Supplemental Table 1 Case definitions for outcomes and covariates

Outcomes	Database	Definition
All-cause readmission	Discharge Abstract Database National Ambulatory Care Reporting System	A first re-visit to ED or admission to hospital for any reason in the 90 days following index ED visit
Stroke readmission	Discharge Abstract Database	Admission to hospital with a primary diagnosis of ischemic stroke (ICD-10-CA I63.1, I64.x, H34.1) or intracerebral hemorrhagic stroke (I61.x) in the 90 days following index ED visit
Death	Ontario Registered Persons Database	Death within 90 days of index ED visit
Telemedicine visit	Ontario Health Insurance Plan	Physician billing code - K080, K081, K082, K083, B099A, B100A, B103A, B200A, B203A, B209A
Physician visits	Ontario Health Insurance Plan ICES Physician Database Corporate Provider Database	The type of consultation (family doctor or stroke specialist) in the 28 days after index ED visit. The overall number of healthcare visits with family doctors and stroke specialists in the 90 days after index ED visit. A visit includes one or more services billed for by a unique physician ID on a single calendar day. Family doctor specialty = 'Family practice and general practice' Stroke specialty = 'Internal medicine', 'Neurology', 'Cardiology', 'Geriatric medicine'
Neuroimaging	National Ambulatory Care Reporting System Ontario Health Insurance Plan	Canadian classification of health intervention code (CCI) or physician billing code within 14 days of index ED visit including the index event. CT head: CCI code - 3AN20, 3ER20 or Physician billing code - X188, X400, X401, X402, X405

		MRI brain: CCI code - 3AN40, 3ER40 or Physician billing code - X421, X422, X425
Neurovascular imaging	National Ambulatory Care Reporting System Ontario Health Insurance Plan	Canadian classification of health intervention code (CCI) or physician billing code within 14 days of index ED visit including the index event. CT-angiogram: CCI code - 3JE20, 3JX20 or Physician billing code - X404, X417, X408 MR-angiogram: CCI code - 3JE40, 3JX40 or Physician billing code - X431, X435 Carotid Doppler: CCI code - 3JE30 or Physician billing code - J190, J191, J192, J490, J491, J492, J201, J501, J195, J189, J489
Echocardiogram	National Ambulatory Care Reporting System Ontario Health Insurance Plan	Canadian classification of health intervention code (CCI) or physician billing code within 14 days of index ED visit including the index event. CCI code - 3IP30 or Physician billing code - G570, G571, G577, G578, G560, G561, G562, G566, G567, G568, G572, G574, G575, G576, G580, G581, G579
Anti-hypertensive medication	Ontario Drug Benefit	Individual is considered on an anti-hypertensive at baseline if prescription was dispensed in the 100 days before the index ED visit or up to 7 days after the ED visit and where the days supply encompasses the ED visit date. Includes drugs of sub-class: ACE-inhibitors, angiotensin receptor blockers, beta-blockers, calcium channel blockers, calcium blockers, diuretics, and potassium-sparing diuretics or Drug names: clonidine HCL, doxazosin mesylate, guanethidine monosulfate, prazosin HCL, reserpine, reserpine & hydrochorothiazide,

Appendix 1, as supplied by the authors. Appendix to: Yu AYX, Penn J, Austin PC, et al. Telemedicine use and outcomes after transient ischemic attack and minor stroke during the COVID-19 pandemic: a population-based cohort study. *CMAJ Open* 2022. doi: 10.9778/cmajo.20220027.

		terazosin HCL, methyldopa, methyldopa HCL, prazosin, hydralazine
Anti-dyslipidemia medication	Ontario Drug Benefit	Individual is considered on an anti-dyslipidemia at baseline if prescription was dispensed in the 100 days before the index ED visit or up to 7 days after the ED visit and where the days supply encompasses the ED visit date. Includes drugs of subclass: statins, calcium blockers and anti-lipemic combination, fibrates, or other antilipemic or Drug names: nicotinic acid, niacin, cholestyramine, cholestyramine resin, cholestyramine resin complex, colestipol HCL
Anti-hyperglycemic medication	Ontario Drug Benefit	Individual is considered on an anti-hyperglycemic at baseline if prescription was dispensed in the 100 days before the index ED visit or up to 7 days after the ED visit and where the days supply encompasses the ED visit date. Includes drugs of subclass: insulins, oral anti-glycemics (including acarbose, acetohexamide, alogliptin, canagliflozin, chlorpropamide, dapagliflozin, gliclazide, glimepiride, glipizide, glyburide, guar gum, linagliptin, metformin, nateglinide, pioglitazone, repaglinide, rosiglitazone, saxagliptin, sitagliptin, tolbutamide, troglitazone)
Predictor variables	**Database**	**Definition**
Age (continuous)	Ontario Registered Persons Database	≥ 18 years of age as of index ED visit
Sex	Ontario Registered Persons Database	Male, Female
Neighborhood income quintile	Statistics Canada Census Postal Code Conversion File	Using the smallest standard geographic area for which census data are disseminated (400-700 persons) to identify a person's

