

Supplemental Table 1: Vaccine coverage, as per the South African expanded programme on immunisation schedule

Samples		Vaccines, n (%)							
Time of collection	Number of results	Bacillus Calmette-Guérin (BCG)	Diphtheria/tetanus/pertussis (DTP)			Measles	Pneumococcal conjugate vaccine, 13-valent (PCV)		
		Birth	6 Weeks	10 Weeks	14 Weeks	9 Months	6 weeks	14 Weeks	9 Months
Birth	911	828/830 (99.8%)	-	-	-	-	-	-	-
6 Months	887	831/834 (99.6%)	839/840 (99.9%)	834/834 (100%)	823/826 (99.6%)	-	840/840 (100%)	824/826 (99.8%)	-
12 Months	800	751/752 (99.9%)	761/762 (99.9%)	758/759 (99.9%)	747/751 (99.5%)	706/713 (99.0%)	762/762 (100%)	749/752 (99.6%)	709/718 (98.8%)

Supplemental Table 2: Carriage status of infants at 12 months, relative to infant carriage at 6 months of age

		6 Months		
		Negative, n (%)	Positive, n (%)	P-value
12 Months	<i>S. aureus</i>	39 (6)	12 (8)	0.454
	<i>S. pneumoniae</i>	154 (57)	376 (74)	<0.001
	<i>H. influenzae</i>	165 (36)	160 (50)	<0.001
	<i>M. catarrhalis</i>	197 (51)	227 (57)	0.084
	Gram negative bacilli	15 (2)	2 (4)	0.444

Supplemental Table 3: Mbekweni: Multivariable analysis of antenatal exposures and maternal nasopharyngeal bacterial carriage.

	<i>S. aureus</i>		<i>S. pneumoniae</i>		<i>H. influenzae</i>		<i>M. catarrhalis</i>		Gram negative bacilli	
	Adjusted RR (CI)	Adjusted 2 RR (CI)	Adjusted RR (CI)	Adjusted 2 RR (CI)	Adjusted RR (CI)	Adjusted 2 RR (CI)	Adjusted RR (CI)	Adjusted 2 RR (CI)	Adjusted RR (CI)	Adjusted 2 RR (CI)
PM10	1.19 (0.75 - 1.89)	1.26 (0.73 - 2.17)	0.87 (0.42 - 1.83)	0.74(0.31 - 1.77)	0.75 (0.28 - 2.04)	0.86 (0.29- 2.56)	0.45(0.11 - 1.86)	0.52 (0.11 - 2.50)	1.34 (0.13 - 14.11)	2.71 (0.21 - 34.50)
NO ₂	1.24 (0.53 - 2.90)	1.62 (0.57 - 4.56)	1.25 (0.34 - 4.60)	1.68 (0.46 - 6.11)	1.14 (0.17 - 7.93)	1.17 (0.17 - 8.13)	3.60 (1.19 - 10.90)	3.90 (1.47 - 10.37)	1.07 (3.88 - 2.98)	-
Benzene	0.71 (0.48 - 1.05)	0.61 (0.35 - 1.06)	1.08 (0.62 - 1.88)	1.19 (0.54 - 2.63)	2.28 (1.00- 5.24)	2.75 (0.88 - 8.63)	2.27 (0.98 - 5.22)	3.90 (1.00 - 15.17)	2.35 (0.46 - 12.08)	2.09 (0.19 - 22.65)
CO	0.89 (0.57 - 1.40)	1.04 (0.61 - 1.78)	1.74 (0.99 - 3.05)	1.53 (0.71 - 3.29)	2.08 (0.90- 4.79)	1.23 (0.47 - 3.20)	0.79 (0.33 - 1.92)	0.55 (0.13- 2.28)	0.37 (0.04 - 3.20)	8.12e-8 (2.47e-8 - 2.66e-7)
Smoking	1.00 (0.68 - 1.47)	0.95 (0.59 - 1.52)	1.47 (0.81 - 2.69)	1.62 (0.75 - 3.51)	0.72 (0.36- 1.47)	1.11 (0.41 - 3.01)	1.19 (0.54 - 2.57)	1.34 (0.43 - 4.22)	0.45 (0.12 - 1.74)	0.79 (0.10 - 6.24)
Toluene	0.68 (0.30 - 1.57)	0.91 (0.37 - 2.28)	1.22 (0.52 - 2.93)	1.16 (0.45 - 3.00)	0.40 (0.05 - 2.99)	0.27 (0.04 - 1.96)	1.71 (0.53 - 5.51)	1.10 (0.37 - 3.24)	5.92 (1.16 - 30.08)	3.90 (0.25 - 60.17)

Notes:

1. Relative risks (RR) in bold are statistically significant
2. Adjusted for all the clinical-demographic variables
3. Adjusted 2 for all the clinical-demographic variables, plus adjusting for other indoor air pollutants
4. PM10 = particulate matter, NO₂ = nitrogen dioxide, CO = carbon monoxide
5. Empty cells = model convergence not achieved
- 6.

