

Appendix 1 (as supplied by the authors): Supplemental material

Supplemental Table S1. Billing Codes for Virtual Care

Time Period	Billing Codes	Modality
January 1, 2012- June 30, 2020	B100, B200, B099	Video-visit
April 1, 2020- June 30, 2020	B103, B203, B209	Video-visit
March 14, 2020- June 30, 2020	K080, K081, K082, K083, H409, H410	All telemedicine modalities

Supplemental Table S2. Inclusion Criteria for Chronic Disease Patient Cohorts

Chronic Disease	Inclusion Criteria
Serious mental illness	<p>Patients with serious mental illness that affects functioning, characterized by at least 2 outpatient or 1 inpatient claims with the corresponding ICD 9 or 10 codes or DXCODES within 12 months prior to year of interest [NACRS, OHIP, DAD]:</p> <p><u>Schizophrenia and psychotic disorders:</u> DAD/NACRS: ICD-9=295, 297 ICD-10= F20.0, F20.1, F20.2, F20.5, F20.9, F20.81, F20.89, F22, F23, F24, F25.9</p> <p>OHIP DXCODES: 295, 297, 298</p> <p><u>Bipolar disorder:</u> DAD/NACRS: ICD-9=296.0, 296.1, 296.4-296.6, 296.7, 296.8, 296.9, 301.11, 301.13 ICD-10=F30.1, F30.2, F30.3, F30.4, F30.8, F31.1, F31.2, F31.3, F31.4, F31.5, F31.6, F31.73, F31.74, F31.75, F31.76, F31.77, F31.78, F31.81, F31.9, F32.8, F34.0, F34.8, F39, F60.89</p> <p>OHIP DXCODES: 296</p>
COPD	Record in the ICES COPD database any time prior to year of interest
Heart failure	Record in ICES CHF database any time prior to year of interest
Asthma	Record in ICES ASTHMA database any time prior to year of interest
Hypertension	Record in the ICES HYPHER database any time prior to year of interest
Angina	<p>At least one ED visit within 12 months prior to year of interest with any of the following codes [NACRS, OHIP]:</p> <p>ICD-9: 411.1, 413.0, 413.1, 413.9, 786.51, 786.52 ICD-10: R07.1–R07.4, I20.0, I20.1, I20.8, I20.88, or I20.9</p>
Diabetes	Record in the ICES ODD database any time prior to year of interest

Supplemental Table S3. Baseline physician characteristics by non/low user vs. high user of virtual care^a

Variable	Non/low user	High user	P-value
Age, median(IQR)	50 (43-60)	53 (45-62)	<0.001
Male, n(%)	2,787 (58.5%)	13,533 (52.7%)	<0.001
Medical specialty, n(%)			
Family/general practice	1,539 (32.3%)	12,780 (49.7%)	<0.001
Psychiatrist	3,105 (65.1%)	10,878 (42.3%)	
Other specialist	123 (2.6%)	2,033 (7.9%)	
>50% FFS, n(%)	3,046 (63.9%)	16,082 (62.6%)	<0.001
Non-FFS group, n(%)	2,197 (46.1%)	15,421 (60.0%)	<0.001
Full-time Patient enrolment model, n(%)	189 (4.0%)	8,539 (33.2%)	<0.001
Years since graduation, median(IQR)	21 (12-32)	23 (13-34)	<0.001
Region of practice			<0.001
Central	1,045 (21.9%)	7,077 (27.5%)	
East	1,145 (24.0%)	5,864 (22.8%)	
North	324 (6.8%)	1,200 (4.7%)	
Toronto	540 (11.3%)	3,772 (14.7%)	
West	1,148 (24.1%)	6,059 (23.6%)	
Level of rurality (RIO score)			<0.001
Urban (<40)	3,999 (83.9%)	23,047 (89.7%)	
Rural (>=40)	184 (3.9%)	914 (3.6%)	

^aNon/low user defined as <2 virtual visits after March 14th, 2020; High user defined as 2+ virtual visits after March 14th, 2020

