

Table S1. Associations between the timing of maternal cigarette smoking and SNM by maternal race/ethnicity, maternal age and infant birth year

Outcomes	Smoking before pregnancy			Smoking in the first trimester			Smoking in the second trimester			Smoking in the third trimester		
	No	Yes	<i>P</i> value	No	Yes	<i>P</i> value	No	Yes	<i>P</i> value	No	Yes	<i>P</i> value
Hispanic												
Assisted ventilation immediately following delivery	1.00	1.66(1.61-1.72)	<0.0001	1.00	1.83(1.75-1.91)	<0.0001	1.00	1.87(1.78-1.96)	<0.0001	1.00	1.84(1.75-1.94)	<0.0001
Assisted ventilation for more than six hours	1.00	1.79(1.69-1.89)	<0.0001	1.00	1.88(1.75-2.01)	<0.0001	1.00	1.89(1.75-2.04)	<0.0001	1.00	1.84(1.69-2.00)	<0.0001
NICU admission for continuous mechanical ventilation	1.00	1.44(1.41-1.48)	<0.0001	1.00	1.65(1.60-1.70)	<0.0001	1.00	1.76(1.70-1.82)	<0.0001	1.00	1.78(1.71-1.84)	<0.0001
Surfactant replacement therapy	1.00	1.60(1.43-1.78)	<0.0001	1.00	1.77(1.56-2.00)	<0.0001	1.00	1.72(1.49-1.99)	<0.0001	1.00	1.72(1.46-2.01)	<0.0001
Suspected neonatal sepsis	1.00	1.41(1.35-1.48)	<0.0001	1.00	1.52(1.44-1.61)	<0.0001	1.00	1.57(1.47-1.66)	<0.0001	1.00	1.60(1.50-1.71)	<0.0001
Seizure or serious neurologic dysfunction	1.00	2.00(1.44-2.78)	<0.0001	1.00	2.30(1.56-3.40)	<0.0001	1.00	2.61(1.71-3.98)	<0.0001	1.00	2.67(1.72-4.15)	<0.0001
Composite SNM*	1.00	1.50(1.46-1.53)	<0.0001	1.00	1.70(1.65-1.75)	<0.0001	1.00	1.81(1.75-1.87)	<0.0001	1.00	1.83(1.77-1.89)	<0.0001
Non-Hispanic white												
Assisted ventilation immediately following delivery	1.00	1.22(1.20-1.23)	<0.0001	1.00	1.21(1.20-1.23)	<0.0001	1.00	1.19(1.18-1.21)	<0.0001	1.00	1.17(1.15-1.18)	<0.0001

Assisted ventilation for more than six hours	1.00	1.20(1.18-1.23)	<0.0001	1.00	1.19(1.17-1.22)	<0.0001	1.00	1.19(1.16-1.21)	<0.0001	1.00	1.16(1.13-1.19)	<0.0001
NICU admission for continuous mechanical ventilation	1.00	1.20(1.18-1.21)	<0.0001	1.00	1.24(1.22-1.25)	<0.0001	1.00	1.25(1.24-1.26)	<0.0001	1.00	1.24(1.22-1.25)	<0.0001
Surfactant replacement therapy	1.00	1.19(1.14-1.23)	<0.0001	1.00	1.18(1.13-1.24)	<0.0001	1.00	1.22(1.17-1.27)	<0.0001	1.00	1.23(1.17-1.29)	<0.0001
Suspected neonatal sepsis	1.00	1.27(1.25-1.29)	<0.0001	1.00	1.26(1.24-1.29)	<0.0001	1.00	1.27(1.24-1.29)	<0.0001	1.00	1.26(1.23-1.28)	<0.0001
Seizure or serious neurologic dysfunction	1.00	1.45(1.31-1.62)	<0.0001	1.00	1.50(1.34-1.68)	<0.0001	1.00	1.58(1.40-1.78)	<0.0001	1.00	1.59(1.40-1.79)	<0.0001
Composite SNM*	1.00	1.22(1.21-1.23)	<0.0001	1.00	1.25(1.24-1.26)	<0.0001	1.00	1.25(1.24-1.26)	<0.0001	1.00	1.24(1.22-1.25)	<0.0001
Non-Hispanic black												
Assisted ventilation immediately following delivery	1.00	1.27(1.24-1.30)	<0.0001	1.00	1.27(1.23-1.31)	<0.0001	1.00	1.27(1.23-1.32)	<0.0001	1.00	1.25(1.21-1.30)	<0.0001
Assisted ventilation for more than six hours	1.00	1.26(1.21-1.32)	<0.0001	1.00	1.23(1.17-1.30)	<0.0001	1.00	1.27(1.20-1.34)	<0.0001	1.00	1.25(1.18-1.33)	<0.0001
NICU admission for continuous mechanical ventilation	1.00	1.13(1.11-1.15)	<0.0001	1.00	1.16(1.13-1.19)	<0.0001	1.00	1.18(1.15-1.21)	<0.0001	1.00	1.16(1.13-1.19)	<0.0001
Surfactant replacement therapy	1.00	1.32(1.23-1.43)	<0.0001	1.00	1.29(1.19-1.40)	<0.0001	1.00	1.40(1.28-1.53)	<0.0001	1.00	1.44(1.30-1.59)	<0.0001
Suspected neonatal sepsis	1.00	1.35(1.31-1.40)	<0.0001	1.00	1.36(1.31-1.41)	<0.0001	1.00	1.36(1.30-1.42)	<0.0001	1.00	1.35(1.29-1.41)	<0.0001
Seizure or serious neurologic dysfunction	1.00	1.67(1.30-2.15)	<0.0001	1.00	1.62(1.22-2.16)	0.0010	1.00	1.70(1.25-2.31)	0.0007	1.00	1.76(1.29-2.42)	0.0004

