

Agenda 12/12/2001

- 1) Data Privacy Issues
- 2) Update on Final Database
 - a. Original controls are in database
 - b. Exclusion criteria
 - i. Cases
 - ii. Controls
 - c. Missing immunization forms and/or data
 - i. Tanya will be following up on missing forms
 - ii. Will get both MMR data as well as other vaccine data
 - d. Birth certificate matching
 - e. Missing data by School System
- 3) Discussion of Preliminary Descriptive Statistics
 - a. Total Sample
 - b. Birth Certificate Sample
- 4) Additional Analyses
 - a. Run analyses examining influence of school systems
 - b. Others

Date 12/12/2001

Data Issues

1) Cases

- a. 706 Initial Cases
- b. 660 Cases that meet MADDSP Autism Case Definition
- c. 647 Cases with ≥ 1 matched control
- d. Missing race data (N=1)
- e. Invalid MMR vaccination date (N=1)
- f. Missing MMR Vaccination information (N=17)
- g. Final sample (N=627 Cases)
- h. Need to add back in the one vaccine exemption (N=628 Cases)

2) Controls

- a. Cases with more than four controls (N=5)
 - i. Dropped additional controls (ID=XX)
- b. Missing race data (N= 101)
- c. Missing MMR Vaccination information (N=19)
- d. Final sample (N=1780 controls)
- e. One control still appears to be coded as delay less than 1
 - i. Based on regression/plateau variable

3) Immunization Forms

	Immunization Form Complete	Immunization Form Missing	Total
MMR Date Complete	2398	Assumed complete	2398
MMR Date Missing	13	23	36

a) Subjects with MMR date missing but received DTP shot

- a. HIB was missing 24%
- b. HepB was missing 33%
- c. DTP was missing only 1.8% in analysis sample
 - i. 9 subjects had 1st DTP shot but didn't get MMR
 - ii. Assumed MMR vaccine was not received for those 9

Birth Certificate Analyses

Cases = 360 (57%)
Controls = 1019 (57%)

check vaccination

send to eye

Missing Data By School System

School System	N	MMR Date		Immunization Form		Blacks		Cases	
		Missing	Percent	Missing	Percent	Missing	Percent	Missing	Percent
Atlanta City	126	7	5.6%	6	4.8%	7	5.6%	5	4.0%
Buford City	8	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Clayton County	197	2	1.0%	1	0.5%	0	0.0%	0	0.0%
Cobb County	648	6	0.9%	2	0.3%	2	0.3%	2	0.3%
Decatur City	28	4	14.3%	3	10.7%	0	0.0%	0	0.0%
DeKalb County	551	13	2.4%	11	2.0%	8	1.5%	6	1.1%
Fulton County	377	5	1.3%	2	0.5%	3	0.8%	3	0.8%
Gwinnett County	580	4	0.7%	2	0.3%	2	0.3%	2	0.3%
Marietta City	40	1	2.5%	1	2.5%	1	2.5%	1	2.5%
Other	4	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	2559	42	1.6%	28	1.1%	23	0.9%	19	0.7%

Total Sample Analyses

Alternative Models	OR	-0.95 CI	+0.95 CI
Categorical MMR Age			
G1	1.1	0.5	2.5
G2	1.8	1.2	2.6
G3	1.5	1.0	2.2
G4	1.5	0.9	2.3
G5	1.7	1.1	2.9
MMR Vaccine ≤ 18 m	1.1	0.9	1.4
MMR Vaccine ≤ 36 m	1.6	1.1	2.4
Excluding Delay < 1			
Delay 1	1.7	1.1	2.7
Delay 2	1.7	1.1	2.5
Isolated Subjects Only			
Univariate	2.4	1.1	5.1
Delay 1	2.8	1.2	6.6
Race			
White - Early	1.6	0.8	3.5
White - Late	1.9	1.0	3.6
Black - Early	2.3	1.3	4.2
Unmatched Race Analyses			
Non-Black Model	1.1	0.7	1.8
Black Model	2.4	1.4	4.4

MMR Vac Overtime	Race	N	Cases	Proportion	~RR1	~RR2
No	White	121	31	0.26	0.85	1.18
Yes	White	1392	360	0.26	0.85	1.18
No	Black	122	27	0.22	1.00	1.00
Yes	Black	820	227	0.28	0.79	1.27
No	White	114	28	0.25	0.56	1.79
Yes	White	1392	360	0.26	0.54	1.86
No	Black	105	15	0.14	1.00	1.00
Yes	Black	820	227	0.28	0.50	2.00

Birth Certificate Analyses

Alternative Models	OR	-0.95 CI	+0.95 CI
MMR Vaccine > \leq 36 m	1.9	1.1	3.3
Full Model	1.3	0.7	2.6
Reduced Model	1.4	0.7	2.6
Excluding Delay < 1			
MMR Vaccine > \leq 36 m	<u>2.9</u>	1.4	5.9
Full Model	2.1	0.9	4.9
Reduced Model	2.2	0.9	5.0
Isolated Subjects Only			
MMR Vaccine \geq 36 m	<u>5.6</u>	<u>1.3</u>	<u>23.7</u>
Reduced Model	3.5	0.7	16.3
Race			
White - Early \leq	0.9	0.3	2.7
White - Late \leq	1.9	0.9	4.1
Black - Early	1.7	0.8	3.6
White - Early	1.2	0.3	4.8
White - Late	1.6	0.6	4.0
Black - Early	1.5	0.6	3.6
Unmatched Race Analyses			
Non-Black Model	1.7	0.8	3.6
Black Model	1.9	0.9	3.8
Non-Black Model	1.0	0.4	2.3
Black Model	1.7	0.8	3.8

Things to Do

- ① Race Variable
- ② MMR single dose vaccines