

# Appendix 1

## Description of Variables

We tracked the location of training (medical degree) (Canada, international or unknown), billing days, contacts per billing day, and unique patients seen. We also tracked the number of physicians with one or more shadow billings and one or more contacts in ambulatory locations. Shadow billings included instances where a FP billed a code for tracking purposes but did not receive full fee-for-service payment. To encourage FPs to continue to submit shadow codes, some provincial governments offered financial incentives,<sup>38</sup> compared billings to expected service volumes and conducted audits.

Table A1 contains descriptions of the datasets accessed in each of the study provinces.

**Table A1 – Description of datasets**

| Dataset            | British Columbia   | Manitoba  | Ontario   | Nova Scotia   |
|--------------------|--|---|---|---|
| Physician registry | College of Physicians and Surgeons of BC – Data on all physicians registered with the College of Physicians and Surgeons of BC | Physician Master File – contains "snapshots" of provider and practice information obtained quarterly (every three months) from Manitoba Health. This data contains information about physicians/providers and their practice details, including: physician/provider specialty, date of birth/age, location of training, years of practice, payment methods, workloads, and practice groups/practice location. In determining practice location information, the Electronic User Site Location (EUSL) data is also required. | Corporate Provider Database – Contains information for all physicians funded by the Ministry of Health, either through the Ontario Health Insurance Program or via some other funding arrangement.<br><br>ICES Physician Database – Contains yearly information about all physicians in Ontario. It includes derived variables generated from data contained in the Ontario Health Insurance Plan, Corporate Provider Database, and the Ontario Human Resource Data Centre. | Licensed Provider Registry – Contains provider place of birth, date of birth, sex, city of practice, county of practice, encrypted ID, type of provider, prescriber indicator, specialty, year of graduation, medical school location, medical school name, and dates of eligibility to practice. |
| Physician billings | Medical Services Plan - Data on medically necessary services   | Medical Claims/ Medical Services Data - Health data maintained by   | Ontario Health Insurance Plan (OHIP) - OHIP claims data   | MSI Physician Billings - Contain administrative records for each  |

|                           |  |   |   |   |
|---------------------------|--|---|---|---|
|                           | provided by fee-for-service practitioners to individuals covered by the Medical Services Plan (MSP), BC's universal insurance program.                       | Manitoba Health consisting of claims for physician visits in offices, hospitals, and outpatient departments; fee-for-service components for tests performed in offices and hospitals.   | received by ICES contains most claims paid for by the Ontario Health Insurance Plan. The data cover all health care providers who can claim under OHIP (this includes physicians, groups, laboratories, and out-of-province providers). | insured service encounter rendered by a physician and paid for by the Nova Scotia Medical Services Insurance (MSI).                       |
| Patient registration file | Consolidation File - Contains basic demographics on all BC residents such as age and sex, geo-codes indicating location of residence, and registration data. | Manitoba Health Insurance Registry – Includes all individuals who have been registered with Manitoba Health. The registry includes individual-level demographics, family composition information, residential postal codes, and data fields for registration, birth, entry into province, and migration in/out of province. | Registered Persons Database - The RPDB provides basic demographic information about anyone who has ever received an Ontario health card number.   | Insured Patient Registry – Includes demographic information on all patients who received publicly insured health services in Nova Scotia. |

## Stratified Analysis

Figures A1 to A6 present the results of our age-period-cohort analysis stratified by sex/gender. Note that this stratification employs a binary indicator for male and female. This information is self-reported by physicians at time of registration, and whether legal sex, sex assigned at birth, or gender is being reported cannot be confirmed. Recognizing this lack of specificity in our measures we describe these variables as sex. Figures A7-A12 present the results of our analysis stratified by practice location. These figures have been included to show how our analysis differs among key subgroups of the FP population.

### Figure A1 - Period Effects on Median Patient Contacts by sex/gender



Figure A2 - Years in Practice Effects on Median Patient Contacts by sex/gender

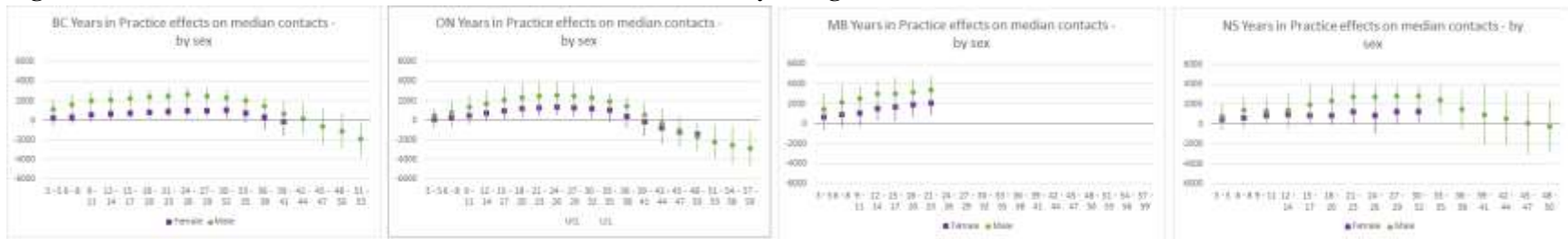


Figure A3 - Cohort Effects on Median Patient Contacts by sex/gender

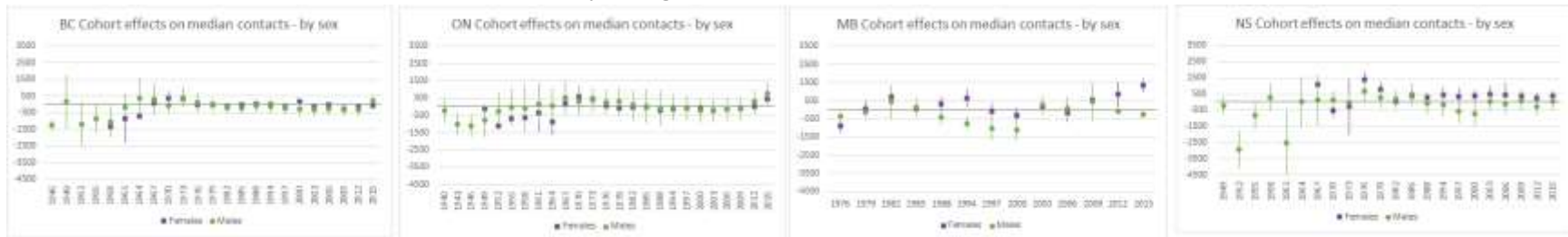


Figure A4 - Period Effects on Median Physician-Level Continuity by sex/gender

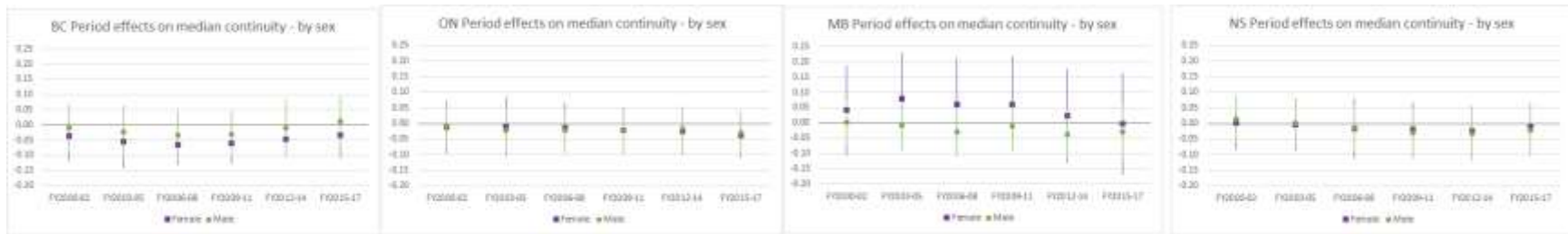


Figure A5 - Years in Practice Effects on Median Physician-Level Continuity by sex/gender

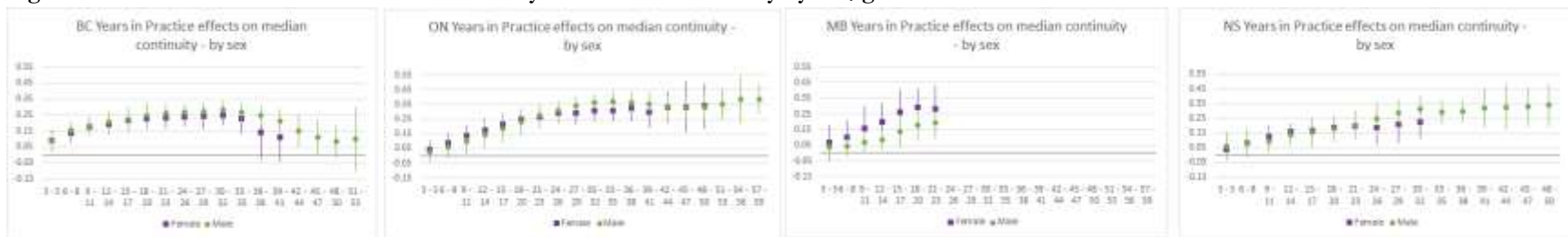
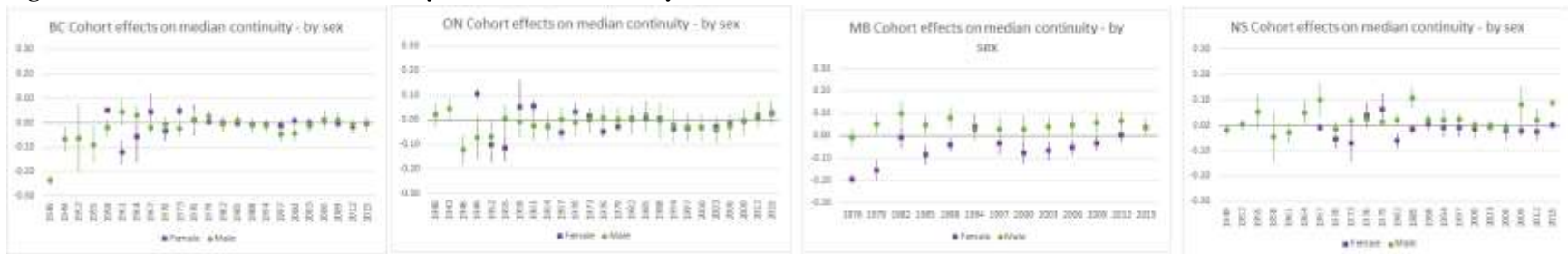


Figure A6 - Cohort Effects on Median Physician-Level Continuity



Figures A7 to A12 present the results of our age-period cohort analysis stratified by rural/urban.

