

Who misses out on the B4 School check?

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Whare Wānanga o Tāmaki Makaurau

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Disclaimer

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What is the B4 School check?



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B4 School Check

The B4 School Check is a nationwide programme offering a free health and development check for 4-year-olds.

The B4 School Check aims to identify and address any health, behavioural, social, or developmental concerns which could affect a child's ability to get the most benefit from school, such as a hearing problem or communication difficulty.

It is the 12th core contact of the Well Child Tamariki Ora Schedule of services.



<http://www.health.govt.nz/our-work/life-stages/child-health/b4-school-check>

Background

- ❑ Evidence from overseas health check programs suggests that some children are more likely to miss out than others
- ❑ Scotland: children from more deprived areas are less likely to receive universal health check
- ❑ National Child Measurement Programme (UK): children missed are more likely to be from deprived areas and have higher BMI
- ❑ Less is known about B4SC

B4 School check coverage- MoH



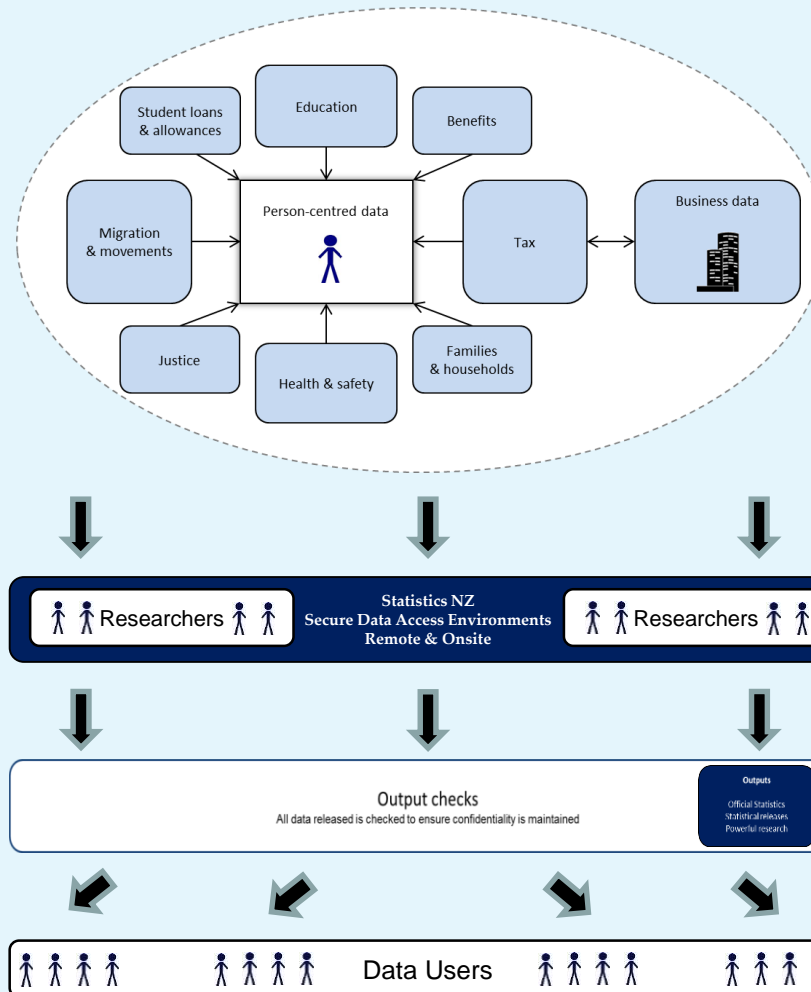
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Whare Wānanga o Tāmaki Makaurau

- ❑ Coverage is high: in 2015/16 92% of all eligible children received a B4SC, and 93% of high deprivation children
- ❑ Eligible children are those who are enrolled with a PHO on their 4th birthday- target is 90% of eligible children
- ❑ What can we learn about the 7-8% of children who miss out on B4SC?

