors affecting mental health and mental illness differ across regions of the province, and certain populations are at a higher risk of mental health problems or illness because of greater exposure to discrimination or disadvantage. These disadvantages are often based on race, ethnicity, religion, age, sex, gender, sexual orientation, language, ability, family status, socioeconomic status, or other socially determined circumstance.

All public health efforts to promote mental health and prevent mental illness require a strong attention to principles of health equity, so that all people can reach their full health potential (2).

Three crucial determinants of mental health were highlighted by the Canadian Mental Health Association in 2008, the World Health Organization in 2010, and the Mental Health Commission of Canada in 2012:

- Social inclusion
- Freedom from discrimination and violence
- Access to opportunities and resources (5)

Data Sources

The following data sources were used to summarize the status of mental health in Renfrew County and District (RCD).

Canadian Community Health Survey (CCHS)

The CCHS is a cross-sectional survey that collects information related to health status, health care utilization and health determinants for the Canadian population. It surveys the population 12 years of age and over living in Canada's ten provinces and three territories. It excludes people living on reserves and other Aboriginal settlements in the provinces; full-time members of the Canadian Forces; people living in institutions; and children aged 12–17 that are living in foster care (6). Data was accessed through the CCHS Ontario Share File. Data from 2015 to 2017 was combined to produce an average estimate for that time period.

BORN Information System (BIS)

The BIS is a database established to collect, manage, protect and share critical data about every pregnancy, birth and child in Ontario. Data is sourced from birthing hospitals, midwifery practice groups, birthing centres, fertility clinics, prenatal and newborn screening laboratories, follow-up clinics, clinical programs, and primary care organizations. The BIS is managed by the Better Outcomes Registry and Network (BORN) Ontario, a prescribed registry under the Personal Health Information Protection Act, 2004 (7).

Medical Services (OHIP)

Medical services information is obtained from the Ontario Health Insurance Plan (OHIP) Approved Claims files. The Medical Services dataset contains service and payment information for: 1) fee-for-service claims submitted by physicians and other licensed health professionals, and; 2) "shadow billings" by providers in some organizations covered by alternative payment arrangements (8). OHIP data was accessed through IntelliHealth Ontario.

National Ambulatory Care Reporting System (NACRS)

Administered by the Canadian Institute for Health Information, the NACRS contains data for all hospital-based and community-based ambulatory care such as day surgery, outpatient and community-based clinics and emergency departments (9). NACRS data was accessed through IntelliHealth Ontario.

Discharge Abstract Database (DAD)

Administered by the Canadian Institute for Health Information, the DAD captures administrative, clinical and demographic information on hospital discharges. Data is received directly from acute care facilities or from their respective health/regional authority or ministry/ department of health (10). DAD data was accessed through IntelliHealth Ontario.

Ontario Mental Health Reporting System (OMHRS)

Administered by the Canadian Institute for Health Information, the OMHRS contains information on the provision of adult and youth mental health services in the province, including hospitals and psychiatric hospitals (11). OMHRS data was accessed through IntelliHealth Ontario.

Census

The 2016 Census of Canada provides demographic and socioeconomic information such as age, sex, type of dwelling, immigration status, ethnic origin, household income, employment status, education, etc. (12).

Vital Statistics – Death Database

Statistics Canada's Death Database collects demographic and medical (cause of death) information monthly and annually from provincial and territorial vital statistics registries for all deaths in Canada (13). Vital Statistics data was accessed through IntelliHealth Ontario.

Analysis

The statistical significance of relationships between outcomes and socioeconomic factors were explored using Chi-square tests at a significance level of $p<0.05$; if there was less than a 5% likelihood that the observed difference was due to chance, then that difference was said to be statistically significant. Point estimates were provided with 95% confidence intervals (CI) indicated by error bars on charts. The 95% CI include the true value 95 times out of 100. For example, if the point estimate for the percentage of RCD residents with excellent or very good self-reported mental health was 71.8% (95% CI: 66.5–75.2%), then the range from 66.5% to 75.2% will contain the true population value 95% of the time. The narrower the confidence interval, the more precise the estimate. Statistical analyses were conducted using StataSE 16 (StataCorp, College Station, Texas), with methods recommended by Statistics Canada.

Mental health indicators are summarized, and, where possible, relevant demographic and socioeconomic information is provided. Any differences between RCD and Ontario-less-RCD should be interpreted as RCD is different from the average of individuals across Ontario excluding the RCD region. It does not mean RCD is different from other individual health unit regions across Ontario. No comparisons were made to other health unit regions in Ontario.

Limitations

There was limited access to data for specific populations living in RCD, including Indigenous peoples (who are unrepresented in national survey data such as the CCHS), immigrants, Francophones, and members of the LGBTQ2S+ populations. CCHS data is limited to participants 12 years of age and older, and therefore is not an adequate data source for children. The statistical analysis of CCHS data in RCD was often limited by the small size of cells when stratified by demographic and socioeconomic factors. This increased the statistical variability of certain estimates.

Mental Health Indicators

The mental health indicators included in this report are summarized in the table below. The inclusion of indicators was limited by the availability of data and the relatively small scope of this project.

Proportions and rates marked in **bold** with an asterisk (*) indicate statistically significant differences from Ontario-less-RCD.

Indicator	Measure	RCD	Ontario-less-RCD	Source
	Positive Mental Health Outcomes			
Self-rated Mental Health	Proportion of the population aged 12 and over who reported perceiving their own mental health status as being very good or excellent	71.0%	70.7%	CCHS 2015/2016 & 2017
Life Satisfaction	Proportion of the population aged 12 and over who reported being satisfied or very satisfied with their life in general	91.9%	92.6%	CCHS 2015/2016 & 2017
Social Well-being	Proportion of the population aged 12 and over who reported their sense of belonging to their local community as being very strong or somewhat strong	**78.5%***	71.1%	CCHS 2015/2016 & 2017
	Poor mental health or mental illness Outcomes			
Life Stress	Proportion of the population aged 12 and over who reported perceiving that most days in their life were quite a bit or extremely stressful	**16.7%***	21.6%	CCHS 2015/2016 & 2017
Mood or anxiety Disorder	Proportion of the population aged 12 and over who reported that they have been diagnosed by a health professional as having a mood or anxiety disorder	14.7%	13.1%	CCHS 2015/2016 & 2017
Mental health concern(s) during pregnancy	Proportion of new mothers that reported one or more mental health concern during pregnancy	29.6%	19.4%	BIS 2019

Indicator	Measure	RCD	Ontario-less-RCD	Source
Mental Health Care Contact	The rate per 100,000 population of emergency department (ED) visits for any mental health and addictions conditions	**3,388***	2,166	NACRS 2018
	The rate per 100,000 population of hospitalizations for any mental health and addictions conditions	**1,013***	625	DAD and OMHRS 2018
	The rate per 100,000 population of ED visits for mood and anxiety disorders	**2,350***	984	NACRS 2018
	The rate per 1000 population of outpatient visits to physicians for any mental health and addictions conditions	**881***	741	OHIP 2017
Self Injury	The rate per 100,000 population of ED visits for intentional self-harm	**182***	141	NACRS 2018
Suicide	The rate per 100,000 population of suicide deaths (annual average)	15	9	Vital Statistics 2011-2015
	Social and Family Determinants			
Unemployment	Proportion of the population in the labour force that are unemployed	7.2%	7.4%	Census 2016
Household Income	Proportion of individuals in private households with low income (based on the Low-Income Measure, after tax)	13.1%	14.4%	Census 2016
Housing	Proportion of households in core housing need	8.8%	6.1%	Census 2016
Family Structure	Proportion of single parent families	13.9%	17.1%	Census 2016

RCD: Renfrew County and District. CCHS: Canadian Community Health Survey. BIS: BORN Information System. NACRS: National Ambulatory Care Reporting System. DAD: Discharge Abstract Database. OMHRS: Ontario Mental Health Reporting System. OHIP: Ontario Health Insurance Plan.

Highlights

Positive Mental Health Outcomes (2015–2017)

- Many RCD residents aged 12 years and older reported **excellent or very good self-rated mental health** (**71.0%**), and reported being **very satisfied or satisfied with life** in general (**91.9%**)
- A larger percentage of RCD residents aged 12 years and older reported a **strong sense of belonging to their local community** (**78.5%**), compared to the rest of Ontario (**71.1%**)

Poor Mental Health and Mental Illness Outcomes

- A smaller percentage of RCD residents aged 12 years and older reported that **most days are quite a bit or extremely stressful** (**16.7%**), compared to the rest of Ontario (**21.6%)**
- **Mood or Anxiety Disorders** (2015 – 2017)
  - **14.7%** of RCD residents reported having been diagnosed by a mental health professional with a mood or anxiety disorder, which was not significantly different from the rest of Ontario (**13.1%**)
  - A significantly higher percentage of **unemployed RCD residents** reported being diagnosed with a mood or anxiety disorder, compared to those who were employed (**21.5%** vs. **11.4%**)
  - A significantly higher percentage of RCD residents living in **population centres** (communities with populations of at least 10,000 people) reported being diagnosed with a mood or anxiety disorder, compared to those living in rural areas (**18.6%** vs. **11.0%**)
- **Mental Health Concern(s) During Pregnancy** (2012 – 2019)
  - In 2019, 1,099 women living in RCD gave birth, and **325** of them (**29.6%)** reported having one or more mental health concern during pregnancy;
  - The percentage of new mothers who reported one or more mental health concern during pregnancy increased by **54.2%** from 2012 to 2019;
- **Mental Health Care Contact for Mental Health and Addictions Conditions** (2009 – 2018)
  - **2,317** RCD residents made **3,543** visits to an emergency department (ED) for mental health and addictions conditions in 2018.
    - The rate of ED visits for mental health and addictions conditions was significantly higher than the rate for Ontario-less-RCD and **increased by 38.6%** from 2009 to 2018. The increase was primarily driven by an increase in visits among **youth and young adults** (15–24 years of age)
  - In 2018, the rate of ED visits for mental health and addictions conditions was **27.4% higher among women** compared to men
  - **1,048** RCD residents were hospitalized for mental health and addictions conditions in 2018.

- The rate of hospitalizations for mental health and addictions conditions was significantly higher than the rate for Ontario-less-RCD and **increased by 14.5%** from 2009 to 2018. The increase was partially driven by an increase in hospitalizations among **older adults** (65+ years of age), and **youth and young adults** (15-24 years of age)
- In 2017, **19,938** RCD residents made **90,456** outpatient visits to physicians for mental health and addiction conditions
- The rate of outpatient visits to physicians for mental health and addictions conditions **increased by 69.7%** from 2009 to 2017

- **Mental Health Care Contact for Mood and Anxiety Disorders** (2009 – 2018)
  - **1,657** RCD residents made **2,325** visits to the ED for mood and anxiety disorders in 2018
  - The rate of ED visits for mood and anxiety disorders was significantly higher than the rate for Ontario-less-RCD and **increased by 48.4%** from 2009 to 2018. The increase was primarily driven by an increase in visits among **youth and young adults** (15-24 years of age)
  - In 2018, the rate of ED visits for mood and anxiety disorders was **57.7% higher among women** compared to men
- **Mental Health Care Contact for Self-Harm** (2009 – 2018)
  - In 2018, **143** RCD residents made **170** visits to the ED due to intentional self-harm
  - The rate of ED visits due to intentional self-harm **increased by 149.3%** from 2009 to 2018. The increase was primarily driven by an increase in visits among **youth and young adults** (15-24 years of age), and women
- **Suicide** (2011 – 2015)
  - There was an average of 15 suicide deaths per year from 2011 to 2015 in RCD. This corresponds with a rate of 15 suicide deaths per 100,000 population, which was not significantly higher than the rate for the rest of Ontario

Social and Family Determinants (2016)

- The **unemployment rate** in RCD was **7.2%** in 2016
- **13.1%** of individuals in RCD lived in private households with **low income**
- **8.8%** of households in RCD had a **core housing need**, meaning they could not afford suitable and adequate housing in their community
- **13.9%** of families in RCD with children were headed by a **single parent**

Positive Mental Health Outcomes

This section provides information about 3 indicators of positive mental health: self-related mental health, life satisfaction, and social well-being. The data is stratified by sociodemographic factors such as gender, age, income, education, employment and residence (population centre of 10,000 or more vs. rural area). Relationships between these factors and the mental health outcomes are identified where possible.

Self-rated Mental Health

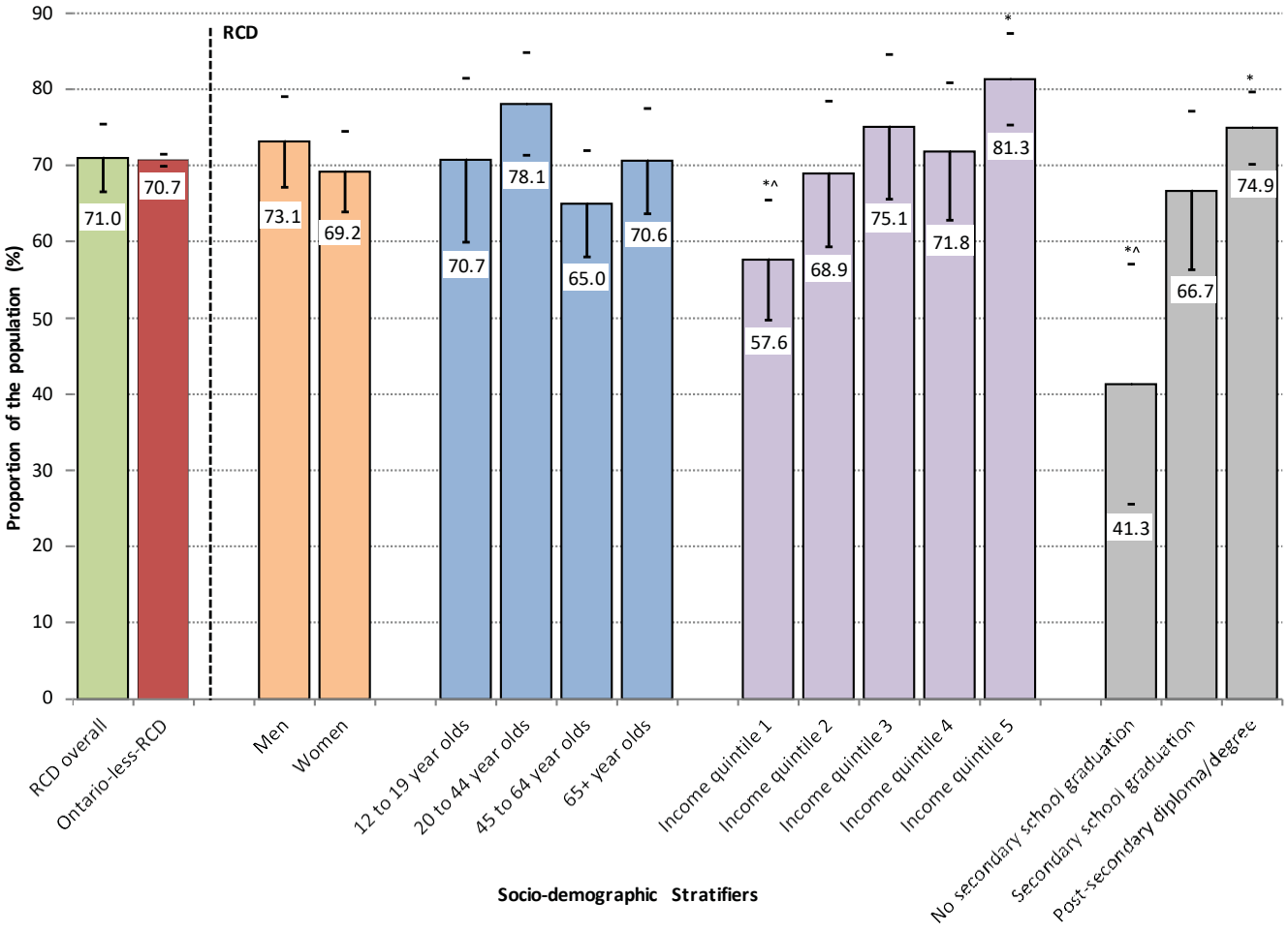
- This measure provides an estimate of mental health status based on self-reports. Self-rated mental health reflects two important components of positive mental health: functioning well and feeling good (3). It also reflects experiences of mental disorders, distress, and emotional or mental problems (14). Fair or poor self-rated mental health among Canadians is associated with a wide variety of mental morbidity measures, such as having a self-reported mental disorder diagnosed by a health professional (15);
- In 2015-2017, 71% of RCD residents 12 years of age and older perceived their own mental health as being excellent or very good (Figure 1). This percentage was not significantly different than that of Ontario-less-RCD;
- There were significant differences in self-rated mental health across certain socioeconomic factors. RCD residents in the highest household income quintile [referred to in this report as Quintile 5], had a significantly higher proportion of excellent or very good mental health, compared to residents in the lowest income quintile [Quintile 1] (**81.3%** vs. **57.6%**); Furthermore, RCD residents with a post-secondary diploma or degree had a significantly higher proportion of excellent or very good self-rated mental health, compared to RCD- residents who did not graduate from secondary school (**74.9%** vs. **41.3%**[1]);

There were no significant differences in self-rated mental health across other sociodemographic factors such as age, sex, mother tongue, immigration status, employment status, and residential geography (population centre [core, fringe, population centre outside of a census metropolitan area and census agglomeration, or secondary core] vs. rural area[2]). It should be noted that the lack of significant differences across sociodemographic factors is at least partially due to the small sample size of the CCHS for RCD. Some socio-demographic factors have been associated with significant differences in self-reported mental health in other Canadian settings (4) (16) (17).

