# Supplemental Online Material

Supplemental Table 1 Percent of prescriptions for CoC, PoP and IUD/S dispensed (2010-2016) by hormonal content

|  |  |
| --- | --- |
| **Contraceptive** | **Percent of prescriptions dispensed** |
| **Combined oral contraceptive** | |
| Estradiol and nomegestrol | 0.0 |
| Ethinylestradiol and desogestrel | 6.2 |
| Ethinylestradiol and drospirenone | 19.1 |
| Ethinylestradiol and gestodene | 4.2 |
| Ethinylestradiol and levonorgestrel | 54.4 |
| Ethinylestradiol and norethisterone | 3.1 |
| Ethinylestradiol and norethisterone acetate | 1.8 |
| Ethinylestradiol and norgestimate | 10.9 |
| Mestranol and norethisterone | 0.0 |
| Estradiol valerate and dienogest | 0.2 |
| **Progesterone only pill** | |
| Desogestrel | 88.6 |
| Etynodiol | 1.4 |
| Levonorgestrel | 0.6 |
| Norethisterone | 9.4 |
| **Intra Uterine Device/System** | |
| Copper | 16.1 |
| Levonorgestrel | 83.9 |

Supplemental Table 2 Number, percent of woman-years and adjusted prevalence rate ratios for contraceptive methods dispensed 2010-2016

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Contraceptive** | **Year** | | | | | | | | | | | | | |
| **2010** | | **2011** | | **2012** | | **2013** | | **2014** | | **2015** | | **2016** | |
| **n (%)** |  | **n (%)** | **Adj. RR**  **(95% CI)** | **n (%)** | **Adj. RR**  **(95% CI)** | **n (%)** | **Adj. RR**  **(95% CI)** | **n (%)** | **Adj. RR**  **(95% CI)** | **n (%)** | **Adj. RR**  **(95% CI)** | **n (%)** | **Adj. RR**  **(95% CI)** |
| CoC | 80,718 (17.8) | Ref. | 80,510 (17.6) | 0.99  (0.98-0.99) | 79,693 (17.3) | 0.97  (0.97-0.98) | 77,507 (16.7) | 0.95  (0.94-0.95) | 75,638 (16.1) | 0.92  (0.92-0.93) | 74,936 (15.8) | 0.91  (0.91-0.92) | 72,826 (15.2) | 0.88  (0.88-0.89) |
| PoP | 28,823 (6.4) | Ref. | 32,052 (7.0) | 1.05  (1.05-1.06) | 35,028 (7.6) | 1.10  (1.09-1.10) | 37,447 (8.1) | 1.13  (1.12-1.13) | 40,139 (8.6) | 1.16  (1.16-1.17) | 42,773 (9.0) | 1.20  (1.19-1.21) | 45,549 (9.5) | 1.23  (1.22-1.24) |
| Emergency | 7,484 (1.7) | Ref. | 7,586 (1.7) | 1.00  (0.99-1.02) | 7,183 (1.6) | 0.98  (0.96-0.99) | 6,814 (1.5) | 0.95  (0.94-0.96) | 6,649 (1.4) | 0.94  (0.93-0.95) | 6,435 (1.4) | 0.92  (0.91-0.93) | 6,993 (1.5) | 0.95  (0.93-0.96) |
| Injection | 4,674 (1.0) | Ref. | 4,830 (1.1) | 1.01  (1.00-1.02) | 4,841 (1.1) | 1.01  (0.99-1.02) | 4,716 (1.0) | 0.99  (0.98-1.00) | 4,403 (0.9) | 0.96  (0.95-0.97) | 4,290 (0.9) | 0.95  (0.93-0.96) | 4,216 (0.9) | 0.94  (0.92-0.95) |
| Implant | 3,019 (0.7) | Ref. | 2,890 (0.6) | 0.98  (0.96-1.00) | 3,464 (0.8) | 1.04  (1.02-1.06) | 4,101 (0.9) | 1.11  (1.09-1.13) | 4,165 (0.9) | 1.10  (1.09-1.13) | 4,676 (1.0) | 1.16  (1.14-1.18) | 4,387 (0.9) | 1.12  (1.11-1.14) |
| IUD/S | 2279 (0.5) | Ref. | 2576 (0.6) | 1.04  (1.02-1.06) | 2706 (0.6) | 1.06  (1.03-1.08) | 2663 (0.6) | 1.05  (1.02-1.07) | 2740 (0.6) | 1.05  (1.03-1.07) | 2874 (0.6) | 1.07  (1.05-1.09) | 2914 (0.6) | 1.06  (1.04-1.09) |
| Patch | 1,169 (0.3) | Ref. | 1,125 (0.2) | 0.98  (0.96-1.00) | 1,117 (0.2) | 0.97  (0.95-1.00) | 1,148 (0.2) | 0.97  (0.95-1.00) | 1,195 (0.3) | 0.98  (0.96-1.01) | 1,236 (0.3) | 0.99  (0.97-1.01) | 1,222 (0.3) | 0.98  (0.96-1.01) |
| Vaginal Ring | 46 (0.0) | Ref. | 74 (0.0) | 1.08  (1.02-1.13) | 100(0.0) | 1.15  (1.08-1.22) | 136 (0.0) | 1.22  (1.15-1.30) | 140 (0.0) | 1.21  (1.14-1.29) | 117 (0.0) | 1.14  (1.07-1.21) | 123 (0.0) | 1.12  (1.05-1.20) |
| Gel | 25 (0.0) | Ref. | 25 (0.0) | 0.90  (0.80-1.00) | 15 (0.0) | 0.92  (0.83-1.02) | 17 (0.0) | 0.96  (0.86-1.07) | 21 (0.0) | 0.93  (0.82-1.05) | 27 (0.0) | 0.75 (0.64-0.88) | | |