Supplemental Table 4: Newman: Multivariable analysis of antenatal exposures and maternal nasopharyngeal bacterial carriage.

	<i>S. aureus</i>		<i>S. pneumoniae</i>		<i>H. influenzae</i>		<i>M. catarrhalis</i>		Gram negative bacilli	
	Adjusted RR (CI)	Adjusted 2 RR (CI)	Adjusted RR (CI)	Adjusted 2 RR (CI)	Adjusted RR (CI)	Adjusted 2 RR (CI)	Adjusted RR (CI)	Adjusted 2 RR (CI)	Adjusted RR (CI)	Adjusted 2 RR (CI)
PM10	0.63 (0.28 -1.43)	1.09 (0.47 – 2.54)	0.88 (0.42 - 1.82)	0.59 (0.21 - 1.67)	0.97(0.33 – 2.88)	1.02 (0.35- 2.98)	1.07 (0.32- 3.59)	0.51 (0.08 – 3.51)	0.72 (0.07 – 7.05)	0.78 (0.06 – 9.52)
NO ₂	1.82e-06 (5.50e-07 – 6.06e-06)	8.73e-07 (8.97e-08 – 8.49e-06)	1.23e-06 (3.38e-07 – 4.50e-06)	2.05e-06 (1.97e-07 – 0.00)	5.17 (0.86 – 30.88)	3.61e-06 (2.61e-07 – 0.00)	4.58 (0.69 – 30.20)	4.70e-06 (3.93e-07 – 5.61e-05)	0.00 (- 1.82– 0.00)	-
Benzene	0.71 (0.39 – 1.28)	0.71 (0.35 - 1.43)	0.93 (0.52 - 1.66)	0.80 (0.33–1.98)	1.87 (0.83- 4.22)	0.85 (0.27 – 2.67)	0.88 (0.38 - 2.03)	0.94 (0.24 – 3.64)	2.07 (0.33 – 13.10)	1.30 (0.19 – 9.03)
CO	0.82 (0.43- 1.54)	0.42 (0.18 - 1.02)	0.52 (0.24 - 1.11)	0.58 (0.24 - 1.41)	0.69 (0.27- 1.80)	0.85 (0.31 - 2.30)	0.38 (0.15- 0.98)	0.85 (0.25 – 2.85)	0.75 (0.16- 3.53)	1.49 (0.25 – 8.88)
Smoking	0.92 (0.44 - 1.93)	0.98 (0.36 – 2.64)	3.36 (0.98 – 11.53)	1.57 (0.46– 5.30)	1.24 (0.30 – 5.04)	0.93 (0.21 – 4.12)	0.84 (0.32 – 2.25)	0.26 (0.07 – 0.97)	3311560 (1388574 - 7897619)	3834979 (1343812 – 1.09e+07)
Toluene	0.48 (0.12- 1.88)	0.37 (0.05 – 2.63)	1.67 (0.79 – 3.53)	2.54 (0.85 – 7.61)	2.36 (0.86 – 6.45)	3.78 (1.04 – 13.74)	1.77 (0.52 – 6.00)	2.86 (0.41 – 20.14)	2.08 (0.22– 19.46)	2.65 (0.26 – 26.94)

Notes:

1. Relative risks (RR) in bold are statistically significant
2. Adjusted for all the clinical-demographic variables
3. Adjusted 2 for all the clinical-demographic variables, plus adjusting for other indoor air pollutants
4. PM10 = particulate matter, NO₂ = nitrogen dioxide, CO = carbon monoxide
5. Empty cells = model convergence not achieved

Supplemental Table 5: Mbekweni: Multivariable analysis of postnatal exposures and infant nasopharyngeal bacterial carriage

