



First Dental Home Evaluation

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Strategic Decision Support
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Purpose of Study

To determine if clients receiving First Dental Home (FDH) services have dental outcomes that are different from Medicaid clients who do not receive FDH services.

Methods – Study Design

- Frequency-matched case control study
- Cases were clients, ages 6 to 36 months, who began receiving FDH services between March 2008 and October 2009
- Controls were selected from clients who had received any dental services during the same time period, but had never received FDH services

Methods – Index Visits

- The clients' earliest visit with record of FDH or procedures covered under FDH:
 - Oral Exam (or FDH)
 - Dental prophylaxis
 - Oral hygiene instructions
 - Fluoride treatment
- Cases and controls were matched on their age and the timing of their first visit

Methods – Study Sample

- Inclusion criteria:
 - Index visit between March 2008 and October 2009
 - Clients must have had \geq 18 months of enrollment following index visit to be included
 - Age at index visit between 6 and 36 months
- Exclusion criteria:
 - Clients with incomplete claims history (gaps in enrollment) prior to the index visit were excluded

Methods – Study Sample

Age	Eligible Cases	Eligible Controls	Final Sample (Cases + Controls)
6 to 11 months	17,373	96	192
12 to 17 months	58,587	24,508	48,034
18 to 23 months	31,687	24,785	42,058
24 to 29 months	14,122	13,959	22,094
30 to 36 months	5,767	5,764	9,460
Total	127,536	69,112	121,838

Baseline Characteristics by Race/Ethnicity

	Total	Cases		Controls	
		N	%	N	%
White, non-Hispanic	14,310	6,744	11.1%	7,566	12.4%
Black, non-Hispanic	15,364	6,356	10.4%	9,008	14.8%
Hispanic	88,050	45,749	75.1%	42,301	69.4%
Other/Unknown	4,114	2,070	3.4%	2,044	3.4%

Baseline Characteristics by Geographic Area

	Total	Cases		Controls	
		N	%	N	%
Bexar	10,081	6,711	11.0%	3,370	5.5%
Dallas	17,478	9,774	16.0%	7,704	12.6%
El Paso	5,341	2,441	4.0%	2,900	4.8%
Harris	27,933	8,384	13.8%	19,549	32.1%
Lubbock	1,704	839	1.4%	865	1.4%
Nueces	3,467	2,099	3.4%	1,368	2.2%
Tarrant	8,787	5,680	9.3%	3,107	5.1%
Travis	6,348	4,690	7.7%	1,658	2.7%
Rest of State	40,609	20,251	33.2%	20,358	33.4%

Definition of Outcomes

- Visits were identified using Medicaid claims and encounters for dental health services.
- ADA Dental Procedure Codes were used to categorize visits into four severity levels.
 - Severity 0 = Preventive
 - Severity 1 = Restorative (fillings only)
 - Severity 2 = Crowns, endodontic treatment, extractions
 - Severity 3 = Surgical, anesthesia, or hospitalization

Severity of visits

Look-back Period	Total	Cases		Controls	
		N	%	N	%
Having at least one Severity 0 visit	22,276	11,863	19.5%	10,413	17.1%
Having at least one Severity 1-3 visit	310	138	0.2%	172	0.3%
Follow-up Period	Total	Cases		Controls	
		N	%	N	%
Having at least one Severity 0 visit	121,087	60,701	99.6%	60,386	99.1%
Having at least one Severity 1-3 visit	17,561	8,975	14.7%	8,586	14.1%

Severity of visits

Look-back Period

	Cases		Controls	
	Number of Visits	Percent of Visits	Number of Visits	Percent of Visits
Total	13,307		11,621	
Severity 0	12,912	97%	11,249	97%
Severity 1	81	1%	86	1%
Severity 2	70	1%	100	1%
Severity 3	96	1%	103	1%
missing	148	1%	83	1%