Supplemental Table 3 Number, percent of woman-years and adjusted prevalence rate ratios for contraceptive methods dispensed across age groups

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Contraceptive** | **Age group** | | | | | | | | | | | | | | | |
| **<16** | | **16-19** | | **20-24** | | **25-29** | | **30-34** | | **35-39** | | **40-44** | | **45+** | |
| **n (%)** | **Adj. RR**  **(95% CI)** | **n (%)** | **Adj. RR (95% CI)** | **n (%)** |  | **n (%)** | **Adj. RR (95% CI)** | **n (%)** | **Adj. RR (95% CI)** | **n (%)** | **Adj. RR (95% CI)** | **n (%)** | **Adj. RR (95% CI)** | **n (%)** | **Adj. RR**  **(95% CI)** |
| CoC | 16,698 (5.4) | 0.34  (0.34-0.35) | 81,933  (27.5) | 0.86  (0.85-0.86) | 134,884  (34.0) | Ref. | 130,561  (29.6) | 0.88  (0.88-0.89) | 96,012 (21.6) | 0.69  (0.68-0.69) | 51,307  (11.9) | 0.48  (0.47-0.48) | 22,656  (4.9) | 0.32  (0.32-0.32) | 7,777  (1.6) | 0.22  (0.22-0.22) |
| PoP | 3,285 (1.1) | 0.42  (0.41-0.42) | 19,533  (6.6) | 0.83  (0.82-0.84) | 37,56  (9.5) | Ref. | 43,184  (9.8) | 1.04  (1.03-1.05) | 43,858 (9.8) | 1.03  (1.02-1.04) | 44,826  (10.4) | 1.05  (1.04-1.06) | 41,315  (9.0) | 0.96  (0.95-0.97) | 28,249  (5.9) | 0.81  (0.81-0.82) |
| Emergency | 1,288 (0.4) | 0.49  (0.48-0.50) | 7,071  (2.4) | 0.92  (0.91-0.93) | 11,754  (3.0) | Ref. | 11,353  (2.6) | 0.94  (0.93-0.96) | 8,366 (1.9) | 0.83  (0.82-0.84) | 5,182  (1.2) | 0.70  (0.69-0.71) | 2,944  (0.6) | 0.56  (0.55-0.57) | 1,186  (0.2) | 0.41  (0.40-0.42) |
| Injection | 457 (0.1) | 0.49  (0.47-0.51) | 3,723  (1.3) | 0.89  (0.87-0.90) | 6,965  (1.8) | Ref. | 6,466  (1.5) | 0.94  (0.93-0.96) | 5,481 (1.2) | 0.87  (0.86-0.89) | 4,077  (0.9) | 0.80  (0.78-0.82) | 3,037  (0.7) | 0.72  (0.70-0.73) | 1,764  (0.4) | 0.62  (0.60-0.63) |
| Implant | 1,146 (0.4) | 0.57  (0.57-0.60) | 5,550  (1.9) | 1.02  (1.02-1.05) | 6,805  (1.7) | Ref. | 5,135  (1.2) | 0.85  (0.85-0.88) | 3,579 (0.8) | 0.74  (0.74-0.77) | 2,371  (0.5) | 0.65  (0.65-0.67) | 1,420  (0.3) | 0.53  (0.53-0.56) | 696  (0.1) | 0.42  (0.42-0.45) |
| IUD/S | 354 (0.1) | 0.57 (0.55-0.59) | | | 1,483  (0.4) | Ref. | 2,601  (0.6) | 1.17  (1.15-1.20) | 3,808 (0.9) | 1.34  (1.31-1.37) | 4,011  (0.9) | 1.37  (1.35-1.40) | 3,854  (0.8) | 1.33  (1.30-1.35) | 2,641  (0.6) | 1.15  (1.12-1.18) |
| Patch | 128 (0.0) | 0.51  (0.48-0.53) | 1,038  (0.3) | 0.87  (0.85-0.90) | 2,306  (0.6) | Ref. | 2,319  (0.5) | 0.96  (0.94-0.99) | 1,534 (0.3) | 0.85  (0.82-0.88) | 606  (0.1) | 0.67  (0.65-0.70) | 214  (0.0) | 0.51  (0.48-0.53) | 67  (0.0) | 0.38  (0.36-0.41) |
| Vaginal Ring | 37 (0.0) | 0.70 (0.64-0.76) | | | 171  (0.0) | Ref. | 201  (0.0) | 1.02  (0.96-1.09) | 192 (0.0) | 0.99  (0.92-1.06) | 76  (0.0) | 0.83  (0.76-0.91) | 47  (0.0) | 0.67  (0.59-0.75) | 12  (0.0) | 0.50  (0.42-0.59) |
| Gel | 25 (0.0) | Ref. | | | | | | | 18 (0.0) | 1.11  (0.92-1.34) | 25  (0.0) | 1.30  (1.12-1.50) | 28  (0.0) | 1.26  (1.05-1.51) | 34  (0.0) | 1.39  (1.20-1.60) |