		<i>S. aureus</i>		<i>S. pneumoniae</i>		<i>H. influenzae</i>		<i>M. catarrhalis</i>		Gram negative bacilli	
		Adj. RR (CI)	Adj. 2 RR (CI)	Adj. RR (CI)	Adj. 2 RR (CI)	Adj. RR (CI)	Adj. 2 RR (CI)	Adj. RR (CI)	Adj. 2 RR (CI)	Adj. RR (CI)	Adj. 2 RR (CI)
PM10	6 mth	0.80(0.37-1.76)	1.22(0.42-3.50)	0.97(0.73-1.29)	1.10(0.70-1.73)	1.25(0.89-1.76)	2.09(1.15-3.81)	0.86(0.58-1.27)	0.95(0.54-1.69)	0.51 (0.13 – 2.00)	0.21 (0.02 – 1.96)
	12 mth	0.38(0.06-2.54)	0.69(0.12-3.78)	1.13(0.92-1.40)	1.16(0.82-1.63)	1.15(0.82-1.62)	0.94(0.53-1.66)	1.11(0.84-1.47)	1.06(0.66-1.71)	1.48e-07 (1.95e-08–1.12e-06)	0.04(0.02-0.07)
NO ₂	6 mth	0.93(0.15-5.57)	2.37e-07(9.14e-09-6.14e-06)	1.33(0.89-1.98)	1.91(0.81-4.50)	0.30(0.06-1.40)	4.58e-07(4.06e-08-5.17e-06)	1.25(0.61-2.56)	3.97e-07(4.34e-08-3.62e-06)	3.32 (0.37 – 29.74)	3.65e-06 (8.06e-08-0.00)
	12 mth	5.06e-07(1.39e-07-1.84e-06)	3.91e-08(6.77e-10-2.26e-06)	0.99(0.66-1.48)	0.67(0.38-1.19)	0.49(0.09-2.61)	1.32(0.52-3.37)	0.68(0.26-1.78)	1.72e-06(2.04e-07-0.00)	3.88e+08 (1.32e+08–1.14e+09)	1.37e+07(1420792-1.31e+08)
Benzene	6 mth	1.14(0.69-1.90)	1.10(0.21-5.62)	1.01(0.82-1.24)	0.86(0.52-1.40)	0.70(0.52-0.95)	0.57(0.23-1.39)	0.96(0.72-1.27)	0.95(0.56-1.62)	0.79 (0.32 – 1.98)	0.61 (0.18 – 2.08)
	12 mth	0.89(0.28-2.80)	2.10(0.05-83.48)	1.00(0.85-1.19)	1.33(1.01-1.75)	1.00(0.73-1.37)	0.97(0.47-2.01)	1.01(0.80-1.27)	0.98(0.63-1.51)	28.96 (9.78 – 85.75)	54952.41(32483.63-92962.75)
CO	6 mth	0.94(0.48-1.85)	0.72(0.18-2.93)	0.93(0.722-1.19)	1.22(0.82-1.84)	0.95(0.62-1.46)	1.05(0.50-2.22)	0.99(0.72-1.36)	1.09(0.67-1.79)	0.83 (0.24 – 2.89)	1.22(0.30– 4.98)
	12 mth	0.84(0.16-4.44)	0.52(0.14-1.90)	1.25(1.02-1.52)	1.11(0.81-1.50)	1.02(0.71-1.48)	0.82(0.42-1.58)	1.06(0.80-1.41)	1.35(0.94-1.95)	47.56 (4.71-479.99)	693.34(399.46-1203.41)
Smoking	6 mth	1.31(0.85-2.01)	0.62(0.23-1.67)	1.08(0.93-1.26)	1.13(0.82-1.56)	1.05(0.80-1.37)	1.31(0.80-2.16)	0.93(0.74-1.17)	1.01(0.68-1.52)	0.75	0.98 (0.32 – 3.03)

		<i>S. aureus</i>		<i>S. pneumoniae</i>		<i>H. influenzae</i>		<i>M. catarrhalis</i>		Gram negative bacilli	
		Adj. RR (CI)	Adj. 2 RR (CI)	Adj. RR (CI)	Adj. 2 RR (CI)	Adj. RR (CI)	Adj. 2 RR (CI)	Adj. RR (CI)	Adj. 2 RR (CI)	Adj. RR (CI)	Adj. 2 RR (CI)
										(0.36 – 1.57)	
	12 mth	0.82(0.41-1.64)	1.45(0.27-7.91)	1.04(0.88-1.24)	0.87(0.66-1.16)	1.10(0.84-1.43)	1.26(0.79-1.99)	0.96(0.80-1.16)	1.07(0.76-1.50)	5.00 (0.56 – 44.68)	8.65e+08(5.08e+08-1.47e+09)
Toluene	6 mth	0.67(0.24-1.92)	1.10(0.16-7.55)	0.83(0.56-1.24)	0.92(0.42-2.02)	0.83(0.49-1.40)	0.60(0.12-2.88)	1.09(0.69-1.74)	-	2.22e-07 (1.06e-07– 4.64e-07)	-
	12 mth	1.19(0.33-4.32)	3.33e-08(3.21e-09-3.46e-07)	0.86(0.60-1.25)	0.59(0.30-1.18)	1.32(0.84-2.06)	0.73(0.24-2.20)	1.07(0.73-1.57)	-	3.48e-07 (1.96e-08– 6.19e-06)	-

Notes:

