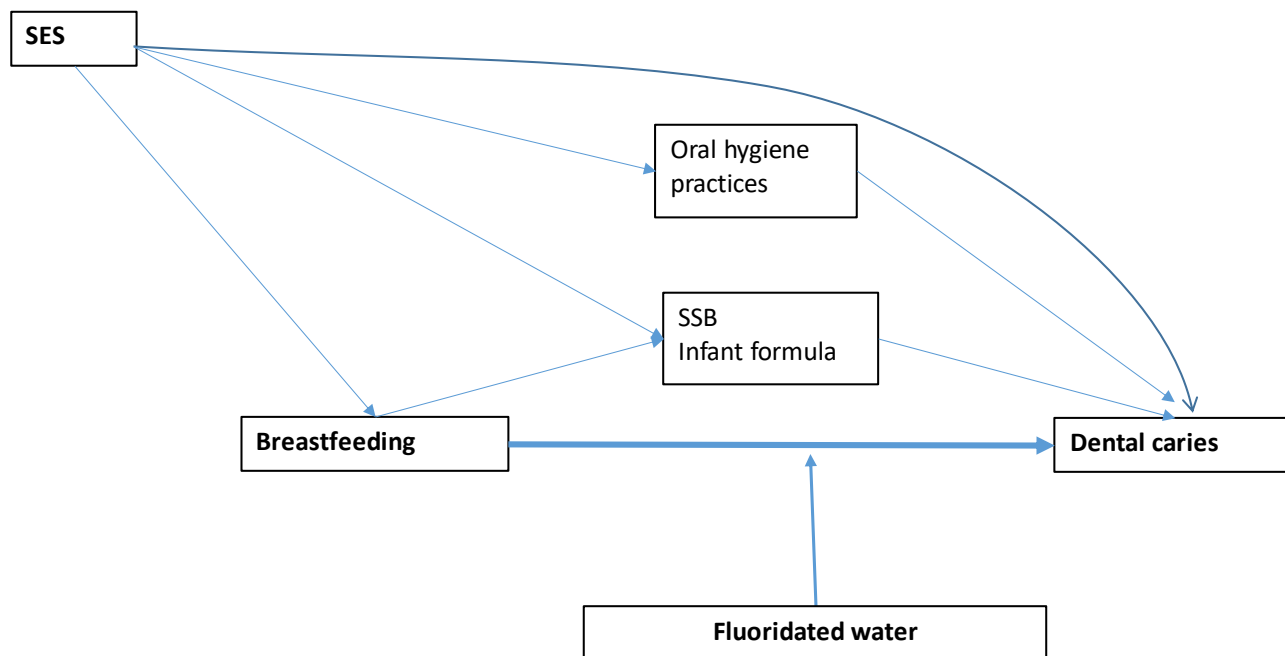


Fluoridated Water Modifies the Effect of Breastfeeding on Dental Caries

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Appendix Figure: Directed Acyclic Graph (DAG) of the pathways between breastfeeding and dental caries with fluoridated water as an effect modifier.

Appendix Table 1: Caries experience in the primary dentition among 5-6 year-old children by family and child characteristics in groups exposed to water fluoridation (WF) or not exposed to water fluoridation (NF)

