

57802

Sample Selection for MMR/Autism Study

Selection Criteria	Controls				Cases					
	Yes	No	No%	Yes	No	No%	Yes	No	No%	
Available Sample	2143			706						
Valid CASENUM	2113	30	1%	706	0	0%		0	0%	
Confirmed Autism Case	2113	0	0%	660	46	7%				
Matched Cases and Controls	1912	201	10%	647	13	2%				
Original 3 Controls	1891	21	1%	647	0	0%				
Missing Age Data	1890	1	0%	647	0	0%				
Missing MMR Vaccine Date (1,2)	1876	14	1%	629	18	3%				

1) 11 controls were missing their entire vaccination record

2) 14 cases were missing their entire vaccination record

Table 1: Descriptive Statistics For Entire Sample *

Variable	Category	Controls		Cases	
		N	Percent	N	Percent
Age 1996	3 - 5 yrs	635	34%	215	34%
	6 - 8 yrs	973	52%	321	51%
	9 - 10 yrs	268	14%	93	15%
	Total	1876	100%	629	100%
Sex	Male	1506	80%	505	80%
	Female	370	20%	124	20%
	Total	1876	100%	629	100%
Race	White	930	52%	336	55%
	Black	674	38%	232	38%
	Other	175	10%	40	7%
	Total	1779	100%	608	100%

* All subjects reported in table had date of receipt of MMR vaccine

* All cases are confirmed cases

Table 2a: Descriptive Statistics for Autism Cases

Conditions	Yes	%	No	%	Total
Non-Isolated Autism Conditions					
Cerebral Palsy	31	5%	598	95%	629
Mental Retardation	378	60%	251	40%	629
Visual Impairment	8	1%	621	99%	629
Hearing Impairment	7	1%	622	99%	629
Epilepsy	49	8%	580	92%	629
Birth Defects	5	1%	624	99%	629
Non-Isolated Autism	405	64%	224	36%	629
Delay < 3 Years of Age	400	64%	229	36%	629
Regression or Plateau	80	13%	549	87%	629
Delay < 1 Year of Age	174	28%	455	72%	629
Pre-existing Condition	79	13%	550	87%	629
Delay < 1 or Pre-Existing Condition	212	34%	417	66%	629
Any Non-Isolated or Pre-Existing Condition	470	75%	159	25%	629

Table 2b: **Isolationism Subgroups**

Sample	Non-Isolated	Isolated	Total
Total Sample	258	159	417
No Pre-existing Conditions	147	65	212
Pre-existing Conditions	405	224	629

Birth Certificate Sample	Non-Isolated	Isolated	Total
Total Sample	134	96	230
No Pre-existing Conditions	90	39	129
Pre-existing Conditions	224	135	359

Table 3: Descriptive Statistics for Birth Certificate Variables

Variable	Category	Controls		Cases	
		N	Percent	N	Percent
Age in 1996	3 - 5 yrs	382	36%	127	35%
	6 - 8 yrs	552	53%	182	51%
	9 - 10 yrs	115	11%	50	14%
	Total	1049	100%	359	100%
Sex	Male	834	80%	286	80%
	Female	215	20%	73	20%
	Total	1049	100%	359	100%
Race	White	578	55%	201	56%
	Black	405	39%	139	39%
	Other	66	6%	19	5%
	Total	1049	100%	359	100%
Mothers Age	< 20 yrs	102	10%	16	4%
	20 - 34 yrs	823	78%	282	79%
	35+ yrs	124	12%	61	17%
	Total	1049	100%	359	100%
Maternal Race	White	618	59%	209	58%
	Black	399	38%	138	38%
	Other	30	3%	12	3%
	Total	1047	100%	359	100%
Maternal Educ	<= 12 yrs	485	46%	138	38%
	13 - 15 yrs	259	25%	100	28%
	16+ yrs	305	29%	121	34%
	Total	1049	100%	359	100%
Birth Weight	0 - 1499 gms	11	1%	12	3%
	1500 - 2499 gms	55	5%	37	10%
	2500 + gms	983	94%	310	86%
	Total	1049	100%	359	100%
Multiplicity	Singleton	1017	97%	333	93%
	Twin +	32	3%	26	7%
	Total	1049	100%	359	100%
Parity	1st Born	462	44%	151	42%
	2nd or Higher	578	56%	206	58%
	Total	1040	100%	357	100%