1. Relative risks (RR) in bold are statistically significant
2. Adjusted for all the clinical-demographic variables.
3. Adjusted 2 for all the clinical-demographic variables, plus adjusting for other indoor air pollutants
4. PM10 = particulate matter, NO₂ = nitrogen dioxide, CO = carbon monoxide
5. Empty cells = model convergence not achieved

Supplemental Table 6: Newman: Multivariable analysis of postnatal exposures and infant nasopharyngeal bacterial carriage

		<i>S. aureus</i>		<i>S. pneumoniae</i>		<i>H. influenzae</i>		<i>M. catarrhalis</i>		Gram negative bacilli	
		Adj. RR (CI)	Adj. 2 RR (CI)	Adj. RR (CI)	Adj. 2 RR (CI)	Adj. RR (CI)	Adj. 2 RR (CI)	Adj. RR (CI)	Adj. 2 RR (CI)	Adj. RR (CI)	Adj. 2 RR (CI)
PM10	6 mt h	1.28(0.62-2.60)	0.50(0.14-1.84)	0.96(0.74-1.26)	0.94(0.52-1.67)	0.95(0.66-1.38)	1.13(0.53-2.41)	0.94(0.67-1.33)	0.91(0.48-1.75)	0.79(0.04-14.78)	1.30e-08(5.64e-09-2.98e-08)
	12 mt h	0.94(0.13-6.63)	1.83e+44(7.02e+43-4.78e+44)	0.91(0.70-1.17)	0.84(0.48-1.48)	1.11(0.71-1.74)	1.91(74-4.97)	1.13(0.79-1.62)	1.89(1.15-3.11)	1.29(0.22-7.73)	0.09(0.04-0.17)
NO ₂	6 mt h	9.76e-06(1.25e-06-0.00)	-	1.73(1.45-2.07)	-	2.66(2.04-3.47)	-	2.21e-06(3.06e-07-0.00)	-	6.92e-07(8.28e-08-5.79e-06)	-
	12 mt h	3.71e-07(3.27e-08-4.21e-06)	-	1.39(1.17-1.64)	-	1.75(1.26-2.42)	-	1.78e-06(2.45e-07-0.00)	-	1.15e-06(1.08e-07-0.00)	-
Benzen e	6 mt h	0.34(0.16-0.76)	0.48(0.12-1.84)	1.03(0.82-1.29)	1.00(0.64-1.55)	1.45(1.06-2.00)	1.56(0.83-2.96)	1.07(0.81-1.42)	1.14(0.74-1.77)	0.21(0.02-2.74)	0.13(0.03-0.58)
	12 mt h	0.73(0.16-3.36)	6.01e+08(2.69e+08-1.34e+09)	0.98(0.80-1.20)	1.03(0.71-1.50)	0.73(0.49-1.09)	0.87(0.44-1.73)	0.75(0.53-1.07)	0.83(0.50-1.40)	10.78(0.09-6.86)	0.00(0.00-0.00)
CO	6 mt h	1.28(0.67-2.45)	3.06(1.29-7.24)	1.13(0.91-1.39)	1.37(0.96-1.96)	1.11(0.81-1.52)	0.85(0.41-1.74)	1.05(0.81-1.35)	1.27(0.81-2.00)	1.30(0.40-4.17)	1.11(0.32-3.79)
	12 mt h	0.35(0.11-1.11)	1.51e-18(8.77e-19-2.60e-18)	0.90(0.72-1.11)	1.05(0.73-1.52)	0.97(0.64-1.49)	1.06(0.49-2.29)	0.92(0.67-1.27)	0.76(0.43-1.33)	1.09(0.23-5.03)	5.18e-08(2.85e-08-9.43e-08)
Smokin g	6 mt h	1.40(0.59-3.35)	1.56(0.39-6.23)	1.31(0.97-1.77)	1.15(0.69-1.93)	0.75(0.54-1.03)	0.60(0.29-1.22)	1.23(0.85-1.77)	1.52(0.67-3.42)	1.32(0.14-12.38)	0.13(0.01-2.31)

