

Appendix 5. Additional Matching and Costing Results

Supplemental Table S7. ADG categories of HCV cases and matched controls.

	Phase of Care							
	Pre-Diagnosis		Initial		Late		Terminal	
	Cases	Matched Controls	Cases	Matched Controls	Cases	Matched Controls	Cases	Matched Controls
Total, N	2,096	3,916	2,077	3,875	130	249	297	545
ADG Category[‡], N (%)								
ADG1: Time Limited: Minor	349 (16.7%)	614 (15.7%)	399 (19.2%)	714 (18.4%)	16 (12.3%)	28 (11.2%)	61 (20.5%)	119 (21.8%)
ADG2: Time Limited: Minor-Primary Infections	592 (28.2%)	1,033 (26.4%)	703 (33.8%)	1,179 (30.4%)	49 (37.7%)	94 (37.8%)	129 (43.4%)	243 (44.6%)
ADG3: Time Limited: Major	84 (4.0%)	143 (3.7%)	139 (6.7%)	223 (5.8%)	16 (12.3%)	32 (12.9%)	62 (20.9%)	120 (22.0%)
ADG4: Time Limited: Major-Primary Infections	280 (13.4%)	435 (11.1%)	491 (23.6%)	819 (21.1%)	61 (46.9%)	106 (42.6%)	130 (43.8%)	227 (41.7%)
ADG5: Allergies	35 (1.7%)	61 (1.6%)	41 (2.0%)	70 (1.8%)	<=5	<=5	<=5	12 (2.2%)
ADG6: Asthma	96 (4.6%)	146 (3.7%)	101 (4.9%)	172 (4.4%)	<=5	<=5	23 (7.7%)	52 (9.5%)
ADG7: Likely to Recur: Discrete	526 (25.1%)	974 (24.9%)	583 (28.1%)	1,076 (27.8%)	53 (40.8%)	115 (46.2%)	110 (37.0%)	201 (36.9%)
ADG8: Likely to Recur: Discrete-Infections	239 (11.4%)	433 (11.1%)	264 (12.7%)	410 (10.6%)	21 (16.2%)	31 (12.4%)	51 (17.2%)	91 (16.7%)
ADG9: Likely to Recur: Progressive	43 (2.1%)	57 (1.5%)	72 (3.5%)	104 (2.7%)	12 (9.2%)	30 (12.0%)	48 (16.2%)	99 (18.2%)
ADG10: Chronic Medical: Stable	473 (22.6%)	821 (21.0%)	513 (24.7%)	945 (24.4%)	60 (46.2%)	105 (42.2%)	159 (53.5%)	307 (56.3%)
ADG11: Chronic Medical: Unstable	208 (9.9%)	310 (7.9%)	272 (13.1%)	487 (12.6%)	71 (54.6%)	126 (50.6%)	139 (46.8%)	271 (49.7%)
ADG12: Chronic Specialty: Stable-Orthopedic	46 (2.2%)	70 (1.8%)	50 (2.4%)	86 (2.2%)	<=5	7 (2.8%)	10 (3.4%)	22 (4.0%)
ADG13: Chronic Specialty: Stable-Ear,Nose,Throat	17 (0.8%)	21 (0.5%)	19 (0.9%)	26 (0.7%)	<=5	0	<=5	<=5
ADG14: Chronic Specialty: Stable-Eye	27 (1.3%)	50 (1.3%)	22 (1.1%)	27 (0.7%)	<=5	<=5	9 (3.0%)	6 (1.1%)
ADG16: Chronic Specialty: Unstable-Orthopedic	48 (2.3%)	88 (2.2%)	45 (2.2%)	80 (2.1%)	<=5	11 (4.4%)	6 (2.0%)	12 (2.2%)
ADG18: Chronic Specialty: Unstable-Eye	25 (1.2%)	39 (1.0%)	28 (1.3%)	44 (1.1%)	<=5	7 (2.8%)	14 (4.7%)	22 (4.0%)
ADG20: Dermatologic	104 (5.0%)	154 (3.9%)	98 (4.7%)	176 (4.5%)	11 (8.5%)	19 (7.6%)	16 (5.4%)	33 (6.1%)
ADG21: Injuries/Adverse Effects: Minor	634 (30.2%)	1,076 (27.5%)	680 (32.7%)	1,210 (31.2%)	39 (30.0%)	68 (27.3%)	116 (39.1%)	193 (35.4%)
ADG22: Injuries/Adverse Effects: Major	582 (27.8%)	970 (24.8%)	678 (32.6%)	1,169 (30.2%)	35 (26.9%)	73 (29.3%)	126 (42.4%)	232 (42.6%)
ADG23: Psychosocial: Time Limited, Minor	196 (9.4%)	319 (8.1%)	237 (11.4%)	409 (10.6%)	15 (11.5%)	25 (10.0%)	40 (13.5%)	58 (10.6%)
ADG24: Psychosocial: Recurrent or Persistent, Stable	780 (37.2%)	1,314 (33.6%)	924 (44.5%)	1,629 (42.0%)	45 (34.6%)	84 (33.7%)	127 (42.8%)	242 (44.4%)
ADG25: Psychosocial: Recurrent or Persistent, Unstable	719 (34.3%)	1,216 (31.1%)	1,066 (51.3%)	1,934 (49.9%)	53 (40.8%)	97 (39.0%)	137 (46.1%)	233 (42.8%)