Integrated data infrastructure (IDI)



Integrated Data Infrastructure



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- ❑ Using the IDI we can compare children who did and did not receive B4 School Checks
- ❑ Multiple data sources (health, census, birth records) give us more information about children's characteristics
- ❑ Can link to parents to get parent characteristics
- ❑ IDI allows us to expand the denominator population of children to include those not enrolled with PHOs

Denominator population



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- ❑ Method similar to that used previously for IDI projects (Census Transformation, VARIANZ, Healthier Lives)
- ❑ All 4-year-olds who were in the IDI spine AND in health or birth records
- ❑ Must have lived in NZ for at least half of the reference year
- ❑ Total is close to ERP for four-year-olds (97-99% of ERP)

Measuring 'coverage'

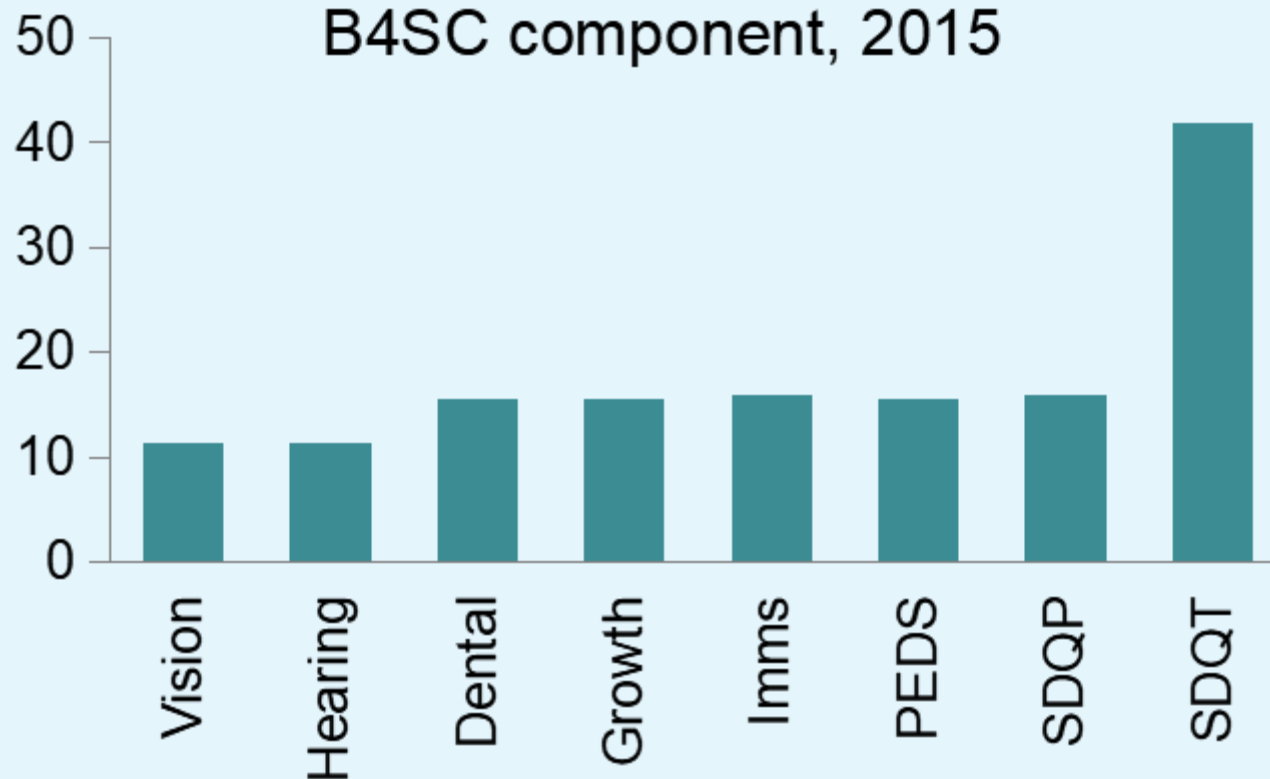


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% of children not completing each B4SC component, 2015



Measuring 'coverage'