		<i>S. aureus</i>		<i>S. pneumoniae</i>		<i>H. influenzae</i>		<i>M. catarrhalis</i>		Gram negative bacilli	
		Adj. RR (CI)	Adj. 2 RR (CI)	Adj. RR (CI)	Adj. 2 RR (CI)	Adj. RR (CI)	Adj. 2 RR (CI)	Adj. RR (CI)	Adj. 2 RR (CI)	Adj. RR (CI)	Adj. 2 RR (CI)
	12 mt h	0.86(0.09-8.10)	1.62e-11(5.30e-12-4.97e-11)	0.96(0.75-1.23)	0.86(0.49-1.52)	1.46(0.83-2.54)	1.80(0.44-7.36)	1.25(0.85-1.84)	0.94(0.45-1.99)	9232717(3917254-2.18e+07)	236594.1(117569-476118.6)
Toluene	6 mt h	0.40(0.12-1.34)	3.36e-31(1.23e-31-9.20e-31)	1.08(0.78-1.50)	1.46(0.88-2.43)	0.98(0.57-1.68)	0.48(0.18-1.29)	0.99(0.65-1.51)	-	1.91e-07(5.16e-08-7.04e-07)	-
	12 mt h	5.94e-08(2.02e-08-1.75e-07)	-	1.31(1.06-1.60)	1.40(0.96-2.03)	1.18(0.74-1.88)	1.44(0.52-4.00)	1.29(0.82-2.01)	-	5.44e-07(1.68e-07-1.77e-06)	-

Notes:

1. Relative risks (RR) in bold are statistically significant
2. Adjusted for all the clinical-demographic variables.
3. Adjusted 2 for all the clinical-demographic variables, plus adjusting for other indoor air pollutants
4. PM10 = particulate matter, NO₂ = nitrogen dioxide, CO = carbon monoxide
5. Empty cells = model convergence not achieved

Supplemental Table 7: Multivariable analysis of postnatal exposures and infant nasopharyngeal bacterial carriage adjusting for bacterial co-carriage.

		<i>S. aureus</i>		<i>S. pneumoniae</i>		<i>H. influenzae</i>		<i>M. catarrhalis</i>		Gram negative bacilli	
		Adjusted RR (CI)	Adj. 2 RR (CI)	Adjusted RR (CI)	Adj. 2 RR (CI)	Adjusted RR (CI)	Adj. 2 RR (CI)	Adjusted RR (CI)	Adj. 2 RR (CI)	Adjusted RR (CI)	Adj. 2 RR (CI)
PM10	6 months	0.95 (0.55 – 1.64)	1.22 (0.51 – 2.92)	0.95 (0.78 – 1.14)	0.92 (0.66 – 1.28)	1.06 (0.83 – 1.35)	1.60 (1.04 – 2.46)	0.90 (0.70 – 1.16)	0.80 (0.53 – 1.21)	0.68 (0.22 – 2.15)	0.16 (0.02 – 1.22)
	12 months	0.61 (0.13 – 2.73)	2.17 (0.39 – 12.01)	1.01 (0.86 – 1.19)	0.96 (0.70 – 1.32)	1.13 (0.86 – 1.48)	1.02 (0.63 – 1.64)	1.09 (0.88 – 1.36)	1.39 (1.02 – 1.90)	0.88 (0.09 – 9.02)	-
NO ₂	6 months	0.82 (0.13 – 4.99)	-	1.39 (1.01 – 1.94)	2.34 (1.19 – 4.61)	0.56 (0.19 – 1.68)	1.56 (0.70 – 3.50)	1.00 (0.39 – 2.60)	-	2.58 (0.40 – 16.92)	-
	12 months	-	-	1.13 (0.80 – 1.59)	1.42 (0.79 – 2.55)	0.84 (0.29 – 2.43)	-	0.64 (0.22 – 1.86)	-	9.44 (1.96 – 45.40)	-
Benzene	6 months	0.78 (0.52 – 1.16)	0.84 (0.36 – 1.93)	1.00 (0.86 – 1.16)	0.85 (0.61 – 1.17)	0.95 (0.77 – 1.18)	1.04 (0.66 – 1.63)	0.97 (0.80 – 1.18)	0.99 (0.71 – 1.40)	0.68 (0.31 – 1.47)	0.32 (0.11 – 0.92)
	12 months	0.81 (0.36 – 1.80)	1.41 (0.23 – 8.76)	1.02 (0.89 – 1.16)	1.16 (0.90 – 1.49)	0.85 (0.67 – 1.08)	0.93 (0.57 – 1.50)	0.92 (0.76 – 1.11)	0.93 (0.68 – 1.28)	1.90 (0.42 – 8.60)	3.38 (2.36 – 4.86)
CO	6 months	1.25 (0.79 – 1.98)	1.88 (0.93 – 3.81)	1.03 (0.88 – 1.22)	1.33 (1.03 – 1.72)	1.05 (0.82 – 1.35)	1.01 (0.66 – 1.55)	1.04 (0.85 – 1.27)	1.01 (0.66 – 1.55)	1.24 (0.52 – 2.93)	2.95 (1.16 – 7.49)
	12 months	0.70 (0.23 – 2.16)	0.58 (0.07 – 4.44)	1.05 (0.91 – 1.22)	1.11 (0.88 – 1.41)	1.01 (0.77 – 1.34)	0.92 (0.59 – 1.44)	0.98 (0.78 – 1.22)	0.92 (0.59 – 1.44)	1.72 (0.36 – 8.34)	-
Smoking	6 months	1.30 (0.90 – 1.88)	0.92 (0.45 – 1.88)	1.16 (1.02 – 1.32)	1.12 (0.86 – 1.46)	0.92 (0.75 – 1.14)	0.91 (0.61 – 1.37)	1.02 (0.85 – 1.22)	0.91 (0.61 – 1.37)	0.93 (0.48 – 1.80)	0.88 (0.32 – 2.47)
	12 months	0.81 (0.43 – 1.53)	0.76 (0.18 – 3.10)	1.00 (0.87 – 1.15)	0.92 (0.73 – 1.17)	1.21 (0.96 – 1.52)	1.46 (0.98 – 2.17)	1.01 (0.85 – 1.19)	1.46 (0.98 – 2.17)	7.31 (0.90 – 59.13)	-
Toluene	6 months	0.56 (0.24 – 1.31)	0.82 (0.22 – 3.13)	0.93 (0.72 – 1.20)	1.29 (0.85 – 1.98)	0.85 (0.59 – 1.24)	0.49 (0.23 – 1.05)	0.95 (0.69 – 1.31)	0.49 (0.23 – 1.05)	-	-
	12 months	0.93 (0.25 – 3.54)	-	1.08 (0.88 – 1.32)	-	1.09 (0.78 – 1.51)	-	1.10 (0.84 – 1.46)	-	-	-