Figure A7 - Period Effects on Median Patient Contacts by rural/urban

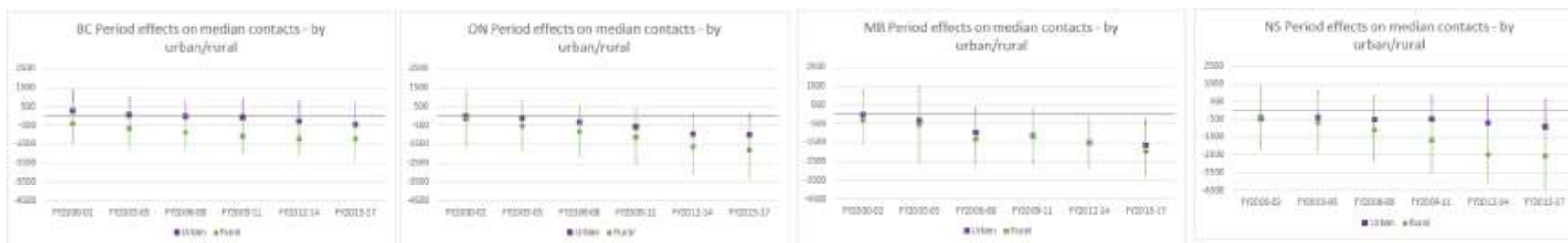


Figure A8 - Years in Practice Effects on Median Patient Contacts by rural/urban

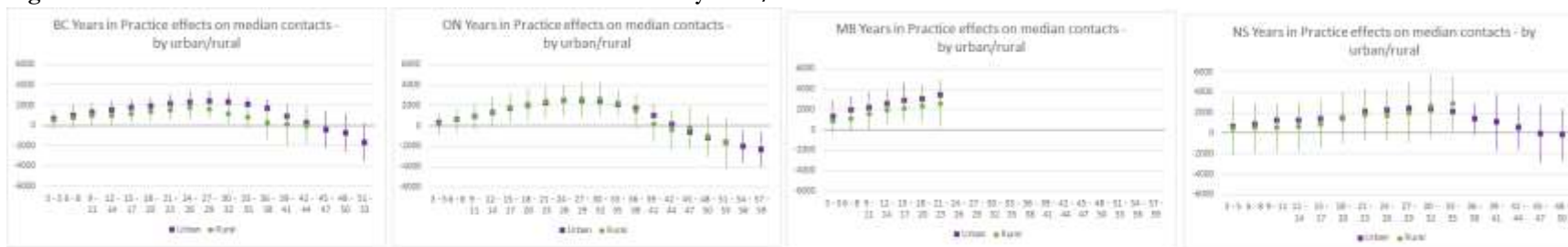


Figure A9 - Cohort Effects on Median Patient Contacts by rural/urban

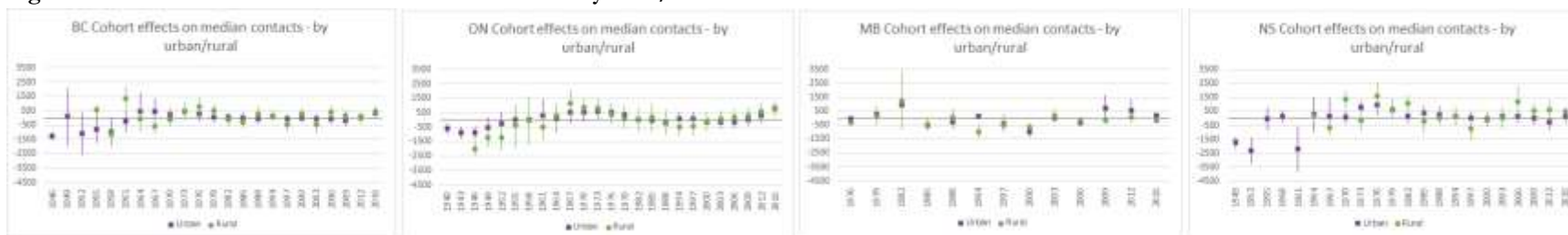


Figure A10 - Period Effects on Median Physician-Level Continuity by rural/urban

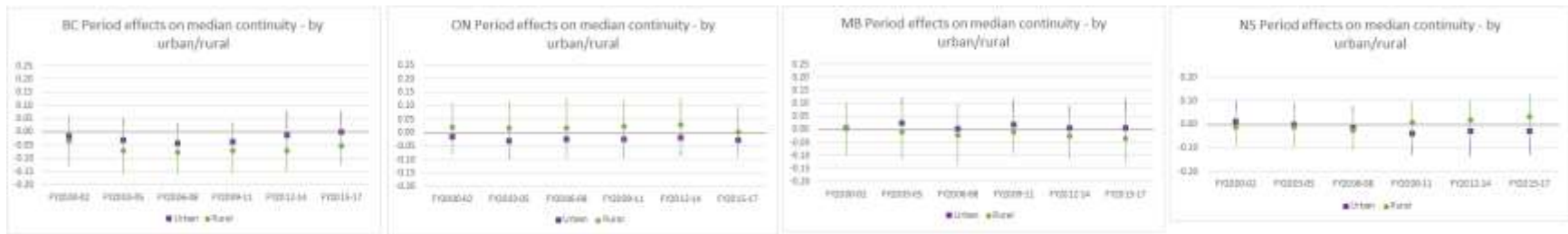


Figure A11 - Years in Practice Effects on Median Physician-Level Continuity by rural/urban

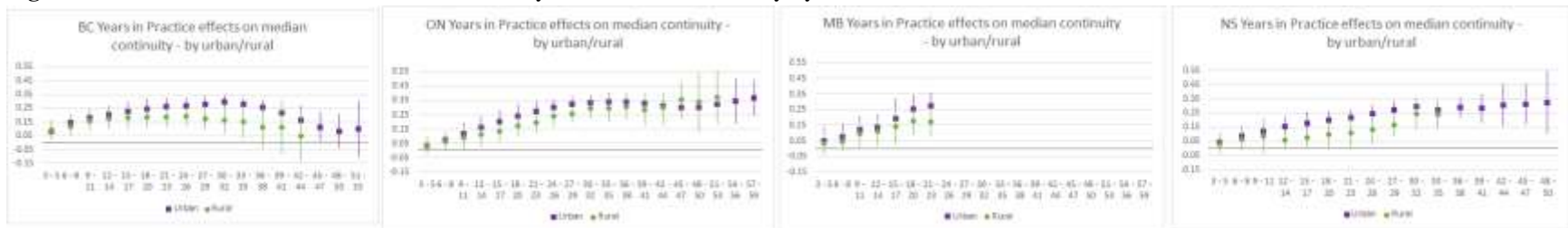
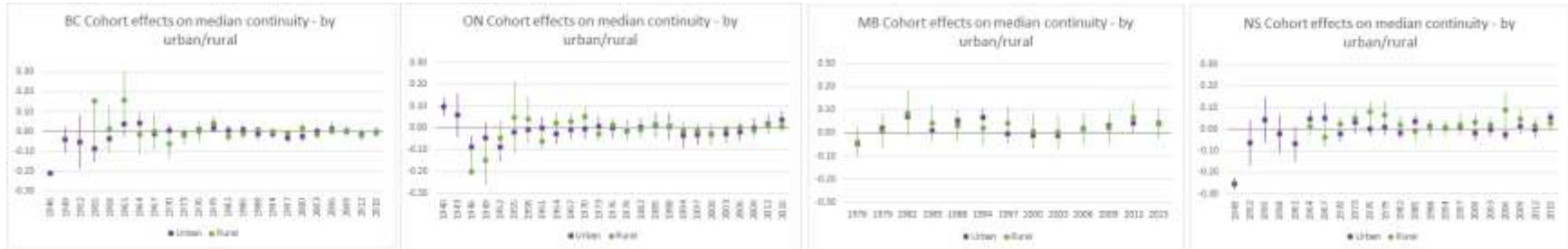


Figure A12 - Cohort Effects on Median Physician-Level Continuity by rural/urban



## Changes in Shadow Billing and Alternative Payment

Table A2 summarizes the changes in shadow billing by years in practice between fiscal years 1997/98 and 2017/18 and across all four study provinces.