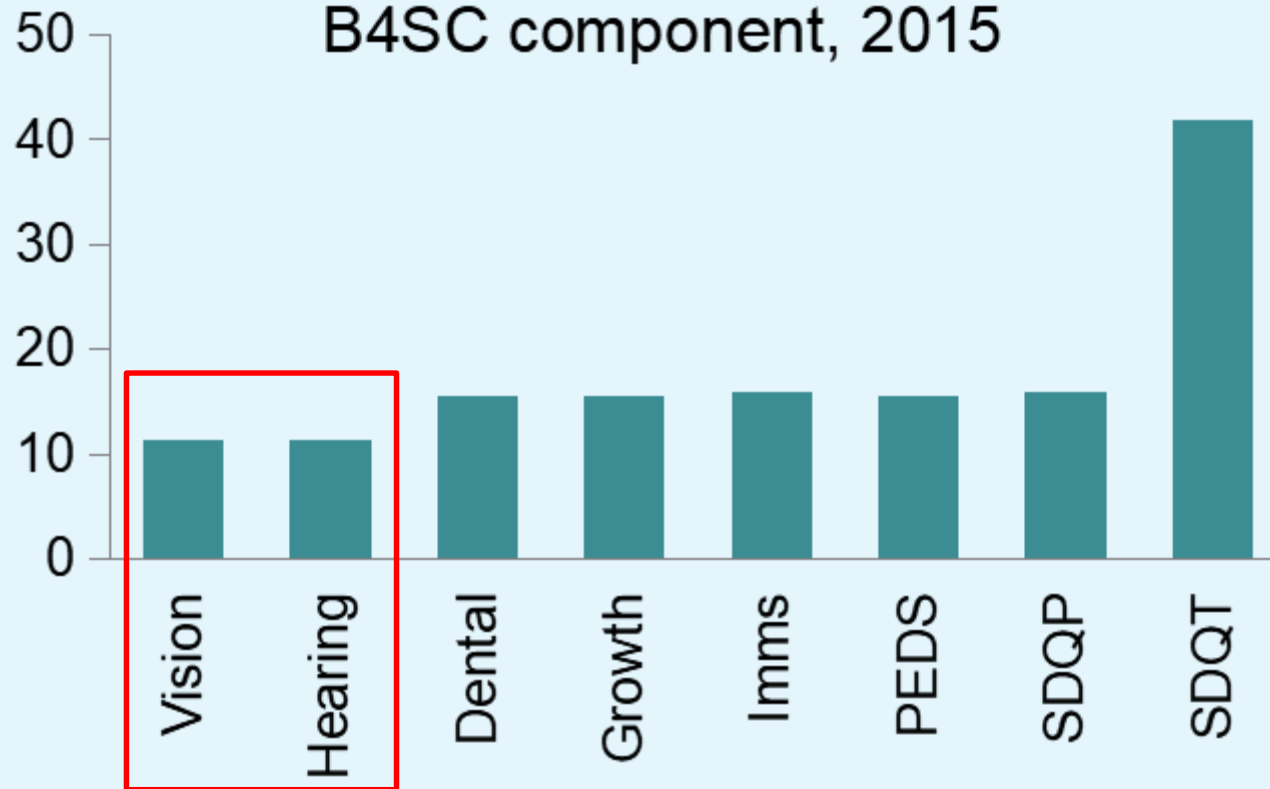


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% of children not completing each B4SC component, 2015



VHT

Measuring 'coverage'