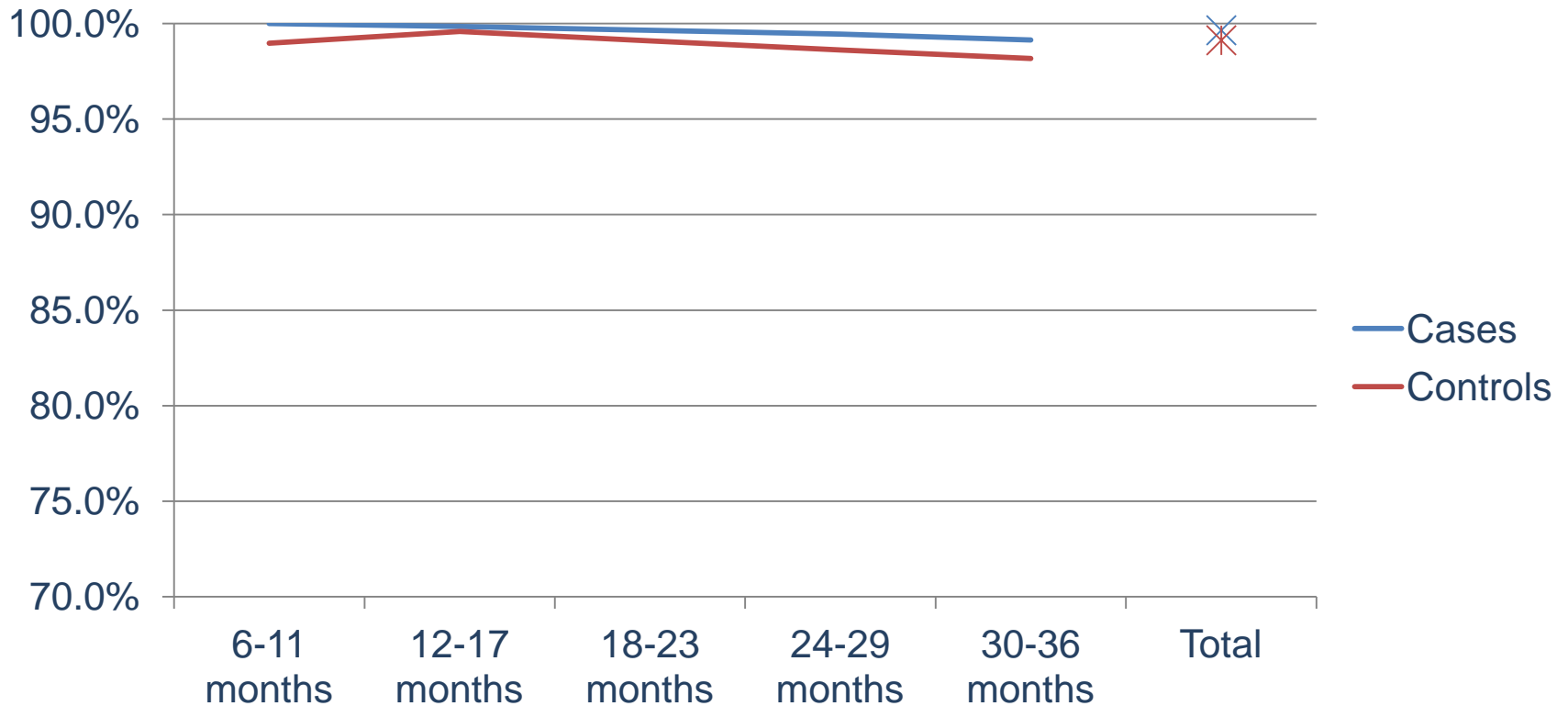
Severity of visits

Follow-up Period

	Cases		Controls	
	Number of Visits	Percent of Visits	Number of Visits	Percent of Visits
Total	200,734		154,532	
Severity 0	176,804	88%	135,426	88%
Severity 1	7,237	4%	6,844	4%
Severity 2	4,893	2%	4,995	3%
Severity 3	11,727	6%	7,200	5%
missing	73	0%	67	0%