Composite SNM*	1.00	1.18(1.16-1.20)	<0.0001	1.00	1.20(1.18-1.23)	<0.0001	1.00	1.21(1.18-1.24)	<0.0001	1.00	1.20(1.17-1.23)	<0.0001
Other												
Assisted ventilation immediately following delivery	1.00	1.44(1.39-1.50)	<0.0001	1.00	1.48(1.42-1.55)	<0.0001	1.00	1.49(1.43-1.56)	<0.0001	1.00	1.45(1.38-1.52)	<0.0001
Assisted ventilation for more than six hours	1.00	1.44(1.35-1.54)	<0.0001	1.00	1.50(1.40-1.62)	<0.0001	1.00	1.50(1.39-1.63)	<0.0001	1.00	1.47(1.35-1.60)	<0.0001
NICU admission for continuous mechanical ventilation	1.00	1.30(1.26-1.34)	<0.0001	1.00	1.40(1.36-1.45)	<0.0001	1.00	1.46(1.41-1.52)	<0.0001	1.00	1.44(1.39-1.50)	<0.0001
Surfactant replacement therapy	1.00	1.47(1.29-1.67)	<0.0001	1.00	1.55(1.35-1.79)	<0.0001	1.00	1.59(1.37-1.84)	<0.0001	1.00	1.48(1.25-1.75)	<0.0001
Suspected neonatal sepsis	1.00	1.35(1.28-1.42)	<0.0001	1.00	1.42(1.34-1.51)	<0.0001	1.00	1.48(1.40-1.58)	<0.0001	1.00	1.47(1.38-1.57)	<0.0001
Seizure or serious neurologic dysfunction	1.00	1.65(1.16-2.35)	0.0052	1.00	1.64(1.10-2.44)	0.0163	1.00	1.65(1.07-2.54)	0.0238	1.00	1.47(0.92-2.34)	0.1070
Composite SNM*	1.00	1.35(1.31-1.39)	<0.0001	1.00	1.44(1.40-1.48)	<0.0001	1.00	1.49(1.44-1.54)	<0.0001	1.00	1.47(1.42-1.52)	<0.0001
18-29 years												
Assisted ventilation immediately following delivery	1.00	1.25(1.23-1.26)	<0.0001	1.00	1.25(1.23-1.26)	<0.0001	1.00	1.23(1.21-1.25)	<0.0001	1.00	1.20(1.18-1.22)	<0.0001
Assisted ventilation for more than six hours	1.00	1.23(1.20-1.25)	<0.0001	1.00	1.22(1.19-1.25)	<0.0001	1.00	1.21(1.18-1.25)	<0.0001	1.00	1.18(1.15-1.21)	<0.0001
NICU admission for continuous mechanical	1.00	1.19(1.17-1.20)	<0.0001	1.00	1.24(1.23-1.25)	<0.0001	1.00	1.26(1.25-1.28)	<0.0001	1.00	1.25(1.23-1.26)	<0.0001