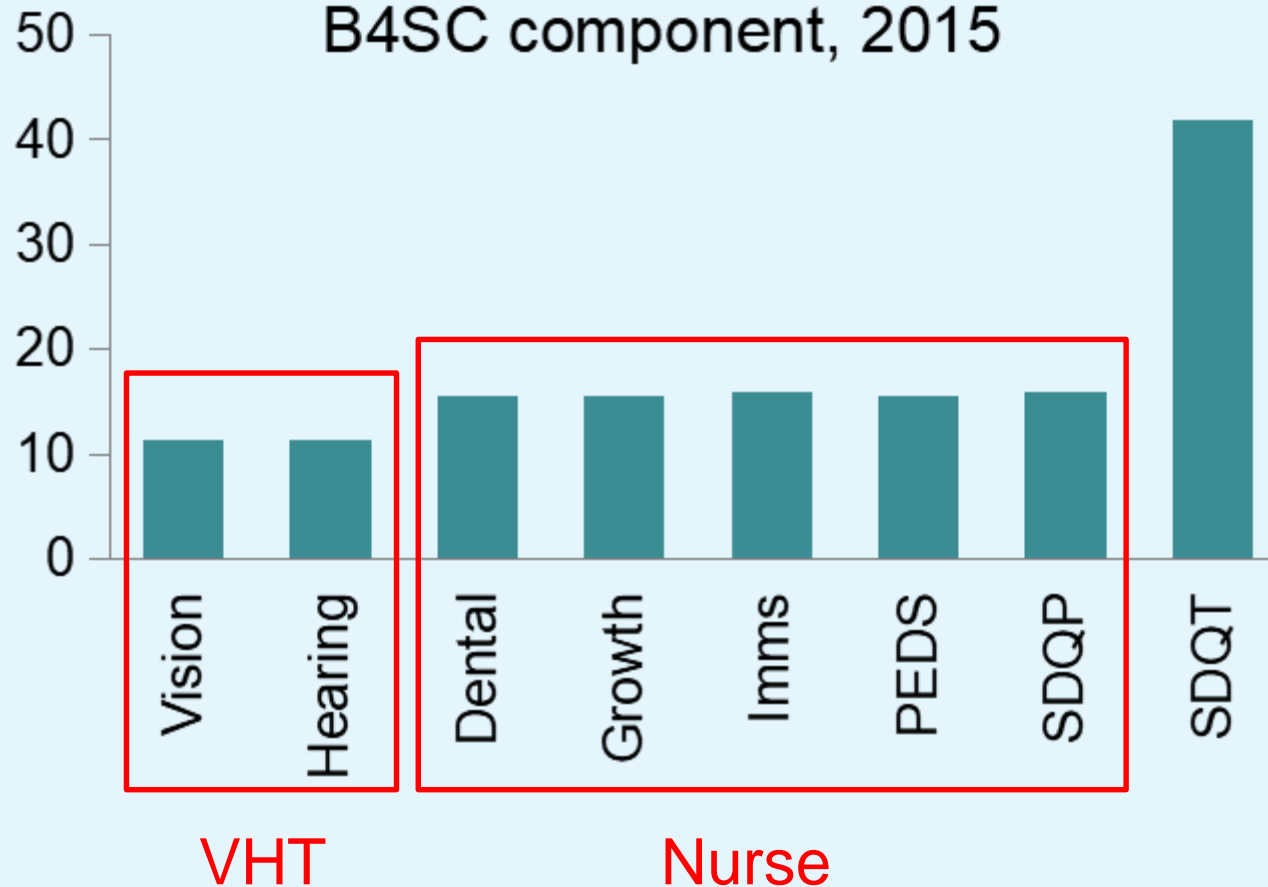


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% of children not completing each
B4SC component, 2015



VHT

Nurse

Measuring 'coverage'