**Table A2 Shadow billing by years in practice**

| Shadow Billing                  | British Columbia |            | Ontario   |             | Manitoba  |            | Nova Scotia |            |
|---------------------------------|------------------|------------|-----------|-------------|-----------|------------|-------------|------------|
|                                 | FY1997/98        | FY2017/18  | FY1997/98 | FY2017/18   | FY1997/98 | FY2017/18  | FY1997/98   | FY2017/18  |
| <b>Years in Practice, N (%)</b> |                  |            |           |             |           |            |             |            |
| 0 to 4                          | 7 (1.3)          | 193 (25.1) | 0         | 527 (30.8)  | 62 (23.7) | 194 (42.2) | 50 (61.7)   | 115 (83.3) |
| 5 to 9                          | s                | 132 (19.7) | 0         | 797 (44.9)  | 15 (8.9)  | 85 (33.0)  | 69 (48.6)   | 66 (72.5)  |
| 10 to 19                        | s                | 197 (16.2) | 0         | 1185 (43.8) | 11 (4.9)  | 58 (24.3)  | 107 (42.5)  | 112 (60.9) |
| 20 to 29 (MB: 20+)              | s                | 168 (11.0) | 0         | 1410 (43.2) | 8 (5.3)   | 17 (5.9)   | 79 (45.9)   | 123 (46.4) |
| 30 to 39                        | 0                | 86 (8.2)   | 0         | 1252 (46.8) | n/a       | n/a        | 6 (9.7)     | 75 (37.1)  |
| 40 to 49                        | 0                | 20 (5.2)   | 0         | 464 (39.7)  | n/a       | n/a        | s           | 29 (35.4)  |
| 50+                             | 0                | s          | 0         | 48 (22.9)   | n/a       | n/a        | 0           | s          |

Table A3 provides a count of family physician observations that contributed to the median polish analysis in each province.

**Table A3 - Count of family physician observations contributing to median polish table by period and by province**

| <b>Fiscal Year</b> | <b>British Columbia</b> | <b>Manitoba</b> | <b>Ontario</b> | <b>Nova Scotia</b> |
|--------------------|-------------------------|-----------------|----------------|--------------------|
| 1997-99            | 11,469                  | 2,469           | 28,079         | 2,239              |
| 2000-02            | 11,906                  | 2,662           | 28,726         | 2,385              |
| 2003-05            | 12,663                  | 2,748           | 30,015         | 2,580              |
| 2006-08            | 13,385                  | 2,864           | 31,169         | 2,613              |
| 2009-11            | 14,312                  | 3,093           | 33,531         | 2,696              |
| 2012-14            | 15,341                  | 3,311           | 36,447         | 2,839              |
| 2015-17            | 16,460                  | 3,588           | 39,602         | 2,905              |

**Note: Family physicians can appear multiple times in each three-year period**

Table A4 provides a full detail on the number and percent of family physicians in each of the years in practice categories in each of the four study provinces.



**Table A4 Physician years in practice, 1997/98 and 2017/18**

| Characteristic                  | British Columbia |           | Manitoba   |            | Ontario      |             | Nova Scotia |           |
|---------------------------------|------------------|-----------|------------|------------|--------------|-------------|-------------|-----------|
|                                 | FY1997/98        | FY2017/18 | FY1997/98  | FY2017/18  | FY1997/98    | FY2017/18   | FY1997/98   | FY2017/18 |
| N                               | 3,828            | 5,641     | 808        | 1,244      | 9,400        | 13,514      | 739         | 974       |
| <b>Years in Practice, N (%)</b> |                  |           |            |            |              |             |             |           |
| 0 to 2                          | 247 (6.5)        | 453 (8.0) | 204 (25.3) | 334 (26.9) | 462 (4.9)    | 796 (5.9)   | 26 (3.5)    | 80 (8.2)  |
| 3 to 5                          | 451 (11.8)       | 459 (8.1) | 110 (13.6) | 169 (13.6) | 1,029 (11.0) | 1,308 (9.7) | 85 (11.5)   | 80 (8.2)  |
| 6 to 8                          | 458 (12.0)       | 391 (6.9) | 93 (11.5)  | 165 (13.3) | 972 (10.3)   | 1,078 (8.0) | 79 (10.7)   | 57 (5.8)  |
| 9 to 11                         | 395 (10.3)       | 408 (7.2) | 77 (9.5)   | 116 (9.3)  | 914 (9.7)    | 827 (6.1)   | 85 (11.5)   | 40 (4.1)  |
| 12 to 14                        | 331 (8.6)        | 324 (5.7) | 73 (9.0)   | 36 (2.9)   | 881 (9.4)    | 752 (5.6)   | 89 (12.0)   | 52 (5.3)  |
| 15 to 17                        | 333 (8.7)        | 428 (7.6) | 63 (7.8)   | 93 (7.5)   | 855 (9.1)    | 864 (6.4)   | 63 (8.5)    | 62 (3.4)  |
| 18 to 20                        | 368 (9.6)        | 367 (6.5) | 46 (5.7)   | 60 (4.8)   | 783 (8.3)    | 855 (6.3)   | 78 (10.6)   | 62 (3.4)  |
| 21 to 23                        | 345 (9.0)        | 360 (6.4) | 48 (5.9)   | 45 (3.6)   | 678 (7.2)    | 853 (7.1)   | 71 (9.6)    | 64 (6.6)  |
| 24 to 26 (MB: 24+)              | 252 (6.6)        | 502 (8.9) | 94 (11.6)  | 226 (18.2) | 685 (7.3)    | 1,040 (7.7) | 46 (6.2)    | 91 (9.3)  |
| 27 to 29                        | 198 (5.2)        | 489 (8.7) | n/a        | n/a        | 518 (5.5)    | 986 (7.3)   | 25 (3.4)    | 90 (9.2)  |
| 30 to 32                        | 122 (3.2)        | 376 (6.7) | n/a        | n/a        | 419 (4.5)    | 906 (6.7)   | 16 (2.2)    | 81 (8.3)  |
| 33 to 35                        | 103 (2.7)        | 309 (5.5) | n/a        | n/a        | 322 (3.4)    | 844 (6.3)   | 25 (3.4)    | 59 (6.1)  |
| 36 to 38                        | 101 (2.6)        | 273 (4.8) | n/a        | n/a        | 248 (2.6)    | 713 (5.3)   | 17 (2.3)    | 52 (5.3)  |
| 39 to 41                        | 72 (1.9)         | 212 (3.8) | n/a        | n/a        | 228 (2.4)    | 563 (4.2)   | 16 (2.2)    | 43 (4.4)  |
| 42 to 44                        | 27 (0.7)         | 147 (2.6) | n/a        | n/a        | 191 (2.0)    | 398 (3.0)   | 8 (1.1)     | 27 (2.8)  |
| 45 to 47                        | 14 (0.4)         | 85 (1.5)  | n/a        | n/a        | 107 (1.1)    | 298 (2.2)   | 7 (1.0)     | 18 (1.8)  |

|          |         |          |     |     |          |           |   |         |
|----------|---------|----------|-----|-----|----------|-----------|---|---------|
| 48 to 50 | 6 (0.2) | 34 (0.6) | n/a | n/a | 52 (0.6) | 172 (1.3) | s | 5 (0.5) |
| 51 to 53 | s       | 15 (0.3) | n/a | n/a | 31 (0.3) | 88 (0.7)  | 0 | 6 (0.6) |
| 54 to 56 | s       | 8 (0.1)  | n/a | n/a | 20 (0.2) | 38 (0.3)  | s | s       |
| 57 to 59 |         | s        | n/a | n/a | s        | 27 (0.2)  | 0 | 0       |
| 60 to 62 |         |          | n/a | n/a | s        | s         | 0 | 0       |
| 63 to 65 |         |          | n/a | n/a |          | s         |   |         |

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**Table abbreviations:** “n/a” = not available, “s” = suppressed due to small cell sizes.

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## Regression Estimates for Median Contacts and Median Continuity

**Table A5 - Regression Estimates for Model of Median Contacts and Residuals from Median Polish Analysis**

| Period            | British Columbia |        |        | Ontario |        |        | Manitoba |        |        | Nova Scotia |        |        |
|-------------------|------------------|--------|--------|---------|--------|--------|----------|--------|--------|-------------|--------|--------|
|                   | Est.             | 95% CI | 95% CI | Est.    | 95% CI | 95% CI | Est.     | 95% CI | 95% CI | Est.        | 95% CI | 95% CI |
| FY1997-99         | ref              | ref    | ref    | ref     | ref    | ref    | ref      | ref    | ref    | ref         | ref    | ref    |
| FY2000-02         | 198              | -920   | 1317   | -58     | -1125  | 1009   | -111     | -1287  | 1064   | -432        | -2205  | 1341   |
| FY2003-05         | -25              | -1023  | 974    | -141    | -1111  | 829    | -472     | -1783  | 839    | -401        | -1946  | 1145   |
| FY2006-08         | -109             | -1021  | 803    | -383    | -1285  | 518    | -1092    | -2037  | -147   | -563        | -1920  | 794    |
| FY2009-11         | -187             | -1190  | 816    | -603    | -1588  | 382    | -1222    | -2250  | -194   | -557        | -1989  | 876    |
| FY2012-14         | -401             | -1481  | 680    | -967    | -2118  | 184    | -1524    | -2582  | -466   | -880        | -2495  | 735    |
| FY2015-17         | -515             | -1709  | 679    | -1075   | -2276  | 126    | -1763    | -2883  | -643   | -1012       | -2715  | 691    |
| Years in Practice | Est.             | 95% CI | 95% CI | Est.    | 95% CI | 95% CI | Est.     | 95% CI | 95% CI | Est.        | 95% CI | 95% CI |
| 0 - 2             | ref              | ref    | ref    | ref     | ref    | ref    | ref      | ref    | ref    | ref         | ref    | ref    |
| 3 - 5             | 622              | -215   | 1458   | 326     | -418   | 1070   | 1025     | -200   | 2251   | 733         | -199   | 1664   |
| 6 - 8             | 978              | 108    | 1848   | 627     | -266   | 1521   | 1568     | 315    | 2822   | 994         | 18     | 1970   |
| 9 - 11            | 1209             | 404    | 2015   | 987     | 14     | 1960   | 1927     | 850    | 3004   | 1185        | 306    | 2064   |
| 12 - 14           | 1413             | 590    | 2236   | 1354    | 281    | 2428   | 2258     | 1245   | 3272   | 1302        | 420    | 2183   |
| 15 - 17           | 1679             | 883    | 2475   | 1730    | 613    | 2846   | 2474     | 1247   | 3700   | 1462        | 295    | 2629   |
| 18 - 20           | 1899             | 1080   | 2717   | 2015    | 741    | 3289   | 2772     | 1510   | 4035   | 1637        | 416    | 2858   |
| 21 - 23           | 2111             | 1239   | 2983   | 2321    | 894    | 3749   | 3063     | 1670   | 4457   | 2220        | 639    | 3802   |
| 24 - 26           | 2274             | 1326   | 3221   | 2512    | 1045   | 3979   | -        | -      | -      | 2313        | 981    | 3644   |
| 27 - 29           | 2340             | 1431   | 3250   | 2510    | 949    | 4070   | -        | -      | -      | 2566        | 1297   | 3835   |
| 30 - 32           | 2252             | 1489   | 3014   | 2420    | 1208   | 3632   | -        | -      | -      | 2524        | 1494   | 3554   |
| 33 - 35           | 1972             | 1274   | 2670   | 2122    | 1112   | 3133   | -        | -      | -      | 2276        | 1166   | 3386   |
| 36 - 38           | 1616             | 790    | 2441   | 1690    | 647    | 2732   | -        | -      | -      | 1596        | 220    | 2971   |
| 39 - 41           | 882              | -299   | 2064   | 969     | -181   | 2119   | -        | -      | -      | 1026        | -1406  | 3459   |
| 42 - 44           | 326              | -1151  | 1803   | 103     | -1320  | 1527   | -        | -      | -      | 617         | -1730  | 2964   |
| 45 - 47           | -318             | -2088  | 1452   | -536    | -1959  | 886    | -        | -      | -      | 118         | -2895  | 3132   |
| 48 - 50           | -725             | -2579  | 1129   | -1147   | -2462  | 167    | -        | -      | -      | 57          | -2730  | 2845   |
| 51 - 53           | -1527            | -3279  | 226    | -1647   | -3025  | -269   | -        | -      | -      | -           | -      | -      |
| 54 - 56           | -                | -      | -      | -1864   | -3702  | -26    | -        | -      | -      | -           | -      | -      |

