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Supplementary appendix

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Supplementary Appendix

CHARACTERISTICS OF CHILDREN WITH INVASIVE PNEUMOCOCCAL DISEASE ELIGIBLE FOR THE 1+1 COMPARED TO THE 2+1 PCV13 INFANT IMMUNISATION SCHEDULE IN ENGLAND: PROSPECTIVE NATIONAL OBSERVATIONAL SURVEILLANCE, ENGLAND

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S1 Methods – Definitions of clinical presentations

Definitions of clinical presentations of invasive pneumococcal disease (IPD) and further categorisation of serotypes by PCV vaccine.

Clinical presentation of IPD included meningitis where *S. pneumoniae* was detected by culture or PCR in the cerebrospinal fluid or isolation via culture from blood and clinical features of meningitis; bacteraemic pneumonia was defined as identification of *S. pneumoniae* by culture or PCR in pleural fluid or isolation of *S. pneumoniae* in blood cultures with clinical features of pneumonia. Isolation of *S. pneumoniae* from other normally sterile sites was defined as other presentations. In patients without a focus of infection, clinical presentation was classified as septicaemia.

S2 Supplementary Table 1

Incidence per 100,000 person-years, number of cases and incidence rate ratios comparing overall, PCV13-type IPD and non-PCV13 IPD and clinical presentations in the 1+1 cohort compared to the 2+1 cohort.

		Total incidence per 100,000 person years* (n)	2+1 cohort incidence per 100,000 person years† (n)	1+1 cohort incidence per 100,000 person years‡ (n)	IRR§ (95% CI)	p-value
IPD						
	Overall	9.30 (702)	9.39 (544)	8.99 (158)	0.96 (0.80-1.14)	0.63
	PCV13-type IPD	1.09 (82)	1.04 (60)	1.25 (22)	1.21 (0.71-2.00)	0.45
	Non-PCV13 IPD	7.39 (558)	7.53 (436)	6.94 (122)	0.92 (0.75-1.13)	0.43
Meningitis						
	Overall meningitis	7.39 (167)	2.23 (129)	2.16 (38)	0.97 (0.66-1.40)	0.88
	PCV13-type meningitis	0.09 (7)	0.09 (5)	0.14 (2)	1.32 (0.13-8.05)	0.72
	Non-PCV13 meningitis	1.95 (147)	1.99 (115)	1.82 (32)	0.92 (0.60-1.37)	0.68
Bacteraemic pneumonia						
	Overall bacteraemic pneumonia	3.26 (246)	3.35 (194)	2.96 (52)	0.88 (0.64-1.20)	0.43
	PCV13-type bacteraemic pneumonia	0.53 (40)	0.48 (28)	0.68 (12)	1.41 (0.65-2.87)	0.32
	Non-PCV13 bacteraemic pneumonia	2.48 (187)	2.61 (151)	2.05 (36)	0.79 (0.53-1.14)	0.19
Other presentations						
	Overall other presentations	1.05 (79)	1.07 (62)	0.97 (17)	0.90 (0.50-1.57)	0.73
	PCV13-type other presentations	0.13 (10)	0.16 (9)	0.06 (1)	0.37 (0.01-2.64)	0.36
	Non-PCV13 other presentations	0.77 (58)	0.76 (44)	0.80 (14)	1.05 (0.53-1.95)	0.86
Septicaemia						
	Overall septicaemia	2.78 (210)	2.74 (159)	2.90 (51)	1.06 (0.76-1.46)	0.72
	PCV13-type septicaemia	0.33 (25)	0.31 (18)	0.40 (7)	1.28 (0.45-3.22)	0.57
	Non-PCV13 septicaemia	2.20 (166)	2.18 (126)	2.28 (40)	1.05 (0.71-1.50)	0.79