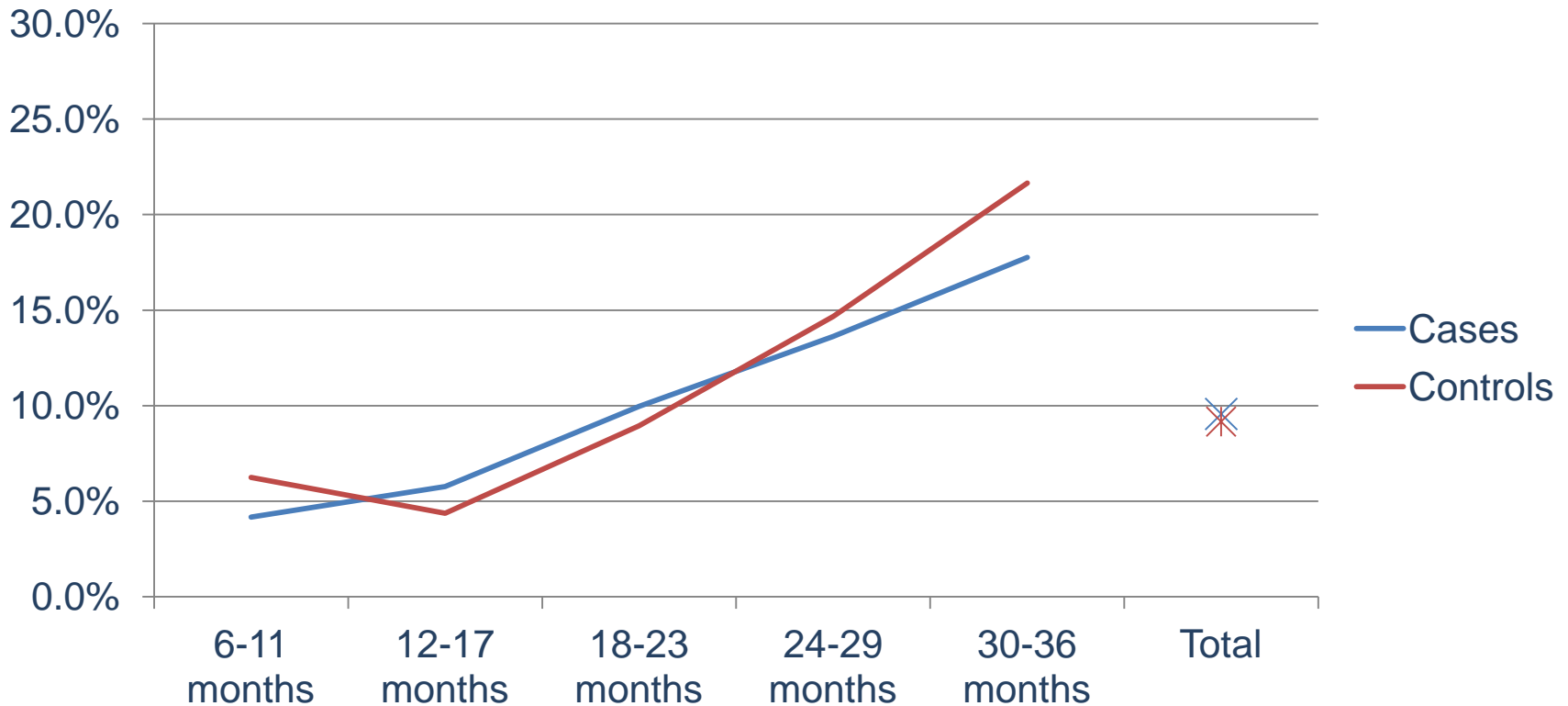
Severity of visits

Percent of Cases and Controls with at least one Severity 0 visit during the follow-up period