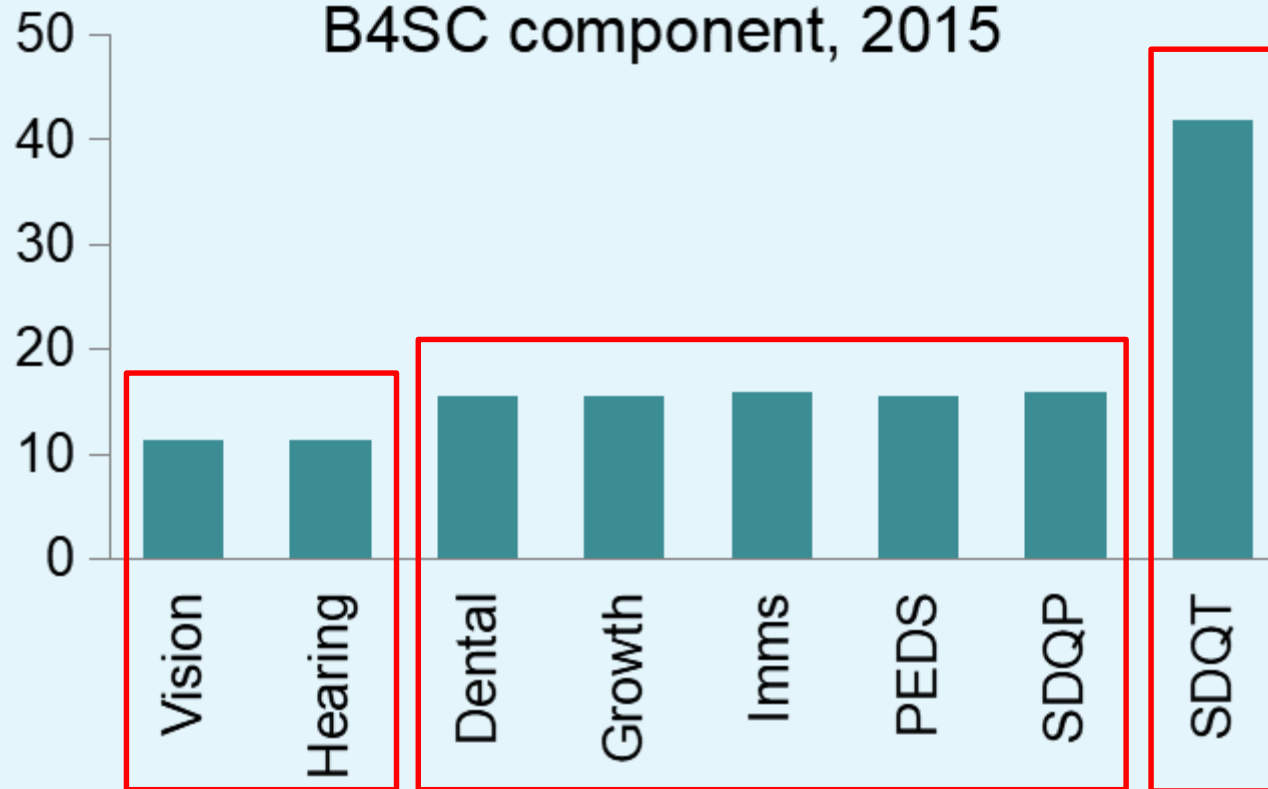


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% of children not completing each
B4SC component, 2015