[1] *Estimate is associated with high statistical variability and is to be interpreted with caution*

[2] *The terms 'core,' 'fringe' and 'rural area' replace the terms 'urban core,' 'urban fringe' and 'rural fringe' for the 2011 Census. These terms distinguish between population centres (POPCTRs) and rural areas (RAs) within a census metropolitan area (CMA) or census agglomeration (CA). A CMA or CA can have two types of cores: the core and the secondary core. The core is the population centre with the highest population, around which a CMA or a CA is delineated. The core must have a population (based on the previous census) of at least 50,000 persons in the case of a CMA, or at least 10,000 persons in the case of a CA. The secondary core is a population centre within a CMA that has at least 10,000 persons and was the core of a CA that has been merged with an adjacent CMA. The term 'fringe' includes all population centres within a CMA or CA that have less than 10,000 persons and are not contiguous with the core or secondary core. All territory within a CMA or CA that is not classified as a core or fringe is classified as rural area.*

Figure 1: Percentage of RCD residents, 12 years of age and older, who reported having excellent or very good mental health (2015–2017)

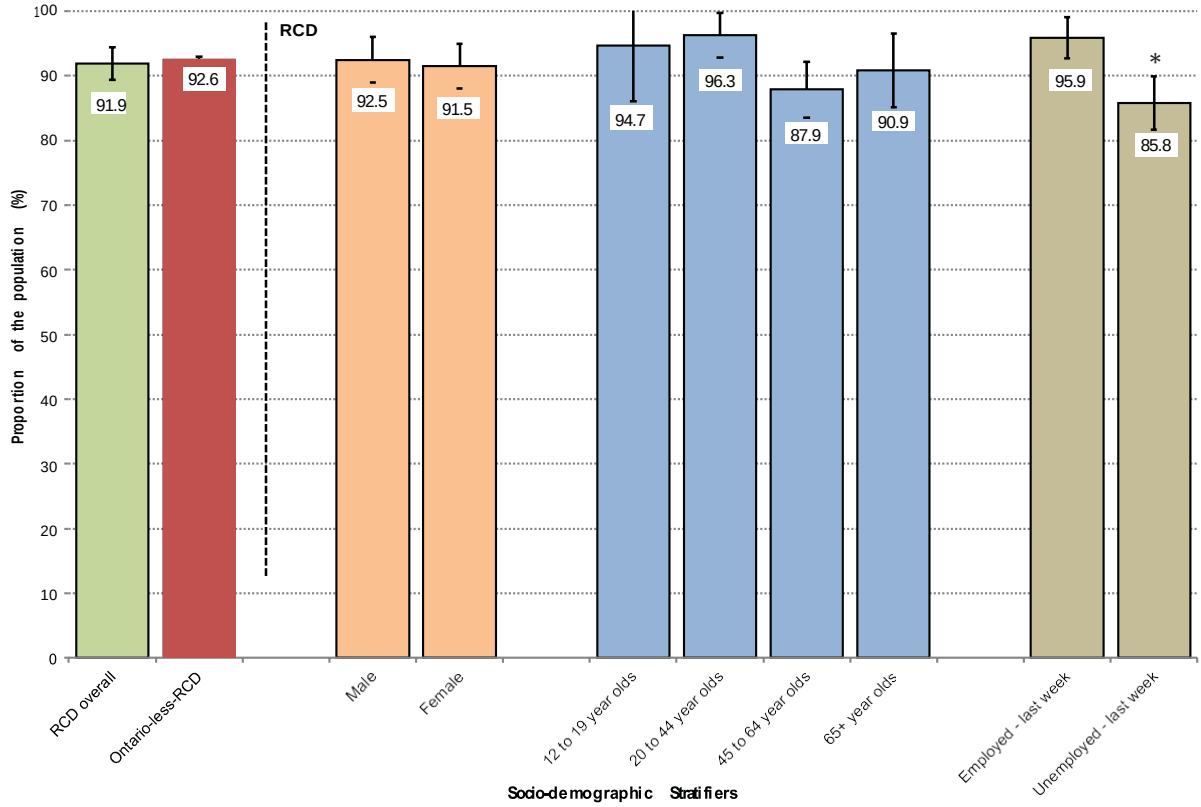


Source: Canadian Community Health Survey (CCHS)
**Statistically significant difference*
Note: Quintile 1 is the lowest household income quintile; Quintile 5 is the highest household income quintile
^Estimate is associated with high statistical variability and is to be interpreted with caution

Life Satisfaction

- Life satisfaction is a personal subjective assessment of how people think and feel about their life. Self-reports of life satisfaction tend to reflect longer-term life experiences such as family circumstances and economic security. In the CCHS, respondents are asked to rate their current life satisfaction on a scale of 0 to 10, where 0 represents "very dissatisfied" and 10 represents "very satisfied". Ratings of 6 or more are categorized as satisfied or very satisfied (18). Life satisfaction reflects an individual's ability to enjoy life and is indicative of positive mental health (19). Life satisfaction has been linked to good mental and physical health (20);
- In 2015-2017, **91.9%** of RCD residents 12 years of age and older reported being very satisfied or satisfied with their life in general (Figure 2). This percentage was not significantly different than that of the Ontario-less-RCD;
- A significantly higher percentage of employed RCD residents reported being very satisfied or satisfied with life in general, compared to unemployed RCD residents (**95.9%** vs. **85.8%**);
- There were no significant differences in reported life satisfaction across other demographic and socioeconomic characteristics, including age, sex, mother tongue, immigration status, household income, education, and residential geography (population centre with at least 10,000 people vs. rural area). It should be noted that the lack of significant differences across sociodemographic factors is at least partially due to the small sample size of the CCHS for RCD. Some socio-demographic factors have been associated with significant differences in self-reported life satisfaction in other Canadian settings (4) (17) (21).

Figure 2: Percentage of RCD residents, 12 years of age and older, who reported being very satisfied or satisfied with life in general, in the past year (2015–2017)

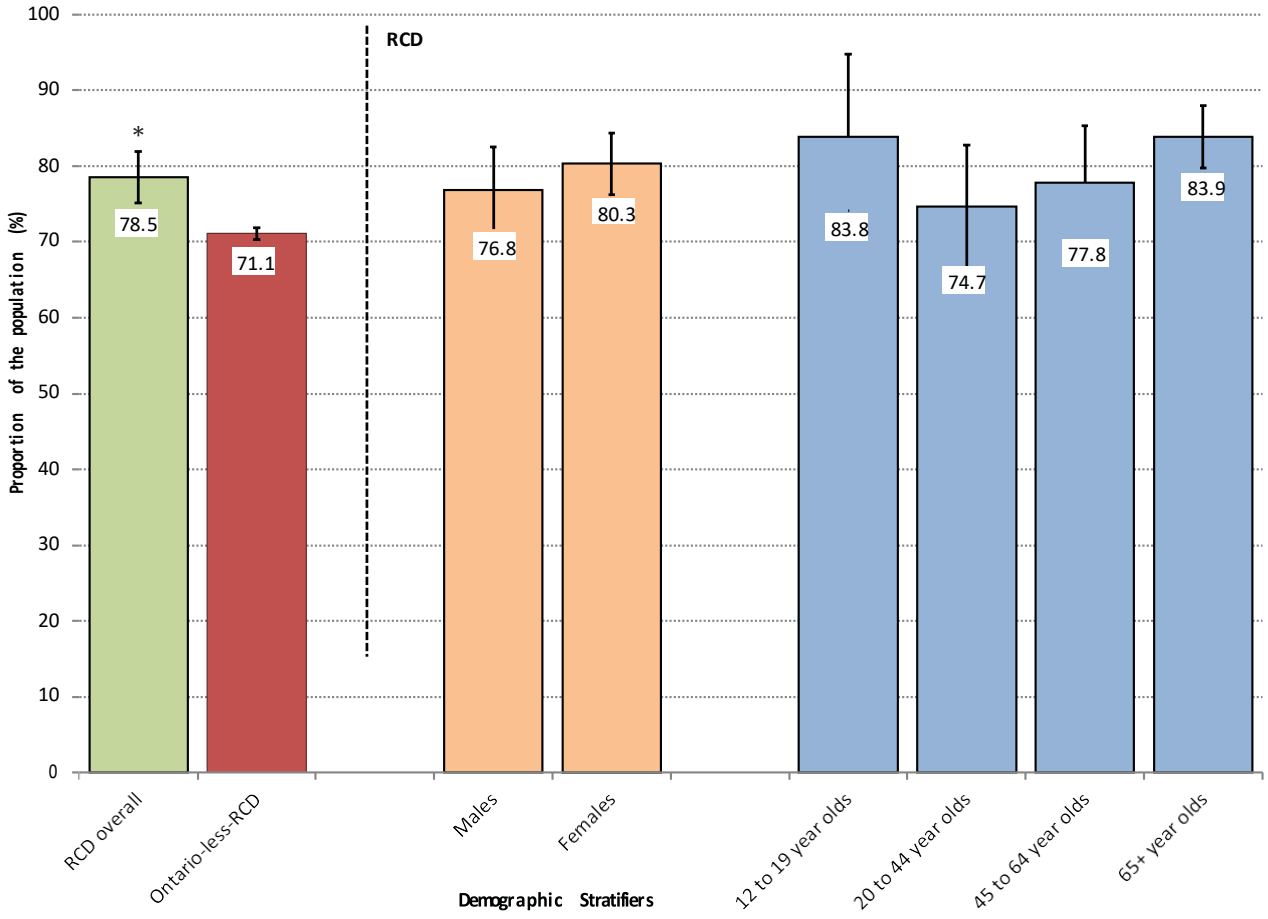


*Source: Canadian Community Health Survey (CCHS); *Statistically significant difference*

Sense of Community Belonging

- Research indicates that social belonging is associated with improved physical and mental health (22), while social isolation tends to be detrimental to health. Community belonging is one measure of social belonging that indicates social engagement, attachment and involvement of individuals in their communities. The CCHS provides estimates of the percentage of individuals 12 years and over reporting a strong or somewhat strong sense of belonging to their local community;
- In 2015–2017, **78.5%** of RCD residents 12 years of age and older reported a very strong or somewhat strong sense of belonging to the local community (Figure 3). This percentage was significantly higher than that of the Ontario-less-RCD;
- There were no significant differences in reported sense of community belonging across a range of demographic and socioeconomic factors, including age, sex, mother tongue, immigration status, household income, education, employment status, and residential geography (population centre with at least 10,000 people vs. rural area). It should be noted that the lack of significant differences across sociodemographic factors was at least partially due to the small sample size of the CCHS for RCD. Some socio-demographic factors were associated with significant differences in sense of community belonging in other Canadian settings (4) (17) (23) (24).

Figure 3: Percentage of RCD residents, 12 years of age and older, who reported very strong or somewhat strong sense of belonging to the local community (2015–2017)



*Source: Canadian Community Health Survey (CCHS); *Statistically significant difference*

Poor Mental Health and Mental Illness Outcomes

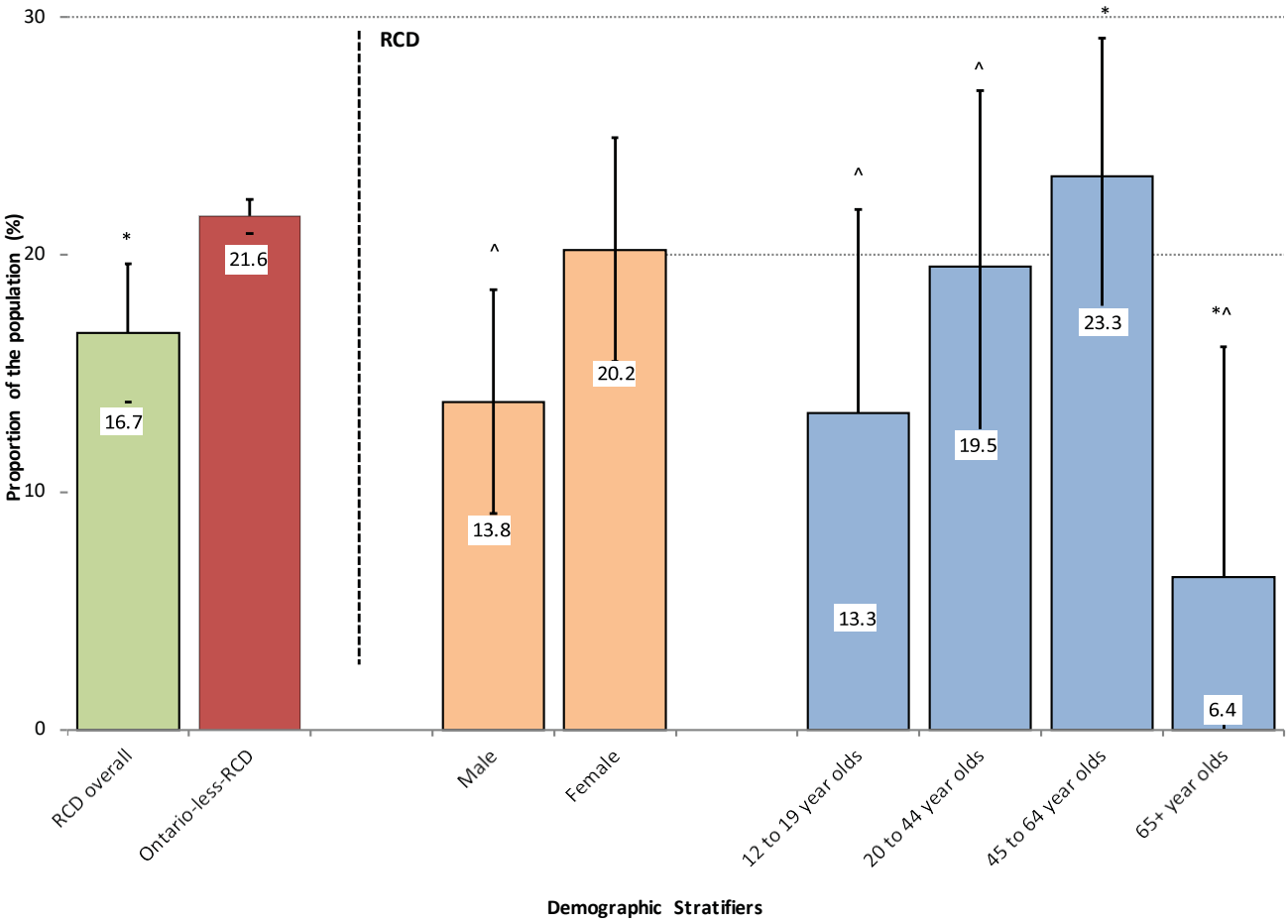
This section provides an analysis of 9 indicators of poor mental health or mental illness: life stress, diagnosis with mood or anxiety disorders; mental health concerns during pregnancy, health care utilization for mental illnesses (emergency department visits, hospitalizations, and physician visits); and suicide deaths. Where possible, the data is stratified by relevant demographic and socioeconomic factors.

Life Stress

- Positive mental health is partially defined by an individual's ability to mitigate and deal with normal stresses of everyday life (25). Although not everyone facing stress develops mental health issues, research suggests a link between stress and depression; with a stressful life event preceding episodes of major depression (25);
- In 2015-2017, **16.7%** of RCD residents 12 years of age and older reported perceiving most days in their life as being quite a bit or extremely stressful (Figure 4). This percentage was significantly lower than that of Ontario-less-RCD (**21.6%**);
- A significantly lower proportion of RCD residents 65 years of age and older reported perceiving most days in their life being quite a bit or extremely stressful, compared to residents 45-64 years of age (**6.4%** vs. **23.3%**).[3]
- There were no significant differences in reported life stress across other demographic and socioeconomic factors, including sex, mother tongue, immigration status, household income, education, employment status, and residential geography (population centre vs. rural). It should be noted that the lack of significant differences across sociodemographic factors was at least partially due to the small sample size of the CCHS for RCD. Some socio-demographic factors were associated with significant differences in self-reported life stress in other Canadian settings (26).

[3] *Estimates are associated with high statistical variability and are to be interpreted with caution.*

Figure 4: Percentage of RCD residents, 12 years of age and older, who reported perceiving most days in their life being quite a bit or extremely stressful (2015–2017)

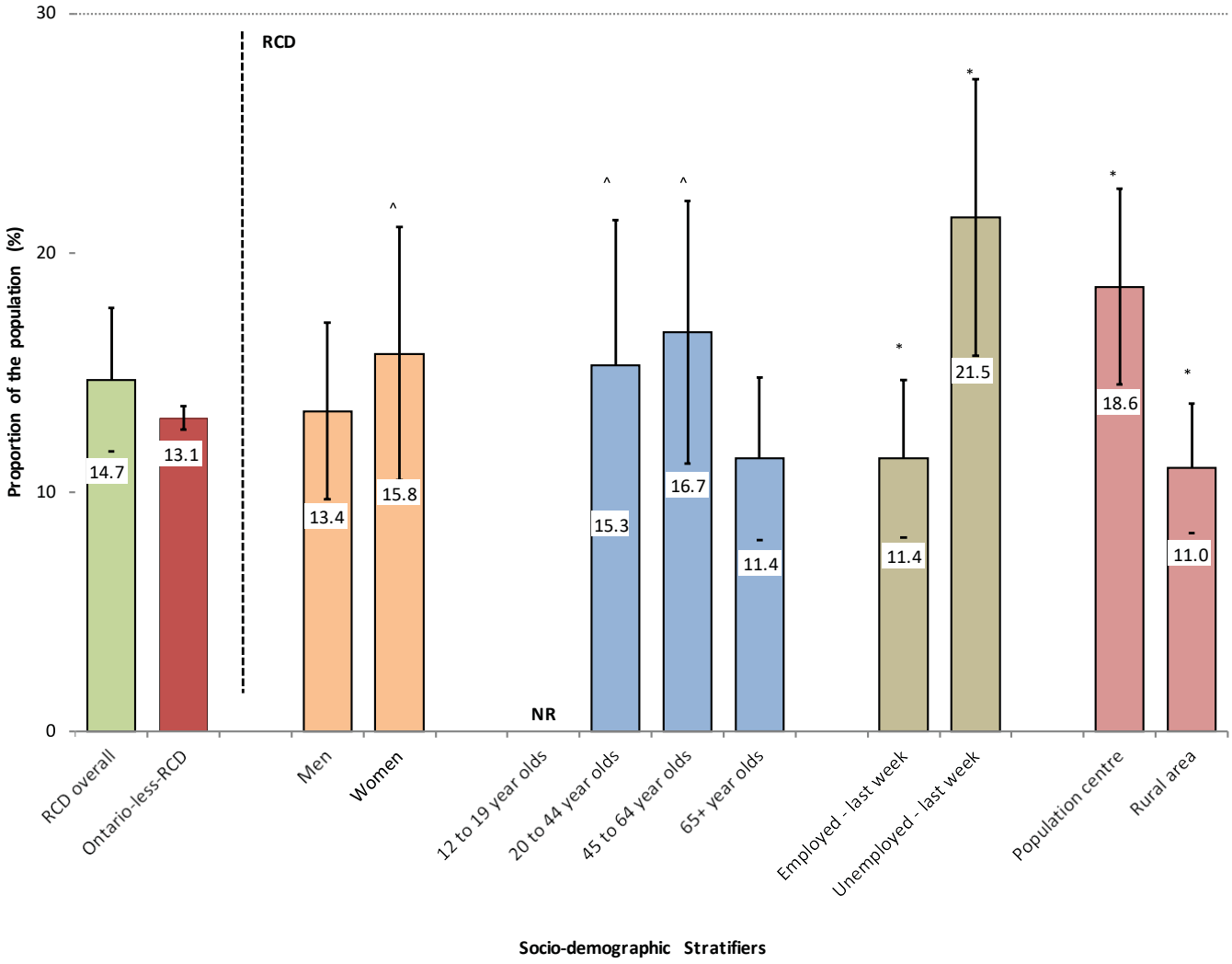


Source: Canadian Community Health Survey (CCHS)
**Statistically significant difference*
^Estimate is associated with high statistical variability and is to be interpreted with caution

Diagnosis with Mood or Anxiety Disorders

- Mood and anxiety disorders are among the most common mental disorders in Canada and have been shown to have a major impact on the daily lives of those affected. Mood disorders are characterized by the fluctuations in a person's mood, while anxiety disorders are characterized by excessive and prolonged feelings of nervousness, anxiety, and even fear. Mood and anxiety disorders can affect how individuals think and feel about themselves and the world around them. In certain instances, mood and anxiety disorders can impede people from leading full and active lives (27). The CCHS estimates the proportion of the population who reported having been diagnosed by a health professional with a mood disorder such as depression, bipolar disorder, mania or dysthymia; or an anxiety disorder such as phobia, obsessive-compulsive disorder, or panic;
- In 2015-2017, **14.7%** of RCD residents 12 years of age and older reported having been diagnosed by a health professional with a mood disorder or anxiety disorder. This percentage was not significantly different than that of the Ontario-less-RCD (Figure 5);
- A significantly higher percentage of unemployed RCD residents reported being diagnosed with a mood or anxiety disorder, compared to those who were employed (**21.5%** vs. **11.4%**);
- A significantly higher percentage of RCD residents living in population centres reported being diagnosed with a mood or anxiety disorder, compared to residents living in rural areas (**18.6%** vs. **11.0%**);
- There were no significant differences in self-reported mood disorders across other demographic and socioeconomic factors, including age, sex, mother tongue, immigration status, household income, and education. It should be noted that the lack of significant differences across sociodemographic factors may be due to the small sample size of the CCHS for RCD.