* All subjects reported in table had date of receipt of MMR vaccine

** All cases are confirmed cases

*** These subjects are unmatched. There are significantly fewer matched cases and controls

Table 4: Statistical Analyses

Sample	Exposure	Case Definitions	N	Univariate			Multivariate		
				OR	L95CI	U95CI	OR	L95CI	U95CI
Total	MMR < 18 Mo	All Subjects	629	1.13	0.92	1.39			
		No Co-morbid Conditions	224	1.21	0.84	1.75			
		No Pre-existing conditions	417	1.16	0.90	1.49			
		No Pre-existing or Co-morbid Conditions	159	1.42	0.91	2.21			
	MMR < 24 Mo	All Subjects	629	1.23	0.95	1.60			
		No Co-morbid Conditions	224	1.52	0.93	2.48			
		No Pre-existing conditions	417	1.21	0.88	1.68			
		No Pre-existing or Co-morbid Conditions	159	2.21	1.17	4.18			
Birth Certificate	MMR < 18 Mo	All Subjects	359	1.00	0.72	1.38			
		No Co-morbid Conditions		0.81	0.47	1.38			
		No Pre-existing conditions		1.15	0.77	1.73			
		No Pre-existing or Co-morbid Conditions		1.14	0.61	2.13			
	MMR < 24 Mo	All Subjects	359	1.14	0.74	1.75			
		No Co-morbid Conditions		1.32	0.59	2.92			
		No Pre-existing conditions		1.20	0.69	2.11			
		No Pre-existing or Co-morbid Conditions		2.76	0.92	8.29	2.97	0.88	10.02