Appendix 1, as supplied by the authors. Appendix to: Rudoler D, Peterson S, Stock D, et al. Changes over time in patient visits and continuity of care among graduating cohorts of family physicians in 4 Canadian provinces. *CMAJ* 2022. doi: 10.1503/cmaj.220439. Copyright © 2022 The Author(s) or their employer(s). To receive this resource in an accessible format, please contact us at [cmajgroup@cmaj.ca](mailto:cmajgroup@cmaj.ca).

| Cohort  | Est.  | 95% CI | Est.  | 95% CI | Est.  | 95% CI | Est. | 95% CI |      |       |       |       |
|---------|-------|--------|-------|--------|-------|--------|------|--------|------|-------|-------|-------|
| 57 - 59 | -     | -      | -     | -2245  | -4051 | -439   | -    | -      | -    | -     | -     | -     |
| 1940-42 | -     | -      | -     | -789   | -1208 | -369   | -    | -      | -    | -     | -     | -     |
| 1943-45 | -     | -      | -     | -1081  | -1489 | -672   | -    | -      | -    | -     | -     | -     |
| 1946-48 | -1457 | -1692  | -1222 | -1035  | -1471 | -600   | -    | -      | -    | -     | -     | -     |
| 1949-51 | -27   | -1851  | 1797  | -679   | -1449 | 91     | -    | -      | -    | -1635 | -1944 | -1326 |
| 1952-54 | -1205 | -2497  | 87    | -362   | -1287 | 562    | -    | -      | -    | -2638 | -3830 | -1446 |
| 1955-57 | -832  | -1655  | -9    | -48    | -947  | 852    | -    | -      | -    | -281  | -1484 | 921   |
| 1958-60 | -994  | -1880  | -108  | 63     | -1120 | 1247   | -    | -      | -    | 94    | -300  | 488   |
| 1961-63 | -206  | -855   | 442   | 196    | -884  | 1276   | -    | -      | -    | -1892 | -3500 | -285  |
| 1964-66 | 348   | -809   | 1505  | 29     | -807  | 864    | -    | -      | -    | 576   | -890  | 2042  |
| 1967-69 | 414   | -507   | 1334  | 565    | -166  | 1297   | -    | -      | -    | 413   | -1111 | 1937  |
| 1970-72 | 129   | -205   | 463   | 543    | -100  | 1187   | -    | -      | -    | 366   | 28    | 704   |
| 1973-75 | 480   | 166    | 794   | 600    | 104   | 1096   | -    | -      | -    | 586   | 156   | 1017  |
| 1976-78 | 275   | -215   | 765   | 470    | -104  | 1043   | -217 | -337   | -98  | 899   | 443   | 1355  |
| 1979-81 | 75    | -237   | 386   | 286    | -310  | 882    | 107  | -323   | 538  | 435   | -5    | 876   |
| 1982-84 | -52   | -363   | 258   | 2      | -661  | 665    | 1077 | 232    | 1922 | 306   | -133  | 744   |
| 1985-87 | -35   | -375   | 305   | -41    | -824  | 742    | -349 | -561   | -136 | 158   | -331  | 648   |
| 1988-90 | -77   | -403   | 250   | -208   | -951  | 535    | -116 | -616   | 383  | 143   | -387  | 673   |
| 1991-93 | ref   | ref    | ref   | ref    | ref   | ref    | ref  | ref    | ref  | ref   | ref   | ref   |
| 1994-96 | 63    | -259   | 385   | -22    | -525  | 480    | -253 | -387   | -119 | 225   | -261  | 712   |
| 1997-99 | -245  | -522   | 33    | -15    | -503  | 473    | -563 | -945   | -180 | 31    | -383  | 444   |
| 2000-02 | -45   | -324   | 233   | -144   | -592  | 304    | -907 | -1078  | -736 | 143   | -215  | 500   |
| 2003-05 | -217  | -499   | 65    | -140   | -587  | 307    | -6   | -197   | 185  | 339   | -122  | 800   |
| 2006-08 | -79   | -375   | 217   | -65    | -506  | 377    | -412 | -645   | -178 | 407   | -3    | 818   |
| 2009-11 | -204  | -540   | 132   | 91     | -369  | 550    | 274  | -172   | 719  | 241   | -140  | 621   |
| 2012-14 | 4     | -299   | 306   | 343    | -101  | 787    | 83   | -320   | 485  | 250   | -72   | 573   |
| 2015-17 | 302   | 25     | 578   | 832    | 406   | 1259   | -180 | -305   | -56  | 396   | 79    | 713   |

**Notes:** The estimates for period and years in practice were generated using the same linear model of median contacts. Estimates for cohort were generated in a separate linear model on the residuals of the median polish analysis. 95% CIs were generated using bootstrap resampling with replacement with 1,000 samples.

**Table A6 - Regression Estimates for Model of Median Continuity and Residuals from Median Polish Analysis**

|                   | British Columbia |        |       | Ontario |        |        | Manitoba |        |       | Nova Scotia |        |        |
|-------------------|------------------|--------|-------|---------|--------|--------|----------|--------|-------|-------------|--------|--------|
| Period            | Est.             | 95% CI | Est.  | 95% CI  | Est.   | 95% CI | Est.     | 95% CI | Est.  | 95% CI      | Est.   | 95% CI |
| FY1997-99         | ref              | ref    | ref   | ref     | ref    | ref    | ref      | ref    | ref   | ref         | ref    | ref    |
| FY2000-02         | -0.023           | -0.084 | 0.038 | -0.011  | -0.071 | 0.048  | 0.009    | -0.072 | 0.089 | 0.011       | -0.066 | 0.089  |
| FY2003-05         | -0.037           | -0.100 | 0.027 | -0.022  | -0.080 | 0.036  | 0.014    | -0.068 | 0.096 | -0.002      | -0.075 | 0.072  |
| FY2006-08         | -0.048           | -0.112 | 0.016 | -0.021  | -0.081 | 0.040  | 0.002    | -0.085 | 0.088 | -0.011      | -0.086 | 0.063  |
| FY2009-11         | -0.041           | -0.095 | 0.014 | -0.022  | -0.083 | 0.040  | 0.015    | -0.064 | 0.093 | -0.028      | -0.105 | 0.048  |
| FY2012-14         | -0.021           | -0.096 | 0.055 | -0.015  | -0.077 | 0.047  | -0.004   | -0.076 | 0.067 | -0.022      | -0.107 | 0.064  |
| FY2015-17         | -0.009           | -0.069 | 0.052 | -0.026  | -0.085 | 0.033  | -0.006   | -0.097 | 0.085 | -0.015      | -0.096 | 0.066  |
| Years in Practice | Est.             | 95% CI | Est.  | 95% CI  | Est.   | 95% CI | Est.     | 95% CI | Est.  | 95% CI      | Est.   | 95% CI |
| 0 - 2             | ref              | ref    | ref   | ref     | ref    | ref    | ref      | ref    | ref   | ref         | ref    | ref    |
| 3 - 5             | 0.089            | 0.040  | 0.137 | 0.033   | -0.018 | 0.085  | 0.049    | -0.006 | 0.103 | 0.042       | -0.008 | 0.091  |
| 6 - 8             | 0.147            | 0.097  | 0.197 | 0.071   | 0.018  | 0.124  | 0.062    | 0.003  | 0.121 | 0.084       | 0.032  | 0.136  |
| 9 - 11            | 0.179            | 0.127  | 0.232 | 0.113   | 0.049  | 0.176  | 0.103    | 0.039  | 0.167 | 0.113       | 0.058  | 0.168  |
| 12 - 14           | 0.202            | 0.148  | 0.256 | 0.154   | 0.081  | 0.226  | 0.118    | 0.048  | 0.188 | 0.141       | 0.086  | 0.196  |
| 15 - 17           | 0.219            | 0.156  | 0.282 | 0.194   | 0.118  | 0.270  | 0.165    | 0.059  | 0.270 | 0.155       | 0.082  | 0.228  |
| 18 - 20           | 0.238            | 0.172  | 0.304 | 0.233   | 0.159  | 0.306  | 0.221    | 0.146  | 0.295 | 0.178       | 0.122  | 0.235  |
| 21 - 23           | 0.252            | 0.193  | 0.311 | 0.263   | 0.205  | 0.320  | 0.231    | 0.147  | 0.315 | 0.198       | 0.148  | 0.249  |
| 24 - 26           | 0.258            | 0.205  | 0.311 | 0.292   | 0.246  | 0.338  | -        | -      | -     | 0.224       | 0.167  | 0.282  |
| 27 - 29           | 0.266            | 0.215  | 0.317 | 0.310   | 0.263  | 0.358  | -        | -      | -     | 0.257       | 0.203  | 0.312  |
| 30 - 32           | 0.276            | 0.226  | 0.327 | 0.330   | 0.289  | 0.371  | -        | -      | -     | 0.282       | 0.230  | 0.334  |
| 33 - 35           | 0.258            | 0.206  | 0.310 | 0.336   | 0.279  | 0.393  | -        | -      | -     | 0.272       | 0.222  | 0.322  |
| 36 - 38           | 0.239            | 0.182  | 0.296 | 0.334   | 0.280  | 0.388  | -        | -      | -     | 0.281       | 0.229  | 0.334  |
| 39 - 41           | 0.203            | 0.124  | 0.282 | 0.320   | 0.253  | 0.388  | -        | -      | -     | 0.296       | 0.182  | 0.409  |
| 42 - 44           | 0.149            | 0.054  | 0.244 | 0.309   | 0.244  | 0.374  | -        | -      | -     | 0.300       | 0.179  | 0.420  |
| 45 - 47           | 0.106            | 0.007  | 0.204 | 0.303   | 0.239  | 0.367  | -        | -      | -     | 0.316       | 0.202  | 0.431  |
| 48 - 50           | 0.082            | -0.041 | 0.204 | 0.307   | 0.242  | 0.372  | -        | -      | -     | 0.332       | 0.160  | 0.503  |
| 51 - 53           | 0.112            | -0.058 | 0.283 | 0.325   | 0.231  | 0.419  | -        | -      | -     | -           | -      | -      |
| 54 - 56           | -                | -      | -     | 0.370   | 0.246  | 0.494  | -        | -      | -     | -           | -      | -      |
| 57 - 59           | -                | -      | -     | 0.377   | 0.269  | 0.485  | -        | -      | -     | -           | -      | -      |
| Cohort            | Est.             | 95% CI | Est.  | 95% CI  | Est.   | 95% CI | Est.     | 95% CI | Est.  | 95% CI      | Est.   | 95% CI |

