Appendix 1: Supplementary tables

Appendix to:

Contents

Table A1: Sex-specific and age-standardized prevalence of CPCSSN validated chronic conditions in adults

	Male (n=493,777)	Female (n=641,203)	All (n=1,134,980)
	Prevalence (age standardized[1])	Prevalence (age standardized[1])	Prevalence (age and sex standardized[1])
	% [95% CI]	% [95% CI]	% [95% CI]
Without CPPSSN Validated Chronic Condition[2]	35.3 [35.1, 35.4]	35.7 [35.5, 35.8]	35.5 [35.4, 35.6]
Chronic Kidney Disease	3.7 [3.7, 3.7]	4.6 [4.6, 4.7]	4.2 [4.1, 4.2]
Chronic Obstructive Pulmonary Disease	4.1 [4.1, 4.2]	3.7 [3.6, 3.7]	3.9 [3.8, 3.9]
Dementia	1.7 [1.6, 1.7]	2.2 [2.1, 2.2]	1.9 [1.9, 1.9]
Depression	18.4 [18.3, 18.5]	27.3 [27.2, 27.4]	23 [22.9, 23.1]
Diabetes Mellitus	11.9 [11.8, 12]	9.7 [9.6, 9.7]	10.8 [10.7, 10.8]
Dyslipidemia	38.8 [39.7, 39.5]	30.9 [30.8, 31]	35.2 [35.1, 35.3]
Epilepsy	1.6 [1.5, 1.6]	1.5 [1.4, 1.5]	1.5 [1.5, 1.5]
Hypertension	22.7 [22.6, 22.8]	21.5 [21.4, 21.6]	22.1 [22, 22.2]
Obesity	22.9 [22.7, 23]	23.1 [22.9, 23.2]	23 [22.9, 23.1]
Osteoarthritis	7.9 [7.8, 7.9]	10.9 [10.8, 10.9]	9.4 [9.4, 9.5]
Parkinson's Disease	0.4 [0.4, 0.5]	0.3 [0.3, 0.3]	0.4 [0.4, 0.4]

Notes: Data source: Canadian Primary Care Sentinel Surveillance Network, Q4-2019. Patients with at least 1 clinical encounter between Jan 1, 2018 and Dec 31, 2019.
Chi square test (difference between males and females) was <.0001 for all disease groups.
[1] 2016 Canadian Census. [2] Chronic Kidney Disease, Chronic Obstructive Pulmonary Disease, Dementia, Depression, Diabetes Mellitus, Dyslipidemia, Epilepsy, Hypertension, Obesity, Osteoarthritis, Parkinson's Disease.

Table A2: Sex-specific and age-standardized prevalence of CPCSSN validated chronic conditions in children

	Male (n=135,267)	Female (n=131,130)	All (n=266,397)
	Prevalence (age standardized[1])	Prevalence (age standardized[1])	Prevalence (age and sex standardized[1])
	% [95% CI]	% [95% CI]	% [95% CI]
Without CPPSSN Validated Chronic Conditions[2]	75.3 [74.8, 75.8]	80 [79.5, 80.5]	77.6 [77.3, 77.9]
Asthma	19.8 [19.6, 20.1]	15.7 [15.5, 15.9]	17.8 [17.7, 18]
Diabetes Mellitus	0.4 [0.4, 0.4]	0.5 [0.4, 0.5]	0.4 [0.4, 0.5]
Obesity	6.3 [6.2, 6.5]	5.1 [5, 5.2]	5.7 [5.6, 5.8]
Notes: Data source: Canadian Primary Care Sentinel Surveillance Network, Q4-2019. Patients with at least 1 clinical encounter between Jan 1, 2018 and Dec 31, 2019. Chi square test (difference between males and females) was <.0001 for all disease groups. [1] 2016 Canadian Census. [2] Asthma, Diabetes Mellitus, Obesity.			