Age of 1st MMR Vaccination by Case Status

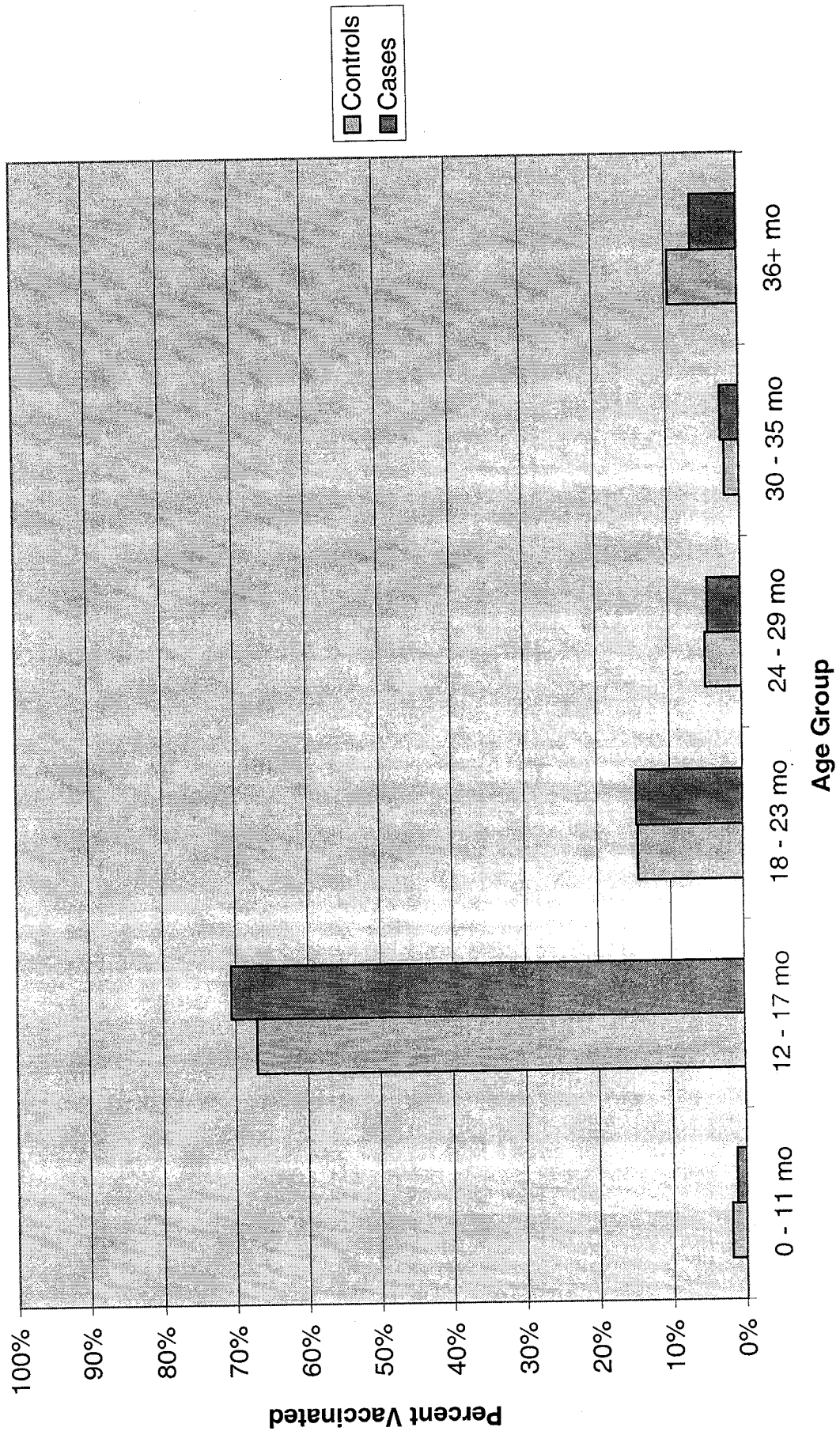