ventilation

Surfactant replacement therapy	1.00	1.22(1.17-1.27)	<0.0001	1.00	1.23(1.17-1.28)	<0.0001	1.00	1.26(1.20-1.32)	<0.0001	1.00	1.24(1.18-1.31)	<0.0001
Suspected neonatal sepsis	1.00	1.25(1.23-1.27)	<0.0001	1.00	1.26(1.24-1.28)	<0.0001	1.00	1.26(1.24-1.29)	<0.0001	1.00	1.25(1.23-1.28)	<0.0001
Seizure or serious neurologic dysfunction	1.00	1.51(1.35-1.69)	<0.0001	1.00	1.55(1.37-1.76)	<0.0001	1.00	1.64(1.44-1.87)	<0.0001	1.00	1.64(1.43-1.88)	<0.0001
Composite SNM*	1.00	1.22(1.21-1.23)	<0.0001	1.00	1.26(1.25-1.27)	<0.0001	1.00	1.27(1.25-1.28)	<0.0001	1.00	1.25(1.24-1.27)	<0.0001

30-39 years

Assisted ventilation immediately following delivery	1.00	1.35(1.33-1.38)	<0.0001	1.00	1.38(1.35-1.40)	<0.0001	1.00	1.37(1.34-1.39)	<0.0001	1.00	1.34(1.31-1.37)	<0.0001
Assisted ventilation for more than six hours	1.00	1.35(1.31-1.39)	<0.0001	1.00	1.34(1.30-1.39)	<0.0001	1.00	1.34(1.29-1.39)	<0.0001	1.00	1.32(1.27-1.36)	<0.0001
NICU admission for continuous mechanical ventilation	1.00	1.33(1.31-1.35)	<0.0001	1.00	1.40(1.38-1.42)	<0.0001	1.00	1.42(1.40-1.44)	<0.0001	1.00	1.41(1.38-1.43)	<0.0001
Surfactant replacement therapy	1.00	1.32(1.25-1.39)	<0.0001	1.00	1.32(1.24-1.40)	<0.0001	1.00	1.35(1.27-1.43)	<0.0001	1.00	1.37(1.28-1.46)	<0.0001
Suspected neonatal sepsis	1.00	1.40(1.37-1.43)	<0.0001	1.00	1.41(1.38-1.45)	<0.0001	1.00	1.43(1.39-1.47)	<0.0001	1.00	1.42(1.38-1.46)	<0.0001
Seizure or serious neurologic dysfunction	1.00	1.65(1.42-1.92)	<0.0001	1.00	1.66(1.40-1.97)	<0.0001	1.00	1.73(1.45-2.06)	<0.0001	1.00	1.75(1.46-2.09)	<0.0001
Composite SNM*	1.00	1.35(1.34-1.37)	<0.0001	1.00	1.41(1.39-1.43)	<0.0001	1.00	1.42(1.40-1.44)	<0.0001	1.00	1.41(1.39-1.43)	<0.0001

