

eTable9: Adjusted risk ratios for achieving expected levels of attainment in English, comparing children with congenital anomalies (CAs) and children without, by key stage and CA subgroup, for subset of children assessed at three key stages. For each comparison, number of children without CAs= 2,008,951

subgroup	Cases, N	EYFSP		KS1		KS2	
		RR (95%CI) Sex adj.	RR (95%CI) Full adj.	RR (95%CI) Sex adj.	RR (95%CI) Full adj.	RR (95%CI) Sex adj.	RR (95%CI) Full adj.
Any CA	62,778	0.92 (0.92,0.93)	0.93 (0.92,0.93)	0.93 (0.92,0.93)	0.93 (0.92,0.94)	0.95 (0.94,0.95)	0.95 (0.95,0.95)
Neural Tube Defects	201	0.83 (0.74,0.93)	0.86 (0.77,0.97)	0.90 (0.81,1.00)	0.94 (0.84,1.04)	0.91 (0.83,0.99)	0.93 (0.86,1.01)
Hydrocephalus	211	0.70 (0.61,0.80)	0.72 (0.63,0.83)	0.74 (0.65,0.84)	0.76 (0.67,0.87)	0.80 (0.72,0.88)	0.81 (0.73,0.90)
Congenital Cataract	308	0.88 (0.81,0.96)	0.90 (0.83,0.97)	0.90 (0.83,0.98)	0.91 (0.84,0.99)	0.96 (0.90,1.02)	0.96 (0.90,1.02)
Congenital Heart Defects (CHD)	8,731	0.86 (0.85,0.88)	0.87 (0.86,0.89)	0.86 (0.84,0.87)	0.87 (0.85,0.88)	0.90 (0.88,0.91)	0.90 (0.89,0.92)
Ventricular Septal Defect	2,202	0.92 (0.89,0.95)	0.93 (0.90,0.95)	0.91 (0.88,0.94)	0.92 (0.89,0.95)	0.95 (0.93,0.97)	0.96 (0.93,0.98)
Pulmonary Valve Stenosis	344	0.82 (0.75,0.89)	0.82 (0.75,0.89)	0.87 (0.80,0.95)	0.88 (0.81,0.95)	0.91 (0.85,0.97)	0.91 (0.85,0.97)
PDA as only CHD in term infants	1,359	0.81 (0.77,0.85)	0.83 (0.79,0.86)	0.81 (0.78,0.85)	0.83 (0.79,0.87)	0.89 (0.86,0.92)	0.90 (0.87,0.93)
Severe CHD	2,311	0.88 (0.85,0.91)	0.89 (0.86,0.92)	0.87 (0.84,0.90)	0.87 (0.84,0.90)	0.87 (0.85,0.90)	0.88 (0.85,0.90)
Atrioventricular Septal Defect	268	0.87 (0.79,0.95)	0.88 (0.81,0.97)	0.86 (0.78,0.94)	0.87 (0.79,0.96)	0.82 (0.75,0.89)	0.83 (0.76,0.90)
Tetralogy of Fallot	423	0.89 (0.83,0.96)	0.90 (0.84,0.97)	0.86 (0.80,0.94)	0.87 (0.80,0.94)	0.89 (0.83,0.94)	0.89 (0.84,0.95)
Hypoplastic Left Heart	145	0.73 (0.62,0.85)	0.75 (0.64,0.88)	0.73 (0.62,0.86)	0.76 (0.65,0.89)	0.80 (0.71,0.91)	0.82 (0.72,0.92)
Respiratory	555	0.84 (0.79,0.90)	0.85 (0.79,0.91)	0.87 (0.81,0.93)	0.88 (0.82,0.94)	0.90 (0.85,0.95)	0.90 (0.86,0.95)
Cleft Lip	740	0.94 (0.89,0.99)	0.95 (0.90,1.00)	0.98 (0.93,1.03)	0.99 (0.94,1.04)	0.96 (0.92,1.00)	0.96 (0.92,1.00)
Cleft Palate	877	0.83 (0.79,0.88)	0.84 (0.79,0.88)	0.82 (0.78,0.87)	0.83 (0.79,0.88)	0.91 (0.87,0.95)	0.91 (0.88,0.95)
Cleft Lip and Palate	932	0.84 (0.79,0.88)	0.84 (0.80,0.89)	0.84 (0.80,0.89)	0.86 (0.81,0.91)	0.89 (0.86,0.93)	0.90 (0.87,0.94)
Digestive System	2,476	0.91 (0.88,0.93)	0.91 (0.89,0.94)	0.92 (0.90,0.95)	0.93 (0.90,0.96)	0.95 (0.93,0.97)	0.95 (0.93,0.98)
Anorectal Malformations	152	0.88 (0.78,1.00)	0.89 (0.79,1.01)	0.99 (0.89,1.11)	1.01 (0.91,1.12)	1.00 (0.92,1.08)	1.01 (0.93,1.09)
Hirschsprung's Disease	369	0.95 (0.88,1.02)	0.96 (0.89,1.03)	0.93 (0.86,1.01)	0.94 (0.87,1.02)	0.96 (0.90,1.02)	0.97 (0.91,1.03)
Gastroschisis	657	0.83 (0.78,0.89)	0.92 (0.87,0.98)	0.81 (0.76,0.87)	0.92 (0.86,0.99)	0.86 (0.81,0.90)	0.93 (0.88,0.98)
Unilateral Renal Agenesis	268	0.98 (0.90,1.06)	0.98 (0.91,1.07)	1.07 (0.99,1.16)	1.08 (1.00,1.16)	0.91 (0.85,0.99)	0.92 (0.85,0.99)
Congenital Hydronephrosis	3,087	0.99 (0.96,1.01)	0.98 (0.95,1.00)	0.98 (0.95,1.00)	0.97 (0.94,0.99)	1.00 (0.98,1.02)	1.00 (0.98,1.02)
Hypospadias	2,866	0.96 (0.93,0.99)	0.96 (0.93,0.99)	0.96 (0.93,0.99)	0.96 (0.93,0.99)	0.97 (0.95,1.00)	0.98 (0.96,1.00)
Club Foot - Talipes Equinovarus	1,919	0.97 (0.94,1.00)	0.97 (0.94,1.00)	0.95 (0.92,0.98)	0.95 (0.92,0.98)	0.96 (0.94,0.99)	0.97 (0.94,0.99)
Polydactyly	3,017	0.95 (0.93,0.98)	0.98 (0.96,1.00)	0.98 (0.95,1.00)	0.99 (0.96,1.01)	0.98 (0.96,1.00)	0.98 (0.97,1.00)