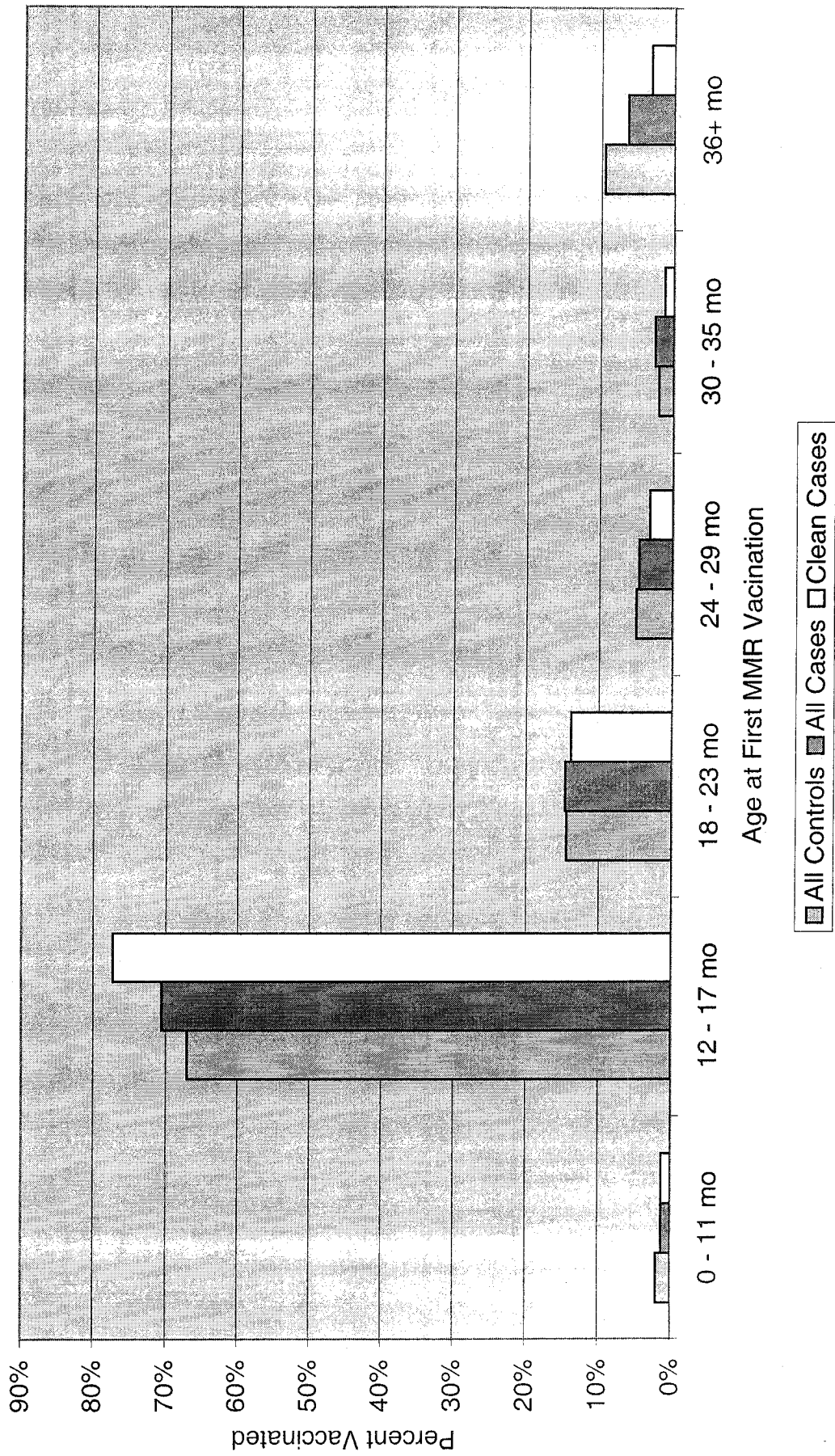