Table A3: Median number of primary care service days between Jan 1, 2019 and Dec 31, 2019 in adults for CPCSSN validated conditions

	Male (n=493,777)			Female (n=641,203)			All (n=1,134,980)			
	Median	IQR (Q1, Q3)	Range	Median	IQR (Q1, Q3)	Range	Median	IQR (Q1, Q3)	Range	*p-value
Without CPPSSN Validated Chronic Condition[1]	0	2 (0,2)	102	1	3 (0,3)	140	1	2 (0,4)	140	<0.0001
Chronic Kidney Disease	4	6 (1,7)	245	4	7 (1,8)	230	4	6 (1,7)	245	0.0738
Chronic Obstructive Pulmonary Disease	3	7 (0,7)	128	4	8 (0,8)	174	3	7 (0,7)	174	<0.0001
Dementia	3	7 (0,7)	216	3	7 (0,7)	237	3	7 (0,7)	237	0.0709
Depression	2	5 (0,5)	171	3	6 (0,6)	237	3	6 (0,6)	237	<0.0001
Diabetes Mellitus	3	5 (1,6)	299	4	7 (0,7)	217	3	5 (1,6)	299	<0.0001
Dyslipidemia	2	5 (0,5)	216	3	4 (1,5)	237	2	5 (0,5)	237	<0.0001
Epilepsy	2	5 (0,5)	245	3	5 (1,6)	154	3	6 (0,6)	245	<0.0001
Hypertension	3	5 (1,6)	299	3	5 (1,6)	237	3	5 (1,6)	299	<0.0001
Obesity	2	4 (0,4)	299	2	5 (0,5)	230	2	5 (0,5)	299	<0.0001
Osteoarthritis	3	5 (1,6)	165	3	6 (1,7)	174	3	5 (1,6)	174	<0.0001
Parkinson's Disease	3	7 (0,7)	76	3	7 (0,7)	105	3	7 (0,7)	105	0.6408

Note: Data source: Canadian Primary Care Sentinel Surveillance Network, Q4-2019. Patients with at least 1 clinical encounter between Jan 1, 2018 and Dec 31, 2019.
[1] Chronic Kidney Disease, Chronic Obstructive Pulmonary Disease, Dementia, Depression, Diabetes Mellitus, Dyslipidemia, Epilepsy, Hypertension, Obesity, Osteoarthritis, Parkinson's Disease.

*Wilcoxon rank sum test. The Wilcoxon rank sum tests for differences in the sum of ranks. With large samples it is possible that significant p values can be calculated when the medians are equal and there are small differences in the sum of ranks between the groups. NB: the Wilcoxon rank sum test and Mann-Whitney are synonymous.
See: Introduction to SAS. UCLA: Statistical Consulting Group.
from https://stats.idre.ucla.edu/sas/modules/sas-learning-moduleintroduction-to-the-features-of-sas/ (accessed August 22, 2016). FAQ: Why Is The Mann-Whitney Significant When The Medians Are Equal?

Table A4: Median number of primary care service days between Jan 1, 2019 and Dec 31, 2019 in children for CPCSSN validated conditions

	Male (n=135,267)			Female (n=131,130)			All (n=266,397)			
	Median	IQR (Q1,Q3)	Range	Median	IQR (Q1,Q3)	Range	Median	IQR (Q1,Q3)	Range	*p-value
Without CPPSSN Validated Chronic Condition[1]	0	2 (0,2)	139	0	2 (0,2)	45	1	2 (0,2)	139	<0.0001
Asthma	1	3 (0,3)	94	1	3 (0,3)	41	1	3 (0,3)	94	<0.0001
Diabetes Mellitus	0	2 (0,2)	18	1	2 (0,2)	22	0	2 (0,2)	22	0.1563
Obesity	1	2 (0,2)	23	1	2 (0,2)	28	1	2 (0,2)	28	0.0400
Note: Data source: Canadian Primary Care Sentinel Surveillance Network, Q4-2019. Patients with at least 1 clinical encounter between Jan 1, 2018 and Dec 31, 2019. [1] Asthma, Diabetes Mellitus, Obesity.										

*Wilcoxon rank sum test. The Wilcoxon rank sum tests for differences in the sum of ranks. With large samples it is possible that significant p values can be calculated when the medians are equal and there are small differences in the sum of ranks between the groups. NB: the Wilcoxon rank sum test and Mann-Whitney are synonymous.

See: Introduction to SAS. UCLA: Statistical Consulting Group.

from https://stats.idre.ucla.edu/sas/modules/sas-learning-moduleintroduction-to-the-features-of-sas/ (accessed August 22, 2016). FAQ: Why Is The Mann-Whitney Significant When The Medians Are Equal?