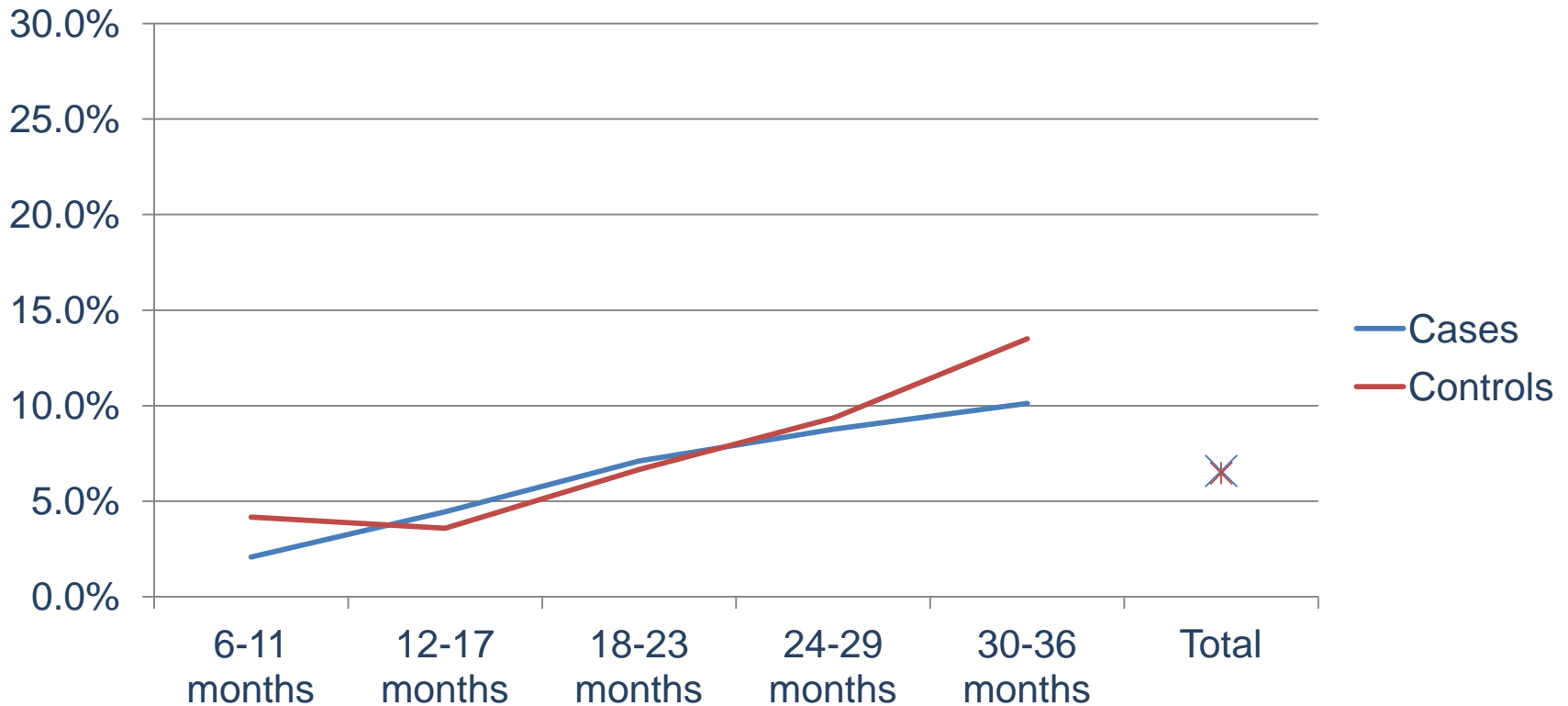
Severity of visits

Percent of Cases and Controls with at least one Severity 1 visit during the follow-up period