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|         |        |        |        |        |        |        |        |        |        |        |        |        |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1940-42 | -      | -      | -      | 0.093  | 0.057  | 0.128  | -      | -      | -      | -      | -      | -      |
| 1943-45 | -      | -      | -      | 0.057  | -0.010 | 0.124  | -      | -      | -      | -      | -      | -      |
| 1946-48 | -0.119 | -0.129 | -0.110 | -0.069 | -0.109 | -0.028 | -      | -      | -      | -      | -      | -      |
| 1949-51 | -0.044 | -0.115 | 0.027  | -0.027 | -0.069 | 0.014  | -      | -      | -      | -0.191 | -0.208 | -0.173 |
| 1952-54 | -0.051 | -0.175 | 0.072  | -0.071 | -0.124 | -0.018 | -      | -      | -      | -0.054 | -0.159 | 0.051  |
| 1955-57 | -0.085 | -0.144 | -0.027 | -0.006 | -0.059 | 0.047  | -      | -      | -      | 0.043  | -0.039 | 0.126  |
| 1958-60 | -0.015 | -0.048 | 0.017  | -0.001 | -0.061 | 0.059  | -      | -      | -      | -0.020 | -0.119 | 0.079  |
| 1961-63 | 0.053  | -0.001 | 0.106  | -0.004 | -0.051 | 0.042  | -      | -      | -      | -0.027 | -0.110 | 0.056  |
| 1964-66 | 0.040  | -0.002 | 0.082  | -0.023 | -0.065 | 0.019  | -      | -      | -      | 0.043  | 0.011  | 0.074  |
| 1967-69 | -0.007 | -0.021 | 0.007  | -0.004 | -0.041 | 0.033  | -      | -      | -      | 0.036  | -0.028 | 0.100  |
| 1970-72 | -0.003 | -0.024 | 0.019  | 0.000  | -0.040 | 0.040  | -      | -      | -      | -0.019 | -0.043 | 0.005  |
| 1973-75 | -0.010 | -0.036 | 0.017  | 0.004  | -0.034 | 0.042  | -      | -      | -      | 0.018  | -0.010 | 0.047  |
| 1976-78 | 0.013  | -0.025 | 0.050  | -0.002 | -0.038 | 0.035  | -0.038 | -0.070 | -0.005 | 0.019  | -0.002 | 0.040  |
| 1979-81 | 0.025  | 0.009  | 0.040  | -0.012 | -0.050 | 0.026  | 0.021  | -0.012 | 0.053  | 0.023  | 0.002  | 0.043  |
| 1982-84 | -0.003 | -0.023 | 0.017  | 0.001  | -0.040 | 0.041  | 0.080  | 0.027  | 0.132  | -0.011 | -0.034 | 0.013  |
| 1985-87 | 0.004  | -0.011 | 0.020  | 0.013  | -0.037 | 0.063  | 0.018  | -0.025 | 0.060  | 0.034  | 0.008  | 0.061  |
| 1988-90 | -0.009 | -0.027 | 0.008  | 0.004  | -0.051 | 0.060  | 0.045  | 0.004  | 0.086  | 0.009  | -0.013 | 0.032  |
| 1991-93 | ref    | ref    | ref    | ref    | ref    | ref    | ref    | ref    | ref    | ref    | ref    | ref    |
| 1994-96 | -0.009 | -0.024 | 0.007  | -0.030 | -0.084 | 0.024  | 0.046  | 0.009  | 0.084  | 0.002  | -0.025 | 0.029  |
| 1997-99 | -0.029 | -0.047 | -0.010 | -0.027 | -0.070 | 0.017  | 0.028  | -0.018 | 0.075  | 0.012  | -0.014 | 0.037  |
| 2000-02 | -0.013 | -0.028 | 0.002  | -0.028 | -0.068 | 0.013  | -0.001 | -0.059 | 0.056  | -0.011 | -0.043 | 0.020  |
| 2003-05 | -0.003 | -0.022 | 0.017  | -0.025 | -0.062 | 0.012  | 0.001  | -0.040 | 0.041  | -0.001 | -0.029 | 0.027  |
| 2006-08 | 0.012  | -0.014 | 0.038  | -0.016 | -0.055 | 0.022  | 0.017  | -0.017 | 0.052  | -0.010 | -0.036 | 0.015  |
| 2009-11 | 0.005  | -0.014 | 0.024  | -0.003 | -0.042 | 0.037  | 0.025  | -0.008 | 0.059  | 0.013  | -0.006 | 0.032  |
| 2012-14 | -0.006 | -0.020 | 0.008  | 0.013  | -0.024 | 0.051  | 0.036  | 0.003  | 0.070  | 0.008  | -0.010 | 0.026  |
| 2015-17 | -0.005 | -0.020 | 0.010  | 0.030  | -0.006 | 0.065  | 0.036  | 0.004  | 0.069  | 0.048  | 0.030  | 0.066  |

**Notes:** The estimates for period and years in practice were generated using the same linear model of median contacts. Estimates for cohort were generated in a separate linear model on the residuals of the median polish analysis. 95% CIs were generated using bootstrap resampling with replacement with 1,000 samples.