		neighbourhood of residence and the neighbourhood's average income
Rural home location	Postal Code Conversion File	Using the smallest standard geographic area for which census data are disseminated (400-700 persons) to determine the extent of urbanicity of a person's residence Community size = 1 or 2 or 3 'Large urban 100+k' Community size = 4 'Medium urban 10-100k' Community size = 5 or 9 'Small town <10k'
Hypertension	Discharge Abstract Database Same Day Surgery Database Ontario Health Insurance Plan	Lookback to 1991: ≥2 outpatient claims (ICD-9 401.x, 402.x, 403.x, 404.x, or 405.x) in a two-year period, or 1 outpatient + 1 hospitalization or day surgery record (ICD-10-CA I10.x, I11.x, I12.x, I13.x, or I15.x) in a two-year period, or If no outpatient record is found, ≥1 hospitalization or day surgery record
Diabetes	Discharge Abstract Database Ontario Health Insurance Plan Ontario Drug Benefit Program	Lookback to 1991: ≥2 outpatient claims (ICD-9 250) in a one-year period, or ≥1 hospitalization (ICD-10-CA E10, E11, E13, E14), or ≥1 diabetes drug claim in a one-year period
Atrial fibrillation	Discharge Abstract Database National Ambulatory Care Reporting System Ontario Health Insurance Plan	Lookback to 1988: 1 hospitalization or 1 ED visit (ICD-10-CA I48) or 4 outpatient claims (ICD-9 427) in a 1-year period
Dyslipidemia	Discharge Abstract Database Same Day Surgery Database Ontario Health Insurance Plan	Lookback to 1991: 1 hospital admission (ICD-9 272 or ICD-10-CA E78 as any diagnosis), or 2 outpatient claims (ICD-9 272) within 2 years, or 1 outpatient claim followed by 1 hospital admission within 2 years
History of stroke	Discharge Abstract Database	Lookback to 1988: Ischemic stroke: ICD-10-CA I63, I64, H341; ICD-9 434, 436, 362.3 or

		Hemorrhagic stroke: ICD-10-CA I60, I61; ICD-9 430, 431
Coronary artery disease	Discharge Abstract Database Same Day Surgery Database	Lookback to 1988: ICD-10-CA I21, I22, or CCI 1IJ50, 1IJ57GQ, 1IJ54, 1IJ76 ICD-9 410 or CCP 4802, 4803, 481
Peripheral artery disease	Discharge Abstract Database Same Day Surgery Database	Lookback to 1988: ICD-10-CA I702, I713, I714, I739, I743, I744 or CCI 1JE57, 1JE50, 1JE87 ICD-9 4402, 4413, 4414, 4439, 4442 or CCP 5012

ED: emergency department, CCI: Canadian classification of health interventions, CCP: Canadian classification of procedures

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Supplemental Table 2 Clinic visits and care before and after the implementation of outpatient telemedicine billing codes