Figure 5: Percentage of RCD residents, 12 years of age and older, who reported being diagnosed by a mental health professional as having mood or anxiety disorders (2015-2017)

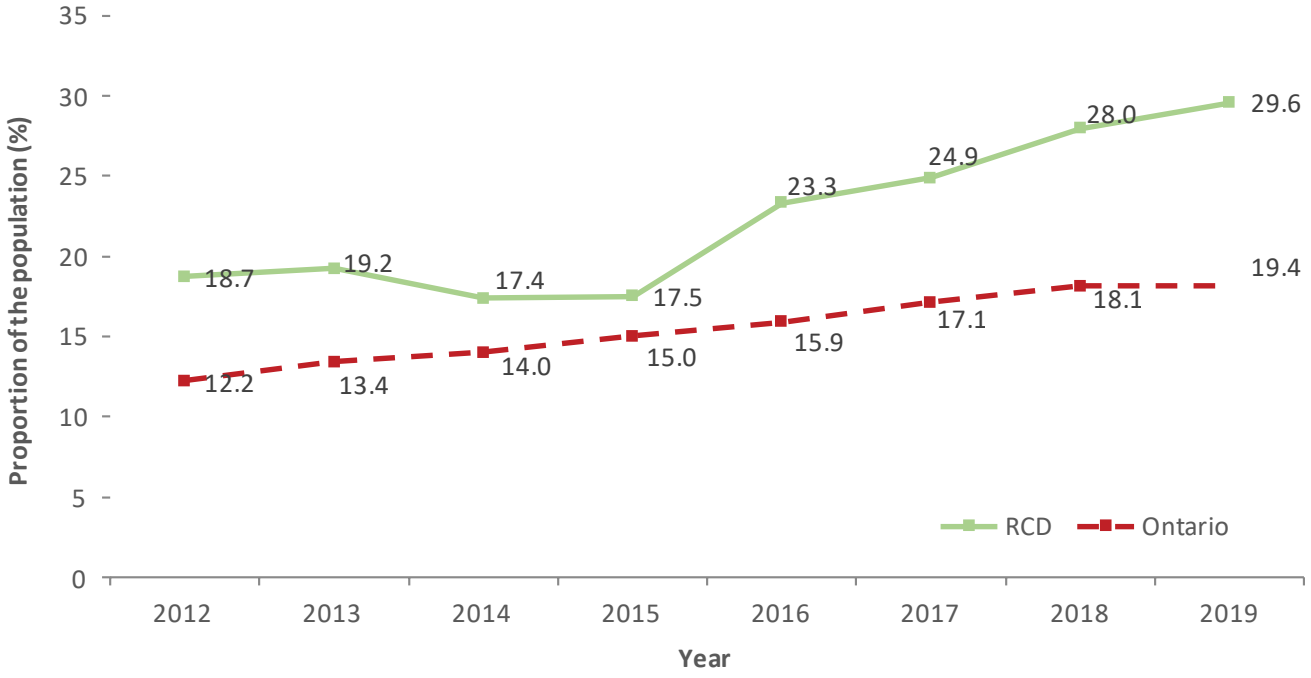


Source: Canadian Community Health Survey (CCHS)
NR: not reportable
**Statistically significant difference*
^Estimate is associated with statistical variability and is to be interpreted with caution

Mental Health Concern(s) during Pregnancy

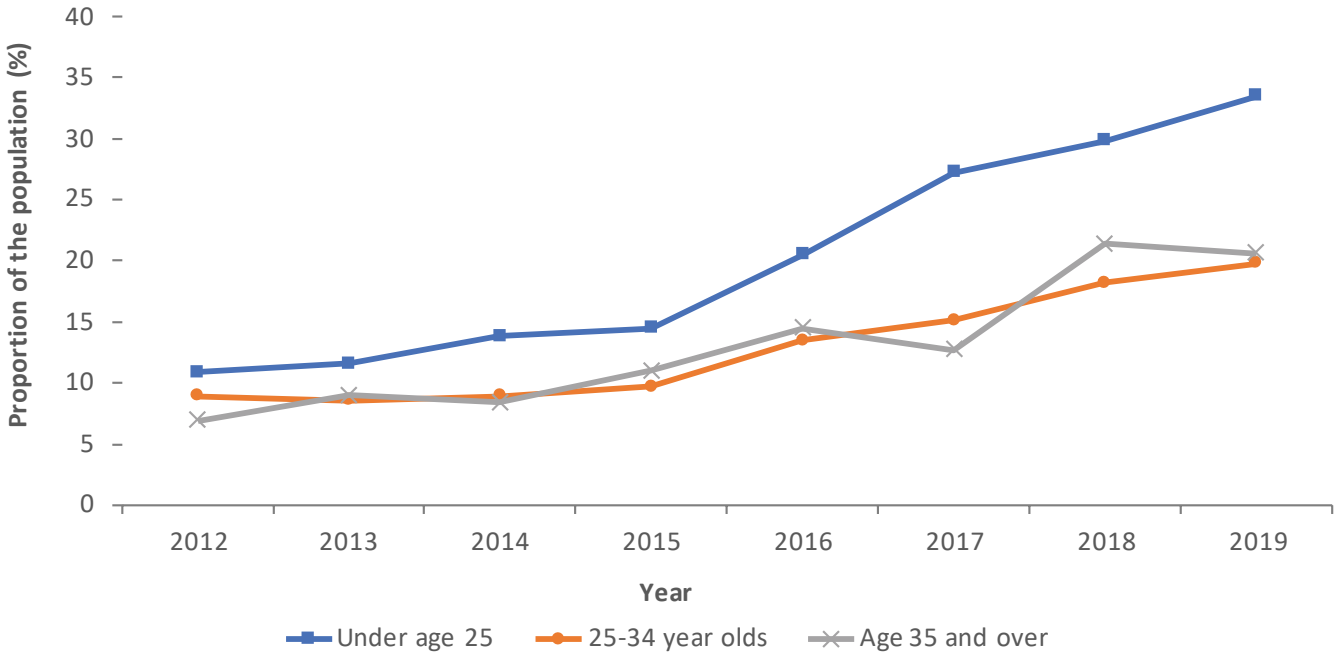
- Mental health concerns during pregnancy are common. Mental health concerns include anxiety, depression, history of post-partum depression, addiction, bipolar disorder, schizophrenia, and others;
- Anxiety and depression are the most common concerns;
- In 2019, 1,099 women living in RCD gave birth, and **325** of them (**29.6%)** reported having one or more mental health concerns during pregnancy;
- The percentage of new mothers who reported one or more mental health concerns during pregnancy increased by **54.2%** from 2012 to 2019 (Figure 6);
- The percentage of new mothers that reported experiencing anxiety during pregnancy increased from 2012 to 2019, particularly among mothers under age 25 (Figure 7).

Figure 6: Percentage of new mothers that reported one or more mental health concerns during pregnancy, RCD and Ontario, 2012–2019



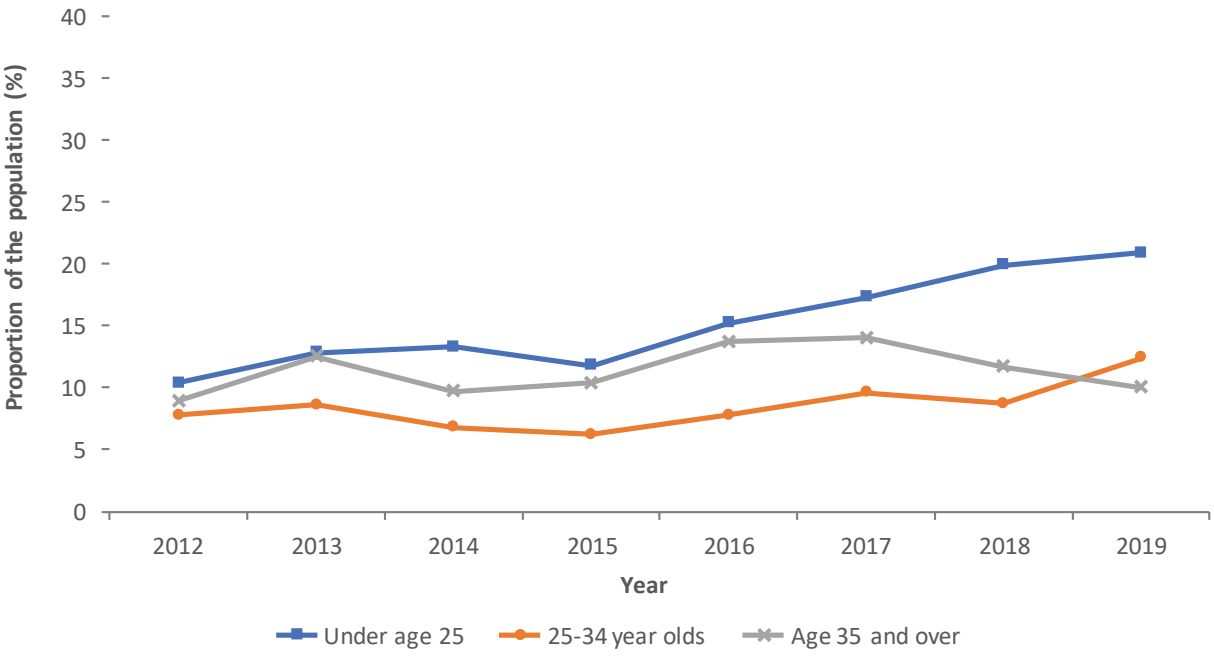
Source: BORN Information System, BORN Ontario, Accessed June 26, 2020

Figure 7: Percentage of new mothers living in RCD that reported anxiety during pregnancy by age group, 2012– 2019



Source: BORN Information System, BORN Ontario, Accessed June 26, 2020

Figure 8: Percentage of new mothers living in RCD that reported depression during pregnancy by age group, 2012–2019



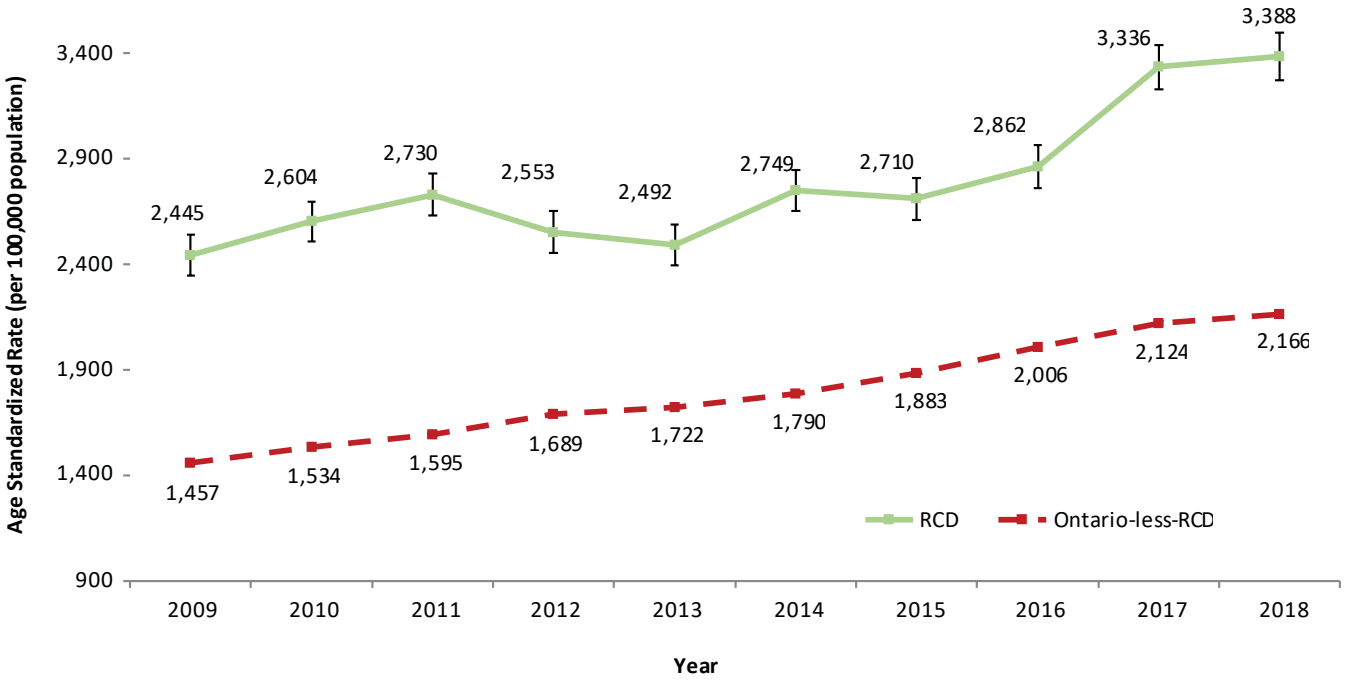
Source: BORN Information System, BORN Ontario, Accessed June 26, 2020

Emergency Department (ED) Visits for Mental Health and Addictions Conditions

- In 2018, **2,317** RCD residents made **3,543** visits to EDs for mental health and addictions conditions, corresponding with a rate of **3,388** visits per 100,000 population. This was significantly higher than the rate for Ontario-less-RCD (Figure 9);
- The rate of ED visits for mental health and addictions conditions increased by **38.6%** from 2009 to 2018. This increase was primarily driven by an increase in the rate for ED visits among RCD residents 15–24 years of age (Figure 10);
- The rate of ED visits for mental health and addictions conditions in Ontario-less-RCD increased by **48.7%** from 2009 to 2018;
- Women in RCD had a significantly higher rate of ED visits for mental health and addictions conditions, compared to men (**3,803** and **2,985** per 100,000 population respectively in 2018) (Figure 11);
- Among RCD residents 0–19 years of age, ED visit rates for mental health and addictions conditions were significantly higher among females, compared to males (**3,961** and **2,258** per 100,000 population respectively in 2018) (Figure 12);
- Upon the exclusion of ED visits with less urgent and non-urgent presenting complaints[4] (28), ED visits rates in 2018 for mental health and addictions conditions with urgent, emergent, and resuscitative presenting complaints accounted for **72.6%** of all ED visits (**2,458** visits per 100,000 population) (Figure 13);
- ED visits for mental health and addictions conditions, with urgent, emergent and resuscitative presenting complaints increased by **19.5%** in RCD and **20%** in Ontario between 2014 and 2018 (Figure 13).

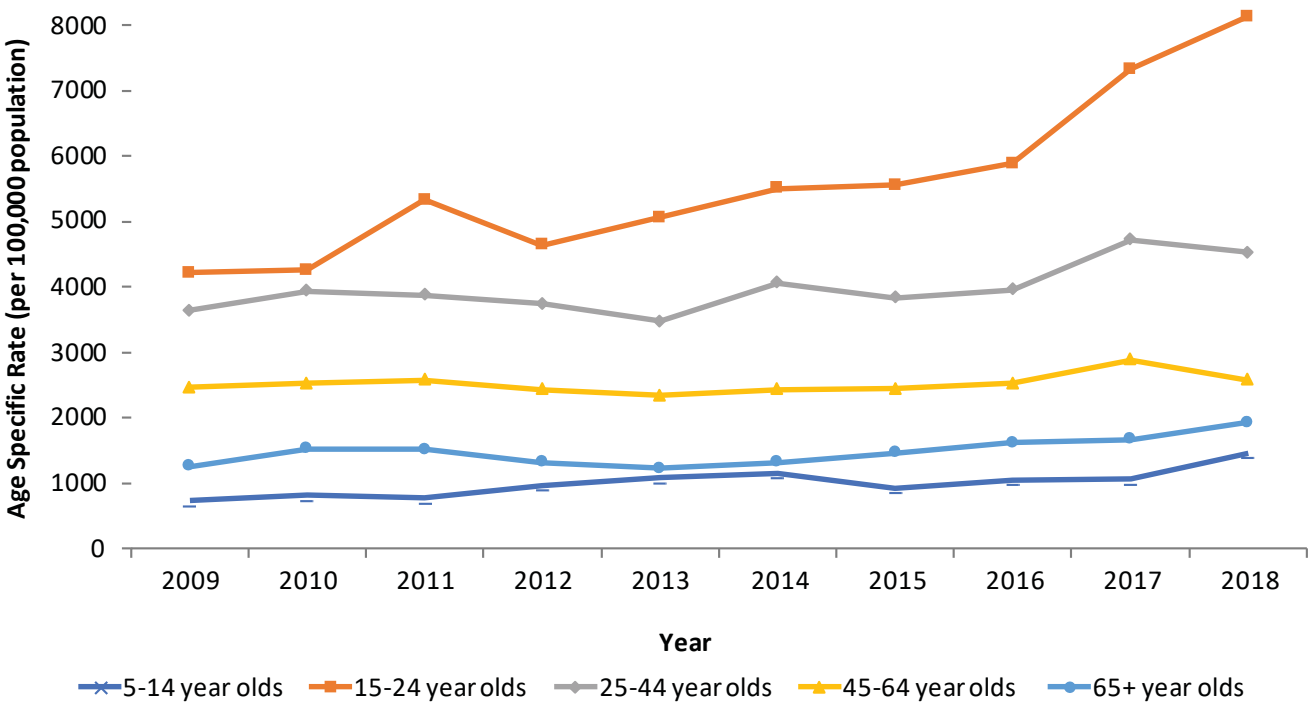
[4] Based on the Canadian Triage & Acuity Scale (CTAS). Presenting complaints for mental health ED visits are categorized into the following levels: level 1 – resuscitation: violent/homicidal behaviour – imminent harm to self or others or specific plans, bizarre behaviour – uncontrolled; level 2 – emergent: attempted suicide or clear suicide plan, severe anxiety or agitation; level 3 – urgent: depression/ suicidal (suicidal ideation, no plan), moderate anxiety or agitation; level 4 – less urgent: mild anxiety; level 5 – non-urgent.