Table A5: Sex-specific and age-standardized prevalence of multiple chronic conditions in adults

	Male (n=493,777)	Female (n=641,203)	All (n=1,134,980)
	Prevalence (age standardized[1])	Prevalence (age standardized[1])	Prevalence (age and sex standardized[1])
	% [95% CI]	% [95% CI]	% [95% CI]
Without CPPSSN validated chronic condition[2]	35.3 [35.1, 35.4]	35.7 [35.5, 35.8]	35.5 [35.4, 35.6]
1 condition	26.8 [26.7, 27]	27.5 [27.4, 27.7]	27.2 [27.1, 27.3]
2 conditions	18.3 [18.1, 18.4]	17 [16.9, 17.1]	17.6 [17.6, 17.7]
3 or more conditions	19.6 [19.5, 19.8]	19.8 [19.7, 19.9]	19.7 [19.6, 19.8]
Note: Data source: Canadian Primary Care Sentinel Surveillance Network, Q4-2019. Patients with at least 1 clinical encounter between Jan 1, 2018 and Dec 31, 2019. Chi square test (difference between males and females) was <.0001 for all disease groups. [1] 2016 Canadian Census. [2] Chronic Kidney Disease, Chronic Obstructive Pulmonary Disease, Dementia, Depression, Diabetes Mellitus, Dyslipidemia, Epilepsy, Hypertension, Obesity, Osteoarthritis, Parkinson's Disease.			

Table A6: Sex-specific and age-standardized prevalence of multiple chronic conditions in children

	Male (n=135, 267)	Female (n=131,130)	All (n=266,397)
	Prevalence (age standardized[1])	Prevalence (age standardized[1])	Prevalence (age and sex standardized[1])
	% [95% CI]	% [95% CI]	% [95% CI]
Without CPPSSN validated chronic condition[2]	75.3 [74.8, 75.8]	80 [79.5, 80.5]	77.6 [77.3, 77.9]
1 condition	22.9 [22.6, 23.1]	22.9 [22.6, 23.1]	20.9 [20.7, 21]
2-3 conditions	1.8 [1.8, 1.9]	1.3 [1.2, 1.3]	1.6 [1.5, 1.6]

Note: Data source: Canadian Primary Care Sentinel Surveillance Network, Q4-2019. Patients with at least 1 clinical encounter between Jan 1, 2018 and Dec 31, 2019.
Chi square test (difference between males and females) was <.0001 for all disease groups.
[1] 2016 Canadian Census. [2] Asthma, Diabetes Mellitus, Obesity.

Table A7: Median number of primary care service days between Jan 1, 2019 and Dec 31, 2019 in adults

	Male (n=493, 777)			Female (n=641,203)			All (n=1,134,980)			
	Median	IQR (Q1,Q3)	Range	Median	IQR (Q1,Q3)	Range	Median	IQR (Q1,Q3)	Range	*p-value
Without CPPSSN validated chronic condition[1]	0	2 (0,2)	102	1	3 (0,3)	140	1	2 (0,2)	140	<0.0001
1 CPCSSN Condition	1	3 (0,3)	171	2	4 (0,4)	101	1	3 (0,4)	171	<0.0001
2 CPCSSN Conditions	2	4 (0,4)	245	2	5 (0,5)	173	2	4 (0,5)	245	<0.0001
3 or more CPCSSN Conditions	3	5 (0,3)	299	3	5 (1,7)	237	3	5 (1,7)	299	<0.0001
Note: Data source: Canadian Primary Care Sentinel Surveillance Network, Q4-2019. Patients with at least 1 clinical encounter between Jan 1, 2018 and Dec 31, 2019. [1] Chronic Kidney Disease, Chronic Obstructive Pulmonary Disease, Dementia, Depression, Diabetes Mellitus, Dyslipidemia, Epilepsy, Hypertension, Obesity, Osteoarthritis, Parkinson's Disease.										

*Wilcoxon rank sum test. The Wilcoxon rank sum tests for differences in the sum of ranks. With large samples it is possible that significant p values can be calculated when the medians are equal and there are small differences in the sum of ranks between the groups. NB: the Wilcoxon rank sum test and Mann-Whitney are synonymous.