Syndactyly	1,364	0.97 (0.93,1.01)	0.95 (0.92,0.99)	0.98 (0.94,1.02)	0.97 (0.94,1.01)	0.99 (0.96,1.01)	0.98 (0.95,1.01)
Craniosynostosis	435	0.95 (0.89,1.02)	0.94 (0.88,1.00)	0.92 (0.86,0.99)	0.91 (0.85,0.98)	0.97 (0.92,1.03)	0.97 (0.92,1.02)
Down Syndrome	58	0.40 (0.26,0.59)	0.39 (0.26,0.58)	0.38 (0.25,0.57)	0.37 (0.24,0.56)	0.52 (0.38,0.70)	0.50 (0.37,0.69)
Turner Syndrome	93	0.62 (0.50,0.77)	0.62 (0.50,0.76)	0.67 (0.55,0.82)	0.67 (0.55,0.82)	0.80 (0.69,0.93)	0.79 (0.68,0.92)
Klinefelter Syndrome	49	0.83 (0.64,1.08)	0.79 (0.61,1.02)	0.53 (0.35,0.79)	0.50 (0.33,0.75)	0.49 (0.34,0.70)	0.46 (0.32,0.67)
Di George Syndrome	46	0.39 (0.25,0.62)	0.39 (0.25,0.62)	0.25 (0.13,0.46)	0.24 (0.13,0.46)	0.30 (0.18,0.51)	0.30 (0.18,0.50)
Karyotype XXX	32	0.89 (0.70,1.12)	0.81 (0.64,1.03)	0.41 (0.24,0.68)	0.38 (0.22,0.63)	0.50 (0.33,0.76)	0.46 (0.30,0.71)

CI=confidence interval; EYFSP=Early Years Foundation Stage Profile; KS1=Key Stage 1; KS2=Key Stage 2; RR=risk ratio; Sex adj.= adjusted for sex at birth; Full adj.=adjusted for sex, maternal age at birth, ethnicity, income deprivation affecting children index (IDACI) quintile, free school meals eligibility (FSME)