Figure 1: Percent Vaccinated by Age at First Vaccination for Controls, Cases, and Cases with No Comorbid or Pre-existing Conditions



**MMR/Autism Race Effects for Total Sample
For Selected Cases - Unmatched**

Race		Vaccinated Late	Vaccinated Early	Total	Crude OR	Percent Vaccinated Late
Whites	Control	135	970	1105	1.8	12%
	Case	8	103	111		7%
	Total	143	1073	1216		12%
Blacks	Control	154	520	674	3.9	23%
	Case	3	40	43		7%
	Total	157	560	717		22%
Total	Control	289	1490	1779	2.5	16%
	Case	11	143	154		7%
	Total	300	1633	1933		16%

MMR/Autism Race Effects for Birth Certificate Sample For Selected Cases - Unmatched

Race		Vaccinated Late	Vaccinated Early	Total	Crude OR	Percent Vaccinated Late
Whites	Control	58	586	644	3.1	9%
	Case	2	63	65		3%
	Total	60	649	709		8%
Blacks	Control	78	327	405	3.5	19%
	Case	2	29	31		6%
	Total	80	356	436		18%
Total	Control	136	913	1049	3.4	13%
	Case	4	92	96		4%
	Total	140	1005	1145		12%

MMR/Autism Race Effects for Birth Certificate Sample For Selected Cases - Matched *

Race		Vaccinated Late	Vaccinated Early	Total	Crude OR	Percent Vaccinated Late
Whites	Control	31	304	335	2.9	9%
	Case	2	56	58		3%
	Total	33	360	393		8%
Blacks	Control	44	198	242	2.9	18%
	Case	2	26	28		7%
	Total	46	224	270		17%
Total	Control	75	502	577	3.1	13%
	Case	4	82	86		5%
	Total	79	584	663		12%