	Before telemedicine n = 40,098	**After telemedicine n = 7,503**	**Risk Difference [95% confidence intervals]**
At least 1 visit within 28 days n (%)	33,353 (83.2%)	6,403 (85.3%)	2.2 [-0.1 , 4.4]
Visit type within 28 days n (%)			
In-person and telemedicine	373 (0.9%)	2,496 (33.3%)	32.3 [31.0 , 33.6]
In-person only	32,817 (81.8%)	1,284 (17.1%)	-64.7 [-66.0 , -63.4]
Telemedicine only	163 (0.4%)	2,623 (35.0%)	34.6 [33.2 , 35.9]
No visits	6,745 (16.8%)	1,100 (14.7%)	-2.2 [-3.1 , -1.2]
At least 1 visit within 90 days n (%)	37,254 (92.9%)	7,053 (94.0%)	1.1 [-1.3 , 3.5]
Visit type within 90 days n (%)			
In-person and telemedicine	1,298 (3.2%)	4,264 (56.8%)	53.6 [51.9 , 55.3]
In-person only	35,723 (89.1%)	817 (10.9%)	-78.2 [-79.4 , -77.0]
Telemedicine only	233 (0.6%)	1,972 (26.3%)	25.7 [24.5 , 26.9]
No visits	2,844 (7.1%)	450 (6.0%)	-1.1 [-1.7 , -0.5]
Family doctor visits within 90 days n (%)			
0	8,753 (21.8%)	1,802 (24.0%)	2.2 [1.0 , 3.4]
1	10,218 (25.5%)	1,572 (21.0%)	-4.5 [-5.7 , -3.4]
2	8,728 (21.8%)	1,369 (18.2%)	-3.5 [-4.6 , -2.5]
3+	12,400 (30.9%)	2,760 (36.8%)	5.9 [4.4 , 7.3]
Stroke specialist visits within 90 days n (%)			
0	9,235 (23.0%)	1,432 (19.1%)	-3.9 [-5.0 , -2.9]
1	16,564 (41.3%)	2,740 (36.5%)	-4.8 [-6.3 , -3.3]
2	9,211 (23.0%)	1,860 (24.8%)	1.8 [0.6 , 3.0]
3+	5,088 (12.7%)	1,471 (19.6%)	6.9 [5.9 , 8.0]
Brain imaging in ED n (%)	32,597 (81.3%)	6,161 (82.1%)	0.8 [-1.4 , 3.1]
Brain imaging within 14 days n (%)	36,728 (91.6%)	6,930 (92.4%)	0.8 [-1.6 , 3.1]
Vascular imaging in ED n (%)	10,246 (25.6%)	3,691 (49.2%)	23.6 [22.0 , 25.3]
Vascular imaging within 14 days n (%)	30,006 (74.8%)	6,300 (84.0%)	9.1 [6.9 , 11.4]
Echocardiogram within 90 days n (%)	21,054 (52.5%)	3,952 (52.7%)	0.2 [-1.6 , 2.0]
Medications refilled within 100 days[a]			
Anti-hypertensives n/N (%)	19,042/20,652 (92.2%)	3,529/3,827 (92.2%)	0.0 [-3.3 , 3.3]
Anti-hyperlipidemia agent n/N (%)	15,510/17,320 (89.5%)	3,076/3,388 (90.8%)	1.2 [-2.3 , 4.7]
Anti-hyperglycemic n/N (%)	5,237/5,737 (91.3%)	1,068/1,146 (92.8%)	1.5 [-4.6 , 7.6]

ED: emergency department

[a] Denominators reflect number of patients aged >65 years on the medication at baseline

Supplemental Table 3 Patient characteristics comparing patients who had at least one ambulatory clinic visit within 28 days of emergency department discharge to those without visits before and after the implementation of outpatient telemedicine billing codes