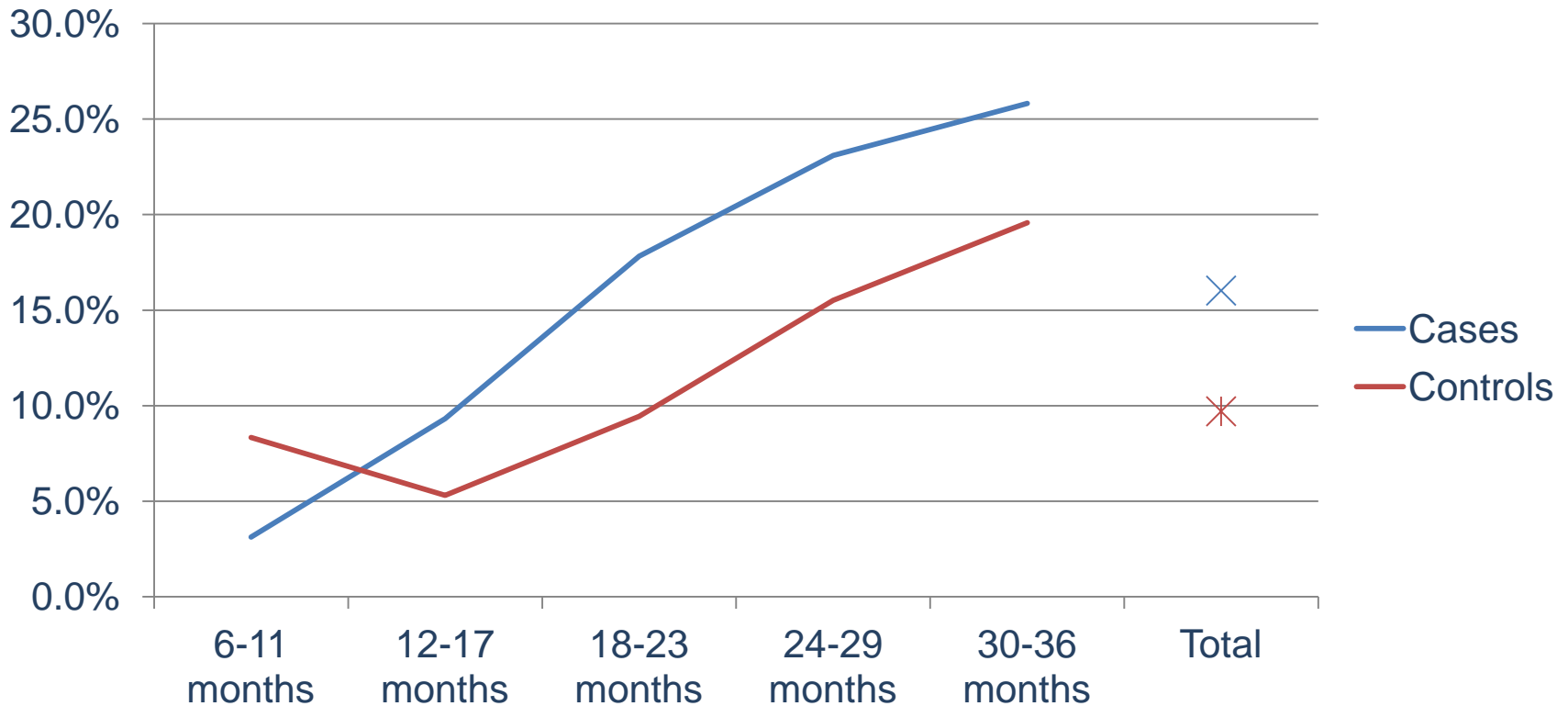
Severity of visits

Percent of Cases and Controls with at least one Severity 2 visit during the follow-up period



Severity of Visit

Percent of Cases and Controls with at least one Severity 3 visit during the follow-up period



Definition of Outcomes

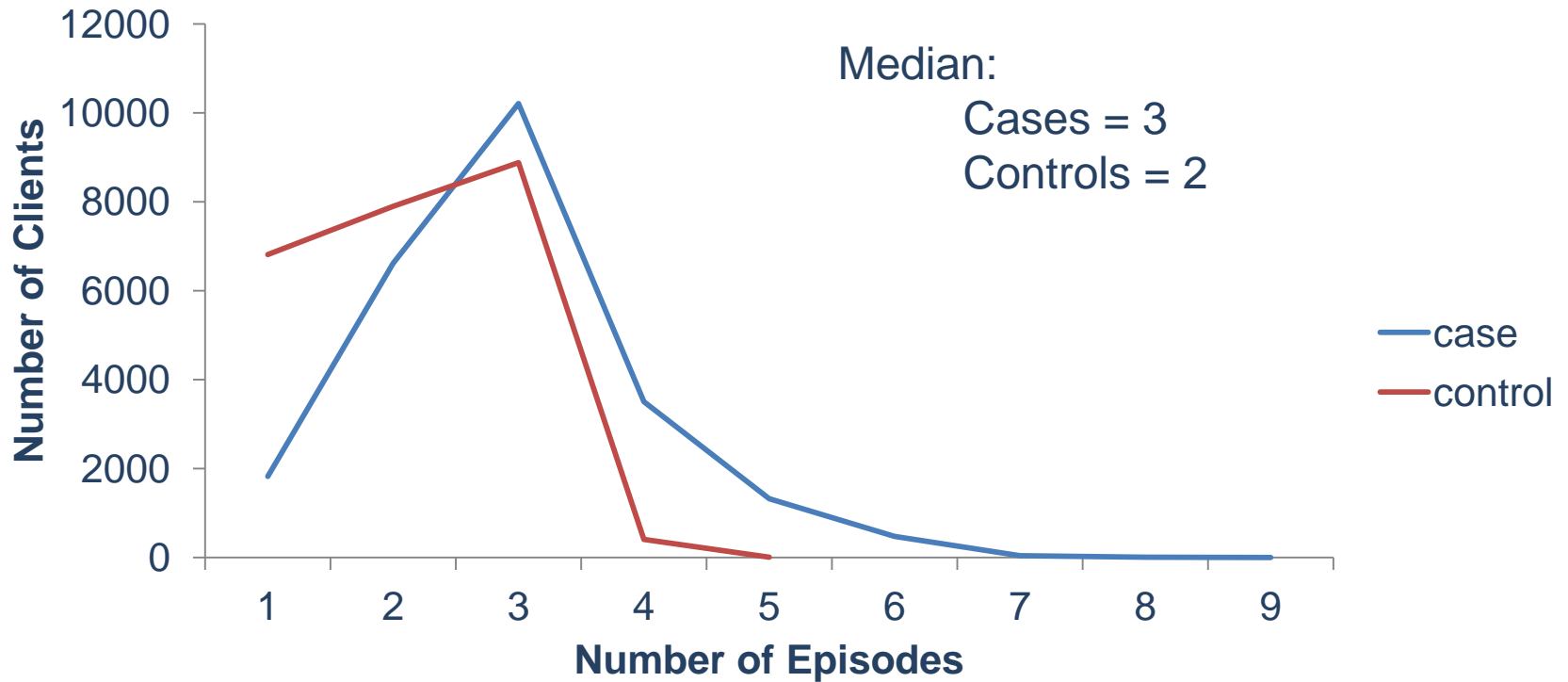
- Series of visits within six weeks of each other were defined as one episode of care.
- Episodes classified as:
 - 1 = Prevention-initiated episodes, or
 - 2 = Non-preventive