	WF group		NF group	
	Prevalence	Severity	Prevalence	Severity
	Weighted % (95%CI)	Weighted mean (95%CI)	Weighted % (95%CI)	Weighted mean (95%CI)
All children	28.0 (25.0-31.2)	1.7 (1.4-2.0)	39.5 (36.4-42.7)	3.6 (3.1-4.2)
Breastfeeding				
Minimal ^a	27.3 (22.3-32.9)	2.0 (1.2-2.8)	47.6 (41.5-53.7)	5.4 (4.2-6.6)
Breastfed 1–<6 mo ^b	28.8 (23.7-34.5)	1.6 (1.2-2.1)	39.5 (34.3-44.8)	3.2 (2.5-4.0)
Breastfed 6–24 mo ^c	26.1 (21.9-30.8)	1.4 (1.0-1.8)	29.3 (25.1-34.0)	2.2 (1.6-2.8)
Sustained ^d	41.5 (30.3-53.6)	2.4 (1.4-3.4)	60.8 (49.0-71.4)	5.6 (3.4-7.8)
SSB intake				
Low	20.3 (17.4-23.6)	0.9 (0.7-1.1)	29.9 (26.4-33.6)	2.3 (1.8-2.8)
Moderate	31.8 (25.8-38.5)	1.6 (1.0-2.1)	46.5 (39.9-53.2)	4.6 (3.4-5.7)
High	52.0 (42.9-61.0)	4.6 (3.0-6.2)	56.7 (47.2-65.7)	6.4 (4.6-8.2)
Household Income				
Low	40.0 (33.9-46.4)	3.0 (2.2-3.8)	51.4 (46.0-56.5)	5.3 (4.3-6.2)
Medium	26.2 (22.4-30.4)	1.2 (1.0-1.5)	35.2 (31.1-39.6)	3.1 (2.3-3.9)
High	19.4 (15.7-23.7)	0.9 (0.5-1.3)	28.1 (22.7-34.3)	1.8 (1.3-2.4)
Parental education				
School	36.1 (29.2-43.7)	2.8 (2.0-3.7)	53.3 (56.9-59.6)	6.1 (4.8-7.3)
Vocational training	27.9 (22.3-34.3)	1.4 (0.9-1.9)	37.6 (31.5-44.1)	3.1 (2.2-4.1)
Tertiary education	24.3 (21.0-28.0)	1.2 (0.9-1.5)	31.6 (27.6-35.9)	2.3 (1.8-2.8)
Parents' country of birth				
Australian born	23.6 (20.6-27.0)	1.1 (0.8-1.4)	39.1 (35.6-42.7)	3.6 (3.0-4.2)
Overseas born	35.3 (30.2-40.8)	2.6 (2.0-3.2)	41.4 (35.5-47.6)	3.8 (2.8-4.7)
Infant formula used				
Never or <1 month	31.1 (25.6-37.2)	2.4 (1.6-3.1)	38.4 (33.0-45.1)	3.6 (2.7-4.5)
1+ month	26.8 (23.4-30.6)	1.4 (1.1-1.7)	39.7 (36.4-43.2)	3.6 (3.0-4.2)

WF: Children exposed to fluoridated water during the first 2 years of life

NF: Children not exposed to fluoridated water during the first 2 years of life

95%CI: 95% confidence intervals

^a None or <1 months, ^b 1–< 6 months, ^c 6–24 months, ^d >24 months

Appendix Table 2: Multivariable regression models including toothbrushing frequency in groups exposed to water fluoridation (WF) or not exposed to water fluoridation (NF).