Figure 9: Age standardized rates (per 100,000 population) of emergency department visits for any mental health and addictions conditions, RCD and Ontario-less-RCD, 2009–2018



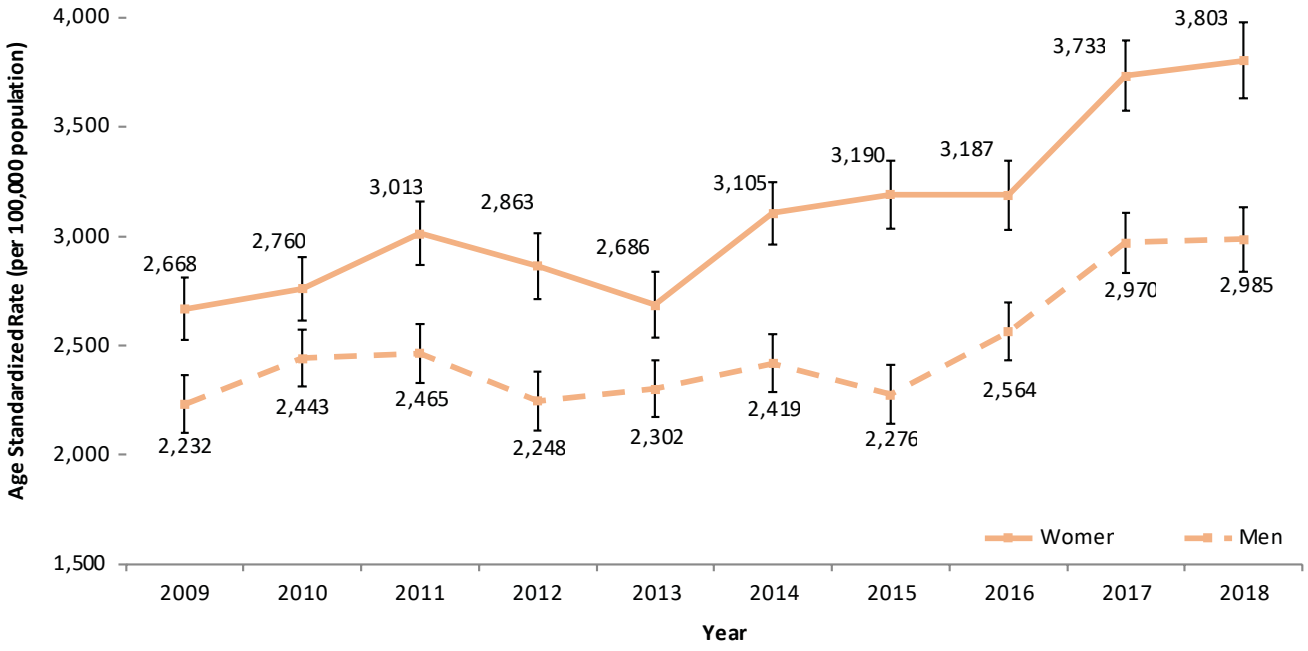
Source: Unscheduled ED visits for any mental health or addictions conditions, NACRS Dataset [2009–2018]. Ontario MOHLTC, IntelliHealth Ontario.
Any mental health or addictions conditions definition from ICES, 2017 (ICD-10-CA codes: primary diagnosis fields F04-F99 [excluded dementia], or secondary diagnosis fields X60-X84, Y10-Y19, Y28).
Note: Rates were age standardized to the 2011 Canadian population
Note: Population estimates were based on Census data
Note: Data displayed above includes repeat visits of the same person for any mental health and addictions conditions in the same year

Figure 10: Age specific rates (per 100,000 population) of emergency department visits for any mental health and addictions conditions in RCD, 2009–2018



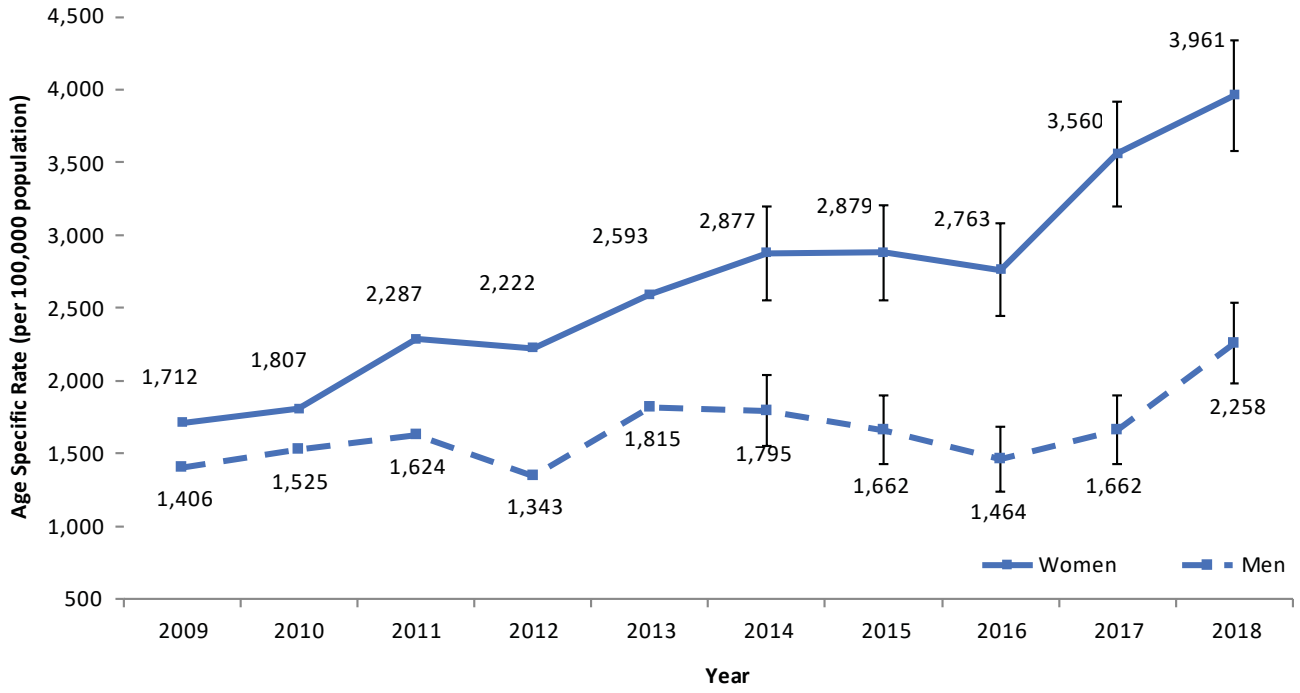
Source: Unscheduled ED visits for any mental health or addictions conditions, NACRS Dataset [2009–2018]. Ontario MOHLTC, IntelliHealth Ontario.
Any mental health or addictions conditions definition from ICES, 2017 (ICD-10-CA codes: primary diagnosis fields F04-F99 [excluded dementia], or secondary diagnosis fields X60-X84, Y10-Y19, Y28)
Note: Population estimates were based on Census data
Note: Data displayed above includes repeat visits of the same person for any mental health and addictions conditions in the same year

Figure 11: Age standardized rates (per 100,000 population) of emergency department visits for any mental health and addictions conditions in RCD, 2009–2018, stratified by sex



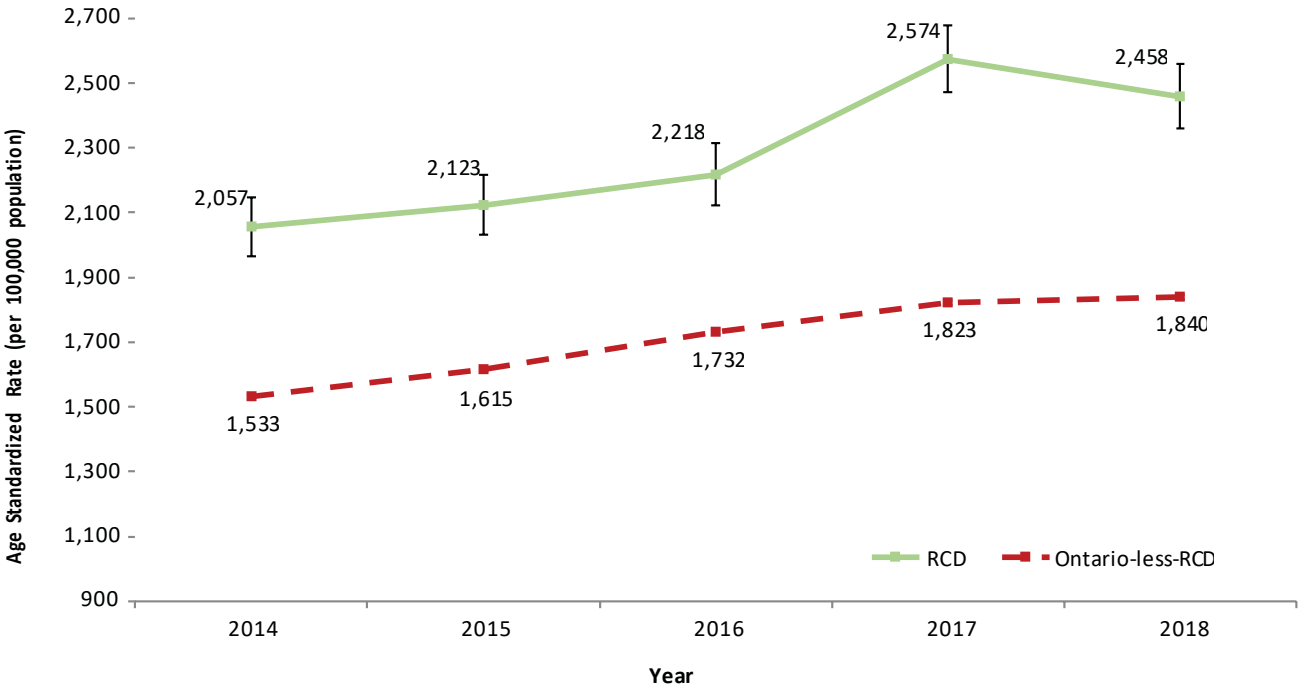
Source: Unscheduled ED visits for any mental health or addictions conditions, NACRS Dataset [2009–2018]. Ontario MOHLTC, IntelliHealth Ontario.
Any mental health or addictions conditions definition from ICES, 2017 (ICD-10-CA codes: primary diagnosis fields F04-F99 [excluded dementia], or secondary diagnosis fields X60-X84, Y10-Y19, Y28).
Note: Rates were age standardized to the 2011 Canadian population
Note: Population estimates were based on Census data
Note: Data displayed above includes repeat visits of the same person for any mental health and addictions conditions in the same year

Figure 12: Age specific rates (per 100,000 population) of emergency department visits for any mental health and addictions conditions in RCD, 2009–2018, 0–19 years of age



Source: Unscheduled ED visits for any mental health or addictions conditions, NACRS Dataset [2009–2018]. Ontario MOHLTC, IntelliHealth Ontario.
Any mental health or addictions conditions definition from ICES, 2017 (ICD-10-CA codes: primary diagnosis fields F04-F99 [excluded dementia], or secondary diagnosis fields X60-X84, Y10-Y19, Y28)
Note: Population estimates were based on Census data
Note: Data displayed above includes repeat visits of the same person for any mental health and addictions conditions in the same year

Figure 13: Age standardized rates (per 100,000 population) of emergency department visits for any mental health and addictions conditions, RCD and Ontario-less-RCD, 2014–2018, urgent, emergent, and resuscitative presenting complaints

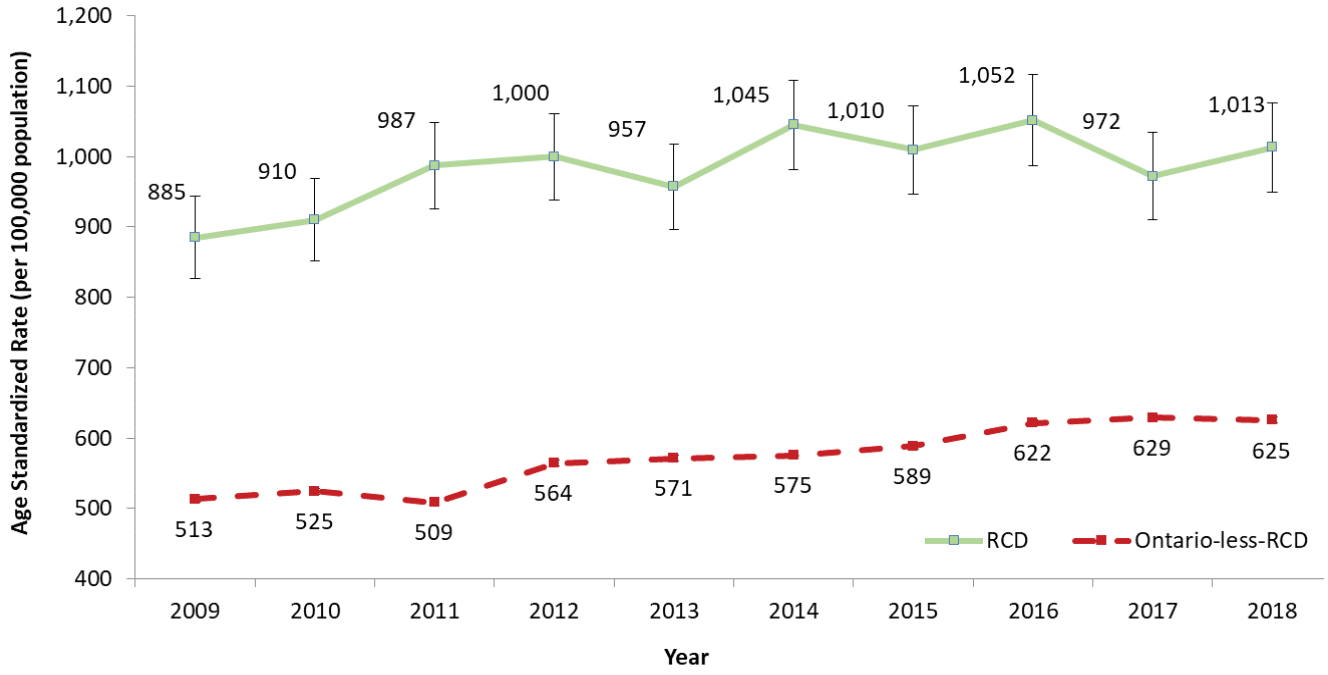


Source: Unscheduled ED visits for any mental health or addictions conditions, NACRS Dataset [2014–2018]. Ontario MOHLTC, IntelliHealth Ontario. Based on the Canadian Triage & Acuity Scale (CTAS) levels 1-3.
Any mental health or addictions conditions definition from ICES, 2017 (ICD-10-CA codes: primary diagnosis fields F04-F99 [excluded dementia], or secondary diagnosis fields X60-X84, Y10-Y19, Y28). CTAS levels 1-3: ED visits with urgent, emergent, and resuscitative presenting complaints
Note: Rates were age standardized to the 2011 Canadian population
Note: Population estimates were based on Census data
Note: Data displayed above includes repeat visits of the same person for any mental health and addictions conditions in the same year

Hospitalizations for Mental Health and Addictions Conditions

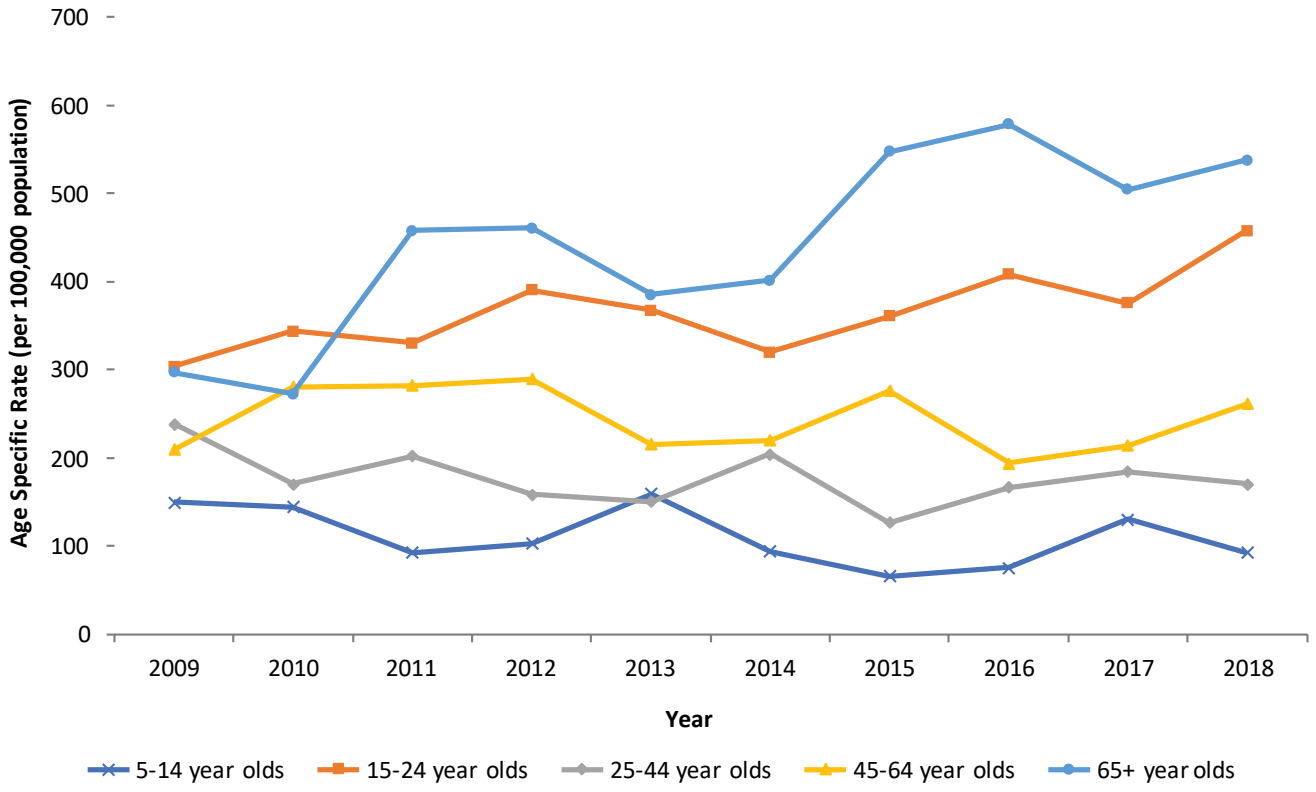
- In 2018, **1,048** RCD residents were hospitalized for mental health and addictions conditions, corresponding with a rate of **1,013** hospitalizations per 100,000 population. This was significantly higher than the rate for Ontario-less-RCD (Figure 14);
- The rate of hospitalizations for mental health and addictions conditions increased by **14%** between 2009 and 2018. This increase was partially driven by an increase in hospitalization rates among RCD residents 65+ years of age, followed by those 15-24 years of age (Figure 15);
- The rate of hospitalizations for mental health and addictions conditions in Ontario-less-RCD increased by **21.8%** between 2009 and 2018;
- In 2018, women in RCD had a higher rate of hospitalization for mental health and addictions conditions compared to men. However, the difference in the two rates was not significantly significant (Figure 16);
- While not always statistically significantly different, hospitalization rates among women were consistently higher than among men from 2013 to 2018.

Figure 14: Age standardized rates (per 100,000 population) of hospitalizations for any mental health and addictions conditions, RCD and Ontario-less-RCD, 2009–2018



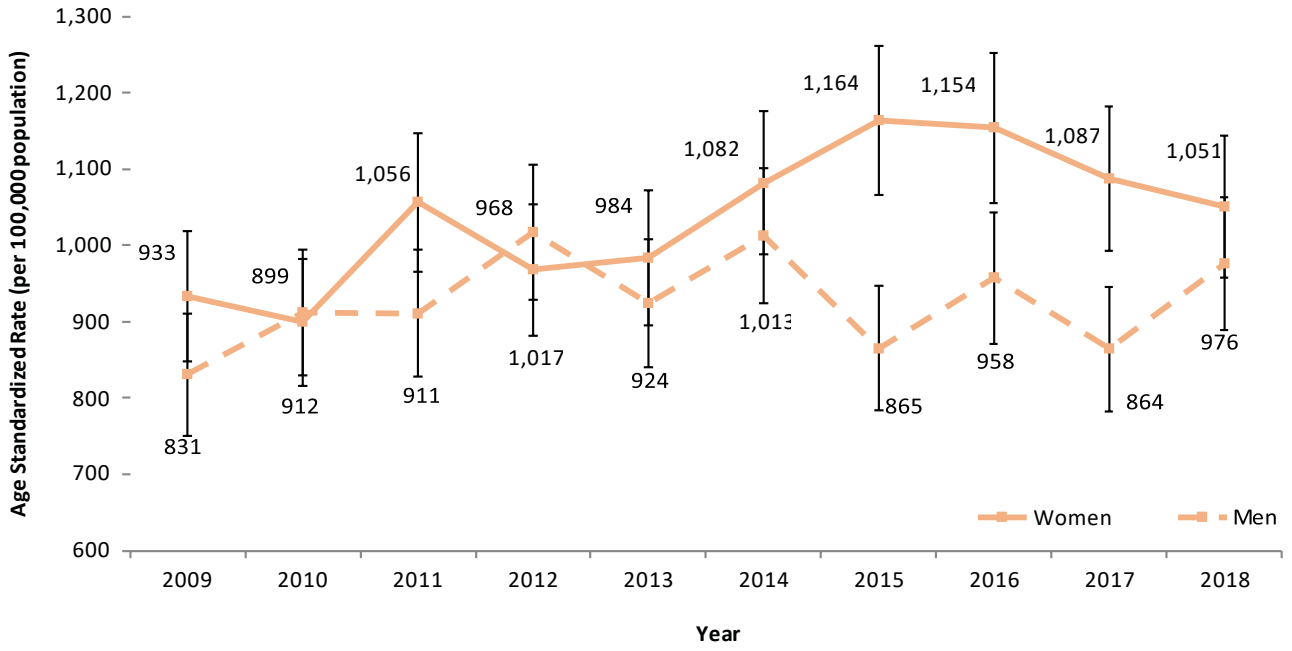
Source: Hospitalizations for any mental health or addictions conditions, DAD and OMHRS Datasets [2009–2018]. Ontario MOHLTC, IntelliHealth Ontario.
Any mental health or addictions conditions definition from ICES, 2017 (ICD-10-CA codes: primary diagnosis fields F04-F99 [excluded dementia], or secondary diagnosis fields X60-X84, Y10-Y19, Y28)
Note: Rates were age standardized to the 2011 Canadian population
Note: Population estimates were based on Census data
Note: Data displayed above includes repeat visits of the same person for any mental health and addictions conditions in the same year