40-49 years

Assisted ventilation immediately following delivery	1.00	1.29(1.21-1.38)	<0.0001	1.00	1.30(1.20-1.39)	<0.0001	1.00	1.28(1.18-1.39)	<0.0001	1.00	1.25(1.15-1.35)	<0.0001
Assisted ventilation for more than six hours	1.00	1.26(1.13-1.41)	<0.0001	1.00	1.22(1.08-1.38)	0.0012	1.00	1.24(1.09-1.41)	0.0010	1.00	1.20(1.05-1.37)	0.0082
NICU admission for continuous mechanical ventilation	1.00	1.24(1.18-1.31)	<0.0001	1.00	1.28(1.21-1.36)	<0.0001	1.00	1.32(1.24-1.40)	<0.0001	1.00	1.28(1.20-1.37)	<0.0001
Surfactant replacement therapy	1.00	1.33(1.09-1.62)	0.0048	1.00	1.25(1.00-1.56)	0.0493	1.00	1.27(1.00-1.61)	0.0459	1.00	1.17(0.90-1.52)	0.2406
Suspected neonatal sepsis	1.00	1.33(1.21-1.46)	<0.0001	1.00	1.33(1.20-1.47)	<0.0001	1.00	1.31(1.17-1.47)	<0.0001	1.00	1.31(1.16-1.46)	<0.0001
Seizure or serious neurologic dysfunction	1.00	1.35(0.74-2.48)	0.3321	1.00	1.57(0.83-2.96)	0.1642	1.00	1.61(0.83-3.12)	0.1581	1.00	1.71(0.88-3.31)	0.1132
Composite SNM*	1.00	1.26(1.20-1.32)	<0.0001	1.00	1.30(1.23-1.37)	<0.0001	1.00	1.32(1.24-1.39)	<0.0001	1.00	1.29(1.21-1.37)	<0.0001
2016												
Assisted ventilation immediately following delivery	1.00	1.28(1.25-1.30)	<0.0001	1.00	1.28(1.25-1.30)	<0.0001	1.00	1.26(1.23-1.29)	<0.0001	1.00	1.26(1.23-1.29)	<0.0001
Assisted ventilation for more than six hours	1.00	1.30(1.26-1.35)	<0.0001	1.00	1.30(1.25-1.35)	<0.0001	1.00	1.29(1.24-1.34)	<0.0001	1.00	1.29(1.23-1.34)	<0.0001
NICU admission for continuous mechanical ventilation	1.00	1.25(1.23-1.27)	<0.0001	1.00	1.31(1.29-1.33)	<0.0001	1.00	1.33(1.31-1.36)	<0.0001	1.00	1.34(1.32-1.37)	<0.0001
Surfactant replacement therapy	1.00	1.29(1.21-1.37)	<0.0001	1.00	1.29(1.21-1.38)	<0.0001	1.00	1.32(1.23-1.42)	<0.0001	1.00	1.34(1.25-1.44)	<0.0001

Suspected neonatal sepsis	1.00	1.32(1.28-1.35)	<0.0001	1.00	1.32(1.28-1.36)	<0.0001	1.00	1.31(1.27-1.35)	<0.0001	1.00	1.32(1.28-1.36)	<0.0001
Seizure or serious neurologic dysfunction	1.00	1.60(1.35-1.89)	<0.0001	1.00	1.80(1.50-2.16)	<0.0001	1.00	1.78(1.46-2.16)	<0.0001	1.00	1.77(1.45-2.16)	<0.0001
Composite SNM*	1.00	1.27(1.25-1.29)	<0.0001	1.00	1.31(1.29-1.33)	<0.0001	1.00	1.33(1.31-1.35)	<0.0001	1.00	1.33(1.31-1.35)	<0.0001

2017

Assisted ventilation immediately following delivery	1.00	1.28(1.25-1.30)	<0.0001	1.00	1.28(1.26-1.31)	<0.0001	1.00	1.27(1.24-1.30)	<0.0001	1.00	1.25(1.22-1.28)	<0.0001
Assisted ventilation for more than six hours	1.00	1.24(1.20-1.29)	<0.0001	1.00	1.24(1.19-1.29)	<0.0001	1.00	1.25(1.20-1.30)	<0.0001	1.00	1.24(1.18-1.29)	<0.0001
NICU admission for continuous mechanical ventilation	1.00	1.25(1.23-1.27)	<0.0001	1.00	1.32(1.30-1.34)	<0.0001	1.00	1.35(1.32-1.37)	<0.0001	1.00	1.36(1.33-1.38)	<0.0001
Surfactant replacement therapy	1.00	1.24(1.17-1.32)	<0.0001	1.00	1.24(1.16-1.33)	<0.0001	1.00	1.30(1.21-1.39)	<0.0001	1.00	1.26(1.17-1.36)	<0.0001
Suspected neonatal sepsis	1.00	1.27(1.24-1.31)	<0.0001	1.00	1.31(1.27-1.35)	<0.0001	1.00	1.32(1.28-1.36)	<0.0001	1.00	1.32(1.28-1.36)	<0.0001
Seizure or serious neurologic dysfunction	1.00	1.38(1.15-1.65)	0.0004	1.00	1.41(1.16-1.72)	0.0006	1.00	1.48(1.20-1.81)	0.0002	1.00	1.57(1.28-1.94)	<0.0001
Composite SNM*	1.00	1.27(1.25-1.29)	<0.0001	1.00	1.33(1.31-1.35)	<0.0001	1.00	1.34(1.32-1.36)	<0.0001	1.00	1.34(1.31-1.36)	<0.0001