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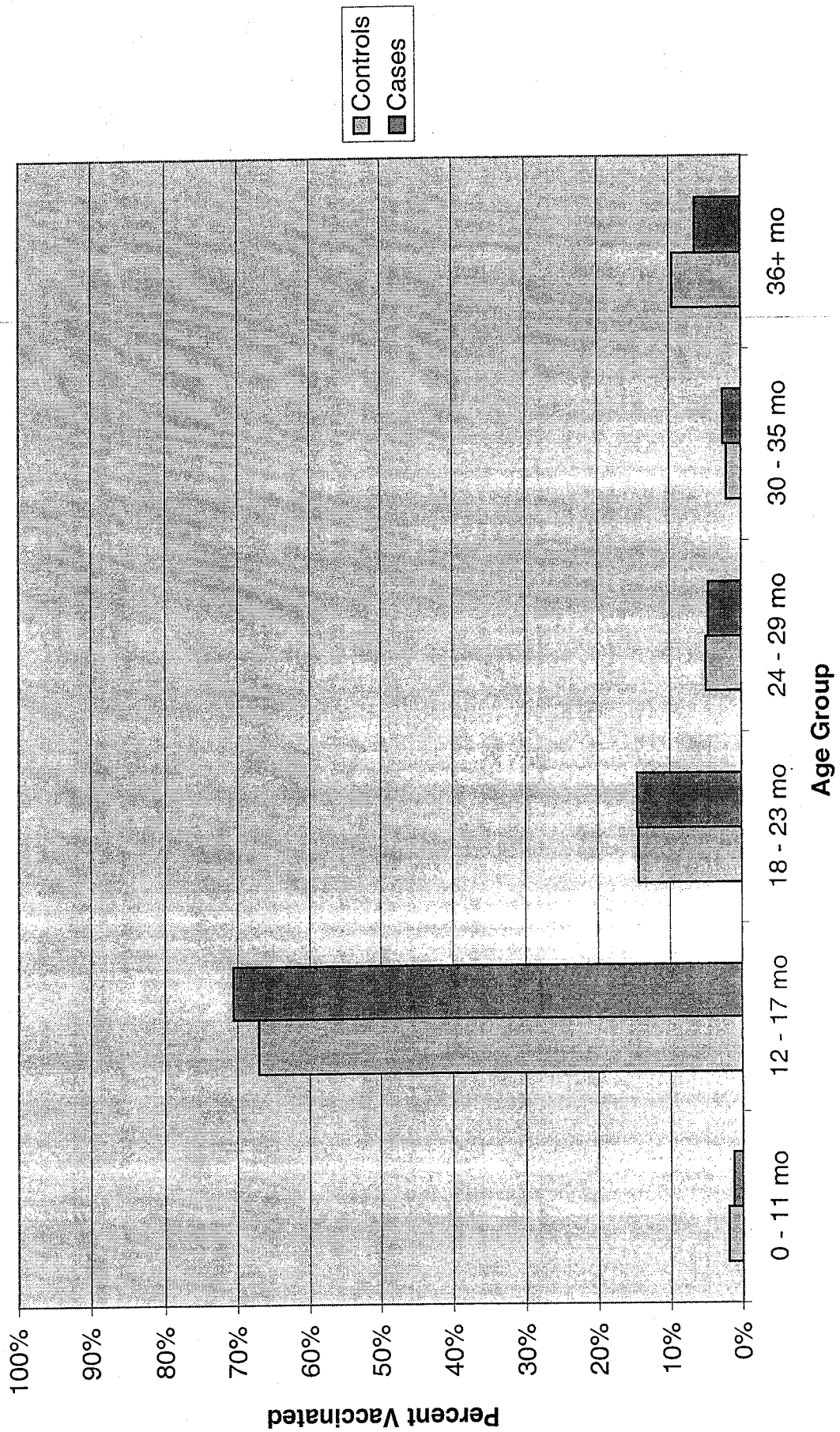
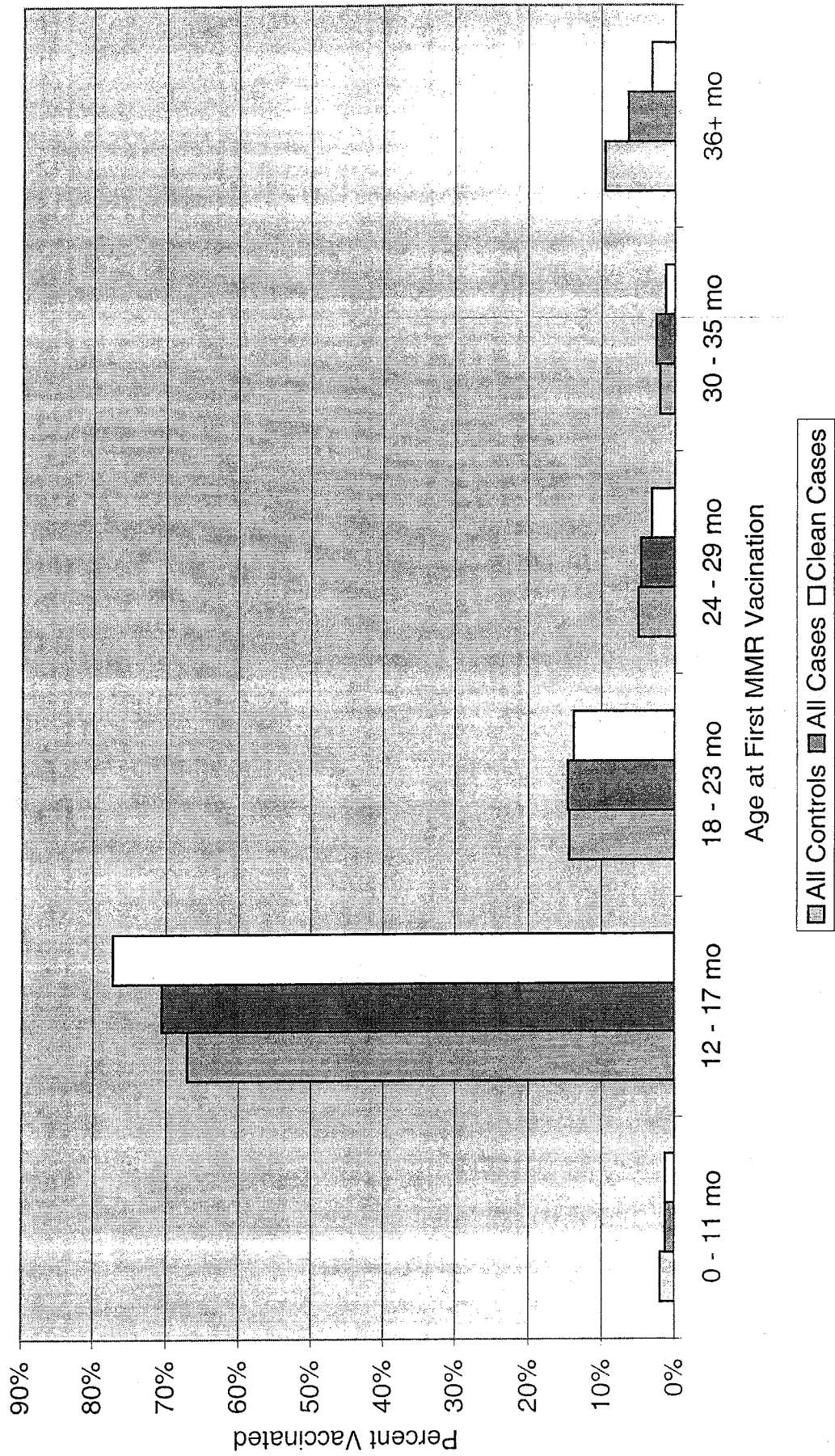


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