Figure 15: Age specific rates (per 100,000 population) of hospitalizations for any mental health and addictions conditions in RCD, 2009–2018



Source: Hospitalizations for any mental health or addictions conditions, DAD and OMHRS Datasets [2009–2018]. Ontario MOHLTC, IntelliHealth Ontario.
Any mental health or addictions conditions definition from ICES, 2017 (ICD-10-CA codes: primary diagnosis fields F04-F99 [excluded dementia], or secondary diagnosis fields X60-X84, Y10-Y19, Y28)
Note: Population estimates were based on Census data
Note: Rates were age standardized to the 2011 Canadian population
Note: Data displayed above includes repeat visits of the same person for any mental health and addictions conditions in the same year

Figure 16: Age standardized rates (per 100,000 population) of hospitalizations for any mental health and addictions conditions in RCD, 2009–2018, stratified by sex

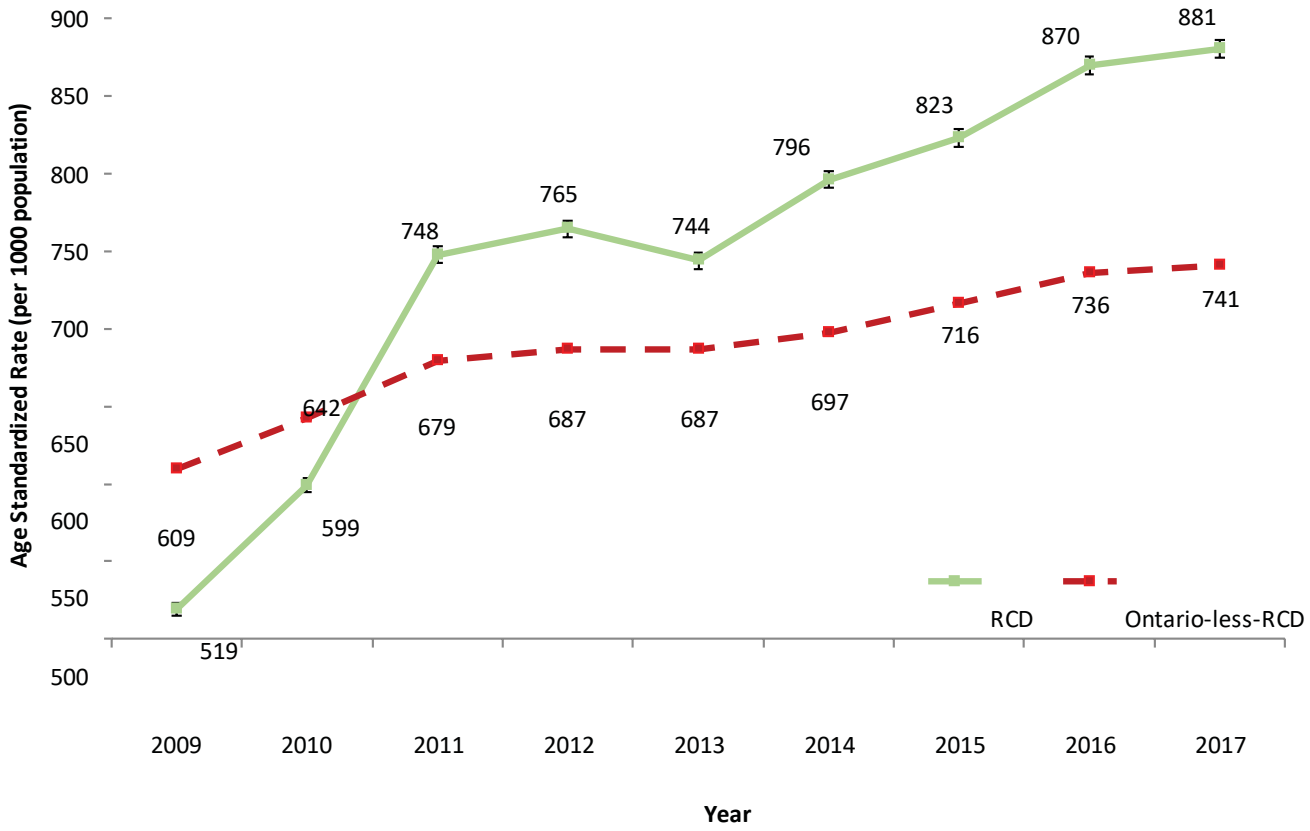


Source: Hospitalizations for any mental health or addictions conditions, DAD and OMHRS Datasets [2009–2018]. Ontario MOHLTC, IntelliHealth Ontario.
Any mental health or addictions conditions definition from ICES, 2017 (ICD-10-CA codes: primary diagnosis fields F04-F99 [excluded dementia], or secondary diagnosis fields X60-X84, Y10-Y19, Y28)
Note: Population estimates were based on Census data
Note: Rates were age standardized to the 2011 Canadian population
Note: Data displayed above includes repeat visits of the same person for any mental health and addictions conditions in the same year

Physician Visits for Mental Health and Addictions Conditions

- In 2017, **19,938** RCD residents made **90,456** outpatient visits to physicians for mental health and addictions conditions, corresponding with a rate of **881** physician visits per 1,000 population. This rate is significantly higher than the rate for Ontario-less-RCD (Figure 17);
- The rate of outpatient visits to physicians due to mental health and addictions conditions in RCD increased by **69.7%** between 2009 and 2017. This was partially driven by an increase in the rate of outpatient physician visits among adults 25-44 years of age (Figure 18), and women (Figure 19);
- The rate of outpatient visits to physicians due to mental health and addictions conditions in Ontario-less-RCD increased by **42.8%** between 2009 and 2017;
- Among RCD residents 0-19 years of age, in 2017, the rate of outpatient physician visits for any mental health and addictions conditions was significantly higher among females than males (**442** and **384** per 100,000 population respectively) (Figure 20).

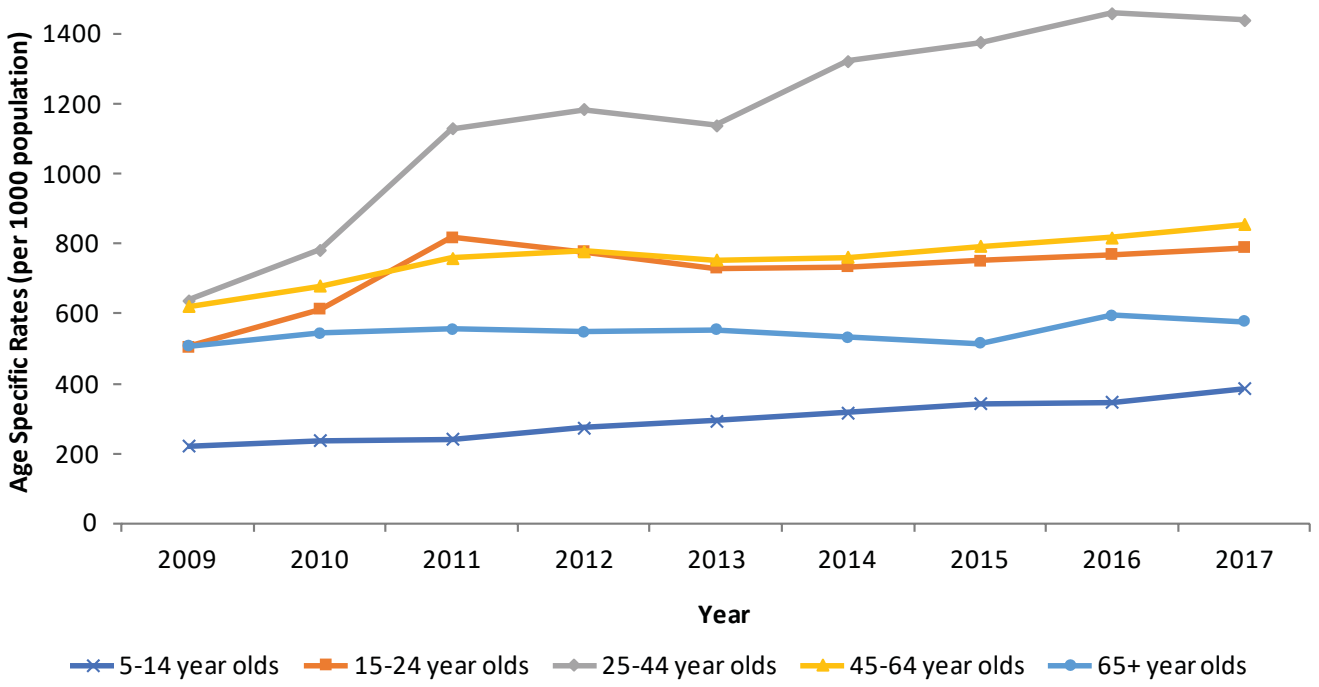
Figure 17: Age standardized rates (per 1,000 population) of outpatient physician visits for mental health and addictions conditions, RCD and Ontario-less-RCD, 2009–2017



Source: Outpatient physician visits for any mental health or addictions conditions, Medical Services (OHIP) Dataset [2009–2017]. Ontario MOHLTC, IntelliHealth Ontario.
Any mental health or addictions conditions definition from ICES, 2017 (ICD-10-CA codes: primary diagnosis fields F04-F99 [excluded dementia], or secondary diagnosis fields X60-X84, Y10-Y19, Y28)
Note: Rates were age standardized to the 2011 Canadian population
Note: Population estimates were based on Census data
Note: Confidence intervals for RCD and Ontario-less-RCD are too small to appear on the graph
Note: Data displayed above includes repeat visits of the same person for any mental health and

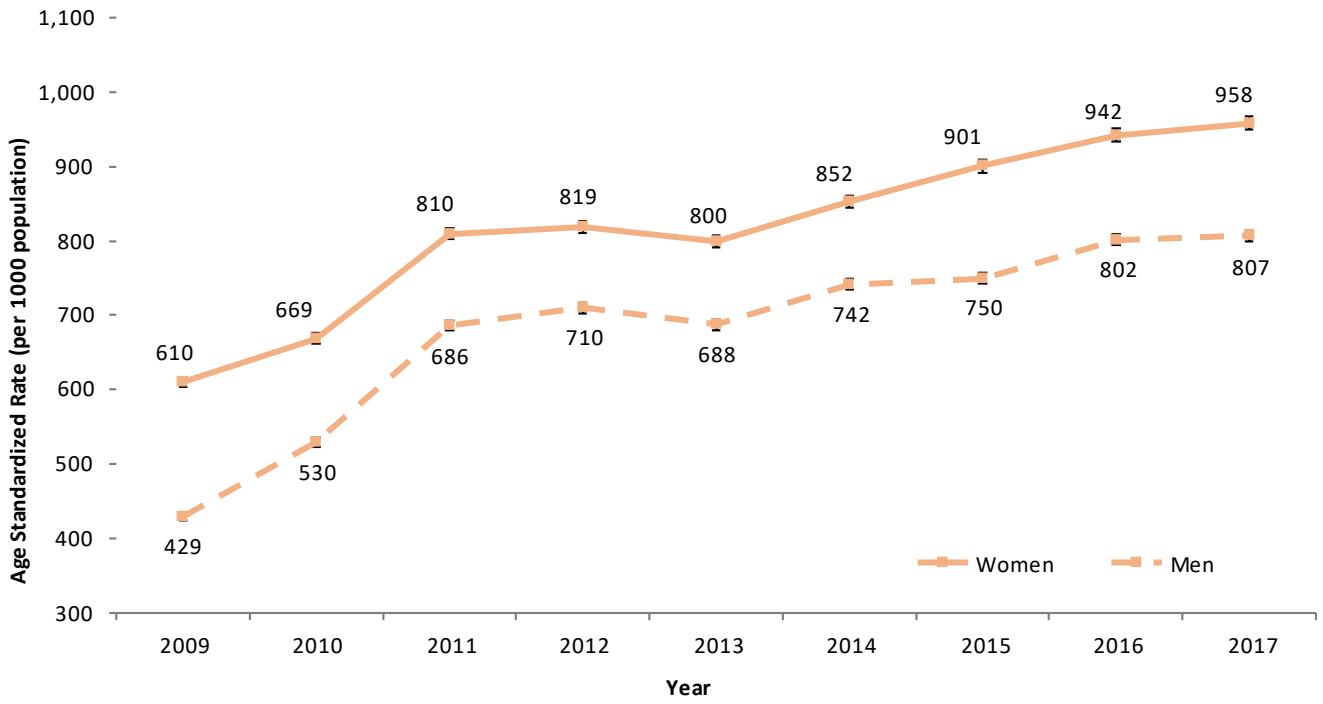
addictions conditions in the same year

Figure 18: Age specific rates (per 1,000 population) of outpatient physician visits for mental health and addictions conditions, in RCD, 2009–2017



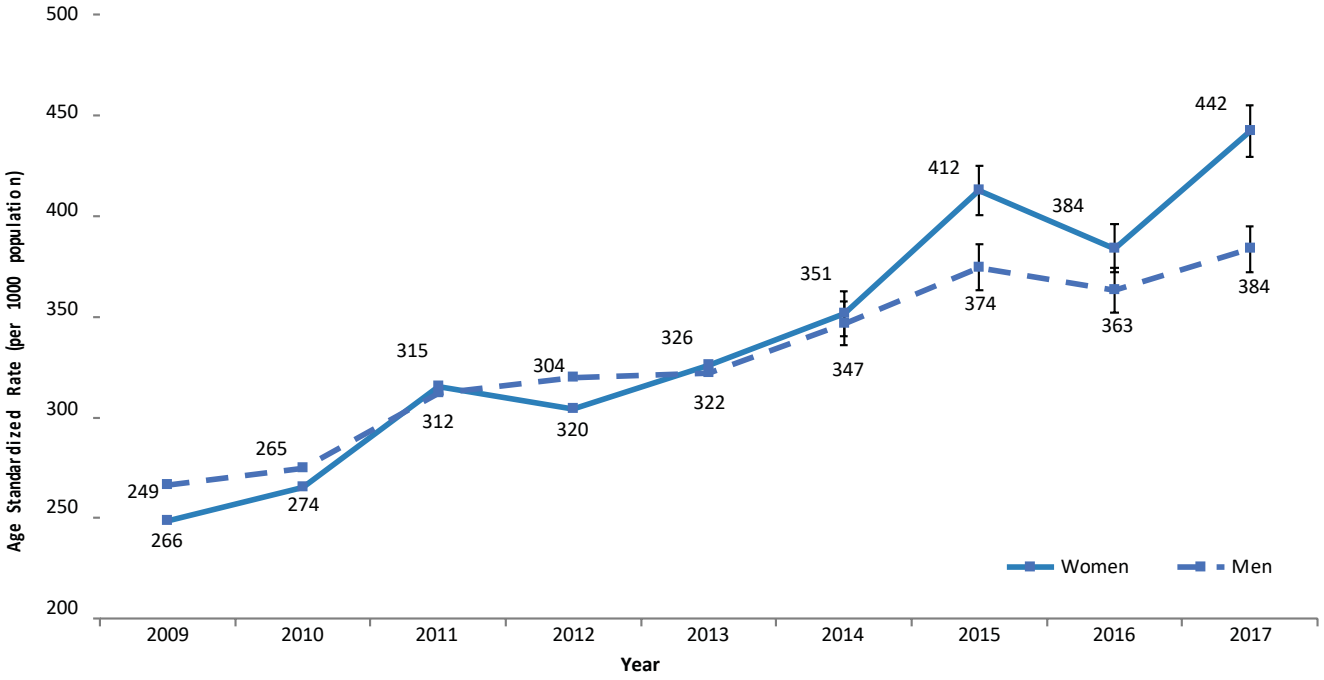
Source: Outpatient physician visits for any mental health or addictions conditions, Medical Services (OHIP) Dataset [2009–2017]. Ontario MOHLTC, IntelliHealth Ontario.
Any mental health or addictions conditions definition from ICES, 2017 (ICD-10-CA codes: primary diagnosis fields F04-F99 [excluded dementia], or secondary diagnosis fields X60-X84, Y10-Y19, Y28)
Note: Population estimates were based on Census data
Note: Data displayed above includes repeat visits of the same person for any mental health and addictions conditions in the same year

Figure 19: Age standardized rates (per 1,000 population) of outpatient physician visits for mental health and addictions conditions in RCD, 2009–2017, stratified by sex



Source: Outpatient physician visits for any mental health or addictions conditions, Medical Services (OHIP) Dataset [2009–2017]. Ontario MOHLTC, IntelliHealth Ontario.
Any mental health or addictions conditions definition from ICES, 2017 (ICD-10-CA codes: primary diagnosis fields F04-F99 [excluded dementia], or secondary diagnosis fields X60-X84, Y10-Y19, Y28)
Note: Rates were age standardized to the 2011 Canadian population
Note: Population estimates were based on Census data
Note: Confidence intervals for RCD and Ontario-less-RCD are too small to appear on the graph
Note: Data displayed above includes repeat visits of the same person for any mental health and addictions conditions in the same year

Figure 20: Age specific rates (per 1,000 population) of outpatient physician visits for mental health and addictions conditions in RCD, 2009–2017, 0–19 years of age

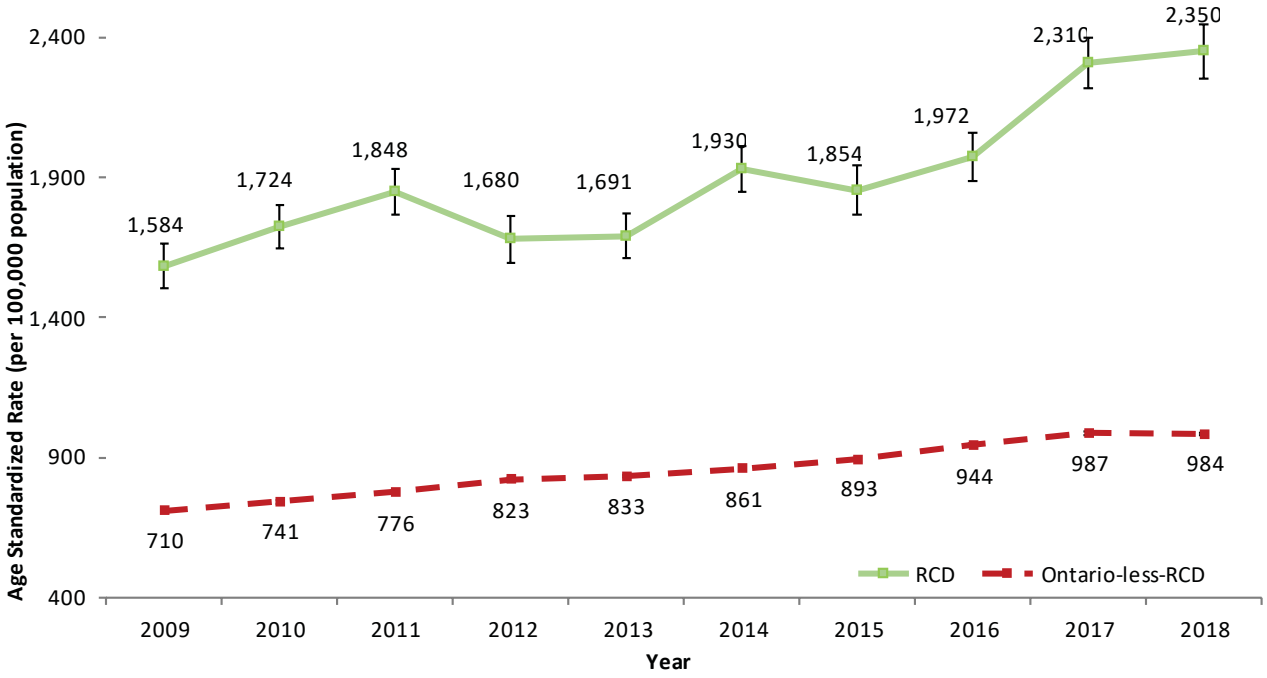


Source: Outpatient physician visits for any mental health or addictions conditions, Medical Services (OHIP) Dataset [2009–2017]. Ontario MOHLTC, IntelliHealth Ontario.
Any mental health or addictions conditions definition from ICES, 2017 (ICD-10-CA codes: primary diagnosis fields F04-F99 [excluded dementia], or secondary diagnosis fields X60-X84, Y10-Y19, Y28)
Note: Population estimates were based on Census data
Note: Data displayed above includes repeat visits of the same person for any mental health and addictions conditions in the same year