2018

Assisted ventilation immediately following delivery	1.00	1.30(1.28-1.33)	<0.0001	1.00	1.31(1.28-1.33)	<0.0001	1.00	1.28(1.25-1.32)	<0.0001	1.00	1.23(1.20-1.26)	<0.0001
Assisted ventilation for more	1.00	1.26(1.22-1.30)	<0.0001	1.00	1.24(1.19-1.29)	<0.0001	1.00	1.24(1.19-1.29)	<0.0001	1.00	1.15(1.10-1.20)	<0.0001

than six hours												
NICU admission for continuous mechanical ventilation	1.00	1.24(1.22-1.26)	<0.0001	1.00	1.29(1.27-1.31)	<0.0001	1.00	1.32(1.29-1.34)	<0.0001	1.00	1.29(1.26-1.31)	<0.0001
Surfactant replacement therapy	1.00	1.21(1.13-1.29)	<0.0001	1.00	1.22(1.14-1.31)	<0.0001	1.00	1.22(1.13-1.32)	<0.0001	1.00	1.15(1.05-1.25)	0.0016
Suspected neonatal sepsis	1.00	1.28(1.24-1.31)	<0.0001	1.00	1.26(1.22-1.30)	<0.0001	1.00	1.29(1.24-1.33)	<0.0001	1.00	1.24(1.20-1.28)	<0.0001
Seizure or serious neurologic dysfunction	1.00	1.68(1.40-2.01)	<0.0001	1.00	1.53(1.25-1.88)	<0.0001	1.00	1.64(1.33-2.03)	<0.0001	1.00	1.52(1.21-1.90)	0.0003
Composite SNM*	1.00	1.27(1.25-1.29)	<0.0001	1.00	1.31(1.29-1.33)	<0.0001	1.00	1.32(1.30-1.34)	<0.0001	1.00	1.29(1.27-1.32)	<0.0001
2019												
Assisted ventilation immediately following delivery	1.00	1.31(1.29-1.34)	<0.0001	1.00	1.32(1.29-1.35)	<0.0001	1.00	1.30(1.27-1.33)	<0.0001	1.00	1.25(1.22-1.28)	<0.0001
Assisted ventilation for more than six hours	1.00	1.29(1.24-1.33)	<0.0001	1.00	1.28(1.23-1.33)	<0.0001	1.00	1.27(1.22-1.33)	<0.0001	1.00	1.18(1.13-1.24)	<0.0001
NICU admission for continuous mechanical ventilation	1.00	1.22(1.20-1.24)	<0.0001	1.00	1.27(1.24-1.29)	<0.0001	1.00	1.28(1.26-1.31)	<0.0001	1.00	1.25(1.22-1.27)	<0.0001
Surfactant replacement therapy	1.00	1.25(1.17-1.34)	<0.0001	1.00	1.25(1.16-1.35)	<0.0001	1.00	1.29(1.20-1.40)	<0.0001	1.00	1.19(1.09-1.30)	<0.0001
Suspected neonatal sepsis	1.00	1.29(1.25-1.33)	<0.0001	1.00	1.31(1.27-1.36)	<0.0001	1.00	1.33(1.28-1.37)	<0.0001	1.00	1.28(1.23-1.32)	<0.0001
Seizure or serious neurologic dysfunction	1.00	1.50(1.24-1.82)	<0.0001	1.00	1.56(1.27-1.93)	<0.0001	1.00	1.76(1.41-2.18)	<0.0001	1.00	1.77(1.42-2.21)	<0.0001
Composite SNM*	1.00	1.26(1.24-1.28)	<0.0001	1.00	1.30(1.28-1.32)	<0.0001	1.00	1.31(1.28-1.33)	<0.0001	1.00	1.28(1.26-1.30)	<0.0001

Logistic regression models were adjusted for maternal age at delivery, race/ethnicity, educational level, marital status, pre-pregnancy BMI, infant sex, gestational age at delivery, parity, total number of prenatal care visits, eclampsia, gestational hypertension and gestational diabetes.

*Composite SNM was defined as having one or more of the above outcomes.

Data are expressed as odds ratios (95% confidence intervals).

SNM, severe neonatal morbidity.