Prevention-Initiated Episodes

Look-back Period	Clients	Cases			Controls		
		N	%	Mean	N	%	Mean
Having prevention-initiated episodes	22,103	11,774	19.3%	1.06	10,329	17.0%	1.05
Follow-up Period		N	%	Mean	N	%	Mean
Having prevention-initiated episodes	121,838	60,919	100%	2.76	60,919	100%	2.13

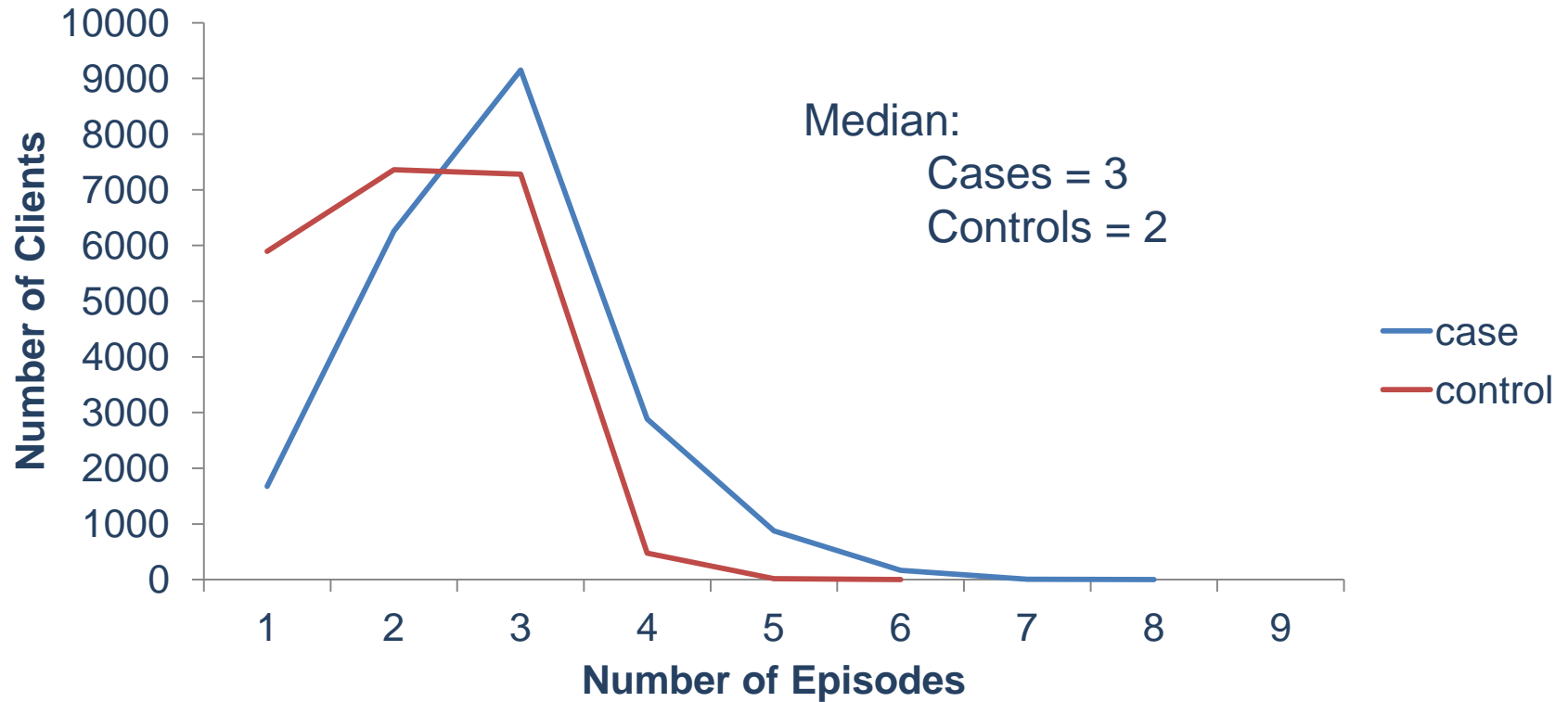
Prevention-Initiated Episodes

Number of Prevention-Initiated Episodes per client during the follow-up period, Age 12-17