Appendix 5, as supplied by the authors. Appendix to: Mendlowitz A, Bremner KE, Walker JD, et al. Health care costs associated with hepatitis C virus infection in First Nations populations in Ontario: a retrospective matched cohort study. *CMAJ Open* 2021. DOI:10.9778/cmajo.20200247. Copyright © 2021 The Author(s) or their employer(s). To receive this resource in an accessible format, please contact us at cmajgroup.cmaj.ca.

ADG26: Signs/Symptoms: Minor	581 (27.7%)	1,027 (26.2%)	740 (35.6%)	1,291 (33.3%)	71 (54.6%)	138 (55.4%)	156 (52.5%)	287 (52.7%)
ADG27: Signs/Symptoms: Uncertain	838 (40.0%)	1,406 (35.9%)	998 (48.1%)	1,821 (47.0%)	65 (50.0%)	124 (49.8%)	184 (62.0%)	343 (62.9%)
ADG28: Signs/Symptoms: Major	373 (17.8%)	634 (16.2%)	498 (24.0%)	789 (20.4%)	57 (43.8%)	107 (43.0%)	132 (44.4%)	244 (44.8%)
ADG29: Discretionary	209 (10.0%)	396 (10.1%)	246 (11.8%)	439 (11.3%)	25 (19.2%)	58 (23.3%)	52 (17.5%)	99 (18.2%)
ADG30: See and Reassure	20 (1.0%)	34 (0.9%)	26 (1.3%)	54 (1.4%)	<=5	<=5	7 (2.4%)	13 (2.4%)
ADG31: Prevention/Administrative	562 (26.8%)	972 (24.8%)	699 (33.7%)	1,232 (31.8%)	45 (34.6%)	87 (34.9%)	118 (39.7%)	234 (42.9%)
ADG32: Malignancy†	73 (3.5%)	99 (2.5%)	84 (4.0%)	119 (3.1%)	12 (9.2%)	18 (7.2%)	51 (17.2%)	113 (20.7%)
ADG33: Pregnancy	103 (4.9%)	209 (5.3%)	135 (6.5%)	269 (6.9%)	<=5	<=5	<=5	<=5
ADG34: Dental	129 (6.2%)	221 (5.6%)	141 (6.8%)	244 (6.3%)	7 (5.4%)	11 (4.4%)	15 (5.1%)	28 (5.1%)

Notes: ADG15 and ADG19 are no longer used. ADG17 (Chronic Specialty: Unstable-Ear, Nose, Throat) was not found in any case or control.

<=5 cannot be reported or able to be calculated to comply with ICES privacy rules.

†Not used for late phase matching algorithm

‡During the year before matching date

Abbreviations: ADG, aggregated diagnosis group.

Supplemental Table S8. Direct healthcare costs per 30 days for cases and controls by cost category stratified by community status