Notes:

1. Relative risks (RR) in bold are statistically significant
2. Adjusted for co-carriage – the presence or absence of the other organisms, plus all the clinical-demographic variables
3. Adjusted 2 for co-carriage – the presence or absence of the other organism, plus all the clinical-demographic variables, plus adjusting for other indoor air pollutants.
4. PM10 = particulate matter, NO₂ = nitrogen dioxide, CO = carbon monoxide
5. Empty cells = model convergence not achieved

Supplemental Table 8 Mbekweni: Multivariable analysis of postnatal exposures and infant nasopharyngeal bacterial carriage adjusting for bacterial co-carriage.

		<i>S. aureus</i>		<i>S. pneumoniae</i>		<i>H. influenzae</i>		<i>M. catarrhalis</i>		Gram negative bacilli	
		Adjusted RR (CI)	Adj. 2 RR (CI)	Adjusted RR (CI)	Adj. 2 RR (CI).	Adjusted RR (CI)	Adj. 2 RR (CI)	Adjusted RR (CI)	Adj. 2 RR (CI)	Adjusted RR (CI)	Adj. 2 RR (CI)
PM10	6 months	0.74 (0.33 – 1.62)	1.48 (0.43 – 5.13)	0.93 (0.70- 1.22)	1.02 (0.66 - 1.58)	1.14 (0.82 – 1.58)	2.13 (1.09 – 4.18)	0.82 (0.55 - 1.21)	0.71 (0.40 – 1.26)	0.59 (0.15 – 2.36)	0.22 (0.03 – 1.90)
	12 months	0.41 (0.06 – 2.93)	0.74 (0.11 – 5.05)	1.13 (0.92 - 1.40)	1.16 (0.83 – 1.61)	1.07 (0.77 – 1.49)	0.88 (0.49 – 1.57)	1.02 (0.78 - 1.34)	1.01 (0.63 – 1.61)	2.89e-08 (1.91e-09 – 4.36e-07)	0.00 (0.00 – 0.01)
NO ₂	6 months	0.83 (0.11 – 5.93)	5.51e-07 (2.78e-08 – 0.00)	1.45 (0.95 – 2.31)	2.02 (0.87 – 4.70)	0.30 (0.07 – 1.22)	1.58e-06 (1.38e-07 – 0.00)	1.40 (0.58 – 3.41)	4.32e-07 (4.74e-08 – 3.94e-06)	2.95 (0.31 – 27.61)	1.44e-06 (3.34e-08 – 0.00)
	12 months	5.24e-07 (1.35e-07 – 2.04e-06)	1.62e-07 (5.91e-09 – 4.45e-06)	1.06 (0.66- 1.72)	0.77 (0.39 – 1.53)	0.53(0.09 – 3.09)	2.55 (0.86- 7.53)	0.82 (0.30 – 2.24)	3.81e-07 (4.56e-08 – 3.17e-06)	4.91e+08 (1.18e+08 – 2.05e+09)	3921.54 (401.03 – 38347.5)
Benzene	6 months	1.07 (0.65 - 1.76)	1.00 (0.11 – 8.75)	1.02 (0.82 – 1.26)	0.90 (0.50 - 1.63)	0.70 (0.52 – 0.94)	0.55 (0.20 - 1.48)	0.96 (0.72 - 1.28)	1.11 (0.60 – 2.03)	0.92 (0.33 – 2.61)	0.44 (0.12 – 1.65)