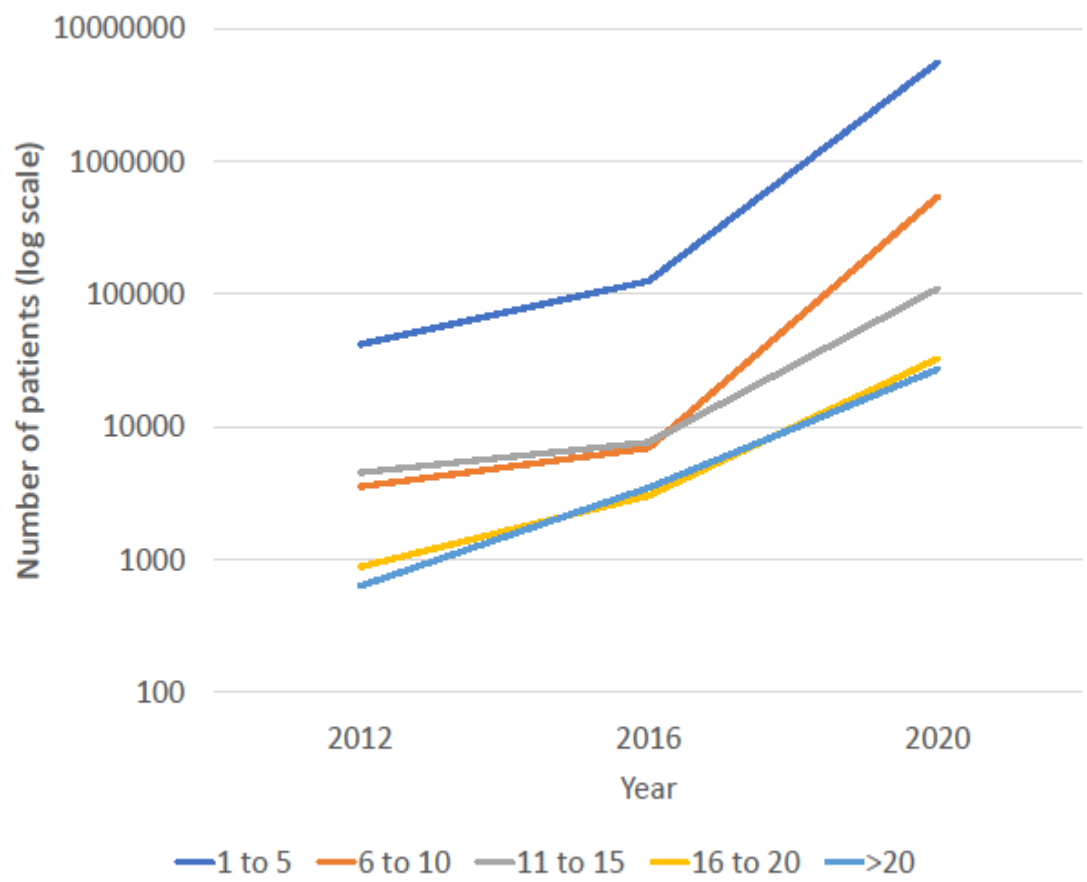
Supplemental Table S4. Medical specialties of physicians who delivered at least one virtual visit in the first 6 months of 2020^a