## Regression Estimates for Mean Contacts and Mean Continuity

**Table A7 - Regression Estimates for Model of Mean Contacts and Residuals from Median Polish Analysis**

| Period            | British Columbia |        |        | Ontario |        |        | Manitoba |        |        | Nova Scotia |        |        |
|-------------------|------------------|--------|--------|---------|--------|--------|----------|--------|--------|-------------|--------|--------|
|                   | Est.             | 95% CI | 95% CI | Est.    | 95% CI | 95% CI | Est.     | 95% CI | 95% CI | Est.        | 95% CI | 95% CI |
| FY1997-99         | ref              | ref    | ref    | ref     | ref    | ref    | ref      | ref    | ref    | ref         | ref    | ref    |
| FY2000-02         | 198              | -754   | 1150   | -67     | -784   | 651    | -56      | -1043  | 930    | -344        | -1596  | 908    |
| FY2003-05         | 116              | -760   | 993    | -100    | -818   | 619    | -341     | -1420  | 737    | -449        | -1582  | 684    |
| FY2006-08         | 100              | -712   | 911    | -228    | -869   | 413    | -802     | -1576  | -27    | -498        | -1572  | 576    |
| FY2009-11         | 87               | -782   | 957    | -403    | -1104  | 299    | -954     | -1856  | -52    | -444        | -1632  | 744    |
| FY2012-14         | -61              | -1042  | 919    | -780    | -1566  | 5      | -1312    | -2330  | -295   | -850        | -2091  | 390    |
| FY2015-17         | -210             | -1317  | 898    | -843    | -1684  | -3     | -1463    | -2592  | -335   | -952        | -2223  | 319    |
| Years in Practice | Est.             | 95% CI | 95% CI | Est.    | 95% CI | 95% CI | Est.     | 95% CI | 95% CI | Est.        | 95% CI | 95% CI |
| 0 - 2             | ref              | ref    | ref    | ref     | ref    | ref    | ref      | ref    | ref    | ref         | ref    | ref    |
| 3 - 5             | 690              | -161   | 1541   | 357     | -392   | 1107   | 1155     | -16    | 2326   | 666         | -63    | 1396   |
| 6 - 8             | 1026             | 133    | 1920   | 743     | -93    | 1579   | 1609     | 494    | 2724   | 848         | -48    | 1744   |
| 9 - 11            | 1311             | 475    | 2146   | 1192    | 360    | 2024   | 1878     | 1012   | 2744   | 992         | 190    | 1794   |
| 12 - 14           | 1462             | 641    | 2283   | 1596    | 780    | 2412   | 2077     | 1255   | 2898   | 1174        | 210    | 2137   |
| 15 - 17           | 1661             | 881    | 2442   | 1932    | 1162   | 2702   | 2277     | 1201   | 3352   | 1392        | 421    | 2363   |
| 18 - 20           | 1860             | 1023   | 2696   | 2203    | 1291   | 3116   | 2516     | 1537   | 3496   | 1650        | 697    | 2603   |
| 21 - 23           | 2012             | 1136   | 2889   | 2405    | 1451   | 3359   | 2696     | 1598   | 3794   | 2040        | 671    | 3410   |
| 24 - 26           | 2191             | 1262   | 3121   | 2511    | 1483   | 3539   | -        | -      | -      | 2161        | 1144   | 3177   |
| 27 - 29           | 2183             | 1345   | 3022   | 2517    | 1355   | 3679   | -        | -      | -      | 2274        | 1301   | 3247   |
| 30 - 32           | 2099             | 1411   | 2786   | 2411    | 1437   | 3385   | -        | -      | -      | 2403        | 1646   | 3160   |
| 33 - 35           | 1794             | 1115   | 2472   | 2112    | 1273   | 2950   | -        | -      | -      | 2228        | 1437   | 3020   |
| 36 - 38           | 1404             | 627    | 2182   | 1650    | 792    | 2508   | -        | -      | -      | 1645        | 643    | 2648   |
| 39 - 41           | 836              | -320   | 1992   | 1031    | 133    | 1928   | -        | -      | -      | 1469        | 280    | 2658   |
| 42 - 44           | 328              | -892   | 1547   | 378     | -693   | 1448   | -        | -      | -      | 989         | -275   | 2253   |
| 45 - 47           | -224             | -1580  | 1133   | -225    | -1351  | 900    | -        | -      | -      | 517         | -1580  | 2614   |
| 48 - 50           | -649             | -2289  | 992    | -732    | -1773  | 308    | -        | -      | -      | 741         | -1216  | 2698   |
| 51 - 53           | -1500            | -3258  | 259    | -1134   | -2199  | -69    | -        | -      | -      | -           | -      | -      |
| 54 - 56           | -                | -      | -      | -1605   | -2914  | -295   | -        | -      | -      | -           | -      | -      |

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| Cohort  | Est.  | 95% CI | Est.  | 95% CI | Est.  | 95% CI | Est. | 95% CI | Est. | 95% CI |       |       |
|---------|-------|--------|-------|--------|-------|--------|------|--------|------|--------|-------|-------|
| 57 - 59 | -     | -      | -     | -2204  | -3632 | -776   | -    | -      | -    | -      | -     | -     |
| 1940-42 | -     | -      | -     | -357   | -641  | -73    | -    | -      | -    | -      | -     | -     |
| 1943-45 | -     | -      | -     | -791   | -1241 | -341   | -    | -      | -    | -      | -     | -     |
| 1946-48 | -1810 | -2016  | -1603 | -660   | -1414 | 93     | -    | -      | -    | -      | -     | -     |
| 1949-51 | -387  | -970   | 195   | -468   | -1022 | 85     | -    | -      | -    | -1534  | -1768 | -1300 |
| 1952-54 | -1069 | -1835  | -303  | -279   | -959  | 401    | -    | -      | -    | -1870  | -3078 | -662  |
| 1955-57 | -711  | -1409  | -12   | -130   | -701  | 441    | -    | -      | -    | -597   | -1585 | 390   |
| 1958-60 | -803  | -1592  | -15   | -104   | -924  | 716    | -    | -      | -    | -338   | -848  | 171   |
| 1961-63 | -50   | -700   | 600   | -44    | -798  | 709    | -    | -      | -    | -543   | -1624 | 539   |
| 1964-66 | 361   | -675   | 1397  | -46    | -710  | 618    | -    | -      | -    | 441    | -362  | 1245  |
| 1967-69 | 319   | -540   | 1177  | 349    | -248  | 946    | -    | -      | -    | 382    | -486  | 1249  |
| 1970-72 | -5    | -337   | 327   | 179    | -243  | 602    | -    | -      | -    | 108    | -158  | 374   |
| 1973-75 | 484   | 167    | 800   | 242    | -128  | 612    | -    | -      | -    | -57    | -374  | 260   |
| 1976-78 | 295   | -117   | 707   | 225    | -208  | 658    | -300 | -340   | -261 | 793    | 396   | 1191  |
| 1979-81 | 196   | -75    | 467   | 179    | -273  | 632    | 352  | 285    | 419  | 304    | -92   | 700   |
| 1982-84 | -85   | -339   | 169   | -148   | -674  | 378    | 781  | 411    | 1151 | -51    | -348  | 246   |
| 1985-87 | -95   | -350   | 159   | -197   | -772  | 378    | 18   | -86    | 122  | 223    | -198  | 643   |
| 1988-90 | -109  | -391   | 173   | -281   | -784  | 222    | 29   | -188   | 247  | -97    | -545  | 351   |
| 1991-93 | ref   | ref    | ref   | ref    | ref   | ref    | ref  | ref    | ref  | ref    | ref   | ref   |
| 1994-96 | -3    | -348   | 342   | 27     | -306  | 360    | -228 | -359   | -97  | 29     | -327  | 384   |
| 1997-99 | -171  | -454   | 111   | -50    | -447  | 346    | -468 | -739   | -197 | -274   | -581  | 34    |
| 2000-02 | -161  | -457   | 135   | -173   | -505  | 160    | -675 | -814   | -535 | -236   | -528  | 57    |
| 2003-05 | -252  | -531   | 27    | -386   | -687  | -84    | 46   | -105   | 196  | -113   | -447  | 222   |
| 2006-08 | -92   | -353   | 170   | -337   | -685  | 10     | -47  | -152   | 57   | 213    | -70   | 496   |
| 2009-11 | -241  | -606   | 123   | -239   | -675  | 198    | 549  | 21     | 1078 | -3     | -315  | 308   |
| 2012-14 | -197  | -460   | 66    | -13    | -338  | 312    | 416  | 239    | 593  | -86    | -351  | 178   |
| 2015-17 | 59    | -211   | 328   | 325    | 38    | 611    | 27   | -22    | 75   | -8     | -246  | 230   |

**Notes:** The estimates for period and years in practice were generated using the same linear model of mean contacts. Estimates for cohort were generated in a separate linear model on the residuals of the median polish analysis. 95% CIs were generated using bootstrap resampling with replacement with 1,000 samples.