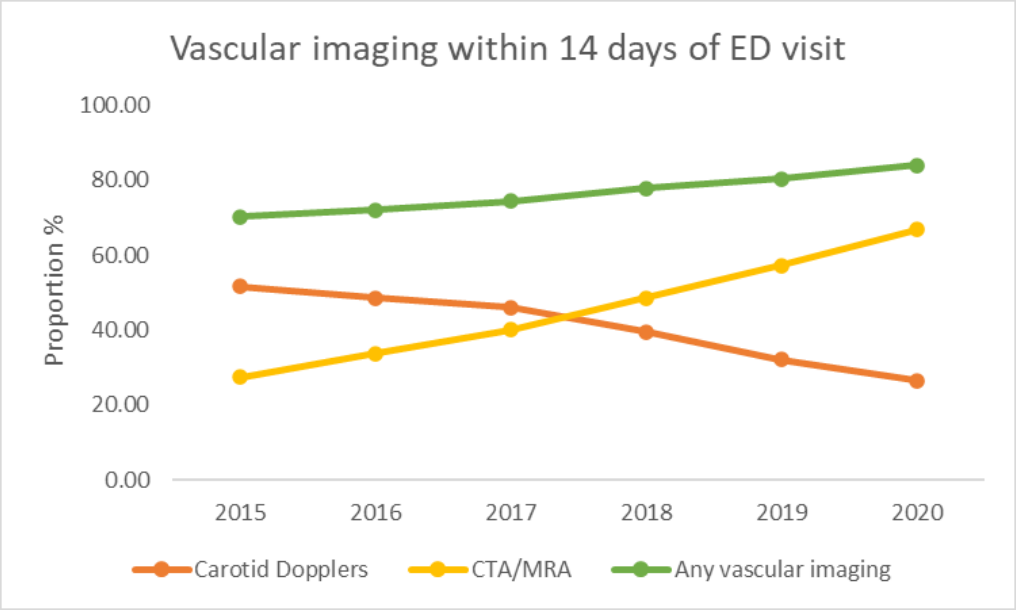
	Before telemedicine* n = 39,562			**After telemedicine n = 7,503**			
	In-person only n = 32,817	**No visits n = 6,745**	**p-value**	**In-person only n = 1,284**	**No visits n = 1,100**	**≥ 1 Telemed n = 5,119**	**p-value**
Median age (IQR), yrs	72 (62, 81)	75 (63, 85)	<0.001	73 (63, 81)	73 (62, 83)	73 (63, 81)	0.007
Age group n (%)							
18-45 years	1,350 (4.1%)	344 (5.1%)	<0.001	50 (3.9%)	52 (4.7%)	220 (4.3%)	<0.001
46-65 years	9,315 (28.4%)	1,663 (24.7%)		334 (26.0%)	298 (27.1%)	1,440 (28.1%)	
66-75 years	8,527 (26.0%)	1,448 (21.5%)		344 (26.8%)	263 (23.9%)	1,410 (27.5%)	
76-85 years	8,911 (27.2%)	1,685 (25.0%)		388 (30.2%)	279 (25.4%)	1,387 (27.1%)	
>85 years	4,714 (14.4%)	1,605 (23.8%)		168 (13.1%)	208 (18.9%)	662 (12.9%)	
Female sex n (%)	16,118 (49.1%)	3,404 (50.5%)	0.043	603 (47.0%)	541 (49.2%)	2,538 (49.6%)	0.244
Neighborhood Income Quintile n (%)							
1 (lowest)	6,779 (20.7%)	1,704 (25.3%)	<0.001	258 (20.1%)	273 (24.8%)	934 (18.2%)	<0.001
2	6,911 (21.1%)	1,454 (21.6%)		290 (22.6%)	211 (19.2%)	1,039 (20.3%)	
3	6,603 (20.1%)	1,315 (19.5%)		249 (19.4%)	226 (20.5%)	1,031 (20.1%)	
4	6,084 (18.5%)	1,141 (16.9%)		256 (19.9%)	184 (16.7%)	996 (19.5%)	
5 (highest)	6,356 (19.4%)	1,087 (16.1%)		227-232	201-206	1,104 (21.6%)	
Missing	84 (0.3%)	44 (0.7%)		†	†	15 (0.3%)	
Residence n (%)							
'Large urban 100+k'	25,288 (77.1%)	4,174 (61.9%)	<0.001	827 (64.4%)	657 (59.7%)	4,001 (78.2%)	<0.001
'Medium urban 10-100k'	3,364 (10.3%)	1,079 (16.0%)		212 (16.5%)	182 (16.5%)	454 (8.9%)	
'Small town <10k'	4,165 (12.7%)	1,492 (22.1%)		245 (19.1%)	261 (23.7%)	664 (13.0%)	
Most responsible diagnosis n (%)			<0.001				
Ischemic stroke	7,804 (23.8%)	2,072 (30.7%)		312 (24.3%)	366 (33.3%)	1,193 (23.3%)	<0.001
Transient ischemic attack	25,013 (76.2%)	4,673 (69.3%)		972 (75.7%)	734 (66.7%)	3,926 (76.7%)	
ED Hospital type							
Comprehensive stroke centre	6,885 (21.0%)	1,144 (17.0%)	<0.001	352 (27.4%)	239 (21.7%)	1,167 (22.8%)	<0.001
Primary stroke centre	5,805 (17.7%)	1,150 (17.0%)		223 (17.4%)	263 (23.9%)	972 (19.0%)	
Non-designated stroke centre	20,127 (61.3%)	4,451 (66.0%)		709 (55.2%)	598 (54.4%)	2,980 (58.2%)	
Hypertension n (%)	23,142 (70.5%)	4,737 (70.2%)	0.6351	839 (65.3%)	730 (66.4%)	3,426 (66.9%)	0.553

Diabetes n (%)	10,152 (30.9%)	2,140 (31.7%)	0.2	395 (30.8%)	348 (31.6%)	1,624 (31.7%)	0.801
Atrial fibrillation n (%)	5,588 (17.0%)	1,332 (19.7%)	<0.001	181 (14.1%)	179 (16.3%)	843 (16.5%)	0.114
Dyslipidemia n (%)	13,360 (40.7%)	2,440 (36.2%)	<0.001	454 (35.4%)	368 (33.5%)	2,058 (40.2%)	<0.001
History of stroke n (%)	3,115 (9.5%)	1,034 (15.3%)	<0.001	104 (8.1%)	155 (14.1%)	456 (8.9%)	<0.001
Coronary artery disease n (%)	4,820 (14.7%)	1,023 (15.2%)	0.312	162 (12.6%)	160 (14.5%)	662 (12.9%)	0.300
Peripheral artery disease n (%)	1,056 (3.2%)	300 (4.4%)	<0.001	36 (2.8%)	32 (2.9%)	126 (2.5%)	0.249

*Patients with telemedicine visits in the 2015-2020 “before telemedicine” period are censored due to small numbers.

† Censored due to small numbers.

Supplemental Figure 1 Vascular imaging within 14 days of the emergency department visit (including imaging done in the emergency department) by fiscal years



CTA: computed tomography angiography, MRA: magnetic resonance angiography