	12 months	0.91 (0.29 – 2.91)	1.72 (0.04 – 81.34)	1.00 (0.84 - 1.19)	1.32 (0.96 – 1.81)	0.99 (0.74 - 1.34)	0.94 (0.43 – 2.05)	1.07 (0.85 - 1.33)	1.03 (0.64 - 1.65)	2.5e+105 (1.8e+105 – 3.7e+105)	644909.9 (381783.2 – 1089385)
CO	6 months	1.01 (0.52 - 1.97)	1.07 (0.23 – 5.03)	0.92 (0.71 - 1.19)	1.27 (0.82 – 1.96)	0.96 (0.63 - 1.46)	1.11 (0.52 – 2.39)	1.04 (0.76 - 1.43)	1.12 (0.70 – 1.77)	0.87 (0.27 - 2.78)	1.67 (0.49 – 5.76)
	12 months	0.93 (0.19 – 4.67)	0.69 (0.14– 3.52)	1.25 (1.04 – 1.56)	1.08 (0.79– 1.46)	0.98 (0.68 - 1.40)	0.75 (0.39 – 1.45)	1.07 (0.81- 1.42)	1.38 (0.95 – 1.99)	37.53 (17.75 – 79.36)	465.28 (269.44 – 803.45)
Smoking	6 months	1.34 (0.89 – 2.02)	0.80 (0.24 – 2.61)	1.09 (0.94 – 1.25)	1.05 (0.77 – 1.43)	1.06 (0.82 - 1.38)	1.21 (0.72- 2.02)	0.94 (0.75- 1.17)	0.85 (0.55 – 1.29)	0.85 (0.41 – 1.74)	0.94 (0.32 – 2.76)
	12 months	0.86 (0.42 - 1.73)	1.25 (0.34 – 4.17)	1.04 (0.87 – 1.23)	0.86 (0.64 – 1.15)	1.12 (0.86 – 1.45)	1.26 (0.79 – 2.02)	0.95 (0.79 – 1.14)	1.08 (0.77 – 1.52)	5.37 (0.55 – 52.89)	301.01 (193.10 – 469.22)
Toluene	6 months	0.66 (0.23 - 1.95)	1.33 (0.10 – 17.51)	0.80 (0.55 - 1.17)	0.87 (0.38 – 2.01)	0.79 (0.47 - 1.32)	0.72 (0.15- 3.44)	0.96 (0.61 - 1.51)	-	4.36e-07 (1.52e-07 – 1.25e-06)	-
	12 months	1.17 (0.33 – 4.15)	3.46e-08 (3.07e-09 – 3.89e-07)	0.87 (0.60 – 1.26)	0.62 (0.30 - 1.27)	1.20 (0.78 – 1.87)	0.94 (0.31 – 2.88)	1.05 (0.73 – 1.53)	-	1.17e-07 (8.38e-09 – 1.63e-06)	-

Notes:

1. Relative risks (RR) in bold are statistically significant
2. Adjusted for co-carriage – the presence or absence of the other organisms, plus all the clinical-demographic variables
3. Adjusted 2 for co-carriage – the presence or absence of the other organism, plus all the clinical-demographic variables, plus adjusting for other indoor air pollutants.
4. PM10 = particulate matter, NO₂ = nitrogen dioxide, CO = carbon monoxide
5. Empty cells = model convergence not achieved

Supplemental Table 9: Newman: Multivariable analysis of postnatal exposures and infant nasopharyngeal bacterial carriage adjusting for bacterial co-carriage.