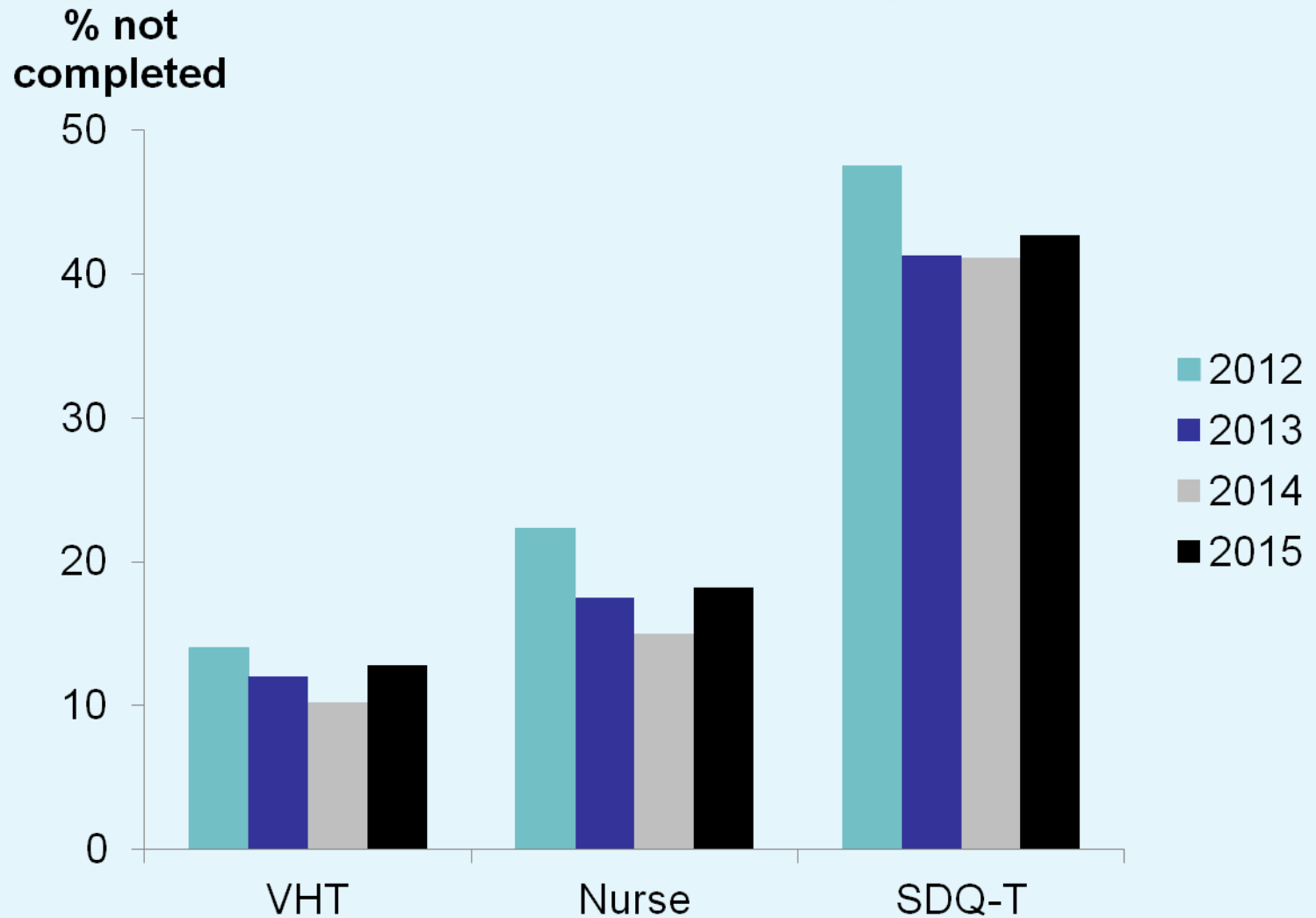


VHT

Nurse

SDQT

B4SC coverage by year



Ethnicity



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	OR (95% CI)		
	VHT	Nurse	SDQ-T
Māori	1.7 (1.6, 1.8)	1.7 (1.7, 1.8)	1.4 (1.4, 1.5)
Pacific	1.9 (1.8, 2)	1.6 (1.5, 1.6)	2.6 (2.5, 2.7)
Asian	0.8 (0.7, 0.8)	0.7 (0.7, 0.8)	1.3 (1.2, 1.4)
European	0.5 (0.5, 0.6)	0.7 (0.6, 0.7)	0.5 (0.4, 0.5)

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Socioeconomic deprivation

		OR (95% CI)		
		VHT	Nurse	SDQ-T
NZDep quintile				
(least deprived)	1	ref		
	2	1.2 (1.1, 1.3)	1.1 (1, 1.2)	1.1 (1.1, 1.2)
	3	1.3 (1.2, 1.4)	1.2 (1.1, 1.3)	1.2 (1.1, 1.2)
	4	1.5 (1.4, 1.6)	1.3 (1.2, 1.4)	1.3 (1.2, 1.4)
(most deprived)	5	2.1 (1.9, 2.2)	1.6 (1.5, 1.7)	2 (1.9, 2.1)

Other socioeconomic measures



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- ❑ Children from poorer socioeconomic backgrounds were more likely to miss out on a B4SC, eg:
 - Someone in the child's household receives benefit income (OR 1.5-1.8)
 - Mother has no formal qualifications (OR 1.3-1.5 compared to secondary school quals)
 - Father had no formal qualifications (OR 1.2-1.4 compared to secondary school quals)

Family and household circumstances



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- ❑ Children were more likely to miss out on a B4SC if:
 - Their mother was aged less than 20 at the time of child's birth (OR 1.6-2.0 compared to age 30-34)
 - No father was listed on their birth certificate (OR 1.7-1.8)
 - They lived in rented housing (OR 1.4-1.9)
 - They lived in households of 8 or more people (OR 2.1-2.6 compared to 2-4 people)

Health status



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	OR (95% CI)		
	VHT	Nurse	SDQ-T
Mother regular smoker (vs never smoked)	1.8 (1.6, 1.9)	1.6 (1.5, 1.7)	1.3 (1.2, 1.4)
Prior hospital admissions			
1 -2	(ref)		
3-5	1.2 (1.1, 1.3)	1.1 (1, 1.2)	1.1 (1.1, 1.2)
6+	1.3 (1.2, 1.4)	1.2 (1.1, 1.3)	1.2 (1.1, 1.2)
Child has been referred for disability support	4 (3.4, 4.8)	3.8 (3.2, 4.5)	2.2 (1.9, 2.7)

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Sensitivity analysis



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- ❑ We have tested how sensitive the findings are to:
 - ❑ Changes in how the denominator population is constructed
 - ❑ Changes in the cut-off for overseas time
- ❑ The major findings remain the same- more disadvantaged children are more likely to miss out on the B4SC

Conclusions



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- ❑ Children from more disadvantaged backgrounds are more likely to miss out on a B4 School check
- ❑ B4SC may not be reaching the children who would most benefit from it
- ❑ Extension: do children who miss out on B4SC have poorer outcomes than those who complete it?