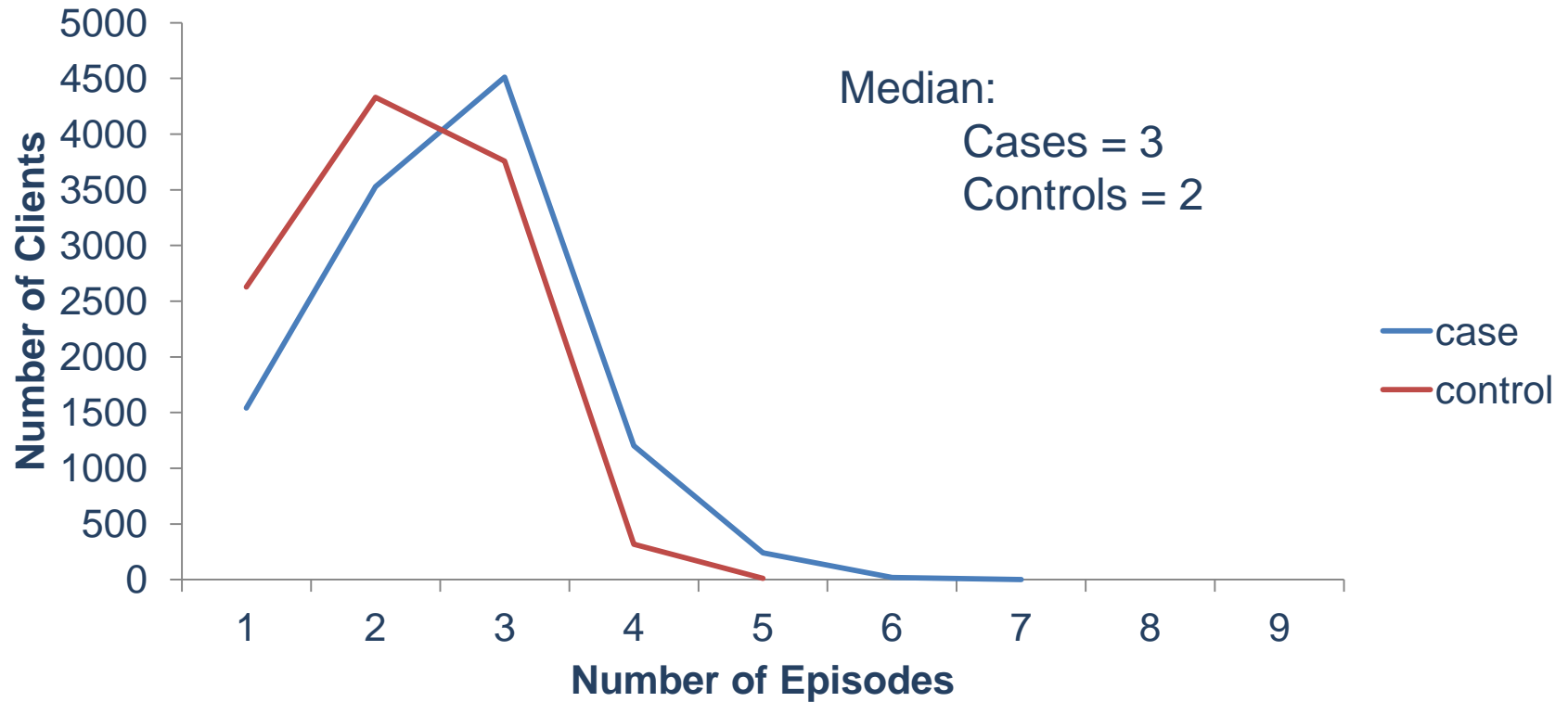
Prevention-Initiated Episodes

Number of Prevention-Initiated Episodes per client during the follow-up period, Age 18-23 months