	Phase of Care, mean cost per 30 days (% of total)							
	Pre-diagnosis		Initial		Late		Terminal	
	Cases	Matched Controls	Cases	Matched Controls	Cases	Matched Controls	Cases	Matched Controls
<i>Case Resides within First Nations Community at Match</i>								
Number of Individuals, N	382	733	382	722	18	36	38	72
Resource Category, \$ (% of total)								
Outpatient Visits	60 (10.7%)	16 (8.1%)	104 (14.2%)	54 (13.0%)	304 (17.5%)	446 (40.9%)	676 (13.0%)	694 (9.8%)
Physician Services	113 (20.0%)	57 (28.7%)	148 (20.2%)	91 (21.8%)	253 (14.6%)	166 (15.3%)	732 (14.1%)	804 (11.4%)
Emergency Room Visits	62 (11.0%)	19 (9.5%)	45 (6.1%)	27 (6.4%)	106 (6.1%)	32 (2.9%)	214 (4.1%)	217 (3.1%)
Same Day Surgery	7 (1.2%)	6 (3.0%)	9 (1.2%)	9 (2.1%)	15 (0.9%)	22 (2.0%)	33 (0.6%)	22 (0.3%)
Inpatient Care	263 (46.9%)	77 (38.7%)	288 (39.3%)	155 (37.3%)	663 (38.2%)	199 (18.3%)	3064 (59.1%)	4747 (67.3%)
Outpatient Prescription	15 (2.6%)	11 (5.6%)	95 (12.9%)	37 (8.8%)	315 (18.2%)	150 (13.7%)	202 (3.9%)	127 (1.8%)
Lab Tests/Services	18 (3.1%)	8 (4.2%)	15 (2.0%)	8 (1.9%)	13 (0.7%)	11 (1.0%)	7 (0.1%)	8 (0.1%)
Other Services*	24 (4.3%)	4 (2.2%)	31 (4.2%)	35 (8.5%)	65 (3.8%)	63 (5.8%)	257 (5.0%)	431 (6.1%)
Total	562 (100.0%)	199 (100.0%)	733 (100.0%)	416 (100.0%)	1735 (100.0%)	1089 (100.0%)	5185 (100.0%)	7050 (100.0%)
<i>Case Resides Outside First Nations Community at Match</i>								
Number of Individuals, N	1714	3183	1695	3153	112	213	259	473
Resource Category, \$ (% of total)								
Outpatient Visits	62 (9.5%)	35 (11.2%)	86 (9.5%)	74 (14.3%)	214 (7.3%)	206 (20.5%)	665 (7.0%)	745 (9.1%)
Physician Services	133 (20.4%)	81 (26.1%)	172 (19.0%)	114 (22.1%)	430 (14.5%)	148 (14.7%)	1104 (11.7%)	886 (10.8%)
Emergency Room Visits	80 (12.2%)	29 (9.3%)	57 (6.3%)	43 (8.3%)	184 (6.2%)	62 (6.1%)	255 (2.7%)	279 (3.4%)
Same Day Surgery	9 (1.3%)	10 (3.1%)	9 (1.0%)	10 (1.9%)	36 (1.2%)	15 (1.5%)	14 (0.2%)	32 (0.4%)
Inpatient Care	250 (38.2%)	108 (35.0%)	334 (36.8%)	176 (34.2%)	1411 (47.7%)	354 (35.3%)	6349 (67.3%)	5339 (65.1%)
Outpatient Prescription	37 (5.7%)	20 (6.4%)	162 (17.9%)	50 (9.6%)	420 (14.2%)	98 (9.7%)	217 (2.3%)	212 (2.6%)
Lab Tests/Services	30 (4.6%)	11 (3.6%)	17 (1.9%)	10 (1.9%)	22 (0.8%)	10 (1.0%)	18 (0.2%)	12 (0.2%)
Other Services*	53 (8.1%)	16 (5.3%)	70 (7.7%)	40 (7.7%)	238 (8.1%)	111 (11.1%)	818 (8.7%)	697 (8.5%)
Total	654 (100.0%)	310 (100.0%)	907 (100.0%)	516 (100.0%)	2955 (100.0%)	1003 (100.0%)	9440 (100.0%)	8203 (100.0%)

Note: Each cost was standardized to a measure per 30 days by dividing each patient-level cost by each person's time in phase. All costs are rounded to the nearest dollar and expressed in 2018 Canadian dollars.

*Contains costs related to the assisted device program, non-physician healthcare professional services, rehabilitation, home care, complex continuing care and long-term care services.

Supplemental Table S9. Net costs of care per 30 days by cost category and phase stratified by cases that reside within and outside of First Nations communities at matching date.