**Table A8 - Regression Estimates for Model of Mean Continuity and Residuals from Median Polish Analysis**

| Period            | British Columbia |        | Ontario |        | Manitoba |        | Nova Scotia |        |       |        |        |        |
|-------------------|------------------|--------|---------|--------|----------|--------|-------------|--------|-------|--------|--------|--------|
|                   | Est.             | 95% CI | Est.    | 95% CI | Est.     | 95% CI | Est.        | 95% CI | Est.  | 95% CI | Est.   | 95% CI |
| FY1997-99         | ref              | ref    | ref     | ref    | ref      | ref    | ref         | ref    | ref   | ref    | ref    | ref    |
| FY2000-02         | -0.008           | -0.060 | 0.044   | -0.008 | -0.050   | 0.034  | 0.007       | -0.030 | 0.044 | 0.000  | -0.075 | 0.074  |
| FY2003-05         | -0.025           | -0.077 | 0.026   | -0.019 | -0.057   | 0.019  | 0.015       | -0.022 | 0.051 | -0.002 | -0.069 | 0.064  |
| FY2006-08         | -0.029           | -0.082 | 0.024   | -0.016 | -0.056   | 0.023  | 0.005       | -0.030 | 0.040 | -0.011 | -0.070 | 0.047  |
| FY2009-11         | -0.018           | -0.070 | 0.035   | -0.019 | -0.060   | 0.022  | 0.016       | -0.022 | 0.054 | -0.019 | -0.081 | 0.043  |
| FY2012-14         | -0.010           | -0.071 | 0.051   | -0.017 | -0.060   | 0.027  | 0.005       | -0.030 | 0.039 | -0.017 | -0.082 | 0.049  |
| FY2015-17         | 0.005            | -0.051 | 0.061   | -0.024 | -0.067   | 0.019  | -0.002      | -0.052 | 0.047 | -0.015 | -0.077 | 0.048  |
| Years in Practice | Est.             | 95% CI | Est.    | 95% CI | Est.     | 95% CI | Est.        | 95% CI | Est.  | 95% CI | Est.   | 95% CI |
| 0 - 2             | ref              | ref    | ref     | ref    | ref      | ref    | ref         | ref    | ref   | ref    | ref    | ref    |
| 3 - 5             | 0.075            | 0.045  | 0.106   | 0.035  | -0.016   | 0.086  | 0.043       | 0.005  | 0.081 | 0.036  | -0.018 | 0.090  |
| 6 - 8             | 0.120            | 0.085  | 0.156   | 0.071  | 0.017    | 0.124  | 0.063       | 0.026  | 0.100 | 0.075  | 0.023  | 0.127  |
| 9 - 11            | 0.148            | 0.111  | 0.185   | 0.108  | 0.047    | 0.169  | 0.093       | 0.055  | 0.132 | 0.102  | 0.052  | 0.152  |
| 12 - 14           | 0.166            | 0.126  | 0.206   | 0.145  | 0.080    | 0.210  | 0.110       | 0.070  | 0.150 | 0.134  | 0.089  | 0.180  |
| 15 - 17           | 0.181            | 0.139  | 0.223   | 0.177  | 0.111    | 0.244  | 0.135       | 0.074  | 0.195 | 0.142  | 0.092  | 0.193  |
| 18 - 20           | 0.198            | 0.151  | 0.245   | 0.207  | 0.147    | 0.267  | 0.165       | 0.126  | 0.205 | 0.164  | 0.119  | 0.210  |
| 21 - 23           | 0.210            | 0.167  | 0.253   | 0.232  | 0.180    | 0.284  | 0.180       | 0.140  | 0.221 | 0.182  | 0.137  | 0.227  |
| 24 - 26           | 0.220            | 0.183  | 0.257   | 0.254  | 0.208    | 0.300  | -           | -      | -     | 0.195  | 0.145  | 0.244  |
| 27 - 29           | 0.225            | 0.189  | 0.260   | 0.271  | 0.227    | 0.315  | -           | -      | -     | 0.216  | 0.172  | 0.261  |
| 30 - 32           | 0.229            | 0.195  | 0.262   | 0.283  | 0.240    | 0.325  | -           | -      | -     | 0.234  | 0.186  | 0.282  |
| 33 - 35           | 0.217            | 0.181  | 0.253   | 0.284  | 0.234    | 0.335  | -           | -      | -     | 0.226  | 0.180  | 0.272  |
| 36 - 38           | 0.200            | 0.161  | 0.239   | 0.281  | 0.230    | 0.332  | -           | -      | -     | 0.228  | 0.183  | 0.274  |
| 39 - 41           | 0.181            | 0.135  | 0.227   | 0.272  | 0.217    | 0.328  | -           | -      | -     | 0.246  | 0.168  | 0.324  |
| 42 - 44           | 0.167            | 0.116  | 0.219   | 0.263  | 0.208    | 0.318  | -           | -      | -     | 0.243  | 0.144  | 0.343  |
| 45 - 47           | 0.159            | 0.108  | 0.210   | 0.260  | 0.208    | 0.312  | -           | -      | -     | 0.250  | 0.146  | 0.355  |
| 48 - 50           | 0.133            | 0.065  | 0.201   | 0.259  | 0.208    | 0.311  | -           | -      | -     | 0.268  | 0.143  | 0.393  |
| 51 - 53           | 0.106            | -0.041 | 0.253   | 0.274  | 0.202    | 0.346  | -           | -      | -     | -      | -      | -      |
| 54 - 56           | -                | -      | -       | 0.289  | 0.207    | 0.372  | -           | -      | -     | -      | -      | -      |
| 57 - 59           | -                | -      | -       | 0.316  | 0.239    | 0.394  | -           | -      | -     | -      | -      | -      |
| Cohort            | Est.             | 95% CI | Est.    | 95% CI | Est.     | 95% CI | Est.        | 95% CI | Est.  | 95% CI | Est.   | 95% CI |

Appendix 1, as supplied by the authors. Appendix to: Rudoler D, Peterson S, Stock D, et al. Changes over time in patient visits and continuity of care among graduating cohorts of family physicians in 4 Canadian provinces. *CMAJ* 2022. doi: 10.1503/cmaj.220439. Copyright © 2022 The Author(s) or their employer(s). To receive this resource in an accessible format, please contact us at [cmajgroup@cmaj.ca](mailto:cmajgroup@cmaj.ca).

|         |        |        |        |        |        |        |        |        |        |        |        |        |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1940-42 | -      | -      | -      | 0.057  | 0.024  | 0.091  | -      | -      | -      | -      | -      | -      |
| 1943-45 | -      | -      | -      | 0.016  | -0.018 | 0.049  | -      | -      | -      | -      | -      | -      |
| 1946-48 | -0.153 | -0.157 | -0.149 | -0.058 | -0.100 | -0.015 | -      | -      | -      | -      | -      | -      |
| 1949-51 | -0.040 | -0.102 | 0.023  | -0.033 | -0.073 | 0.006  | -      | -      | -      | -0.119 | -0.137 | -0.101 |
| 1952-54 | -0.042 | -0.091 | 0.007  | -0.034 | -0.072 | 0.004  | -      | -      | -      | -0.126 | -0.158 | -0.095 |
| 1955-57 | -0.040 | -0.067 | -0.014 | 0.000  | -0.040 | 0.040  | -      | -      | -      | 0.075  | 0.030  | 0.121  |
| 1958-60 | -0.005 | -0.048 | 0.039  | 0.011  | -0.037 | 0.059  | -      | -      | -      | -0.017 | -0.063 | 0.028  |
| 1961-63 | 0.031  | -0.016 | 0.078  | -0.011 | -0.050 | 0.028  | -      | -      | -      | 0.003  | -0.035 | 0.041  |
| 1964-66 | 0.026  | -0.008 | 0.060  | -0.016 | -0.053 | 0.021  | -      | -      | -      | 0.009  | -0.019 | 0.037  |
| 1967-69 | -0.005 | -0.019 | 0.008  | -0.003 | -0.037 | 0.032  | -      | -      | -      | 0.019  | -0.007 | 0.044  |
| 1970-72 | -0.003 | -0.018 | 0.011  | 0.003  | -0.032 | 0.038  | -      | -      | -      | -0.026 | -0.050 | -0.003 |
| 1973-75 | 0.000  | -0.013 | 0.012  | 0.008  | -0.027 | 0.043  | -      | -      | -      | 0.008  | -0.013 | 0.029  |
| 1976-78 | 0.011  | -0.009 | 0.031  | 0.002  | -0.032 | 0.036  | -0.014 | -0.018 | -0.010 | 0.019  | 0.000  | 0.038  |
| 1979-81 | 0.020  | 0.006  | 0.035  | -0.006 | -0.040 | 0.028  | 0.000  | -0.004 | 0.004  | 0.010  | -0.009 | 0.029  |
| 1982-84 | -0.002 | -0.018 | 0.014  | -0.003 | -0.039 | 0.033  | 0.026  | 0.022  | 0.031  | -0.004 | -0.023 | 0.016  |
| 1985-87 | 0.005  | -0.009 | 0.018  | 0.008  | -0.033 | 0.049  | -0.009 | -0.014 | -0.003 | 0.025  | 0.006  | 0.045  |
| 1988-90 | -0.003 | -0.017 | 0.010  | 0.006  | -0.041 | 0.054  | 0.015  | 0.007  | 0.023  | 0.013  | -0.008 | 0.034  |
| 1991-93 | ref    | ref    | ref    | ref    | ref    | ref    | ref    | ref    | ref    | ref    | ref    | ref    |
| 1994-96 | -0.003 | -0.016 | 0.009  | -0.016 | -0.062 | 0.030  | 0.015  | 0.005  | 0.025  | 0.021  | -0.005 | 0.047  |
| 1997-99 | -0.016 | -0.029 | -0.002 | -0.021 | -0.060 | 0.018  | -0.005 | -0.023 | 0.014  | 0.007  | -0.011 | 0.026  |
| 2000-02 | -0.006 | -0.019 | 0.007  | -0.022 | -0.059 | 0.015  | -0.020 | -0.042 | 0.003  | -0.006 | -0.029 | 0.018  |
| 2003-05 | -0.003 | -0.018 | 0.013  | -0.024 | -0.059 | 0.011  | -0.005 | -0.016 | 0.006  | 0.011  | -0.010 | 0.032  |
| 2006-08 | 0.008  | -0.012 | 0.027  | -0.014 | -0.050 | 0.022  | 0.000  | -0.004 | 0.005  | -0.003 | -0.025 | 0.019  |
| 2009-11 | 0.005  | -0.010 | 0.020  | 0.000  | -0.035 | 0.034  | 0.001  | -0.003 | 0.005  | 0.012  | -0.006 | 0.030  |
| 2012-14 | -0.006 | -0.019 | 0.008  | 0.016  | -0.017 | 0.050  | 0.014  | 0.008  | 0.020  | -0.010 | -0.027 | 0.008  |
| 2015-17 | -0.002 | -0.017 | 0.013  | 0.035  | 0.002  | 0.069  | 0.022  | 0.018  | 0.027  | 0.048  | 0.030  | 0.066  |

**Notes:** The estimates for period and years in practice were generated using the same linear model of mean contacts. Estimates for cohort were generated in a separate linear model on the residuals of the median polish analysis. 95% CIs were generated using bootstrap resampling with replacement with 1,000 samples.