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Table A8: Median number of primary care service days between Jan 1, 2019 and Dec 31, 2019 in children

	Male (n=135, 267)			Female (n=131,130)			All (n=266, 397)			
	Median	IQR (Q1,Q3)	Range	Median	IQR (Q1,Q3)	Range	Median	IQR (Q1,Q3)	Range	*p-value
Without CPPSSN validated chronic condition[1]	1	2	139	1	2	45	1	2	139	<0.0001
1 CPCSSN Condition	1	2	94	1	3	41	1	3	94	<0.0001
2 or more CPCSSN Conditions	1	3	23	1	3	23	1	3	23	0.0011
Note: Data source: Canadian Primary Care Sentinel Surveillance Network, Q4-2019. Patients with at least 1 clinical encounter between Jan 1, 2018 and Dec 31, 2019. [1] Asthma, Diabetes Mellitus, Obesity.										

*Wilcoxon rank sum test. The Wilcoxon rank sum tests for differences in the sum of ranks. With large samples it is possible that significant p values can be calculated when the medians are equal and there are small differences in the sum of ranks between the groups. NB: the Wilcoxon rank sum test and Mann-Whitney are synonymous.

See: Introduction to SAS. UCLA: Statistical Consulting Group.

from https://stats.idre.ucla.edu/sas/modules/sas-learning-moduleintroduction-to-the-features-of-sas/ (accessed August 22, 2016). FAQ: Why Is The Mann-Whitney Significant When The Medians Are Equal?

Table A9: Observed and sex-specific age-standardized prevalence of CPCSSN validated conditions in adults and children with at least one clinical encounter between Jan 1, 2018 and Dec 31, 2019