Supplemental Table 4 Number, percent of woman-years and adjusted prevalence rate ratios for contraceptive methods dispensed in rural general practices compared to urban practices

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Contraceptive** | **Practice urban/rural** | | | |
| **Urban** | | **Rural** | |
| **n (%)** |  | **n (%)** | **Adj. RR (95% CI)** |
| **CoC** | 408,823 (16.5) | Ref. | 133,005 (17.3) | 1.05 (1.04-1.05) |
| **PoP** | 204,399 (8.2) | Ref. | 57,412 (7.5) | 0.94 (0.93-0.95) |
| **Emergency** | 38,947 (1.6) | Ref. | 10,197 (1.3) | 0.93 (0.92-0.94) |
| **Injection** | 23,609 (1.0) | Ref. | 8,361 (1.1) | 1.03 (1.01-1.05) |
| **Implant** | 19,126 (0.8) | Ref. | 7,576 (1.0) | 1.15 (1.13-1.16) |
| **IUD/S** | 12,343 (0.5) | Ref. | 6,409 (0.8) | 1.20 (1.18-1.21) |
| **Patch** | 6,110 (0.3) | Ref. | 2,102 (0.3) | 1.09 (1.06-1.13) |
| **Vaginal Ring** | 537 (0.0) | Ref. | 199 (0.0) | 1.05 (0.96-1.14) |
| **Gel** | 102 (0.0) | Ref. | 28 (0.0) | 0.94 (0.78-1.12) |

Supplemental Table 5 Number, percent of woman-years and adjusted prevalence rate ratios for contraceptive methods dispensed by general practice size

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Contraceptive** | **Practice size** | | | | | | | | | | |
| **0 to 2,500** | | | **2,501 to 5,000** | | **5,001 to 7,500** | | **7,501 to 10,000** | | **Over 10,000** | |
| **n (%)** | **Adj. RR**  **(95% CI)** | **n (%)** | | **Adj. RR**  **(95% CI)** | **n (%)** | **Adj. RR**  **(95% CI)** | **n (%)** |  | **n (%)** | **Adj. RR**  **(95% CI)** |
| **CoC** | 23,236  (17.9) | 1.07  (1.05-1.08) | 144,867  (17.5) | | 1.06  (1.05-1.07) | 145,978  (16.6) | 1.03  (1.02-1.03) | 141,431  (16.0) | Ref. | 86,316  (16.2) | 1.01  (1.00-1.02) |
| **PoP** | 9,368  (7.2) | 0.92  (0.90-0.94) | 64,666  (7.8) | | 0.96  (0.95-0.97) | 71,054  (8.1) | 0.98  (0.97-0.98) | 74,805  (8.5) | Ref. | 41,918  (7.9) | 0.94  (0.93-0.95) |
| **Emergency** | 1,784  (1.4) | 1.05  (1.03-1.06) | 12,863  (1.6) | | 1.06  (1.05-1.08) | 13,810  (1.6) | 1.07  (1.06-1.09) | 12,903  (1.5) | Ref. | 7,784  (1.5) | 1.01  (0.99-1.04) |
| **Injection** | 1,632  (1.3) | 1.11  (1.07-1.15) | 9,647  (1.2) | | 1.08  (1.06-1.11) | 8,834  (1.0) | 1.03  (1.01-1.05) | 8,059  (0.9) | Ref. | 3,798  (0.7) | 0.91  (0.89-0.94) |
| **Implant** | 975  (0.8) | 0.95  (0.92-0.98) | 7,602  (0.9) | | 1.05  (1.03-1.06) | 6,502  (0.7) | 0.99  (0.97-1.00) | 6,548  (0.7) | Ref. | 5,075  (1.0) | 1.15  (1.13-1.16) |
| **IUD/S** | 411  (0.3) | 0.76  (0.73-0.79) | 4,705  (0.6) | | 0.96  (0.94-0.97) | 4,920  (0.6) | 0.95  (0.94-0.96) | 5,743  (0.7) | Ref. | 2,973  (0.6) | 1.01  (0.99-1.03) |
| **Patch** | 358  (0.3) | 1.01  (0.94-1.08) | 2,412  (0.3) | | 1.03  (1.00-1.07) | 1,852  (0.2) | 0.96  (0.92-0.99) | 2,105  (0.2) | Ref. | 1,485  (0.3) | 1.09  (1.05-1.14) |
| **Vaginal Ring** | 28  (0.0) | 1.01  (0.85-1.20) | 165  (0.0) | | 1.00  (0.90-1.10) | 220  (0.0) | 1.05  (0.96-1.17) | 171  (0.0) | Ref. | 152  (0.0) | 1.12  (1.01-1.24) |
| **Gel** | 38  (0.0) | 1.04 (0.86-1.24) | | | | 38  (0.0) | 1.06  (0.89-1.26) | 38(0.0) | Ref. | 16  (0.0) | 0.95  (0.78-1.15) |

