

Supplementary Online Content

Adelman JS, Applebaum JR, Southern WN, et al. Risk of wrong-patient orders among multiple vs singleton births in the neonatal intensive care units of 2 integrated health care systems. *JAMA Pediatr*. Published August 26, 2019.
doi:10.1001/jamapediatrics.2019.2733

eTable 1. Participant Characteristics by Study Site

eTable 2. Wrong-Patient Orders Among Multiple-Birth Versus Singleton-Birth Infants by Study Site

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Participant Characteristics by Study Site^a

| | Site 1 | | | Site 2 | | |
|-------------------------|---------------------|-----------------------|----------------------|---------------------|-----------------------|---------------------|
| | Overall (n=8629) | Singleton (n=7268) | Multiple (n=1361) | Overall (n=2190) | Singleton (n=1982) | Multiple (n=208) |
| Sex | | | | | | |
| Male | 4873 (56.5) | 4186 (57.6) | 687 (50.5) | 1162 (53.1) | 1057 (53.3) | 105 (50.5) |
| Female | 3756 (43.5) | 3082 (42.4) | 674 (49.5) | 1028 (46.9) | 925 (46.7) | 103 (49.5) |
| Race/ethnicity | | | | | | |
| White | 2493 (28.9) | 1960 (27.0) | 533 (39.2) | 209 (9.5) | 180 (9.1) | 29 (13.9) |
| Hispanic | 1103 (12.8) | 983 (13.5) | 120 (8.8) | 456 (20.8) | 421 (21.2) | 35 (16.8) |
| Black | 593 (6.9) | 523 (7.2) | 70 (5.1) | 684 (31.2) | 611 (30.8) | 73 (35.1) |
| Other/unknown | 4440 (51.5) | 3802 (52.3) | 638 (46.9) | 841 (38.4) | 770 (38.9) | 71 (34.1) |
| Health insurance | | | | | | |
| Commercial | 5459 (63.3) | 4371 (60.1) | 1088 (79.9) | 513 (23.4) | 454 (22.9) | 59 (28.4) |
| Medicaid | 3101 (35.9) | 2830 (38.9) | 271 (19.9) | 1671 (76.3) | 1522 (76.8) | 149 (71.6) |
| Self-pay | 69 (0.8) | 67 (0.9) | 2 (0.2) | 6 (0.3) | 6 (0.3) | 0 (0) |

^a Comparisons between singleton and multiple birth infants for sex, race/ethnicity, and health insurance status. Site 1: $P < .0005$, all comparisons; Site 2: sex, $P = .43$; race, $P = .04$; insurance, $P = .16$.

eTable 2. Wrong-Patient Orders Among Multiple-Birth Versus Singleton-Birth Infants by Study Site

| | Total Orders | No. of RAR Events | RAR Events per 100,000 orders | Unadjusted Odds Ratio (95% CI) | Adjusted ^{a,b} Odds Ratio (95% CI) |
|------------------|-----------------|-------------------|-------------------------------|---------------------------------|---|
| Site 1 | | | | | |
| Overall | 1,251,132 | 586 | 46.8 | NA | NA |
| Singleton births | 974,022 | 405 | 41.6 | 1.00 (Ref) | 1.00 (Ref) |
| Multiple births | 277,110 | 181 | 65.3 | 1.72 (1.35–2.20) ^{c,e} | 1.74 (1.36–2.23) ^{c,f} |
| Extrafamilial | NA ^g | 100 | 36.1 | NA | NA |
| Intrafamilial | NA ^g | 81 | 29.2 | NA | NA |
| Site 2 | | | | | |
| Overall | 285,028 | 130 | 45.6 | NA | NA |
| Singleton births | 251,610 | 106 | 42.1 | 1.00 (Ref) | 1.00 (Ref) |
| Multiple births | 33,418 | 24 | 71.8 | 1.83 (1.01–3.29) ^{d,e} | 1.84 (1.02–3.31) ^{d,f} |
| Extrafamilial | NA ^g | 12 | 35.9 | NA | NA |
| Intrafamilial | NA ^g | 12 | 35.9 | NA | NA |

Abbreviations: CI, confidence interval; RAR events, Retract-and-Reorder events. Wrong-Patient RAR events are orders placed for a patient that are retracted (ie, cancelled) by the same clinician within 10 minutes, then reordered by the same clinician for a different patient within the next 10 minutes.

^a Logistic regression models constructed to calculate odds ratios and 95% confidence intervals.

^b Adjusted for sex, race/ethnicity, and health insurance status.

^c $P < .001$, comparison of multiple vs singleton births.

^d $P < .05$, comparison of multiple vs singleton births.

^e Ratio of odds ratios (ROR) 0.94; 95% CI 0.50 to 1.78; $P = .89$, unadjusted comparison of site 1 vs site 2.

^f Ratio of odds ratios (ROR) 0.95; 95% CI 0.50 to 1.80; $P = .89$, adjusted comparison of site 1 vs site 2.

^g The total number of orders for multiple birth infants was used as the denominator to calculate the rate of extrafamilial and intrafamilial RAR events.