	Phase of care, mean net cost (95% CI) per 30 days							
	Pre-diagnosis		Initial		Late		Terminal	
	Within First Nations Community	Outside of First Nations Community	Within First Nations Community	Outside of First Nations Community	Within First Nations Community	Outside of First Nations Community	Within First Nations Community	Outside of First Nations Community
Number of Cases	382	1714	382	1695	18	112	38	259
Number of Controls	733	3183	722	3153	36	213	72	473
Resource Category, \$ (95% CI)								
Outpatient Visits	44 (10,102)	27 (8,50)	50 (-22,139)	12 (-17,42)	-142 (-757,465)	9 (-166,177)	-12 (-568,635)	-75 (-355,204)
Physician Services	55 (29,87)	52 (40,65)	57 (33,81)	58 (47,71)	87 (-64,262)	282 (205,371)	-71 (-439,318)	219 (-31,493)
Emergency Room Visits	43 (32,55)	51 (43,59)	18 (10,26)	14 (9,20)	74 (-9,185)	122 (70,181)	-3 (-94,93)	-25 (-80,32)
Same Day Surgery	1 (-4,7)	-1 (-5,3)	0 (-3,3)	-1 (-2,0)	-7 (-27,14)	21 (4,39)	11 (-17,42)	-18 (-38,-2)
Inpatient Care	187 (68,317)	141 (87,195)	133 (-8,270)	157 (93,228)	464 (-80,1190)	1056 (671,1534)	-1676 (-4267,858)	1040 (-715,2964)
Outpatient Prescription	4 (-4,11)	17 (11,24)	58 (32,87)	112 (97,127)	166 (-44,371)	322 (161,495)	75 (-67,264)	5 (-101,121)
Lab Tests/Services	9 (5,14)	19 (16,23)	7 (3,10)	8 (6,9)	2 (-7,10)	13 (3,23)	-1 (-6,5)	6 (0,12)
Other	20 (0,56)	37 (5,77)	-5 (-32,21)	30 (-1,69)	2 (-130,157)	126 (13,263)	-175 (-523,171)	122 (-236,469)
Total Cost	363 (202,539)	344 (258,427)	318 (85,549)	391 (300,493)	645 (-618,2163)	1949 (1280,2708)	-1844 (-5182,1419)	1289 (-892,3515)

Notes: Each cost is rounded to the nearest dollar and expressed in 2018 Canadian dollars. Net costs were estimated for cases to controls using clustered generalized estimating equations (GEE) with each cost category as the dependent variable and HCV status as the independent variable. For each GEE analysis of each resource category, a gamma distribution and log link were used. Confidence intervals were generated using the percentile method sampling from 1,000 clustered bootstrap replications.

Supplemental Table S10. Direct healthcare costs per 30 days for cases and controls by cost category stratified by sex.

	Phase of Care, mean cost per 30 days (% of total)							
	Pre-diagnosis		Initial		Late		Terminal	
	Cases	Matched Controls	Cases	Matched Controls	Cases	Matched Controls	Cases	Matched Controls
<i>Males</i>								
Number of Individuals, N	1152	2188	1132	2113	88	169	181	340
Resource Category, \$ (% of total)								
Outpatient Visits	66 (11.2%)	30 (11.4%)	101 (11.9%)	87 (16.7%)	276 (10.0%)	312 (27.1%)	721 (8.0%)	679 (9.3%)
Physician Services	115 (19.5%)	64 (24.0%)	148 (17.4%)	98 (18.7%)	410 (14.9%)	157 (13.6%)	1064 (11.8%)	802 (10.9%)
Emergency Room Visits	71 (12.0%)	23 (8.6%)	56 (6.6%)	39 (7.5%)	188 (6.8%)	68 (5.9%)	252 (2.8%)	257 (3.5%)
Same Day Surgery	9 (1.5%)	6 (2.3%)	8 (1.0%)	9 (1.8%)	41 (1.5%)	17 (1.5%)	18 (0.2%)	33 (0.4%)
Inpatient Care	234 (39.8%)	100 (37.6%)	304 (35.9%)	190 (36.2%)	1226 (44.6%)	391 (33.9%)	5904 (65.3%)	4683 (63.8%)
Outpatient Prescription	28 (4.8%)	17 (6.6%)	131 (15.5%)	41 (7.9%)	378 (13.8%)	81 (7.0%)	220 (2.4%)	220 (3.0%)
Lab Tests/Services	25 (4.3%)	8 (3.0%)	15 (1.8%)	8 (1.5%)	22 (0.8%)	10 (0.9%)	18 (0.2%)	12 (0.2%)
Other Services*	41 (7.0%)	17 (6.5%)	84 (9.9%)	51 (9.8%)	205 (7.5%)	116 (10.1%)	846 (9.4%)	651 (8.9%)
Total	589 (100.0%)	265 (100.0%)	847 (100.0%)	524 (100.0%)	2747 (100.0%)	1152 (100.0%)	9042 (100.0%)	7335 (100.0%)
<i>Females</i>								
Number of Individuals, N	944	1728	945	1762	42	80	116	205
Resource Category, \$ (% of total)								
Outpatient Visits	56 (8.1%)	32 (10.1%)	75 (8.2%)	49 (10.5%)	124 (4.3%)	89 (12.2%)	583 (6.7%)	837 (9.1%)
Physician Services	147 (21.2%)	93 (29.1%)	192 (21.2%)	124 (26.8%)	394 (13.8%)	137 (18.9%)	1044 (12.0%)	998 (10.8%)
Emergency Room Visits	84 (12.0%)	32 (10.0%)	54 (6.0%)	40 (8.6%)	143 (5.0%)	36 (4.9%)	246 (2.8%)	295 (3.2%)
Same Day Surgery	8 (1.2%)	12 (3.9%)	10 (1.1%)	10 (2.2%)	16 (0.5%)	14 (1.9%)	15 (0.2%)	27 (0.3%)
Inpatient Care	274 (39.4%)	106 (33.3%)	351 (38.6%)	152 (32.6%)	1477 (51.5%)	207 (28.5%)	5968 (68.9%)	6220 (67.3%)
Outpatient Prescription	39 (5.6%)	19 (6.0%)	171 (18.9%)	55 (11.7%)	463 (16.1%)	156 (21.4%)	207 (2.4%)	169 (1.8%)
Lab Tests/Services	32 (4.5%)	14 (4.4%)	19 (2.1%)	11 (2.4%)	18 (0.6%)	9 (1.2%)	15 (0.2%)	11 (0.1%)
Other Services*	56 (8.0%)	10 (3.2%)	36 (4.0%)	24 (5.2%)	233 (8.1%)	80 (11.0%)	591 (6.8%)	680 (7.4%)
Total	695 (100.0%)	318 (100.0%)	908 (100.0%)	465 (100.0%)	2868 (100.0%)	727 (100.0%)	8668 (100.0%)	9237 (100.0%)

