

## MMR/Autism Agenda

Date: January 23, 2002

- 1) Data Privacy Issues
- 2) Update on Data Checks / Final Database
  - a. Original controls are in database
  - b. Missing immunization forms/data
    - i. Tanya will be following up on missing forms
    - ii. Will be getting both MMR data as well as other vaccine data
  - c. Will review exclusionary criteria once new data is available
  - d. Check why Isolated Autism cases without Delay < 1 all appear to be vaccinated < 36 months
  - e. New Variables Added
    - i. Developmental Delay < 1
    - ii. Plateau/Regression – will not be very useful for analyses
    - iii. Pre-existing Condition – was previously subset of DD < 1
    - iv. Age of 1<sup>st</sup> Concern – uncorrelated with age of vaccination
- 3) Discussion of Preliminary Descriptive Statistics
  - a. Total Sample
  - b. Birth Certificate Sample
- 4) Additional Analyses
  - a. Run analyses examining influence of each school system
  - b. Delay < 1
  - c. Age of 1<sup>st</sup> Concern

## Sample Selection for MMR/Autism Study

Selection Criteria	Controls			Cases		
	Remaining Sample	Removed	Percent	Remaining Sample	Removed	Percent
Initial Sample	1912	NA	NA	647	NA	NA
Removed Extra Controls	1891	21	1%	647	0	0%
Missing Age Data	1890	1	0%	647	0	0%
Missing Race Data	1789	101	5%	626	21	3%
Invalid MMR Vaccine Date	1789	0	0%	625	1	0%
Missing MMR Vaccine Date (1,2)	1780	9	1%	608	17	3%

1) 14 of the 17 cases missing an MMR date were also missing their entire vaccination record

2) 8 of the 9 controls missing an MMR date were also missing their entire vaccination record

All single antigen vaccines are actually MMR ]

Table 1: Preliminary Descriptive Statistics For Entire Sample \*

	Category	Controls		Cases	
		N	Percent	N	Percent
Age 1996	3 - 5 yrs	614	34%	208	34%
	6 - 8 yrs	932	52%	308	51%
	9 - 10 yrs	234	13%	92	15%
	Total	1780	100%	608	100%
Sex	Male	355	20%	122	20%
	Female	1425	80%	486	80%
	Total	1780	100%	608	100%
Race	White	930	52%	336	55%
	Black	675	38%	232	38%
	Other	175	10%	40	7%
	Total	1780	100%	608	100%
Co-existing DD	CP	NA	NA	30	5%
	MR	NA	NA	365	60%
	VI	NA	NA	8	1%
	HI	NA	NA	7	1%
	Epilepsy	NA	NA	45	7%
	<del>Any DD</del>	NA	NA	374	62%
Pre-existing Conditions	Yes	NA	NA	75	18%
	No	NA	NA	331	80%
	Suspect	NA	NA	6	1%
	Total			412	100%
Delay < 1	Yes	NA	NA	181	30%
	No	NA	NA		
Age of MMR	0 - 11 mo	36	2%	7	1%
	12 - 15 mo	841	47%	319	52%
	16 - 18 mo	435	24%	143	24%
	19 - 23 mo	175	10%	57	9%
	24 - 35 mo	120	7%	42	7%
	36+ mo	173	10%	40	7%
	Total	1780	100%	608	100%

Switch

Non-Isolated

Median Age of 1st Dose Concern

Summary  
Congenital  
Anomalies

\* All subjects reported in table had date of receipt of MMR vaccine  
\* All cases are confirmed cases

Additional Analysis

# Pre-existing + Delay < 1  
Pre-existing  
Delay < 1

Table 2: Preliminary 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	114	11%	50	14%
	Total	1048	100%	359	100%
Sex	Male	833	79%	286	80%
	Female	215	21%	73	20%
	Total	1048	100%	359	100%
Race	White	577	55%	201	56%
	Black	405	39%	139	39%
	Other	66	6%	19	5%
	Total	1048	100%	359	100%
Mothers Age	< 20 yrs	102	10%	16	4%
	20 - 34 yrs	822	78%	282	79%
	35+ yrs	124	12%	61	17%
	Total	1048	100%	359	100%
Maternal Race	White	617	59%	209	58%
	Black	399	38%	138	38%
	Other	30	3%	12	3%
	Total	1046	100%	359	100%
Maternal Educ	<= 12 yrs	485	46%	138	38%
	13 - 15 yrs	258	25%	100	28%
	16+ yrs	305	29%	121	34%
	Total	1048	100%	359	100%
Birth Weight	0 - 1499 gms	11	1%	12	3%
	1500 - 2499 gms	55	5%	37	10%
	2500 + gms	982	94%	310	86%
	Total	1048	100%	359	100%
Multiplicity	Singleton	1016	97%	333	93%
	Twin +	32	3%	26	7%
	Total	1048	100%	359	100%
Parity	1st Born	462	44%	151	42%
	2nd or Higher	577	56%	206	58%
	Total	1039	100%	357	100%

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

\* All cases are confirmed cases