# Plots of Outcomes by Years in Practice, Period and Cohort

Figure A13 - Median contacts by years in practice (stratified by period)

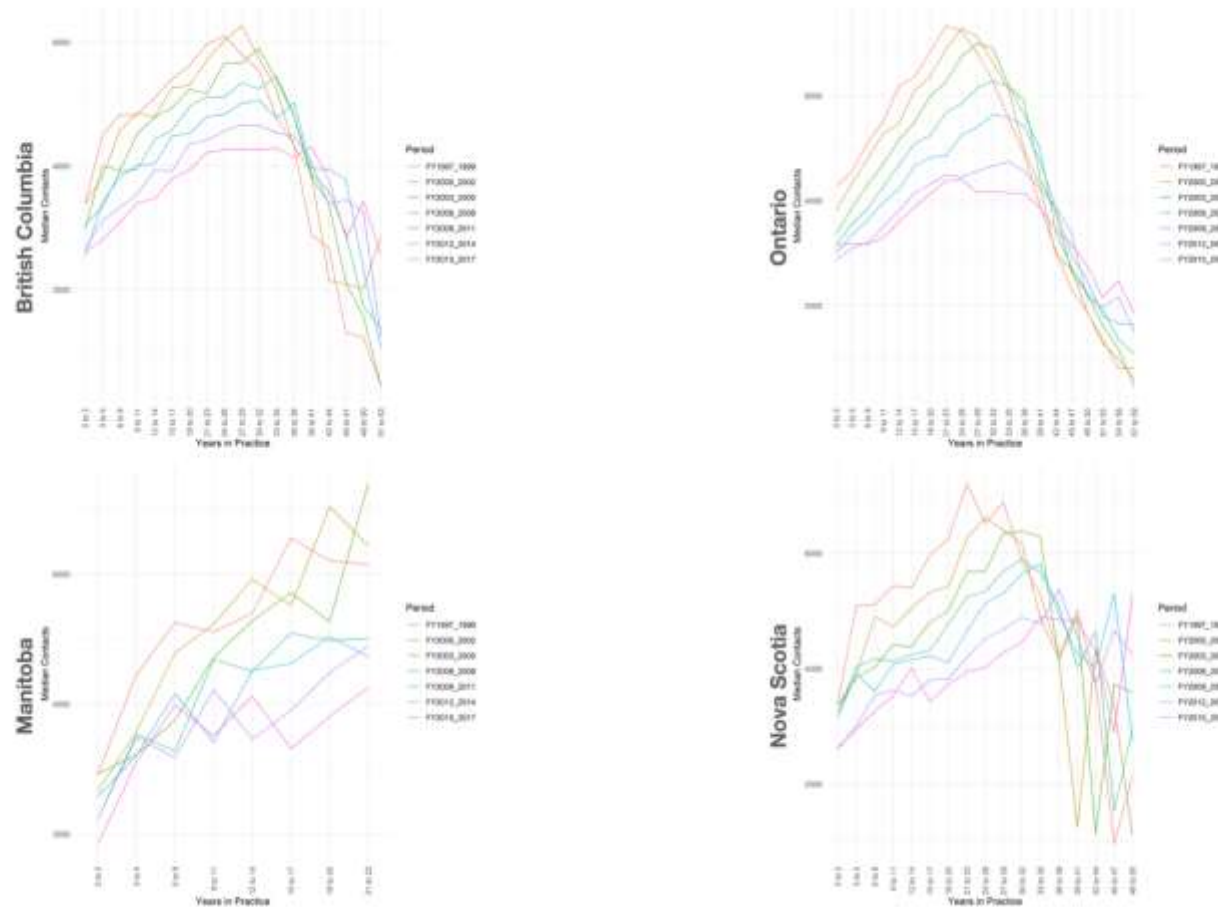


Figure A14 - Median contacts by period (stratified by years in practice)

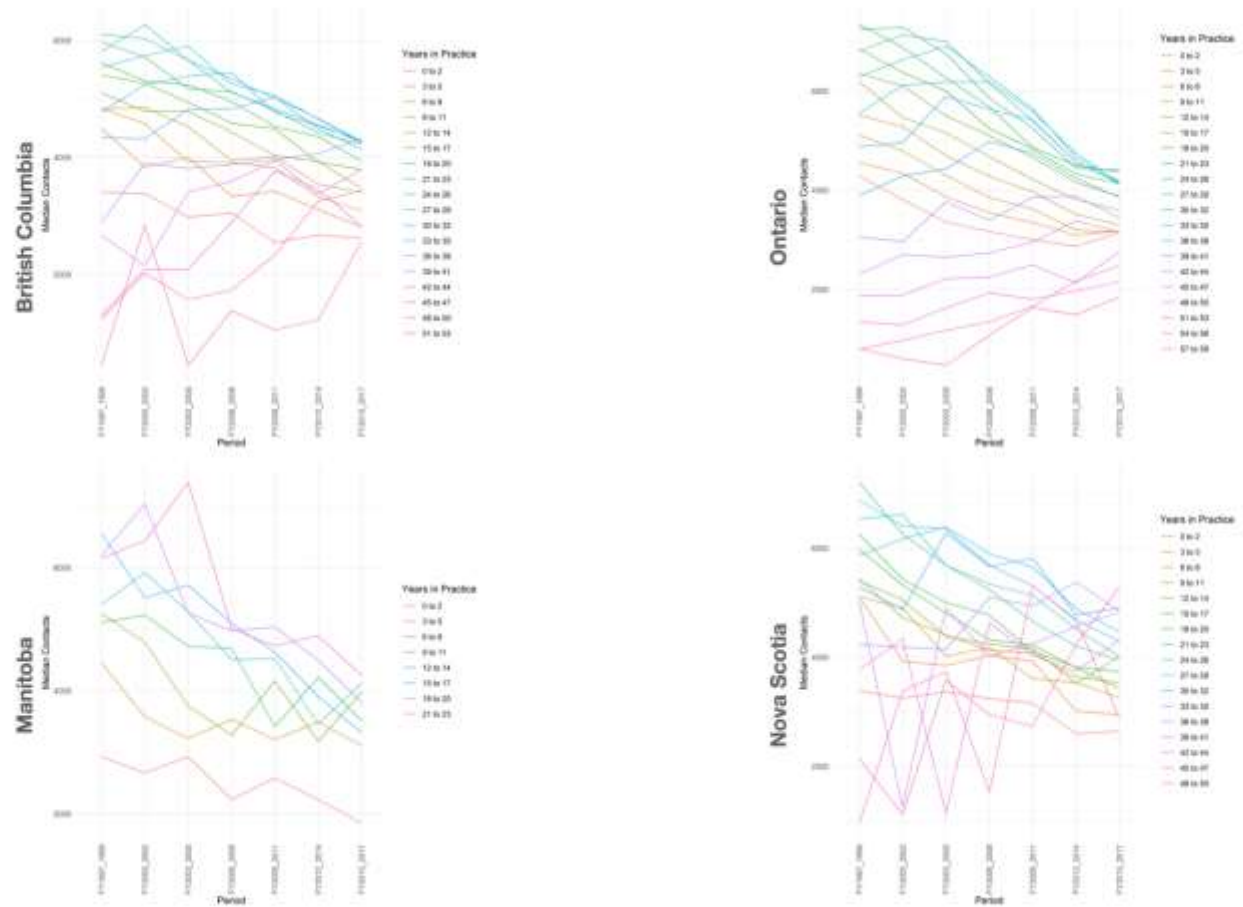


Figure A15 - Median continuity by years in practice (stratified by period)

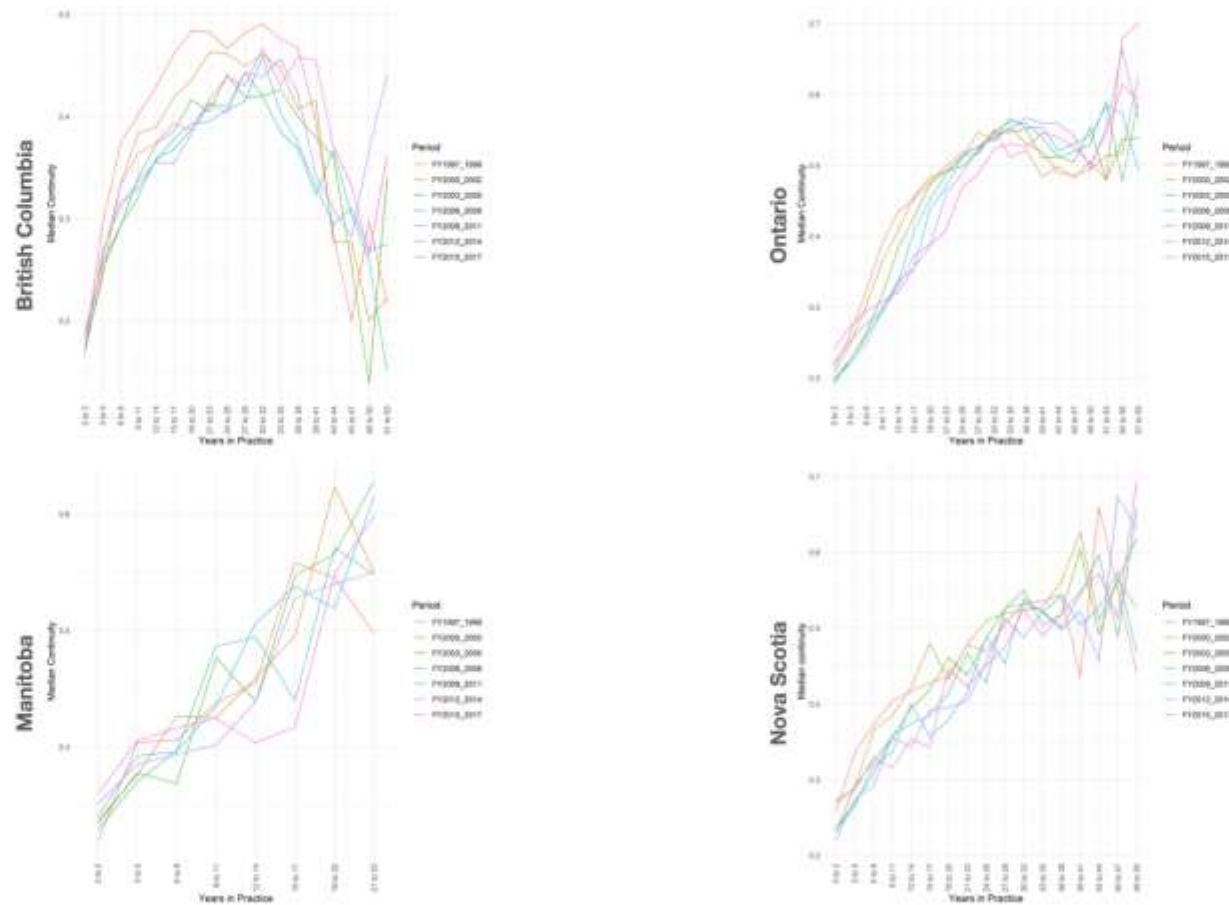


Figure A16 - Median continuity by period (stratified by years in practice)