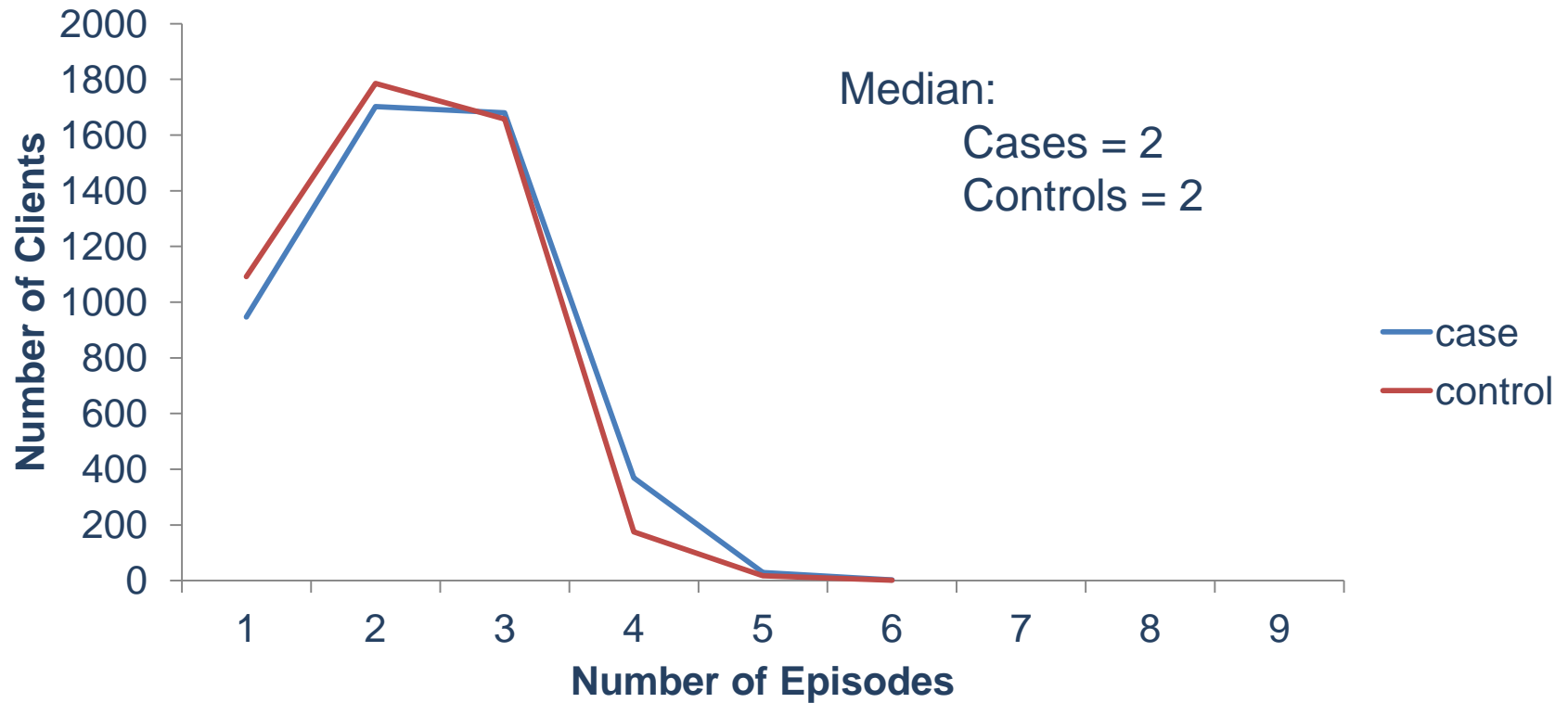
Prevention-Initiated Episodes

Number of Prevention-Initiated Episodes per client during the follow-up period, Age 24-30



Prevention-Initiated Episodes

Number of Prevention-Initiated Episodes per client during the follow-up period, Age 31-36



Conclusions

- Cases appear to have already received some services before the index visit
- A higher percentage of cases have a Severity 3 visit, while all other severity levels appear similar
- Up until they age out of First Dental Home services, cases have more prevention-initiated episodes than controls

Discussion

- Limitations:
 - Analyzing a new and developing program (provider/client ratio not constant)
 - Not controlling for OEFV, other unmeasured confounders such as maternal age, education, and number of siblings
 - Cannot assess carries risk
 - Differences in provider behavior
 - Sample representativeness