

Do Any Vaccines Cause Autism ?

An investigation of PRR safety signals for 100 different vaccines

by Craig Paardekooper

Introduction :

The CDC ([Data & Statistics on Autism Spectrum Disorder | CDC](#)) estimates that 1 in 36 children now has autism - up from 1 in 110 in 2006. If this is the case, then 2.7% of children have autism . There are 2 billion children in the world , so 2.7% equates to 54 million autistic children . 1 in 6, or 17% of children now suffer developmental disability – that's 340 million children.

- About 1 in 36 children has been identified with autism spectrum disorder (ASD) according to estimates from CDC's Autism and Developmental Disabilities Monitoring (ADDM) Network. [\[Read article\]](#)
- ASD is reported to occur in all racial, ethnic, and socioeconomic groups. [\[Read article\]](#)
- ASD is nearly 4 times more common among boys than among girls. [\[Read article\]](#)
- About 1 in 6 (17%) children aged 3–17 years were diagnosed with a developmental disability, as reported by parents, during a study period of 2009-2017. These included autism, attention-deficit/hyperactivity disorder, blindness, and cerebral palsy, among others. [\[Read summary\]](#)

If the increase in autism is caused by certain vaccines being administered to infants then we can greatly reduce this morbidity by identifying those harmful vaccines.

The CDC and EMA detect a safety signal when a symptom occurs with a disproportionately high incidence for a drug, when compared to the incidence of the symptom for all drugs in the database. This is called Proportional Reporting Ratio. Simply put -

$$PRR = \frac{\text{rate of incidence of symptom per 100 reports for drug A}}{\text{rate of incidence of symptom per 100 reports for all other drugs.}}$$

Safety Signal : $PRR \geq 2$

Data Source :

<https://howbad.info/safety-signal-datasets.zip>

Method :

33 years of VAERS data from 1990 till 2023 were combined into a single dataset, consisting of two columns – vaccine and symptom. There were 9,020,372 rows of data, 16,849 unique symptoms, and 99 different vaccines. The number of records for each vaccine is shown in Appendix B.

The Proportional Reporting Ratios (PRR) were calculated for each symptom for each vaccine. Nothing like this has been done before – where safety signal calculations have been applied to every symptom of every vaccine – enabling rapid comparison. The PRR ratio reveals where any symptom is occurring at a rate that is disproportionately high.

The resulting spreadsheets are available as downloadable excel files, and as csv files (see above). You are strongly advised to consult these files when investigating any vaccine.

A search was made for symptoms associated with autism –

- | | | |
|-----------------------------|------------------------|-------------------------------|
| 1. Autism | 4. Repetitive behavior | 8. Attention Deficit Disorder |
| 2. Autism spectrum disorder | 5. Emotional disorder | 9. Intellectual disability |
| 3. Broad autism phenotype | 6. Emotional poverty | 10. Learning disability |
| | 7. Aspergers | 11. Learning disorder |

The aim was to see which vaccines are associated with a disproportionally high incidence of these symptoms as measured by PRR ratio.

Results

VACCINE	Autism
MNC	408.05
MMR	231.08
DTPIPV	158.66
PER	44.66
DTAPH	43.55
HBHEPB	35.75
OPV	33.81
MU	31.84
PNC	16.52
MEA	13.79
DTP	13.52
DTAPHEPBIP	12.81
HIBV	10.09
DTAP	8.85
HEP	6.37
IPV	6.15
RUB	5.61
DT	5.23
MEN	2.51
DTPHIB	2.34
MMRV	2.20
HEPA	1.37
VARCEL	1.16
UNK	0.92
FLUN(H1N1)	0.66
TTOX	0.63

VACCINE	Emotional disorder
EBZR	69.34813294
HPVX	9.519437955
HPV2	7.667122771
MEA	6.378962141
MMR	4.615277574
DTAP	3.583438965
IPV	3.156580782
HPV4	2.506765834
DTAPIPV	2.310900258
HPV9	2.273544824
FLUA4	2.208370387
FLU(H1N1)	2.183779364
RAB	2.032501302

VACCINE	Emotional poverty
DTAPIPVHIB	31.97082491
DTP	31.92320473
MMR	18.02842802
MNQ	9.88875836
HPV9	7.307822648
FLU4	5.363985477
PNC13	5.287384167
HEP	1.884984571
HPV4	1.881515045
FLU3	1.083697716
COVID19	0.424561873

VACCINE	Asperger's disorder
MMR	187.4956514
IPV	63.13161563
DTP	56.33506718
DTAP	14.16512344
HEP	7.068692142
HPV4	3.320320668

