# Supplemental Online Material

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

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| **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

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| **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

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| **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

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| **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

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| **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

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| **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) |