

Multimedia Appendix:

Characteristics of infants born 2007-2015 and enrolled in the FAX study.

| Variable | Total | <i>In-utero</i> exposure to antibiotics | | | |
|--|----------------|---|------------------------|---------------|--------------------------------------|
| | Infant cohort | None | Pregnancy ^a | Intrapartum | Pregnancy ^a + Intrapartum |
| n (%) | 223431 | 76711 | 42511 | 66896 | 37313 |
| Sex, male | 114464 (51.23) | 38325 (49.96) | 21513 (50.61) | 35101 (52.47) | 19525 (52.33) |
| Race and Ethnicity | | | | | |
| White | 63085 (28.23) | 22866 (29.81) | 11261 (26.49) | 19560 (29.24) | 9398 (25.19) |
| Hispanic | 105699 (47.31) | 36238 (47.24) | 22047 (51.86) | 29366 (43.90) | 18048 (48.37) |
| Black | 18934 (8.47) | 4675 (6.09) | 4138 (9.73) | 5417 (8.10) | 4704 (12.61) |
| API | 27937 (12.50) | 10153 (13.24) | 3781 (8.89) | 10010 (14.96) | 3993 (10.70) |
| Others and Unknown | 7776 (3.48) | 2779 (3.62) | 1284 (3.02) | 2543 (3.80) | 1170 (3.13) |
| Maternal education | | | | | |
| <High school | 10969 (4.91) | 4020 (5.24) | 2588 (6.09) | 2678 (4.00) | 1683 (4.51) |
| High school | 55668 (24.92) | 18879 (24.61) | 11979 (28.18) | 15211 (22.74) | 9607 (25.75) |
| Some college | 67772 (30.30) | 21750 (28.35) | 14067 (33.09) | 19530 (29.19) | 12425 (33.30) |
| Bachelor degree | 54001 (24.17) | 19496 (25.41) | 8485 (19.96) | 17825 (26.65) | 8195 (21.96) |
| Graduate or higher | 32036 (14.34) | 11537 (15.04) | 4867 (11.45) | 10736 (16.05) | 4896 (13.12) |
| Unknown | 2985 (1.34) | 1037 (1.35) | 525 (1.23) | 916 (1.37) | 507 (1.36) |
| Neighborhood income | | | | | |
| < \$15,000 | 22657 (10.14) | 7646 (9.97) | 4435 (10.43) | 6683 (9.99) | 3893 (10.43) |
| \$15,000 to \$34,999 | 38582 (17.27) | 12957 (16.89) | 7369 (17.33) | 11459 (17.13) | 6798 (18.22) |
| \$35,000 to \$49,999 | 31015 (13.88) | 10611 (13.83) | 6030 (14.18) | 9158 (13.69) | 5217 (13.98) |
| \$50,000 to \$74,999 | 43042 (19.26) | 14769 (19.25) | 8273 (19.46) | 12825 (19.17) | 7175 (19.23) |
| \$75,000 to \$99,999 | 30944 (13.85) | 10674 (13.91) | 5842 (13.74) | 9321 (13.93) | 5107 (13.69) |
| \$100,000 to \$149,999 | 33105 (14.82) | 11516 (15.01) | 6109 (14.37) | 10079 (15.07) | 5400 (14.47) |
| ≥\$150,000 | 20780 (9.30) | 7280 (9.49) | 3629 (8.54) | 6499 (9.72) | 3373 (9.04) |
| Government health care assistance | 20071 (8.98) | 5842 (7.62) | 4922 (11.58) | 4849 (7.25) | 4458 (11.95) |
| Preterm birth# | 17191 (7.69) | 2201 (2.86) | 2117 (4.98) | 7136 (10.67) | 5737 (15.38) |
| Delivery mode | | | | | |
| Vaginal | 156381 (70.00) | 76711 (100.00) | 36982 (86.99) | 24973 (37.33) | 17715 (47.48) |
| Cesarean section | 67050 (30.00) | 0 (0.00) | 5529 (13.01) | 41923 (62.67) | 19598 (52.52) |
| Small-for-gestational age | 22026 (9.86) | 7712 (10.05) | 4287 (10.08) | 6486 (9.70) | 3541 (9.49) |
| Maternal age, years | | | | | |

| | | | | | |
|---|----------------|---------------|---------------|---------------|---------------|
| <20 | 7900 (3.54) | 2745 (3.58) | 2299 (5.41) | 1477 (2.21) | 1379 (3.70) |
| 20-29 | 91292 (40.86) | 32464 (42.32) | 19445 (45.74) | 24301 (36.33) | 15082 (40.42) |
| 30-34 | 73787 (33.02) | 26200 (34.15) | 12699 (29.87) | 23245 (34.74) | 11643 (31.20) |
| ≥35 | 50452 (22.58) | 15302 (19.95) | 8068 (18.98) | 17873 (26.72) | 9209 (24.68) |
| Maternal pre-pregnancy BMI, kg/m² | | | | | |
| <18.5 | 4733 (2.12) | 1910 (2.49) | 960 (2.26) | 1167 (1.74) | 696 (1.87) |
| 18.5-22.4 | 46387 (20.76) | 17909 (23.35) | 8481 (19.95) | 13167 (19.68) | 6830 (18.30) |
| 22.5-24.9 | 38861 (17.39) | 14047 (18.31) | 7132 (16.78) | 11464 (17.14) | 6218 (16.66) |
| 25.0-29.9 | 54718 (24.49) | 17889 (23.32) | 10607 (24.95) | 16512 (24.68) | 9710 (26.02) |
| 30.0-34.9 | 28876 (12.92) | 7847 (10.23) | 5653 (13.30) | 9220 (13.78) | 6156 (16.50) |
| 35.0 -39.9 | 13386 (5.99) | 3036 (3.96) | 2589 (6.09) | 4409 (6.59) | 3352 (8.98) |
| ≥40 | 8050 (3.60) | 1480 (1.93) | 1452 (3.42) | 2795 (4.18) | 2323 (6.23) |
| Missing | 28420 (12.72) | 12593 (16.42) | 5637 (13.26) | 8162 (12.20) | 2028 (5.44) |
| Maternal smoking during pregnancy | 24231 (10.84) | 7114 (9.27) | 5244 (12.34) | 6946 (10.38) | 4927 (13.20) |
| Start of prenatal care | | | | | |
| ≤ 3 months | 199099 (89.11) | 67659 (88.20) | 38289 (90.07) | 59506 (88.95) | 33645 (90.17) |
| 4-6 months | 19922 (8.92) | 7306 (9.52) | 3435 (8.08) | 6086 (9.10) | 3095(8.29) |
| > 6 months | 2386 (1.07) | 982 (1.28) | 360 (0.85) | 759 (1.13) | 285 (0.76) |
| No care or missing | 2024 (0.91) | 764 (1.00) | 427 (1.00) | 545 (0.82) | 288 (0.77) |
| Parity | | | | | |
| 1 | 168219 (75.29) | 57128 (74.47) | 30932 (72.76) | 52279 (78.15) | 27880 (74.72) |
| 2 | 36208 (16.21) | 12848 (16.75) | 7384 (17.37) | 9846 (14.72) | 6130 (16.43) |
| ≥3 | 19004 (8.51) | 6735 (8.78) | 4195 (9.87) | 4771 (7.13) | 3303 (8.95) |

^aPregnancy without intrapartum period

<37 week of gestation