ED Visits for Mood and Anxiety Disorders

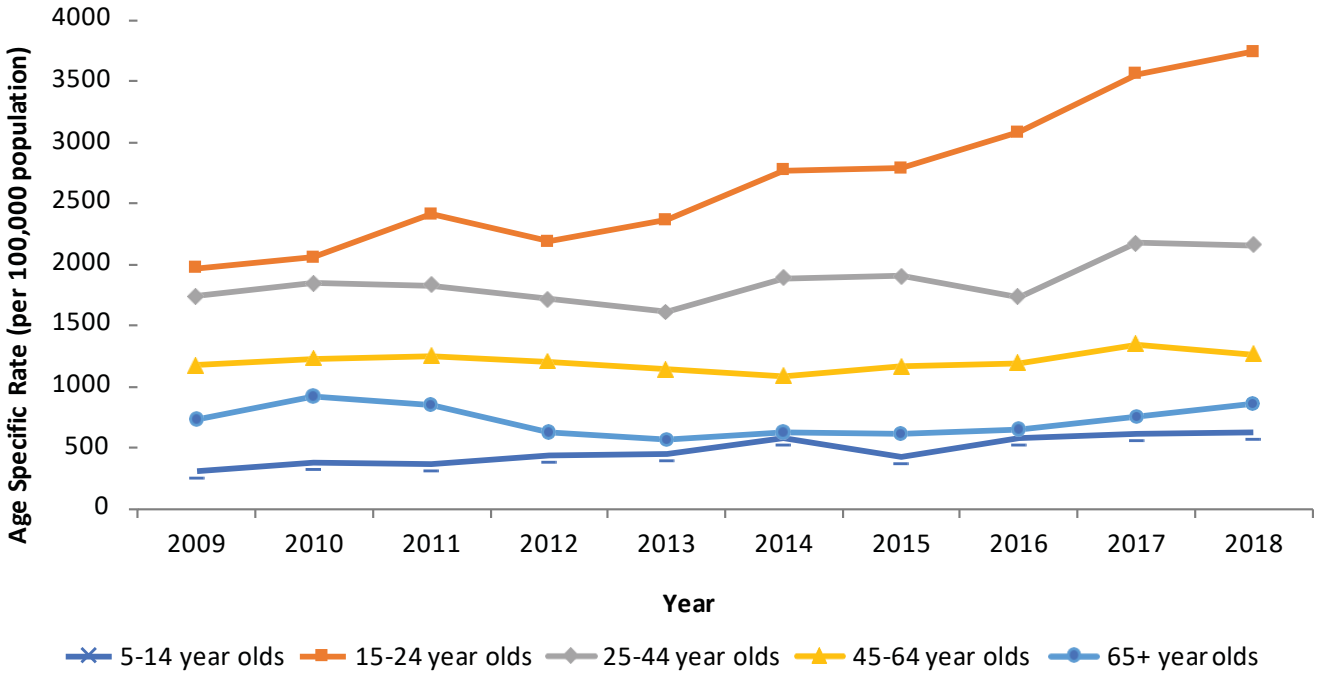
- In 2018, **1,657** RCD residents made **2,325** visits to the ED for mood and anxiety disorders, corresponding with a rate of **2,350** visits per 100,000 population. This was significantly higher than the rate for Ontario-less-RCD (Figure 21);
- The rate of ED visits for mood and anxiety disorders increased by **48.4%** between 2009 and 2018. This was primarily driven by an increase in the rate of ED visits among RCD residents 15-24 years of age (Figure 22);
- The rate of ED visits for mood and anxiety disorders in Ontario-less-RCD increased by **38.6%** between 2009 and 2018;
- In 2018, the rate of ED visits for mood and anxiety disorders was significantly higher among women in RCD, compared to men (**2,895** and **1,836** visits per 100,000 population respectively) (Figure 23);
- Upon the exclusion of less urgent and non-urgent presenting complaints (28), ED visits rates in 2018 for mood and anxiety disorders, with urgent, emergent, and resuscitative presenting complaints accounted for **64.7%** of all ED visits for mood and anxiety disorders (**1,521** visits per 100,000 population) (Figure 24);
- ED visits for mood and anxiety disorders with urgent, emergent, and resuscitative presenting complaints increased by **18.6**% between 2014 and 2018;
- Between 2014 and 2018, among RCD residents 0-19 years of age, ED visit rates for mood and anxiety disorders were significantly higher among females compared to males (**2,586** and **1,336** per 100,000 population respectively in 2018) (Figure 25).

Figure 21: Age standardized rates (per 100,000 population) of emergency department visits for mood and anxiety disorders, RCD and Ontario-less-RCD, 2009–2018



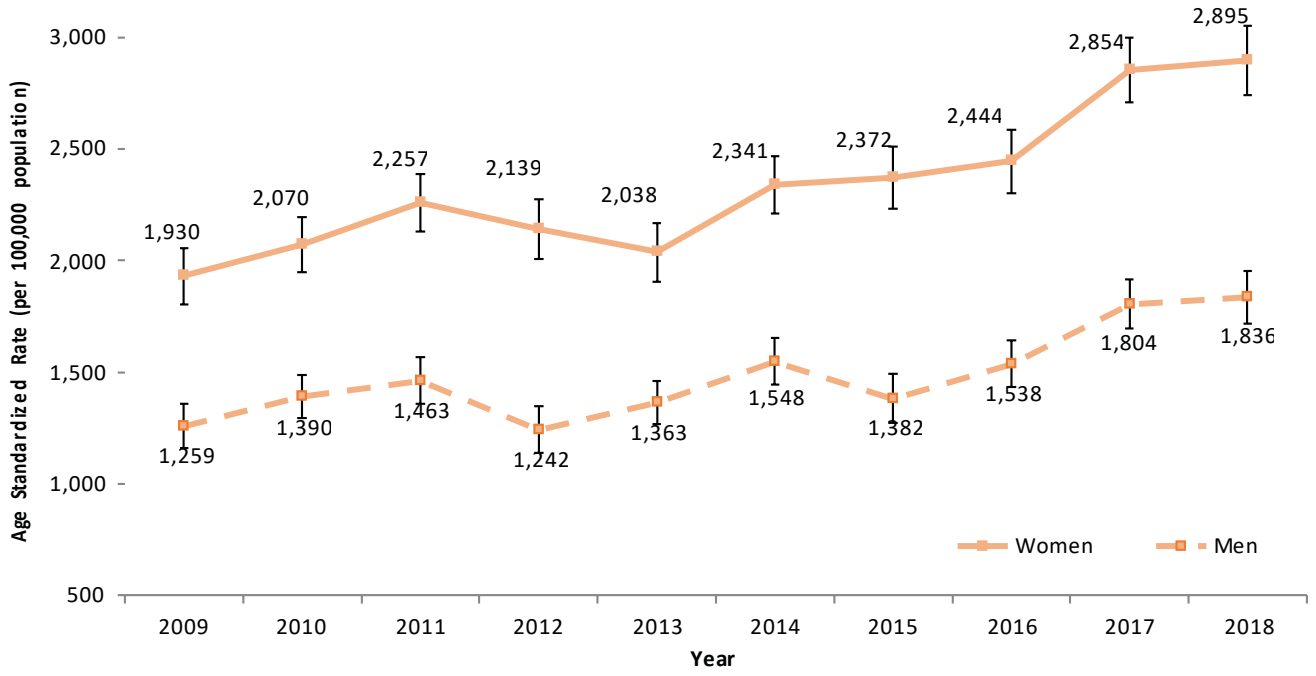
Source: Unscheduled ED visits for mood and anxiety disorders, NACRS Dataset [2009–2018]. Ontario MOHLTC, IntelliHealth Ontario.
Mood and anxiety disorder definition from ICES, 2017.
Mood and anxiety disorders definition from ICES, 2017 (ICD-10-CA codes: F3, F40-43, F488-F489, F931-F932)
Note: Population estimates were based on Census data
Note: The confidence intervals for Ontario-less-RCD are too small too small to appear in the graph
Note: Data displayed above includes repeat visits of the same person for mood and anxiety disorders in the same year

Figure 22: Age specific rates (per 100,000 population) of emergency department visits for mood and anxiety disorders in RCD, 2009–2018



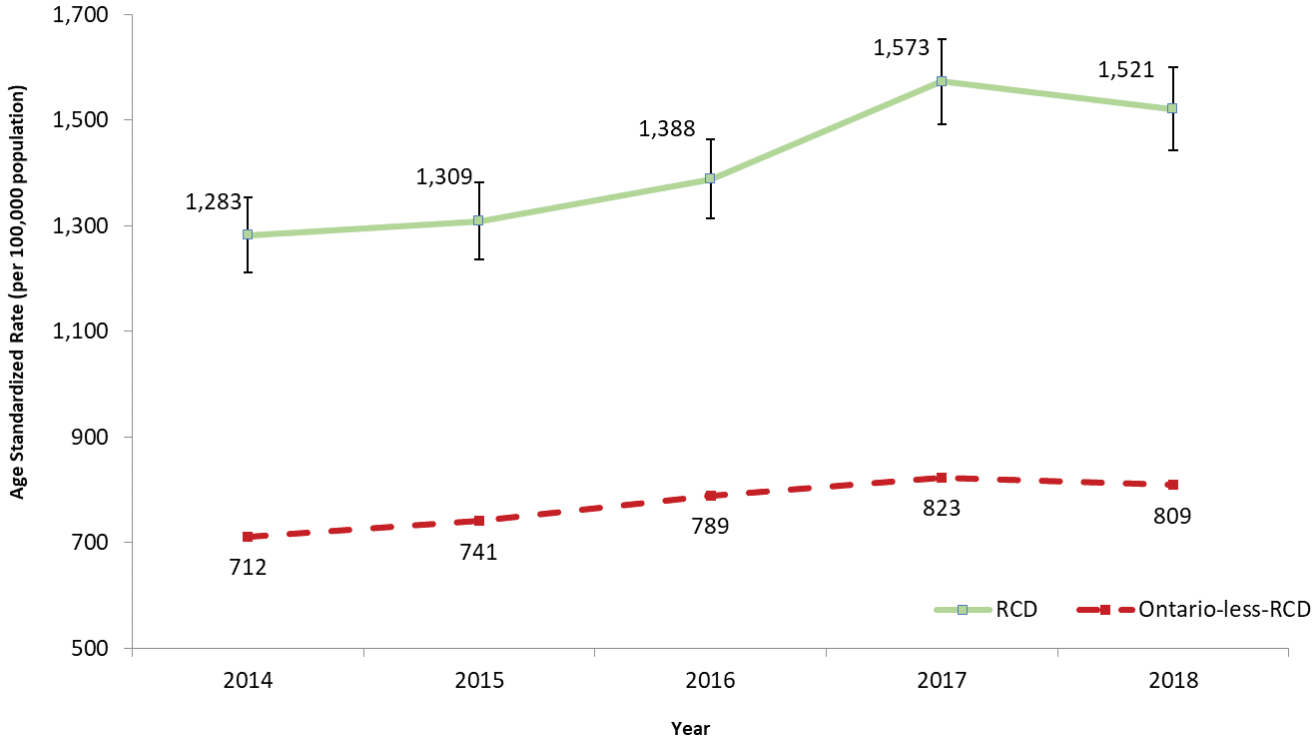
Source: Unscheduled ED visits for mood and anxiety disorders, NACRS Dataset [2009–2018]. Ontario MOHLTC, IntelliHealth Ontario.
Mood and anxiety disorders definition from ICES, 2017 (ICD-10-CA codes: F3, F40-43, F488-F489, F931-F932)
Note: Population estimates were based on Census data
Note: Data displayed above includes repeat visits of the same person for mood and anxiety disorders in the same year

Figure 23: Age standardized rates (per 100,000 population) of emergency department visits for mood and anxiety disorders in RCD, 2009–2018, stratified by sex



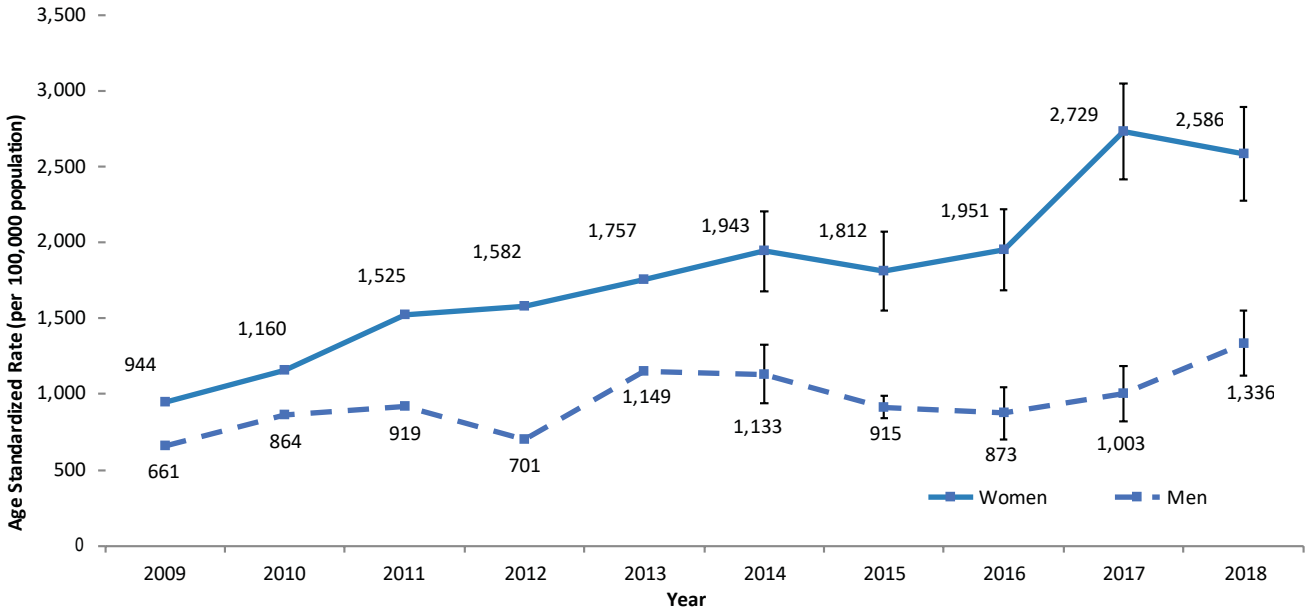
Source: Unscheduled ED visits for mood and anxiety disorders, NACRS Dataset [2009–2018]. Ontario MOHLTC, IntelliHealth Ontario.
Mood and anxiety disorders definition from ICES, 2017 (ICD-10-CA codes: F3, F40-43, F488-F489, F931-F932)
Note: Rates were age standardized to the 2011 Canadian population
Note: Population estimates were based on Census data
Note: Data displayed above includes repeat visits of the same person for mood and anxiety disorders in the same year

Figure 24: Age standardized rates (per 100,000 population) of emergency department visits for mood and anxiety disorders, RCD and Ontario-less-RCD, 2014–2018, urgent, emergent, and resuscitative presenting complaints



Source: Unscheduled ED visits for any mental health or addictions conditions, NACRS Dataset [2014–2018]. Ontario MOHLTC, IntelliHealth Ontario. Based on the Canadian Triage & Acuity Scale (CTAS) levels 1-3.
Mood and anxiety disorders definition from ICES, 2017 (ICD-10-CA codes: F3, F40-43, F488-F489, F931-F932). CTAS levels 1-3: ED visits with urgent, emergent, and resuscitative presenting complaints
Note: Rates were age standardized to the 2011 Canadian population
Note: population estimates were based on Census data
Note: Data displayed above includes repeat visits of the same person for mood and anxiety disorders in the same year

Figure 25: Age specific rates (per 100,000 population) of emergency department visits for mood and anxiety disorders in RCD, 2014–2018, 0–19 years of age



Source: Unscheduled ED visits for mood and anxiety disorders, NACRS Dataset [2009–2018]. Ontario MOHLTC, IntelliHealth Ontario.
Mood and anxiety disorders definition from ICES, 2017 (ICD-10-CA codes: F3, F40-43, F488-F489, F931-F932)
Note: Population estimates were based on Census data
Note: Data displayed above includes repeat visits of the same person for mood and anxiety disorders in the same year

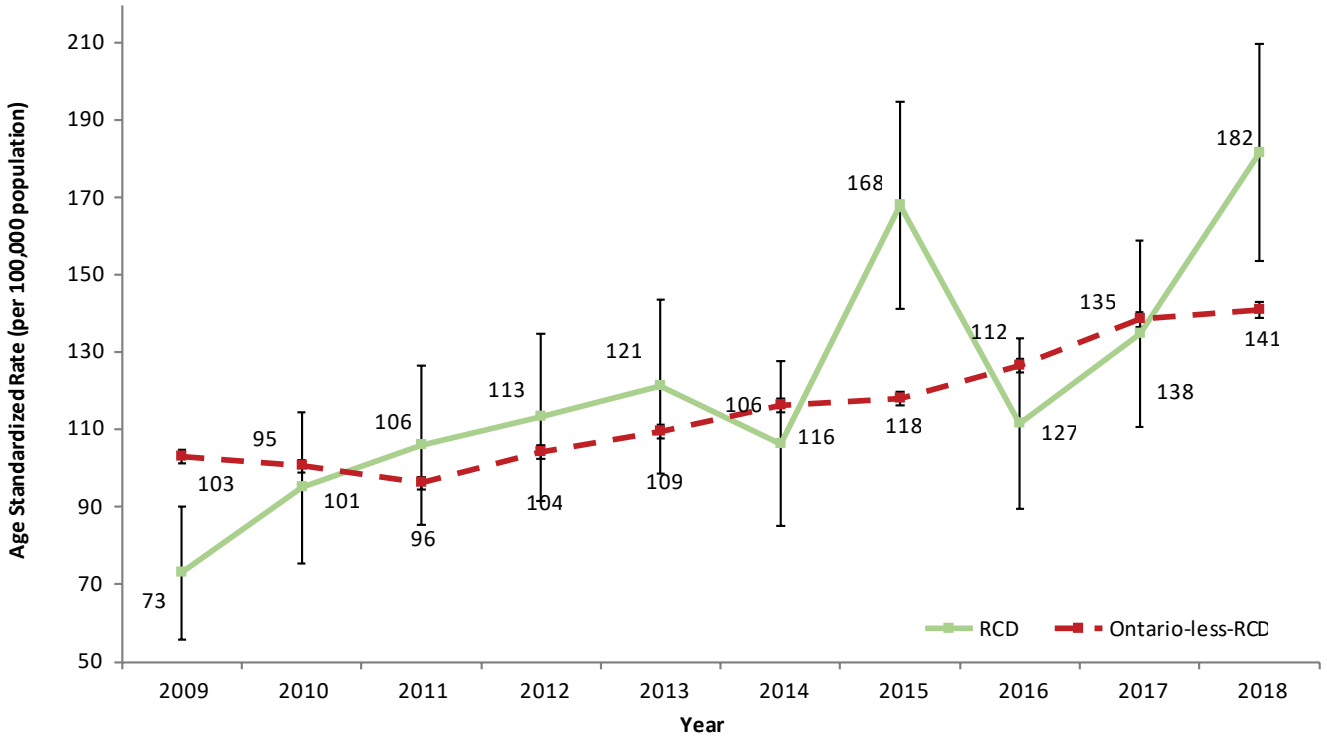
ED Visits for Intentional Self-harm

- Intentional acts of self-harm include acts with or without the intent to die, including scratching skin, bumping skin, cutting, and medication overdose. Local data may underestimate the prevalence of self-harm in RCD, given that ED visits capture cases of self-harm that result in medical attention;
- In 2018, **143** RCD residents made **170** visits to the ED due to intentional self-harm, corresponding with a rate of **182** visits per 100,000 population. This was significantly higher than the rate for Ontario-less-RCD (Figure 26). In most of the years from 2009 to 2018, the differences in ED visit rates for intentional self-harm in RCD were not significantly different from Ontario-less-RCD;
- The rate of ED visits due to intentional self-harm increased by **149.3%** from 2009 to 2018. This increase was mainly driven by an increase in the rate of ED visits among RCD residents 15–24 years of age (Figure 27), and women (Figure 28);
- The rate of ED visits due to intentional self-harm in Ontario-less-RCD increased by **36.9%** from 2009 to 2018;
- The rates of ED visits due to intentional self-harm are higher among RCD residents 15–24 years of age, compared to those in the 25–44 and 45–64 age groups. However, the differences are not statistically significant (Figure 27).