VACCINE	Autism spectrum disorder
DTPIHI	343.24
DTPIPV	198.62
DTIPV	89.17
MMR	71.34
6VAX-F	57.16
DTAPIPVHIB	13.47
DTAP	13.38
MMRV	13.20
MEA	12.07
DTAPIPV	8.80
RUB	8.19
DTP	8.03
HEP	7.85
DTAPHEPBIP	6.99
HEPA	6.12
IPV	5.98
DT	5.73
PNC13	5.45
PNC	4.83
MEN	3.66
UNK	3.28
MENB	3.09
FLUA3	2.73
HPVX	2.55
HPV2	2.51
RV1	2.41

VACCINE	Attention deficit hyperactivity disorder
DTAPHEPBIP	22.48
MENB	4.98
TDAP	3.68
MMR	3.44
DTAP	2.15
HPV9	1.96
COVID19	1.65
FLUX	1.52
PNC13	1.42
VARCEL	0.77
FLU4	0.69
COVID19-2	0.67
HEP	0.50
HPV4	0.50
VARZOS	0.21

VACCINE	Attention deficit/hyperactivity disorder
PER	992.53
DTPIPV	495.18
MEA	60.33
DTAPIPV	33.67
MMR	32.99
HPVX	25.86
FLUN3	15.40
TTOX	13.92
DTP	13.30
HPV4	11.10
MMRV	10.81
UNK	8.40
PNC	8.01
HEPAB	7.48
DTAP	6.78
TDAP	5.81
ANTH	4.20
HPV2	4.17
HEP	4.16
VARCEL	2.43
FLU4	2.19
FLU3	1.88

VACCINE	Intellectual disability
6VAX-F	142.52
MEA	60.33
DTP	26.98
DTAPIPVHIB	13.32
HPVX	12.75
MMR	8.40
PNC	8.01
DTAP	6.78
UNK	6.21
HIBV	6.19
PNC13	4.47
HPV2	4.17
MENB	3.84
TDAP	2.82
HPV4	1.59
FLUX	1.17
HEP	0.79
PPV	0.75
VARZOS	0.67
COVID19	0.51

VACCINE	Broad autism phenotype
MMR	inf
DTPIHI	0
DTPIPV	0
DTIPV	0

VACCINE	Repetitive speech
MEA	80.44580033
MMR	18.3419659
DTAPIPVHIB	17.76156939
FLUN3	10.12318058
DTAP	9.087060318
MNQ	5.493754644
HPV4	4.427094224
HPV9	4.059901471
TDAP	1.854822283
FLU4	1.440329434
COVID19	0.597040134
DTPIHI	0
DTPIPV	0
DTIPV	0

VACCINE	Intelligence test abnormal
HPV2	224.9398519
DTAPIPVHIB	159.8541245
HPV9	36.53911324
TDAP	16.69340055
FLU4	12.9629649
6VAX-F	0
MEA	0
DTP	0

VACCINE	Learning disability
PER	749.68
HPV2	42.85
DTP	41.64
MMR	27.87
HPVX	19.53
HEP	13.05
FLUN3	11.63
DTAP	10.47
RAB	9.79
ANTH	6.44
FLU(H1N1)	6.29
HPV4	5.13
UNK	3.08
TDAP	2.13
COVID19	0.06

VACCINE	Learning disorder
PER	482.67
HPV2	118.84
DTP	26.60
IPV	14.70
HPV4	14.35
MMR	12.98
HPVX	12.57
DTAPIPV	10.76
MENB	7.67
MMRV	5.26
FLUX	4.83
HEP	3.23
UNK	1.99
TDAP	1.37
FLU3	0.45
COVID19	0.06

Discussion

Some vaccines show-

1. High PRR ratios for autism
2. Same Symptom Consistency (SSC) –
 - a. Autism
 - b. Aspergers
 - c. Broad autism phenotype
3. Related Symptom Consistence (RSC) –
 - a. Repetitive speech
 - b. Emotional disorder
 - c. Emotional poverty
 - d. Attention deficit
 - e. Intellectual disability
 - f. Intellectual
 - g. Intelligence test abnormal
 - h. Learning disability

There is, therefore considerable confirmation of the high PRR ratios for autism in both Same Symptom Consistency (SSC) and Related Symptom Consistency (RSC).