		<i>S. aureus</i>		<i>S. pneumoniae</i>		<i>H. influenzae</i>		<i>M. catarrhalis</i>		Gram negative bacilli	
		Adjusted RR (CI)	Adj. 2 RR (CI)	Adjusted RR (CI)	Adj. 2 RR (CI)	Adjusted RR (CI)	Adj. 2 RR (CI)	Adjusted RR (CI)	Adj. 2 RR (CI)	Adjusted RR (CI)	Adj. 2 RR (CI)
PM10	6 months	1.15 (0.52 – 2.53)	0.90 (0.21 – 3.79)	0.96 (0.67 – 1.38)	0.94 (0.44 – 2.02)	0.97 (0.74 – 1.26)	0.93 (0.52 – 1.67)	0.96 (0.69– 1.35)	0.99 (0.52 – 1.88)	0.79 (0.05 – 12.51)	9.40e-21 (4.95e-21 – 1.79e-20)
	12 months	0.89 (0.11 – 7.47)	3.45e+34 (1.55e+34– 7.67e+34)	1.08 (0.69 – 1.70)	1.74 (0.71 – 4.30)	0.91 (0.70 – 1.17)	0.92 (0.53 – 1.57)	1.13 (0.78 – 1.64)	1.77 (1.11 – 2.84)	1.64 (0.27 – 9.88)	2.0 (0.99– 4.00)
NO ₂	6 months	0.00 (4.10e-06– 0.00)	-	2.784 (1.94 – 3.86)	-	1.60 (1.28– 2.01)	-	1.40e-06 (1.93e-07– 0.00)	-	2.36e-06 (2.18e-07- 0.00)	-
	12 months	1.39e-06 (6.39e-08 – 0.00)	-	2.07 (1.41- 3.06)	-	1.48 (1.20 – 1.82)	-	4.39e-06 (6.01e-07– 0.00)	-	1.87 (1.23 – 28.04)	-
Benzene	6 months	0.40 (0.18 – 0.90)	0.56 (0.14 – 2.17)	1.37 (0.99– 1.88)	1.38 (0.68 – 2.76)	0.96 (0.76- 1.21)	0.88 (0.57 – 1.37)	1.03 (0.78 – 1.37)	1.14 (0.73 – 1.80)	0.18 (0.11 – 2.91)	1.07e-45 (3.09e-46 – 3.74e-45)
	12 months	0.61 (0.13 – 2.82)	570066.9 (322933.7– 1006325)	0.73 (0.49 – 1.08)	1.01 (0.50 – 2.05)	0.98 (0.80 - 1.20)	1.03 (0.70 – 1.53)	0.75 (0.53 - 1.06)	0.80 (0.49 - 1.30)	0.93 (0.10 – 9.00)	0.08 (0.05 – 0.13)
CO	6 months	1.41 (0.75 – 2.70)	3.83 (1.59 - 9.23)	1.09 (0.80- 1.49)	0.90 (0.47 – 1.76)	1.13 (0.92 - 1.39)	1.34 (0.96– 1.88)	1.01 (0.79 - 1.31)	1.11 (0.73 – 1.70)	1.09 (0.26 – 4.58)	0.00 (0.00 – 0.00)
	12 months	0.29 (0.11 – 0.74)	3.09e-12 (1.84e-12– 5.19e-12)	1.01 (0.65 – 1.57)	1.15 (0.51 – 2.60)	0.89 (0.72 - 1.11)	1.05 (0.72 – 1.54)	0.92 (0.67- 1.27)	0.74 (0.44 – 1.23)	1.33 (0.28 – 6.40)	0.00 (0.00 – 0.00)
Smoking	6 months	1.44 (0.60 – 3.43)	1.90 (0.47 – 7.77)	1.71 (0.52 – 0.96)	1.55 (0.26 – 1.17)	1.32 (0.99- 1.76)	1.17 (0.72- 1.93)	1.26 (0.87- 1.81)	1.63 (0.75 – 3.57)	1.31 (0.10 – 17.33)	6.31e-82 (2.20e-82 – 1.81e-81)
	12 months	0.91 (0.10 – 8.04)	5.37e-07 (2.28e-07– 1.27e-06)	1.32 (0.79 – 2.22)	1.95 (0.55 – 6.98)	0.94 (0.73 – 1.20)	0.83 (0.47 – 1.46)	1.24 (0.84 – 1.84)	0.82 (0.39 – 1.75)	5613806 (2278443– 1.38e+07)	5445369 (2642860– 1.12e+07)
Toluene	6 months	0.45 (0.13 - 1.57)	0.17 (0.02 – 1.20)	0.94 (0.53 - 1.67)	0.41 (0.14 – 3.62)	1.06 (0.75 - 1.48)	1.79 (1.04- 3.08)	1.00 (0.65 - 1.56)	-	1.12e-07 (2.70e-08 – 4.67e-07)	-
	12 months	1.43e-07 (5.40e-08 – 3.81e-07)	1.12e-13 (4.87e-14 – 2.59e-13)	1.05 (0.64 – 1.73)	1.32 (0.48 – 1.26)	1.23 (1.00 – 1.51)	1.44 (1.01- 2.06)	1.14 (0.73 – 1.79)	-	1.66e-07 (5.11e-08– 5.38e-07)	-

Notes:

1. Relative risks (RR) in bold are statistically significant
2. Adjusted for co-carriage – the presence or absence of the other organisms, plus all the clinical-demographic variables

3. Adjusted 2 for co-carriage – the presence or absence of the other organism, plus all the clinical-demographic variables, plus adjusting for other indoor air pollutants.
4. PM10 = particulate matter, NO₂ = nitrogen dioxide, CO = carbon monoxide
5. Empty cells = model convergence not achieved