Suicide

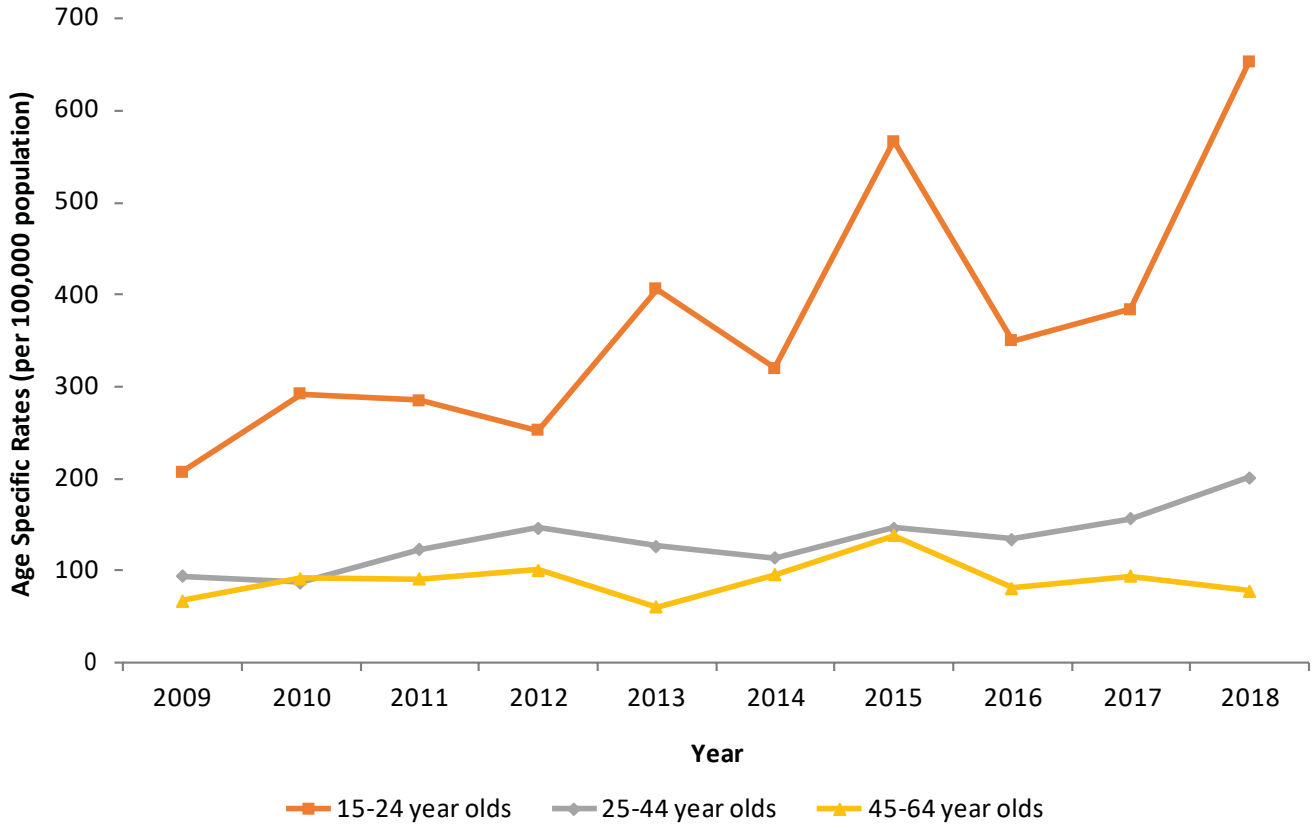
- Suicide is a preventable cause of death and is an important indicator of mental health and resiliency in a population. Due to under reporting and challenges in determining the primary cause of death, the rate of suicide deaths is often underestimated (29-31);
- From 2011 to 2015, the annual average number of suicide deaths in RCD was **15**, corresponding with a rate of **15** suicide deaths per 100,000 population. This was not significantly higher than the rate for Ontario-less-RCD (9 per 100,000 population).

Figure 26: Age standardized rates (per 100,000 population) of emergency department visits for intentional self-harm, RCD and Ontario-less-RCD, 2009–2018



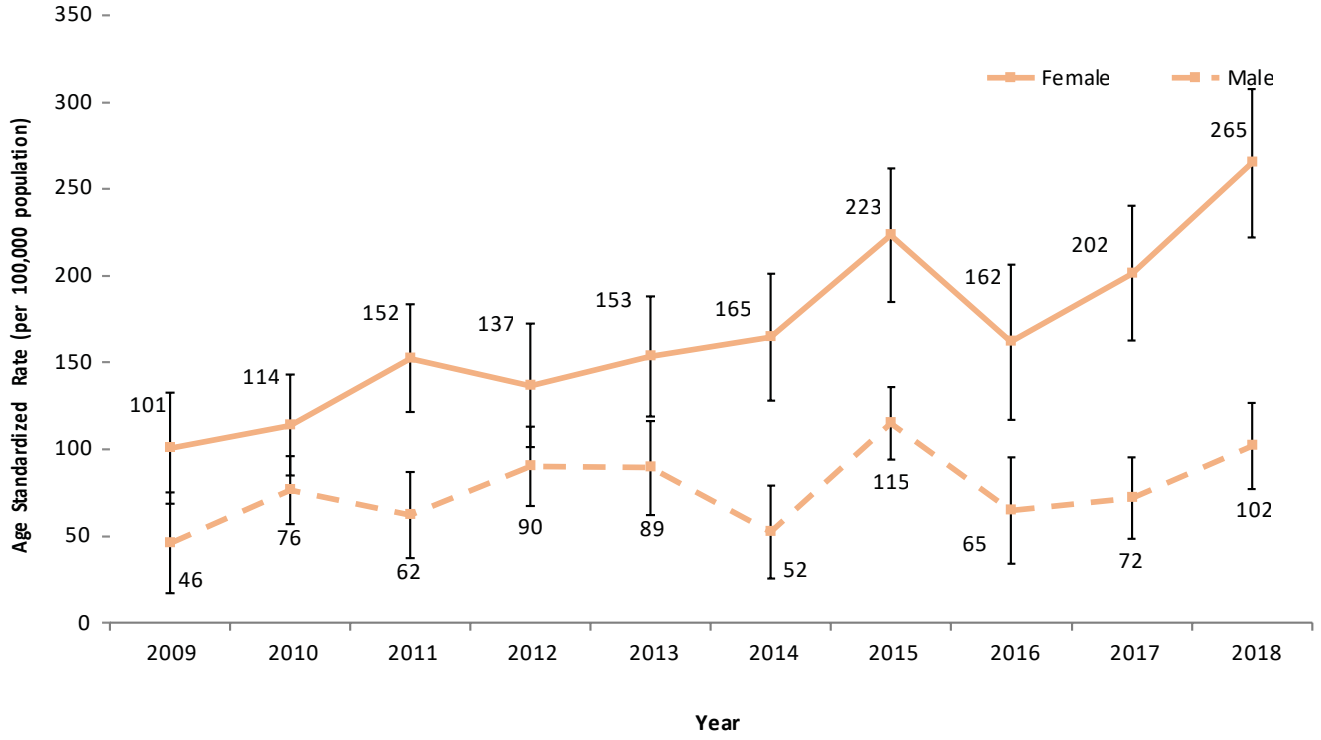
Source: Unscheduled ED visits for intentional self-harm, NACRS Dataset [2009-2018]. Ontario MOHLTC, IntelliHealth Ontario.
Self harm (ICD-10-CA codes: X60-X84, Y870)
Note: Rates were age standardized to the 2011 Canadian population
Note: Population estimates were based on Census data
Note: Data displayed above includes repeat visits of the same person for intentional self-harm in the same year

Figure 27: Age specific rates (per 100,000 population) of emergency department visits for intentional self-harm, RCD and Ontario-less-RCD, 2009-2018



Source: Ambulatory emergency external cause [2009-2018]. Ontario MOHLTC, IntelliHealth Ontario.
Self harm (ICD-10-CA codes: X60-X84, Y870)
Note: Population estimates were based on Census data
Note: Other age groups were supressed due to small numbers
Note: Data displayed above includes repeat visits of the same person for intentional self-harm in the same year

Figure 28: Age standardized rates (per 100,000 population) of emergency department visits for intentional self-harm, RCD and Ontario-less-RCD, 2009-2018, stratified by sex



Source: Ambulatory emergency external cause [2009-2018]. Ontario MOHLTC, IntelliHealth Ontario.
Self-harm (ICD-10-CA codes: X60-X84, Y870)
Note: Rates were age standardized to the 2011 Canadian population
Note: Population estimates were based on Census data
Note: Data displayed above includes repeat visits of the same person for intentional self-harm in the same year

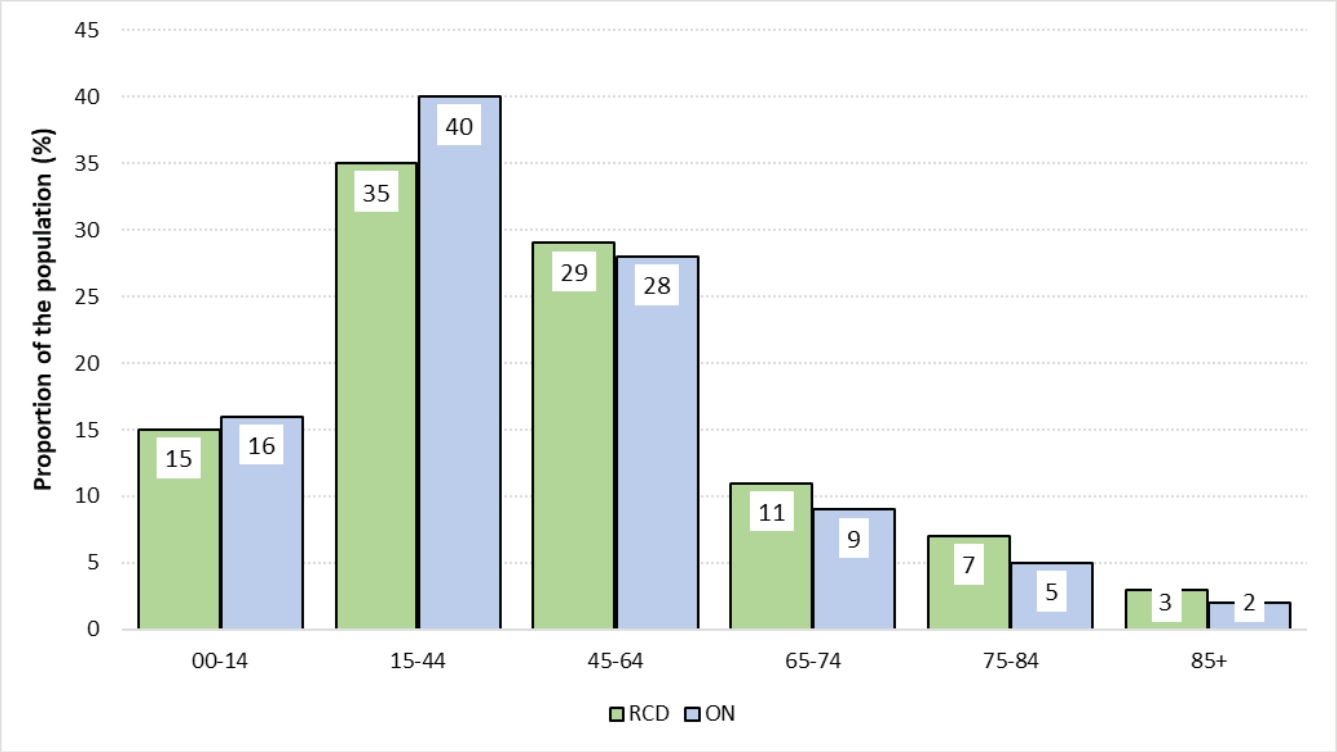
Renfrew County and District Population Demographics and Social Determinants

RCD is in the province of Ontario (ON) and is comprised of the County of Renfrew, the City of Pembroke, the Township of South Algonquin and most of Algonquin Provincial Park. It is located on the west bank of the Ottawa River and extends west into the Madawaska Highlands. According to Census data, the population of RCD in 2016 was 103,593. RCD is a mainly rural area. The population density is 6.9 km^2, which is lower than that of Ontario as a whole (14.8 km^2).

Demographic and socioeconomic characteristics of a community such as marital status, percent of families with children headed by single parents, and unemployment rates may provide context to challenges faced by a community. They may also showcase the level of resiliency of individuals and families. Understanding the demographic and social characteristics of residents in RCD can help shed light on potential determinants of mental health status. Based on the 2016 Census:

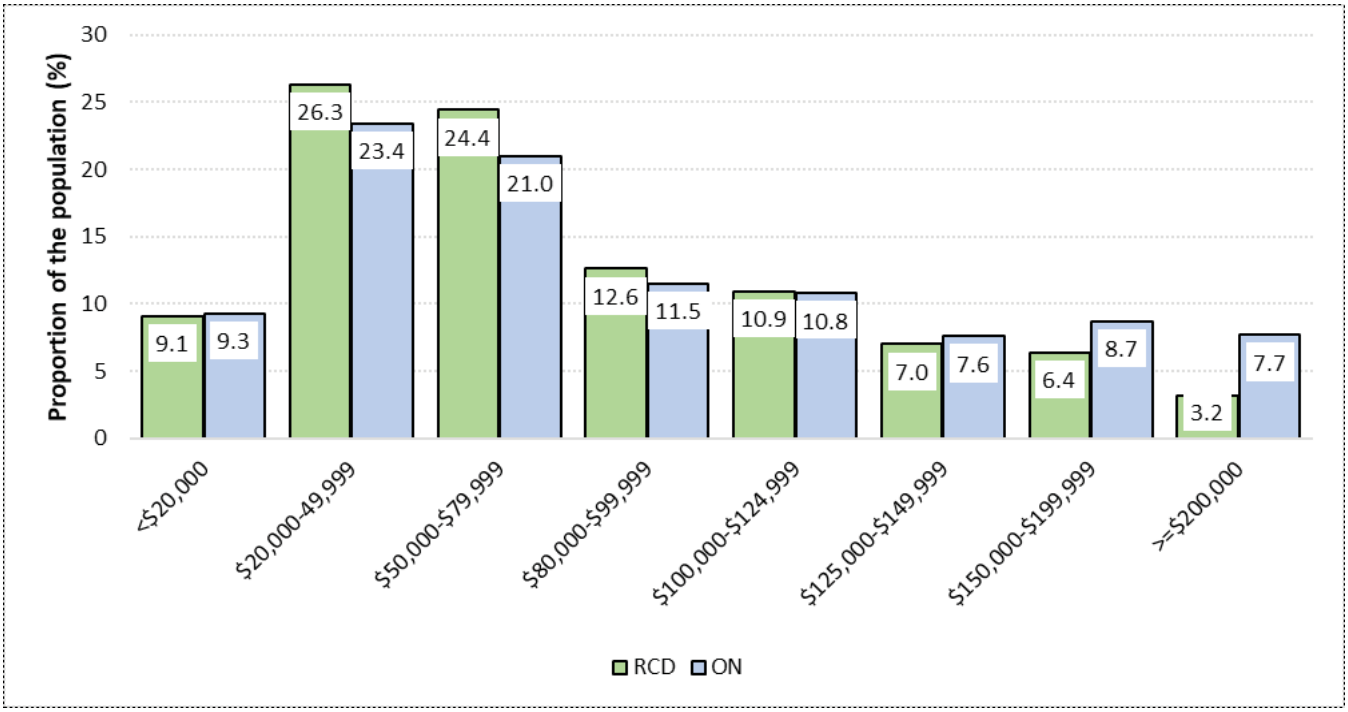
- About one third of RCD residents **(35%)** were 15 to 44 years of age. RCD has a higher proportion of the population aged 45 and older, and a lower proportion aged 0 to 44 compared to Ontario (Figure 29);
- The median age of RCD residents in 2016 was **45 years**, which was 4 years older than the provincial median age of 41.3 years
- **61.2%** of RCD residents were either married or living in common law, followed by **22.3%** who have never been married, and **16.5%** who were separated, divorced or widowed. This distribution of marital status is similar to Ontario as a whole;
- **13.9%** of RCD families with children were headed by single parents, which is lower than the percentage of single parent families in Ontario (**17.1%**)
- In RCD, the percentage of individuals in private households with low income was **13.1%**. This is a smaller percentage than that in Ontario as whole (**14.1%**);
- The household income distribution in RCD was similar to Ontario as a whole, with the majority of residents (**59.8%**) having a household income less than $80,000 (Figure 30);
- The unemployment rate in RCD was **7.2%**, which was similar to Ontario (**7.4%**);
- Most RCD residents (aged 25 to 64 years) had a post-secondary certificate, diploma or degree (**57.0%**), which was lower than the percentage of Ontario residents with a post-secondary certificate, diploma or degree (**65.1%**);
- **8.8%** of households in RCD had a core housing need, meaning that they could not afford suitable and adequate housing in their community. This percentage was higher than that of Ontario as a whole (**6.1%**).

Figure 29: Age distribution in RCD vs. Ontario, 2016



Source: Census 2016 data

Figure 30: Household income in RCD vs. Ontario, 2016



Source: 2016 Census

Summary

Status of Mental Health in Renfrew County and District takes a broad look at mental health in the population through 12 indicators of mental health status.

A large majority of RCD residents age 12 and over reported experiencing aspects of positive mental health (2015 to 2017). They felt satisfied or very satisfied with life in general; had a strong or somewhat strong sense of belonging to the local community; and perceived their own mental health as being excellent or very good. Those who had graduated from post secondary school, were employed, and were in the highest income quintile were more likely to report positive mental health.

A smaller but substantial proportion of residents age 12 and over reported aspects of poor mental health or mental illness (2015 – 2017). They reported that most days were quite a bit or extremely stressful, or that they had been diagnosed with a mood or anxiety disorder. Residents age 65 and over were less likely to report high life stress. Residents living in a population centre (10,000 or more people) and those that were unemployed were more likely to report having been diagnosed with a mood or anxiety disorder. Mental health concerns during pregnancy have been increasing, particularly among women under age 25.