Table S2. Sensitivity analyses of the associations between the timing of maternal cigarette smoking and SNM

Outcomes	Smoking before pregnancy			Smoking in the first trimester			Smoking in the second trimester			Smoking in the third trimester		
	No	Yes	<i>P</i> value	No	Yes	<i>P</i> value	No	Yes	<i>P</i> value	No	Yes	<i>P</i> value
Exclusion of women with caesarean section[†]												
Assisted ventilation immediately following delivery	1.00	1.28(1.26-1.30)	<0.0001	1.00	1.29(1.27-1.31)	<0.0001	1.00	1.28(1.26-1.30)	<0.0001	1.00	1.25(1.23-1.27)	<0.0001
Assisted ventilation for more than six hours	1.00	1.30(1.27-1.33)	<0.0001	1.00	1.30(1.27-1.34)	<0.0001	1.00	1.31(1.27-1.35)	<0.0001	1.00	1.28(1.24-1.32)	<0.0001
NICU admission for continuous mechanical ventilation	1.00	1.31(1.29-1.32)	<0.0001	1.00	1.39(1.37-1.41)	<0.0001	1.00	1.42(1.41-1.44)	<0.0001	1.00	1.41(1.39-1.42)	<0.0001
Surfactant replacement therapy	1.00	1.29(1.23-1.36)	<0.0001	1.00	1.32(1.25-1.39)	<0.0001	1.00	1.39(1.31-1.47)	<0.0001	1.00	1.39(1.30-1.47)	<0.0001
Suspected neonatal sepsis	1.00	1.32(1.30-1.35)	<0.0001	1.00	1.34(1.32-1.37)	<0.0001	1.00	1.36(1.33-1.39)	<0.0001	1.00	1.35(1.32-1.38)	<0.0001
Seizure or serious neurologic dysfunction	1.00	1.43(1.25-1.63)	<0.0001	1.00	1.40(1.21-1.63)	<0.0001	1.00	1.49(1.27-1.74)	<0.0001	1.00	1.50(1.28-1.76)	<0.0001
Composite SNM*	1.00	1.31(1.30-1.32)	<0.0001	1.00	1.37(1.36-1.39)	<0.0001	1.00	1.39(1.38-1.41)	<0.0001	1.00	1.38(1.36-1.39)	<0.0001
Exclusion of women with eclampsia, gestational hypertension or diabetes[‡]												
Assisted ventilation immediately following delivery	1.00	1.32(1.30-1.33)	<0.0001	1.00	1.32(1.31-1.34)	<0.0001	1.00	1.31(1.29-1.32)	<0.0001	1.00	1.27(1.26-1.29)	<0.0001
Assisted ventilation for	1.00	1.31(1.29-1.34)	<0.0001	1.00	1.31(1.28-1.33)	<0.0001	1.00	1.30(1.27-1.33)	<0.0001	1.00	1.27(1.24-1.30)	<0.0001

