**Supplemental Digital Content 1.** Estimated effects of infant secretor status, maternal secretor status, and breastfeeding on diarrheal illness from birth to 18 months of age in the ALSPAC cohort, with and without accounting for interaction between maternal secretor status and breastfeeding.

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|  | **Association with Infant Diarrhea****OR (95% CI)** |
|  | 0-6 months1330/4962 (26.8%) | 6-18 months2377/4661 (51.0%) |
| **Infant *FUT2* (non-secretor (26%)vs. secretor (74%))** | **0.85 (0.72, 0.99)\*** | **0.70 (0.61, 0.81)\*\*\*** |
| **Mother *FUT2* (non-secretor (25%) vs. secretor (75%))** |  |  |
|  Overall, ignoring breastfeeding interactiona | 1.09 (0.93, 1.27) | 0.93 (0.81, 1.07) |
|  If breastfed >6 monthsb | 0.91 (0.67, 1.24) | **0.80 (0.64, 1.00)\*** |
|  If not breastfed >6 monthsb | 1.15 (0.96, 1.37) | 1.01 (0.84, 1.20) |
| **Breastfeeding >6 months (yes (33%) vs. no (67%))** |  |  |
|  Overall, ignoring mother *FUT2* interactiona | **0.39 (0.33, 0.45)\*\*\*** | **0.81 (0.72, 0.91)\*\*** |
|  If mother is a non-secretorb | **0.33 (0.24, 0.44)\*\*\*** | **0.68 (0.53, 0.86)\*\*\*** |
|  If mother is a secretorb | **0.41 (0.35, 0.49)\*\*** | **0.86 (0.75, 0.99)\*** |
| *p for interaction betweenbreastfeeding and mother FUT2 secretor status* | *0.18* | *0.09* |

Estimates are from logistic regression models mutually adjusted for infant *FUT2*, mother *FUT2* and breastfeeding. aFrom models without interaction terms. bFrom models including an interaction term for mother *FUT2* and breastfeeding. No interactions were detected for infant *FUT2* and maternal *FUT2*, or for infant *FUT2* and breastfeeding (interaction p-values >0.20; not shown). OR, odds ratio; CI, confidence interval; *FUT2*, fucosyltransferase-2. \*p<0.05, \*\*p<0.01, \*\*\*p<0.001