Supplemental Table 6 Number, percent of women years and adjusted rate ratios for dispensed contraceptive prescriptions by general practice area deprivation quintiles

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Contraceptive** | **Practice address NIMDM2017 Quintile** | | | | | | | | | |
| **1**  **Most deprived** | | **2** | | **3** | | **4** | | **5**  **Least deprived** | |
| **n (%)** |  | **n (%)** | **Adj. RR**  **(95% CI)** | **n (%)** | **Adj. RR**  **(95% CI)** | **n (%)** | **Adj. RR**  **(95% CI)** | **n (%)** | **Adj. RR**  **(95% CI)** |
| **CoC** | 191,016  (16.4) | Ref. | 124,152  (17.0) | 1.02  (1.01-1.03) | 89,009  (16.6) | 1.02  (1.01-1.03) | 94,503  (17.0) | 1.03  (1.02-1.04) | 43,149  (16.0) | 1.03  (1.02-1.04) |
| **PoP** | 89,19  (7.7) | Ref. | 58,398  (8.0) | 1.05  (1.04-1.06) | 44,129  (8.2) | 1.08  (1.07-1.09) | 47,640  (8.6) | 1.10  (1.09-1.11) | 22,448  (8.3) | 1.09  (1.08-1.11) |
| **Emergency** | 18,344  (1.6) | Ref. | 11,249  (1.5) | 1.05  (1.03-1.6) | 8,138  (1.5) | 1.06  (1.05-1.08) | 8,448  (1.5) | 1.07  (1.05-1.08) | 2,965  (1.1) | 1.01  (0.99-1.04) |
| **Injection** | 10,626  (0.9) | Ref. | 8,149  (1.1) | 1.10  (1.08-1.12) | 5,042  (0.9) | 1.06  (1.04-1.09) | 5,923  (1.1) | 1.11  (1.09-1.14) | 2,230  (0.8) | 1.07  (1.03-1.11) |
| **Implant** | 11,241  (1.0) | Ref. | 6,794  (0.9) | 0.98  (0.97-0.99) | 3,823  (0.7) | 0.88  (0.87-0.80) | 3,713  (0.7) | 0.89  (0.87-0.90) | 1,131  (0.4) | 0.81  (0.79-0.83) |
| **IUD/S** | 5,618  (0.5) | Ref. | 4,982  (0.7) | 1.08  (1.07-1.10) | 2,665  (0.5) | 0.96  (0.94-0.98) | 3,340  (0.6) | 1.04  (1.02-1.06) | 2,147  (0.8) | 1.16  (1.14-1.19) |
| **Patch** | 3,746  (0.3) | Ref. | 1,860  (0.3) | 0.93  (0.89-0.96) | 1,110  (0.2) | 0.88  (0.84-0.91) | 1,115  (0.2) | 0.88  (0.84-0.92) | 381  (0.1) | 0.84  0.79-0.89) |
| **Vaginal Ring** | 256  (0.0) | Ref. | 170  (0.0) | 1.02  (0.93-1.12) | 58  (0.0) | 0.85  (0.75-0.97) | 163  (0.0) | 1.12  (1.02-1.24) | 89  (0.0) | 1.16  (1.01-1.33) |
| **Gel** | 55  (0.0) | Ref. | 12  (0.0) | 0.78  (0.63-0.96) | 19  (0.0) | 0.92  (0.73-1.17) | 23  (0.0) | 0.99  (0.81-1.22) | 21  (0.0) | 1.20  (0.95-1.51) |