Medical Specialty	N(%) with zero virtual visits (N=5,253)	N(%) with ≥1 virtual visits (N=26,267)	N(%) with x number of virtual visits ^b			
			1 visit (N=388)	2-4 visits (N=580)	5-10 visits (N=695)	>10 visits (N=24,604)
Anaesthesia	550 (10.5%)	811 (3.1%)	53 (6.5%)	75 (9.2%)	91 (11.2%)	592 (73.0%)
Cardiology	47 (0.9%)	654 (2.5%)	6-10 (0.9-1.5%)	≤5	10 (1.5%)	633 (96.8%)
Community Medicine	≤5	6 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	6 (100.0%)
Dermatology	23 (0.4%)	227 (0.9%)	≤5	≤5	≤5	220 (96.9%)
Diagnostic Radiology	879 (16.7%)	68 (0.3%)	16 (23.5%)	17 (25.0%)	15 (22.1%)	20 (29.4%)
Emergency	252 (4.8%)	170 (0.6%)	13 (7.6%)	25 (14.7%)	27 (15.9%)	105 (61.8%)
Endocrinology	≤5	273 (1.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	273 (100.0%)
Family/General Practice	1,767 (33.6%)	12,999 (49.5%)	151 (1.2%)	202 (1.6%)	247 (1.9%)	12,399 (95.4%)
Gastroenterology	12 (0.2%)	299 (1.1%)	0 (0.0%)	≤5	≤5	294 (98.3%)
Genetics	≤5	41 (0.2%)	≤5	0 (0.0%)	≤5	38 (92.7%)
Geriatrics	10 (0.2%)	143 (0.5%)	≤5	≤5	≤5	134 (93.7%)
Haematology	11 (0.2%)	215 (0.8%)	≤5	≤5	≤5	207 (96.3%)
Immunology	≤5	51 (0.2%)	0 (0.0%)	0 (0.0%)	≤5	46-50 (90.2-98.0%)
Infectious Disease	14 (0.3%)	160 (0.6%)	≤5	6 (3.8%)	≤5	145 (90.6%)
Internal Medicine	442 (8.4%)	1,313 (5.0%)	52 (4.0%)	69 (5.3%)	70 (5.3%)	1,122 (85.5%)
Nephrology	6 (0.1%)	213 (0.8%)	≤5	≤5	0 (0.0%)	211 (99.1%)
Neurology	25 (0.5%)	443 (1.7%)	≤5	7 (1.6%)	9 (2.0%)	422-426 (95.3-96.2%)
Nuclear Medicine	25 (0.5%)	10 (0.0%)	≤5	≤5	≤5	6-7 (60.0-70.0%)
OB/GYN	70 (1.3%)	876 (3.3%)	≤5	17 (1.9%)	16 (1.8%)	838-842 (95.7-96.1%)

Oncology	8 (0.2%)	245 (0.9%)	0 (0.0%)	0 (0.0%)	<=5	240-244 (98.0- 99.6%)
Ophthalmology	86 (1.6%)	377 (1.4%)	12 (3.2%)	9 (2.4%)	15 (4.0%)	341 (90.5%)
Otolaryngology	27 (0.5%)	269 (1.0%)	<=5	<=5	<=5	262 (97.4%)
Pathology	288 (5.5%)	18 (0.1%)	0 (0.0%)	<=5	<=5	11-16 (88.9%)
Pediatrics	190 (3.6%)	1,370 (5.2%)	21 (1.5%)	48 (3.5%)	60 (4.4%)	1,241 (90.6%)
Physical Medicine	31 (0.6%)	197 (0.7%)	7 (3.6%)	<=5	7 (3.6%)	178- 182(90.4- 92.4%)
Psychiatry	147 (2.8%)	2,069 (7.9%)	11 (0.5%)	37 (1.8%)	47 (2.3%)	1,974 (95.4%)
Respiratory Disease	13 (0.2%)	317 (1.2%)	<=5	<=5	<=5	311 (98.1%)
Rheumatology	<=5	231 (0.9%)	0 (0.0%)	<=5	<=5	228 (98.7%)
Surgery	274 (5.2%)	1,709 (6.5%)	28 (1.6%)	36 (2.1%)	42 (2.5%)	1,603 (93.8%)
Therapeutic Radiology	<=5	219 (0.8%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	219 (100.0%)
Urology	28 (0.5%)	274 (1.0%)	<=5	<=5	8 (2.9%)	260-264 (94.9- 96.4%)
Missing	13 (0.2%)					

^aPercentage ranges are provided due to suppression of small cells (n<6) to prevent risk of re-identification

^bDenominator used to calculate percentages is total number of providers within each specialty with >=1 virtual visit



Supplemental Figure S1. Distribution of number of virtual visits in total eligible Ontario patient population