	WF group		NF group	
	Prevalence PR (95%CI)	Severity MR (95%CI)	Prevalence PR (95%CI)	Severity MR (95%CI)
Breastfeeding				
Minimal ^a	1.0 (0.7-1.3)	1.4 (0.9-2.3)	1.4 (1.1-1.9)	2.5 (1.6-3.9)
Breastfed 1–<6 mo ^b	1.1 (0.9-1.5)	1.4 (0.9-2.1)	1.4 (1.0-1.8)	1.7 (1.1-2.7)
Breastfed 6–24 mo ^c	Ref	Ref	Ref	Ref
Sustained ^d	1.2 (0.9-1.7)	0.9 (0.5-1.5)	1.8 (1.4-2.4)	2.2 (1.3-3.8)
Household Income				
Low	1.8 (1.3-2.4)	2.3 (1.5-3.5)	1.5 (1.1-2.0)	1.9 (1.2-2.9)
Medium	1.4 (1.0-1.8)	1.5 (1.0-2.2)	1.3 (1.0-1.6)	1.4 (0.1-2.1)
High	Ref	Ref	Ref	Ref
Parental education				
School	1.0 (0.7-1.3)	1.4 (1.0-1.9)	1.2 (1.0-1.5)	1.6 (1.1-2.4)
Vocational training	1.2 (0.9-1.5)	1.1 (0.7-1.7)	1.0 (0.8-1.3)	0.9 (0.6-1.3)
Tertiary education	Ref	Ref	Ref	Ref
Parents' country of birth				
Australian born	Ref	Ref	Ref	Ref
Overseas born	1.3 (1.1-1.6)	1.7 (1.2-2.5)	1.1 (0.9-1.3)	1.1 (0.8-1.4)
SSB intake				
Low	Ref	Ref	Ref	Ref
Moderate	1.4 (1.1-1.8)	1.4 (1.0-2.0)	1.4 (1.2-1.7)	1.8 (1.3-2.4)
High	1.8 (1.4-2.4)	2.8 (1.8-4.2)	1.6 (1.2-2.0)	2.0 (1.3-2.9)
Infant formula used				
Never or <1 month	Ref	Ref	Ref	Ref
1+ month	0.8 (0.6-1.0)	0.5 (0.3-0.7)	0.9 (0.7-1.2)	0.7 (0.5-1.1)
Toothbrushing frequency				
<2 times/day	1.2 (1.0-1.4)	1.4 (1.1-1.8)	0.9 (0.8-1.1)	0.8 (0.6-1.1)
2+ times/day	Ref	Ref	Ref	Ref

Model specification was the same as for models 3 in the main text + toothbrushing frequency.

PR: Prevalence ratio; MR: Mean ratio; 95% CI: 95% confidence interval; Ref: Reference group

^a None or <1 months, ^b 1–< 6 months, ^c 6–24 months, ^d >24 months

Appendix Table 3: Multivariable regression models with interactions between breastfeeding and exposure to fluoridated water.

	Prevalence PR (95%CI)	Severity MR (95%CI)
Breastfeeding		
Minimal ^a	1.0 (0.7-1.3)	1.2 (0.7-2.0)
Breastfed 1–<6 mo ^b	1.1 (0.9-1.4)	1.2 (0.8-1.9)
Breastfed 6–24 mo ^c	Ref	Ref
Sustained ^d	1.3 (0.9-1.8)	1.1 (0.7-1.8)
Exposure to water fluoridation		
Not exposed (NF)	1.1 (0.9-1.4)	1.5 (1.0-2.2)
Exposed (WF)	Ref	Ref
Breastfeeding x water fluoridation *		
Minimal ^a	1.5 (1.1-2.2)	1.9 (1.0-3.5)
Breastfed 1–<6 mo ^b	1.2 (0.9-1.7)	1.3 (0.8-2.2)
Breastfed 6–24 mo ^c	Ref	Ref
Sustained ^d	1.3 (0.9-2.0)	1.7 (0.9-3.3)

Model specification was the same as for models 3 in the main text + exposure to fluoridated water and interaction between breastfeeding and exposure to fluoridated water.

*: Interaction terms of groups with no exposure to fluoridated water (NF) vs groups with exposure to fluoridated water (WF).

PR: Prevalence ratio; MR: Mean ratio; 95% CI: 95% confidence interval; Ref: Reference group

^a None or <1 months, ^b 1–< 6 months, ^c 6–24 months, ^d >24 months

Appendix Table 4: Per cent of children who brushed their teeth at least twice a day by exposure to water fluoridation (WF) and breastfeeding duration

	Minimal^a	Breastfed 1–<6 mo^b	Breastfed 6–24 mo^c	Sustained^d
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Exposed to fluoridated water (WF)	58.4 (51.9-65.0)	60.3 (54.6-66.1)	67.0 (63.3-70.8)	52.8 (41.0-64.7)
Not exposed to fluoridated water (NF)	62.3 (56.9-67.6)	65.4 (60.2-70.6)	66.9 (62.5-71.3)	66.5 (55.0-77.9)

%. weighted %; 95%CI: 95% confidence intervals

^a None or <1 months, ^b 1–< 6 months, ^c 6–24 months, ^d >24 months