* Among 7,551,091 live births

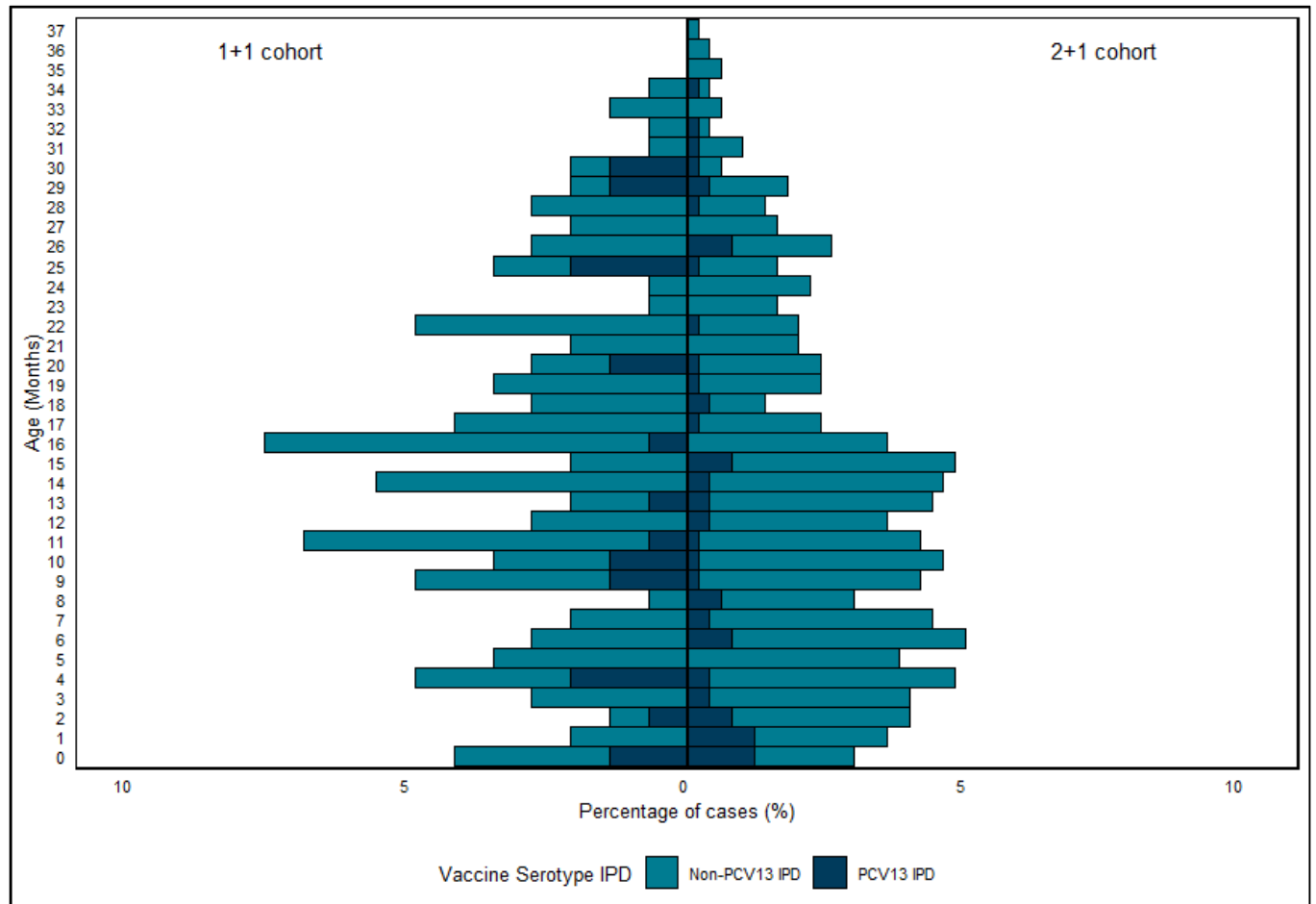
† Among 5,792,902 live births

‡ Among 1,758,189 live births

§ Incidence rate ratio calculated using the 2+1 cohort incidence as baseline.

S3 Supplementary Figure 1

Distribution of PCV13 IPD and non-PCV13 IPD by age (monthly intervals) as a percentage of cases of IPD (with known serotype) in the 1+1 cohort (left) and the 2+1 cohort (right).



S4 Supplementary Figure 2

Clinical presentations of IPD of all IPD cases, PCV13 IPD, and non-PCV13 IPD by age (monthly intervals).

- (A) Clinical presentations in children in the 1+1 cohort compared to the 2+1 cohort as a percentage of all IPD cases per cohort. (B) Clinical presentations of PCV13 IPD, in children in the 1+1 cohort compared to the 2+1 cohort, as a percentage of PCV13 IPD cases per cohort. (C) Clinical presentations of non-PCV13 IPD, in children in the 1+1 cohort compared to the 2+1 cohort, as a percentage of non-PCV13 IPD cases per cohort. Note: The scales on the axes differ.