more than six hours NICU admission for continuous mechanical ventilation	1.00	1.29(1.28-1.30)	<0.0001	1.00	1.35(1.34-1.36)	<0.0001	1.00	1.38(1.36-1.39)	<0.0001	1.00	1.36(1.35-1.37)	<0.0001
Surfactant replacement therapy	1.00	1.30(1.26-1.35)	<0.0001	1.00	1.30(1.25-1.36)	<0.0001	1.00	1.35(1.29-1.40)	<0.0001	1.00	1.33(1.27-1.39)	<0.0001
Suspected neonatal sepsis	1.00	1.33(1.31-1.35)	<0.0001	1.00	1.34(1.32-1.36)	<0.0001	1.00	1.35(1.33-1.37)	<0.0001	1.00	1.34(1.32-1.36)	<0.0001
Seizure or serious neurologic dysfunction	1.00	1.59(1.44-1.76)	<0.0001	1.00	1.61(1.44-1.79)	<0.0001	1.00	1.69(1.51-1.89)	<0.0001	1.00	1.68(1.50-1.89)	<0.0001
Composite SNM*	1.00	1.31(1.30-1.32)	<0.0001	1.00	1.36(1.35-1.37)	<0.0001	1.00	1.37(1.36-1.38)	<0.0001	1.00	1.35(1.34-1.37)	<0.0001
Exclusion of women with preterm birth[†]												
Assisted ventilation immediately following delivery	1.00	1.32(1.30-1.33)	<0.0001	1.00	1.34(1.32-1.36)	<0.0001	1.00	1.32(1.30-1.33)	<0.0001	1.00	1.31(1.29-1.33)	<0.0001
Assisted ventilation for more than six hours	1.00	1.33(1.30-1.37)	<0.0001	1.00	1.34(1.31-1.38)	<0.0001	1.00	1.33(1.29-1.37)	<0.0001	1.00	1.32(1.28-1.36)	<0.0001
NICU admission for continuous mechanical ventilation	1.00	1.32(1.31-1.33)	<0.0001	1.00	1.42(1.40-1.43)	<0.0001	1.00	1.46(1.44-1.47)	<0.0001	1.00	1.46(1.44-1.48)	<0.0001
Surfactant replacement therapy	1.00	1.26(1.17-1.35)	<0.0001	1.00	1.33(1.23-1.43)	<0.0001	1.00	1.36(1.26-1.48)	<0.0001	1.00	1.38(1.27-1.49)	<0.0001
Suspected neonatal sepsis	1.00	1.26(1.24-1.29)	<0.0001	1.00	1.27(1.25-1.30)	<0.0001	1.00	1.27(1.25-1.30)	<0.0001	1.00	1.28(1.25-1.31)	<0.0001
Seizure or serious neurologic dysfunction	1.00	1.46(1.32-1.62)	<0.0001	1.00	1.56(1.39-1.75)	<0.0001	1.00	1.66(1.47-1.87)	<0.0001	1.00	1.65(1.46-1.87)	<0.0001
Composite SNM*	1.00	1.33(1.32-1.34)	<0.0001	1.00	1.40(1.39-1.41)	<0.0001	1.00	1.42(1.40-1.43)	<0.0001	1.00	1.42(1.41-1.43)	<0.0001

Imputation analyses to deal with missing data on selected covariates[†]

Assisted ventilation immediately following delivery	1.00	1.32(1.31-1.33)	<0.0001	1.00	1.33(1.32-1.34)	<0.0001	1.00	1.32(1.30-1.33)	<0.0001	1.00	1.29(1.27-1.30)	<0.0001
Assisted ventilation for more than six hours	1.00	1.31(1.29-1.34)	<0.0001	1.00	1.31(1.28-1.33)	<0.0001	1.00	1.30(1.28-1.33)	<0.0001	1.00	1.27(1.24-1.29)	<0.0001
NICU admission for continuous mechanical ventilation	1.00	1.27(1.26-1.28)	<0.0001	1.00	1.34(1.33-1.35)	<0.0001	1.00	1.37(1.36-1.38)	<0.0001	1.00	1.36(1.34-1.37)	<0.0001
Surfactant replacement therapy	1.00	1.30(1.26-1.34)	<0.0001	1.00	1.30(1.26-1.34)	<0.0001	1.00	1.32(1.28-1.37)	<0.0001	1.00	1.30(1.26-1.35)	<0.0001
Suspected neonatal sepsis	1.00	1.36(1.34-1.37)	<0.0001	1.00	1.37(1.35-1.39)	<0.0001	1.00	1.38(1.36-1.40)	<0.0001	1.00	1.37(1.35-1.39)	<0.0001
Seizure or serious neurologic dysfunction	1.00	1.61(1.48-1.76)	<0.0001	1.00	1.65(1.50-1.81)	<0.0001	1.00	1.72(1.56-1.90)	<0.0001	1.00	1.75(1.58-1.93)	<0.0001
Composite SNM*	1.00	1.30(1.29-1.31)	<0.0001	1.00	1.36(1.35-1.37)	<0.0001	1.00	1.37(1.36-1.38)	<0.0001	1.00	1.36(1.35-1.37)	<0.0001

[†] Logistic regression models were adjusted for maternal age at delivery, race/ethnicity, educational level, marital status, pre-pregnancy BMI, infant sex, gestational age at delivery, parity, total number of prenatal care visits, eclampsia, gestational hypertension and diabetes.

[‡] Logistic regression models were adjusted for maternal age at delivery, race/ethnicity, educational level, marital status, pre-pregnancy BMI, infant sex, gestational age at delivery, parity, total number of prenatal care visits.

*Composite SNM was defined as having one or more of the above outcomes.

Data are expressed as odds ratios (95% confidence intervals).

SNM, severe neonatal morbidity.