In both Ontario and RCD, more and more people sought health care for help with mental health and addictions, mood and anxiety disorders and intentional self-harm over the ten-year period examined in this report (2009 - 2018). In RCD the increases in health care use were mainly driven by people aged 15 to 24, females, and people age 25–44:

- The largest increases in ED visits for mental health and addictions conditions, mood and anxiety disorders, and intentional self-harm were among people age 15 to 24
- ED visits for mental health and addictions conditions, mood and anxiety disorders, and intentional self-harm were consistently higher among females
- The greatest increase in outpatient physician visits for mental health and addictions conditions was among people age 25 to 44

The use of hospital and physician-based mental health care services were significantly higher in RCD than in Ontario-less-RCD in the most recent years included in this report (2018 and 2017), and were consistently higher in RCD over the 10-year period examined in this report for three of the five indicators of mental health care use.

Outpatient visits to physicians for any mental health and addictions conditions increased substantially in RCD and are more common than any of the other mental health care indicators examined in this report. In 2009 and 2010, outpatient physician visit rates were lower than in Ontario-less-RCD. In contrast, outpatient physician visit rates were consistently higher from 2011 to 2017.

The suicide rate in RCD was 15 per 100,000 population on average between 2011 and 2015. This was higher but not significantly different from Ontario-less-RCD.

Conclusions

Health inequities in self-reported mental health related to income, education, employment and residence (population centre vs. rural area) were identified. These findings of inequities are consistent with inequities in mental health found in other Canadian settings. Mental health concerns during pregnancy have been increasing, particularly among women under age 25. Certain population groups have the greatest need for mental health care services (ages 15 – 24, females, and ages 25 – 44).

There is consistently higher use of hospital and physician-based mental health care services in RCD compared to Ontario-less-RCD. In both jurisdictions, emergency department visit rates, hospitalization rates and outpatient physician visit rates increased steadily over the 10-year period examined in the report.

This data does not tell the whole story. Rather, it leads to more questions: What are some of the reasons for increases in the use of mental health care services? Why are certain population groups more affected than others? What changes would make a difference to the status of mental health at the population level? What should be the focus of mental health promotion efforts?

This report can be used by Renfrew County and District Health Unit and community partners to inform programs, services, and policies that promote positive mental health in our community. Information on populations with a greater risk of experiencing poor mental health can be used to help target programs and services to those who need them the most. RCDHU is committed to working in collaboration with the many community partners that are addressing mental health needs, in order to improve the mental health and well-being of Renfrew County and District residents.

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Appendix 1: Data Tables for Figures

Table 1: Percentage of RCD residents, 12 years of age and older, who reported having excellent or very good mental health (2015-2017)

Sociodemographic Factor	Percent of the Population	Confidence Interval
RCD overall	71.0	66.5–75.2
Ontario-less-RCD	70.7	70.0–71.4
Sex		
Men	73.1	66.7–78.7
Women	69.2	63.7–74.3
Age		
12 to 19 years	70.7	58.7–80.3
20 to 44 years	78.1	70.7–84.0
45 to 64 years	65.0	57.7–71.7
65+ years	70.6	63.3–77.0
Household Income		
Quintile 1	57.6^	49.6–65.3
Quintile 2	68.9	58.5–77.6
Quintile 3	75.1	64.4–83.5
Quintile 4	71.8	61.9–80.0
Quintile 5	81.3	74.6–86.6
Education		
No secondary school graduation	41.3^	26.4–57.9
Secondary school graduation	66.7	55.5–76.3
Post-secondary diploma/degree	74.9	69.9–79.3

^Estimate is associated with high statistical variability and to be interpreted with caution

Table 2: Percentage of RCD residents, 12 years of age and older, who reported being very satisfied or satisfied with life in general, in the past year (2015–2017)

Sociodemographic Factor	Percent of the Population	Confidence Interval
RCD overall	91.9	89.0–94.1
Ontario-less-RCD	92.6	92.2–93.0
Sex		
Men	92.5	88.3–95.3
Women	91.5	87.3–94.4
Age		
12 to 19 years	94.7	81.4–98.6
20 to 44 years	96.3	91.7–98.4
45 to 64 years	87.9	83.0–91.6
65+ years	90.9	83.7–95.1
Employment		
Employed as of Last Week	95.9	91.7–98.0
Unemployed as of Last Week	85.8	81.2–89.3

Table 3: Percentage of RCD residents, 12 years of age and older, who reported very strong or somewhat strong sense of community belonging (2015-2017)

Demographic Factor	Percent of the Population	Confidence Interval
RCD overall	78.5	74.9–81.7
Ontario-less-RCD	71.1	70.3–71.9
Sex		
Men	76.8	70.7–82.1
Women	80.3	75.9–84.0
Age		
12 to 19 years	83.8	70.1–92.0
20 to 44 years	74.7	65.7–81.9
45 to 64 years	77.8	69.5–84.4
65+ years	83.9	79.4-–87.5

Table 4: Percentage of RCD residents, 12 years of age and older, who reported perceiving most days in their life being quite a bit or extremely stressful (2015–2017)

Demographic Factor	Percent of the Population	Confidence Interval
RCD overall	16.7	14.0–19.8
Ontario-less-RCD	21.6	20.9–22.3
Sex		
Men	13.8^	9.7–19.1
Women	20.2	15.9–23.4
Age		
12 to 19 years	13.3^	6.9–24.1
20 to 44 years	19.5^	13.1–27.8
45 to 64 years	23.3	18.0–29.7
65+ years	6.4^	4.2–9.7

^Estimate is associated with high statistical variability and to be interpreted with caution

Table 5: Percentage of RCD residents, 12 years of age and older, who reported being diagnosed by a mental health professional as having a mood disorder (2015–2017)

Demographic Factor	Percent of the Population	Confidence Interval
RCD overall	10.9	8.6–13.7
Ontario-less-RCD	8.7	8.3–9.1
Sex		
Men	9.5^	6.2–14.2
Women	12.2^	8.4–17.4
Age		
12 to 19 years	NR	
20 to 44 years	10.9^	7.0–16.6
45 to 64 years	13.4^	9.0–19.4
65+ years	7.7^	5.5–10.7

^Estimate is associated with high statistical variability and to be interpreted with caution
NR: Not reportable

Table 6: Percentage of RCD residents, 12 years of age and older, who reported being diagnosed by a mental health professional as having an anxiety disorder (2015-2017)

Sociodemographic Factor	Percent of the Population	Confidence Interval
RCD overall	10.7	8.2–14.0
Ontario-less-RCD	8.7	8.3–9.1
Sex		
Men	8.9^	6.3–12.5
Women	12.4^	8.1–18.6
Age		
12 to 19 years	NR	
20 to 44 years	12.2^	7.6–19.1
45 to 64 years	11.8^	7.3–18.5
65+ years	6.8^	4.1–11.3
Household Income		
Quintile 1	20.5^	13.4–30.1
Quintile 2	10.7^	6.0–18.4
Quintile 3	7.2^	3.9–12.5
Quintile 4	9.7^	5.7–16.2
Quintile 5	NR	
Employment		
Employed as of Last Week	7.8^	5.6–10.9
Unemployed as of Last Week	17.3	12.6–23.2

^Estimate is associated with high statistical variability and to be interpreted with caution
NR: Not reportable

Table 7: Age standardized rates (per 100,000 population) of emergency department visits for any mental health and addictions conditions, RCD and Ontario-less-RCD, 2009–2018

	RCD		Ontario-less-RCD	
Year	Age-standardized Rate	Confidence Interval	Age-standardized Rate	Confidence Interval
2009	2,445	2,351–2,542	1,457	1,451–1,464
2010	2,604	2,506–2,704	1,534	1,527–1,541
2011	2,730	2,631–2,833	1,595	1,589–1,602
2012	2,553	2,457–2,652	1,689	1,682–1,696
2013	2,492	2,397–2,589	1,722	1,715–1,729
2014	2,749	2,649–2,852	1,790	1,783–1,797
2015	2,710	2,610–2,813	1,883	1,876–1,890
2016	2,862	2,759–2,968	2,006	1,998–2,013
2017	3,336	3,224–3,450	2,124	2,116–2,131
2018	3,388	3,276–3,503	2,166	2,158–2,173

Table 8: Age specific rates (per 100,000 population) of emergency department visits for any mental health and addictions conditions in RCD, 2009–2018

Year	5–14 Years	15–24 Years	25–44 Years	45–64 Years	65+ Years
2009	732	4,218	3,641	2,467	1,267
2010	815	4,264	3,936	2,527	1,533
2011	779	5,333	3,882	2,582	1,523
2012	974	4,642	3,747	2,434	1,327
2013	1,090	5,064	3,474	2,345	1,231
2014	1,155	5,506	4,066	2,434	1,320
2015	936	5,558	3,835	2,442	1,471
2016	1,052	5,889	3,963	2,527	1,618
2017	1,066	7,326	4,720	2,891	1,677
2018	1,467	8,139	4,526	2,580	1,930

Table 9: Age standardized rates (per 100,000 population) of emergency department visits for any mental health and addictions conditions in RCD, 2009–2018, stratified by sex

Year	Women	Confidence Interval	Men	Confidence Interval
2009	2,668	2,528–2,814	2,232	2,106–2,364
2010	2,760	2,617–2,909	2,443	2,311–2,580
2011	3,013	2,864–3,168	2,465	2,333–2,602
2012	2,863	2,717–3,014	2,248	2,122–2,379
2013	2,686	2,545–2,832	2,302	2,174–2,435
2014	3,105	2,952–3,264	2,419	2,288–2,555
2015	3,190	3,034–3,352	2,276	2,148–2,409
2016	3,187	3,030–3,350	2,564	2,429–2,705
2017	3,733	3,564–3,908	2,970	2,824–3,121
2018	3,803	3,633–3,980	2,985	2,839–3,136

Table 10: Age specific rates (per 100,000 population) of emergency department visits for any mental health and addictions conditions in RCD, 2014–2018, 0-19 years of age

Year	Women	Men
2009	1,712	1,406
2010	1,807	1,525
2011	2,287	1,624
2012	2,222	1,343
2013	2,593	1,815
2014	2,877	1,795
2015	2,879	1,662
2016	2,763	1,464
2017	3,560	1,662
2018	3,961	2,258

Table 11: Age standardized rates (per 100,000 population) of emergency department visits for any mental health and addictions conditions, RCD and Ontario-less-RCD, 2014–2018, urgent, emergent, and resuscitative presenting complaints

	RCD		Ontario-less-RCD	
Year	Age-standardized Rate	Confidence Interval	Age-standardized Rate	Confidence Interval
2014	2,057	1,968–2,148	1,533	1,526–1,540
2015	2,123	2,032–2,217	1,615	1,608–1,622
2016	2,218	2,125–2,314	1,732	1,725–1,739
2017	2,574	2,474–2,678	1,823	1,816–1,830
2018	2,458	2,360–2,560	1,840	1,833–1,847

Table 12: Age standardized rates (per 100,000 population) of hospitalizations for any mental health and addictions conditions, RCD and Ontario-less-RCD, 2009–2018

	RCD		Ontario-less-RCD	
Year	Age-standardized Rate	Confidence Interval	Age-standardized Rate	Confidence Interval
2009	885	828–945	513	509–517
2010	910	853–971	525	521–529
2011	987	927–1,050	509	505–513
2012	1,000	939–1,063	564	560–568
2013	957	898–1,019	571	567–575
2014	1,045	983–1,110	575	571–580
2015	1,010	948–1,074	589	584–593
2016	1,052	989–1,118	622	617–626
2017	972	912–1,036	629	625–633
2018	1,013	951–1,078	625	621–630

Table 13: Age specific rates (per 100,000 population) of hospitalizations for any mental health and addictions conditions in RCD, 2009–2018

Year	5–14 Years	15–24 Years	25–44 Years	45–64 Years	65+ Years
2009	150	304	239	210	297
2010	145	344	171	281	273
2011	93	331	202	282	458
2012	103	391	159	290	461
2013	160	367	150	216	386
2014	95	321	205	220	402
2015	66	361	127	277	548
2016	76	408	167	194	578
2017	131	376	184	215	505
2018	93	458	171	262	538

Table 14: Age standardized rates (per 100,000 population) of hospitalizations for any mental health and addictions conditions in RCD, 2009–2018, stratified by sex

Year	Women	Confidence Interval	Men	Confidence Interval
2009	933	851–1,022	831	754–913
2010	899	819–986	912	832–998
2011	1,056	969–1,150	911	831–997
2012	968	884–1,057	1,017	932–1,108
2013	984	899–1,075	924	843–1,011
2014	1,082	991–1,178	1,013	928–1,104
2015	1,164	1,069–1,264	865	787–949
2016	1,154	1,059–1,255	958	874–1,046
2017	1,087	996–1,184	864	786–949
2018	1,051	960–1,147	976	893–1,066

Table 15: Age standardized rates (per, 1000 population) of outpatient physician visits due to mental health and addictions conditions, RCD and Ontario-less-RCD, 2009–2017

	RCD		Ontario-less-RCD	
Year	Age-standardized Rate	Confidence Interval	Age-standardized Rate	Confidence Interval
2009	519	515–524	609	609–610
2010	599	594–604	642	642–643
2011	748	743–753	679	679–680
2012	765	759–770	687	686–687
2013	744	739–750	687	686–687
2014	796	791–802	697	697–698
2015	823	818–829	716	716–171
2016	870	864–876	736	735–736
2017	881	875–887	741	741–741

Table 16: Age specific rates (per, 1000 population) of outpatient physician visits due to mental health and addictions conditions in RCD, 2009–2017

Year	5–14 Years	15–24 Years	25–44 Years	45–64 Years	65+ Years
2009	222	505	639	620	508
2010	237	614	782	679	544
2011	241	818	1,128	760	556
2012	274	778	1,183	779	548
2013	295	729	1,139	754	554
2014	317	734	1,323	761	532
2015	343	751	1,374	792	515
2016	347	770	1,460	818	595
2017	386	788	1,440	855	578

Table 17: Age standardized rates (per, 1000 population) of outpatient physician visits for mental health and addictions conditions in RCD, 2009–2017 [distinct visits], stratified by sex

Year	Women	Confidence Interval	Men	Confidence Interval
2009	610	604–617	429	423–435
2010	669	662–676	530	524–536
2011	810	802–818	686	679–693
2012	819	811–818	710	703–717
2013	800	792–827	688	680–695
2014	852	844–808	742	734–749
2015	901	892–861	750	742–757
2016	942	934–909	802	794–810
2017	958	949–951	807	799–815

Table 18: Age specific rates (per, 1000 population) of outpatient physician visits for mental health and addictions conditions in RCD, 2009–2017, 0–19 years of age

Year	Women	Men
2009	249	266
2010	265	274
2011	315	312
2012	304	320
2013	326	322
2014	351	347
2015	412	374
2016	384	363
2017	442	384
2018	249	266

Table 19: Age standardized rates (per 100,000 population) of emergency department visits for mood and anxiety disorders, RCD and Ontario-less-RCD, 2009–2018

	RCD		Ontario-less-RCD	
Year	Age-standardized Rate	Confidence Interval	Age-standardized Rate	Confidence Interval
2009	1,584	1,508–1,664	710	706–715
2010	1,724	1,644–1,807	741	737–746
2011	1,848	1,765–1,934	776	771–781
2012	1,680	1,601–1,762	823	818–728
2013	1,691	1,611–1,774	833	828–838
2014	1930	1,844–2,018	861	856–866
2015	1,854	1,769–1,942	893	888–898
2016	1,972	1,884–2,063	944	939–950
2017	2,310	2,214–2,407	987	982–992
2018	2,350	2,254–2,449	984	979–989

Table 20: Age specific rates (per 100,000 population) of emergency department visits for mood and anxiety disorders in RCD, 2009–2018

Year	5–14 Years	15–24 Years	25–44 Years	45–64 Years	65+ Years
2009	309	1,972	1,744	1,180	729
2010	380	2,057	1,849	1,232	922
2011	371	2,411	1,828	1,252	852
2012	440	2,191	1,719	1,204	625
2013	451	2,368	1,614	1,144	568
2014	578	2,773	1,889	1,089	622
2015	426	2,791	1,908	1,165	617
2016	578	3,082	1,737	1,194	655
2017	617	3,559	2,178	1,347	755
2018	631	3,743	2,162	1,264	858

Table 21: Age standardized rates (per 100,000 population) of emergency department visits for mood and anxiety disorders in RCD, 2009–2018, stratified by sex

Year	Women	Confidence Interval	Men	Confidence Interval
2009	1,930	1,808–2,057	1,259	1,164–1,359
2010	2,070	1,944–2,201	1,390	1,290–1,495
2011	2,257	2,126–2,395	1,463	1,361–1,570
2012	2,139	2,011–2,273	1,242	1,148–1,342
2013	2,038	1,912–2,169	1,363	1,264–1,468
2014	2,341	2,205–2,483	1,548	1,442–1,660
2015	2,372	2,233–2,516	1,382	1,281–1,488
2016	2,444	2,303–2,592	1,538	1,431–1,649
2017	2,854	2,701–3,012	1,804	1,689–1,926
2018	2,895	2,740–3,055	1,836	1,719–1,958

Table 22: Age standardized rates (per 100,000 population) of emergency department visits for mood and anxiety disorders, RCD and Ontario-less-RCD, 2014–2018, urgent, emergent, and resuscitative presenting complaints

	RCD		Ontario-less-RCD	
Year	Age-standardized Rate	Confidence Interval	Age-standardized Rate	Confidence Interval
2014	1,283	1,212–1,356	712	707–716
2015	1,309	1,238–1,238	741	736–745
2016	1,388	1,315–1,315	789	785–794
2017	1,573	1,495–1,495	823	819–828
2018	1,521	1,443–1,443	809	804–813

Table 23: Age specific rates (per 100,000 population) of emergency department visits for mood and anxiety disorders in RCD, 2014–2018, 0–19 years of age

Year	Women	Men
2009	944	661
2010	1,160	864
2011	1,525	919
2012	1,582	701
2013	1,757	1,149
2014	1,943	1,133
2015	1,812	915
2016	1,951	873
2017	2,729	1,003
2018	2,586	1,336

Table 24: Age standardized rate (per 100,000 population) of intentional self-harm related ED visits, RCD and Ontario-less-RCD, 2009–2018

	RCD		Ontario-less-RCD	
Year	Age-standardized Rate	Confidence Interval	Age-standardized Rate	Confidence Interval
2009	73	57–92	103	101–105
2010	95	771–169	101	99–102
2011	106	87–128	96	95–98
2012	113	93–136	104	102–106
2013	121	100–145	109	108–111
2014	106	87–129	116	114–118
2015	168	143–196	118	116–120
2016	112	91–135	127	125–128
2017	135	112–160	138	137–140
2018	182	155–211	141	139–143

Table 25: Age specific rate (per 100,000 population) of intentional self-harm related ED visits, RCD and Ontario-less-RCD, 2009–2018

Year	15–24 Years	25–44 Years	45–64 Years
2009	208	94	68
2010	292	87	92
2011	285	123	91
2012	253	147	101
2013	406	127	60
2014	321	114	96
2015	566	147	138
2016	350	135	81
2017	384	157	94

Note: age groups 5–14 years and 65+ are not reportable

Table 26: Age standardized rate (per 100,000 population) of intentional self-harm related ED visits, RCD and Ontario-less-RCD, 2009–2018, stratified by sex

Year	Women	Confidence Interval	Men	Confidence Interval
2009	101	75–133	46	30–69
2010	114	86–148	76	55–104
2011	152	120–191	62	43–88
2012	137	105–174	90	66–120
2013	153	120–193	89	65–119
2014	165	129–206	52	34–76
2015	223	182–271	115	87–149
2016	162	126–204	65	45–91
2017	202	162–247	72	50–100
2018	265	219–318	102	76–134