	Male (n=629,044)		Female (n=772.333)		All (n=1,401,377)	
	Total (observed)	Total (age standardized[1])	Total (observed)	Total (age standardized[1])	Total (observed)	Total (age and sex standardized[1])
	% [95% CI] (n/N)	% [95% CI] (n/N)	% [95% CI] (n/N)	% [95% CI] (n/N)	% [95% CI] (n/N)	% [95% CI] (n/N)
Adult						
Chronic Kidney Disease	5.0 [4.9, 5.1] (24,786/493,777)	3.7 [3.6, 3.7] (496,920/13,450,920)	5.4 [5.4, 5.5] (34,859/641,203)	4.6 [4.6, 4.7] (660,932/14,260,795)	5.3 [5.2, 5.3] (59,645/1,134,980)	4.2 [4.1, 4.2] (1,157,853/27,711,715)
Chronic Obstructive Pulmonary Disease	5.0 [4.9, 5.1] (24,817/493,777)	4.1 [4.0, 4.2] (552041/13,450,920)	4.0 [3.9, 4.0] (25,527/641,203)	3.7 3.6, 3.7] (522,455/14,260,795)	4.4 [4.4, 4.5] (50,344/1,134,980)	3.9 [3.8, 3.9] (1,074,496/27,711,715)
Dementia	2.4 [2.3, 2.4] (11,794/493,777)	1.5 [1.5, 1.5] (188,850/13,450,920)	2.7 [2.7, 2.8] (17,519/641,203)	2.2 [2.1, 2.2] (307,451/14,260,795)	2.6 [2.5, 2.6] (29,313/1,134,980)	1.9 [1.9, 1.9] (529,325/27,711,715)
Depression	18.3 [18.2, 18.4] (90,184/493,777)	18.4 [18.3, 18.5] (2,473,680/13,450,920)	27.2 [27.1, 27.3] (174,178/641,203)	27.3 [27.2, 27.4] (3895,275/14,260,795)	23.3 [23.2, 23.4] (264,362/1,134,980)	23.0 [22.9, 23.1] (6,368,955/27,711,715)
Diabetes Mellitus	13.6 [13.5, 13.6] (66,935/493,777)	11.9 [11.8, 12.0] (1,601,698/13,450,920)	10.1 [10.0, 10.2] (64,866/641,203)	9.7 [9.6, 9.7] (1,378,865/14,260,795)	11.6 [11.5, 11.7] 131,801/1,134,980)	10.8 [10.7, 10.8] (2,980,564/27,711,715
Dyslipidemia	42.8 [42.6, 42.9] (211,169/493,777)	39.7 [39.5, 39.9] (5,337,272/13,450,920)	31.7 [31.6, 31.8] (203,503/641,203)	30.9 [30.7, 31.0] (4,405,586/14,260,795)	36.5 [36.5, 36.6] (414,672/1,134,980)	35.2 [35.1, 35.3] (9,742,858/27,711,715)
Epilepsy	1.5 1.5, 1.6] (7,675/493,777)	1.5 [1.5, 1.6] (207,959/13,450,920)	1.4 [1.4, 1.5] (9,288/641,203)	1.4 [1.4, 1.5] (207,035/14,260,795)	1.5 [1.5, 1.5] (16,963/1,134,980)	1.5 [1.5, 1.5] (41,4994/27,711,715)
Hypertension	26.0 [25.9, 26.2] (128,586/493,777)	22.7 [22.6, 22.8] (3,053,350/13,450,920)	23.1 [23.0, 23.2] (14,7971/641,203)	21.5 [21.4, 21.6] (3,069,475/14,260,795)	24.4 [24.3, 24.4] (276,557/1,134,980)	22.1 [22.0, 22.2] (5,49,6442/27,711,715)
Obesity	23.4 [23.3, 23.5] (115,655/493,777)	23.0 [22.8, 23.1] (3089,912/13,450,920)	23.1 [23.0, 23.2] (14,7921/641,203)	23.2 [23.1, 23.3] (3,306,818/14,260,795)	23.2 [23.1, 23.3] (263,576/1,134,980)	23.1 [2300, 23.2] (6,39,6730/27,711,715)
Osteoarthritis	9.3 [9.2, 9.4] (45,805/493,777)	7.8 [7.8, 7.9] (1,056,016/13,450,920)	11.7 [11.6, 11.6) (74,810/641,203)	10.9 [10.8, 10.9] (1,549,313/14,260,795)	10.6 [10.6, 10.7] (120,615/1,134,980)	9.4 [9.4, 9.5] (2,605,330/27,711,715)
Parkinson's Disease	0.6 [0.6, 0.6] (2,938/493,777)	0.4 [0.4, 0.5] (59,810.8/13,450,920)	0.4 [0.4, 0.4] (2,386/641,203)	0.3 [0.3, 0.3] (46,208.8/14,260,795)	0.5 [0.5, 0.5] (5,324/1,134,980)	0.4 [0.4, 0.4] (106,020/27,711,715)
Pediatric						
Asthma	19.6 [19.4, 19.9] (26,574/135,267)	19.8 [19.6, 20.1] (756,137/3,183,300)	15.6 [15.4, 15.8] (20,489/131,130)	15.7 [15.5, 15.9] (569,506/3,626,720)	17.7 [17.5, 17.1] (47,063/266,397)	17.8 [17.7, 18.0] (1,325,643/7,440,020)
Diabetes Mellitus	0.4 [0.4,0.4] (531/13,5267)	0.4 [0.4, 0.4] (15,459.2/3,183,300)	0.5 [0.4, 0.5] (604/131,130)	0.46 [0.43, 0.50] (16863.4/3,626,720)	0.43 [0.40, 0.45] (1135/266,397)	0.4 [0.4, 0.5] (32,322.7/7,440,020)
Obesity	6.2 [6.1, 6.3] (8,405/135,267)	6.3 [6.2, 6.5] (241,657/3,183,300)	5.1 [4.9, 5.2] (6,634/131,130)	5.1 [5.0, 5.2] (184,513/3,626,720)	5.6 [5.6,5.7] (15,039/266,397)	5.7 [5.6, 5.8] (42,6170/7,440,020
Chronic Kidney Disease	5.0 [4.9, 5.1] (24,786/493,777)	3.7 [3.6, 3.7] (496,920/13,450,920)	5.4 [5.4, 5.5] (34,859/641,203)	4.6 [4.6, 4.7] (660,932/14,260,795)	5.3 [5.2, 5.3] (59,645/1,134,980)	4.2 [4.1, 4.2] (1,157,853/27,711,715)

Note: Data source: Canadian Primary Care Sentinel Surveillance Network, Q4-2019. Patients with at least 1 clinical encounter between Jan 1, 2018 and Dec 31, 2019. [1] 2016 Canadian Census.