Notes: Each cost was standardized to a measure per 30 days by dividing each patient-level cost by each person's time in phase. All costs are rounded to the nearest dollar and expressed in 2018 Canadian dollars.

*Contains costs related to the assisted device program, non-physician healthcare professional services, rehabilitation, home care, complex continuing care and long-term care services.

Supplemental Table S11. Net costs of care per 30 days by cost category and phase stratified by sex.

	Phase of care, mean net cost (95% CI) per 30 days							
	Pre-diagnosis		Initial		Late		Terminal	
	Male	Female	Male	Female	Male	Female	Male	Female
Number of cases	1152	944	1132	945	88	42	181	116
Number of controls	2188	1728	2113	1762	169	80	340	205
Resource Category, \$ (95% CI)								
Outpatient Visits	36 (10,64)	24 (0,55)	14 (-29,62)	26 (-2,57)	-36 (-291,193)	36 (-58,139)	45 (-251,348)	-245 (-631,199)
Physician Services	51 (37,65)	54 (37,74)	50 (38,62)	67 (50,90)	253 (168,355)	257 (162,370)	263 (-31,609)	51 (-288,493)
Emergency Room Visits	48 (40,57)	52 (42,62)	16 (9,23)	14 (7,20)	120 (60,197)	108 (64,157)	-5 (-65,56)	-49 (-145,42)
Same Day Surgery	2 (-2,7)	-4 (-11,2)	-1 (-3,0)	-1 (-2,1)	24 (4,47)	2 (-7,11)	-15 (-42,5)	-12 (-31,6)
Inpatient Care	134 (64,209)	168 (106,240)	114 (29,201)	199 (115,287)	835 (429,1331)	1268 (693,1895)	1248 (-818,3418)	-220 (-2739,2462)
Outpatient Prescription	11 (4,18)	20 (12,27)	90 (73,108)	117 (96,139)	297 (146,470)	308 (18,623)	0 (-138,155)	38 (-56,140)
Lab Tests/Services	17 (14,21)	17 (12,22)	7 (5,9)	8 (6,10)	12 (3,24)	9 (3,19)	5 (-1,12)	4 (-4,13)
Other	24 (-7,68)	45 (6,103)	33 (-11,90)	12 (-5,29)	89 (-15,228)	150 (-43,362)	196 (-227,636)	-89 (-432,303)
Total Cost	324 (219,429)	376 (280,487)	323 (186,461)	443 (321,560)	1594 (844,2431)	2130 (1275,3031)	1745 (-639,4460)	-498 (-3563,2832)

Notes: Each cost is rounded to the nearest dollar and expressed in 2018 Canadian dollars. Net costs were estimated for cases to controls using clustered generalized estimating equations (GEE) with each cost category as the dependent variable and HCV status as the independent variable. For each GEE analysis of each resource category, a gamma distribution and log link were used. Confidence intervals were generated using the percentile method sampling from 1,000 clustered bootstrap replications.