The vaccines that stand out as most associated with autism are –

• Autism	MMR	DTIPV		
• Autism Spectrum Disorder	MMR	DTIPV	DTIPV	
• Broad Autism Phenotype	MMR			
• Repetitive Speech	MMR	DTAPIPVHIB		HPV
• Emotional Poverty	MMR	DTAPIPVHIB	DTP	HPV
• Aspergers Syndrome	MMR	DTP, IPV	DTAP	HPV
• Attention Deficit Disorder	MMR	DTAPHEPBIP	DTAP	HPV
• Intellectual Disability	MMR	DTAPIPVHIB	DTP	HPV
• Intelligence Test Abnormal		DTAPIPVHIB		HPV
• Learning Disability	MMR		DTP	HPV
• Learning Disorder	MMR	DTP, IPV		HPV

A strong pattern of consistency is apparent across multiple symptoms. We can say with confidence that the following vaccines have a strong association with autism – MMR, DTIPV, DTAPIPVHIB, DTP, IPV, DTAPHEPBIP, HPV

However

- 21 vaccines have PRRs greater than 2 for autism
- 26 vaccines have PRRs greater than 2 for autism spectrum disorder
- 6 vaccines have PRRs greater than 2 for Asperger's syndrome
- 8 vaccines have PRRs greater than 2 for repetitive speech
- 11 vaccines have PRRs greater than 2 for emotional poverty
- 20 vaccines have PRRs greater than 2 for Attention deficit hyperactivity disorder
- 14 vaccines have PRRs greater than 2 for intellectual disability
- 14 vaccines have PRRs greater than 2 for learning disability

So, even though some vaccines have very strong associations with autism and its symptoms, many additional vaccines have a lesser but still very significant effect. This would probably be cumulative with the number of these vaccines taken at one time, and cumulative if these vaccines are taken annually.

The effect of these vaccines may differ depending upon the age at which they are administered. I can do a separate study where PRRs are calculated for different age groups – to determine if the vaccines are more associated with devastating outcomes for younger ages.

The multi-valent vaccines, that combine 2 or more vaccines, seem associated with worse outcomes.

Conclusion

This study confirms that MMR is strongly associated with autism, as evidenced by very high PRR scores, and by a consistency in high PRR scores across multiple related symptoms.

However, this study also alerts the public to other vaccines with similar associations.

I hope this study serves to convey the power of this dataset for detecting safety signals. You have seen how it can detect elevations in the incidence of multitudes of related symptoms, enabling us to see Related Symptom Consistency. The symptom inventory is very rich, consisting of 16849 unique symptoms, enabling a detailed and thorough investigation of any vaccine. Finally the results can be ranked and compared. You can view all the symptoms for any one vaccine, ranked by PRR, or you can view all the vaccines for any one symptom, ranked by PRR.

The data is available

- [Safety Signal](#)
- [Excel Spreadsheets](#)

Background information on the creation of the dataset is available

- [Powerpoint](#)
- [PDF](#)

This dataset is critical for informed choice. It is highly recommended that people consult this data before taking any vaccine for themselves or for their children.

Please share this document widely,
especially with anyone considering
parenthood.

APPENDIX A : Additional Symptoms Related to Autism

- Developmental delay
- Developmental regression
- Lack of spontaneous speech
- Speech disorder
- Speech disorder development
- Speech sound disorder
- Seizures
- Cerebral palsy
- Hearing loss

See : [Increase in Developmental Disabilities Among Children in the United States | CDC](#)

VACCINE	Developmental delay
PER	649.49
DTPIPV	490.63
DTPPVHBPB	70.32
HBHEPB	51.18
6VAX-F	46.64
DTAPHEPBIP	46.41
DTAPIPVHIB	45.46
MMR	31.06
PNC	30.20
MEN	24.31
DTP	17.65
DTPHIB	16.77
DTAP	16.29
RV1	14.15
HEP	12.12
PNC13	11.55
DT	9.37
HIBV	6.13
MENB	5.09
IPV	4.88
HPVX	4.17
RV5	4.00
DTAPIPV	3.57
HEPA	3.30
TYP	3.24
UNK	2.67

VACCINE	Developmental regression
6VAX-F	131.55
DTAP	34.90
MMR	31.78
DTAPIPVHIB	24.91
PNC13	17.87
MMRV	15.15
MENB	14.73
IPV	13.76
DTP	12.28
HIBV	11.57
RV5	11.48
FLUN4	10.54
HEPA	9.45
UNK	7.73
PNC	7.39
MNQ	3.80
HEP	3.02
FLU4	2.02
TDAP	1.28
VARCEL	1.10
FLUX	1.08
HPV4	0.72
COVID19	0.02

VACCINE	Lack of spontaneous speech
COVID19	7.83
MMR	3.12
FLU3	0.53

VACCINE	Speech disorder
DTAPIPV	9.68
MMR	7.09
DTPIPV	6.24
PER	6.16
DTP	4.71
MEA	4.56
HBHEPB	3.94
JEV1	3.83
DF	3.34
DTPHIB	3.23
HEP	2.43
DTAPHEPBIP	2.20
DTAP	2.08
DTAPIPV	2.07
RUB	2.06
YF	2.02
6VAX-F	1.79
LYME	1.79
FLUR3	1.78
FLUX(H1N1)	1.76
RAB	1.70
HPV2	1.63
MEN	1.62
HEPAB	1.60
HPV4	1.58
JEV	1.58

VACCINE	Speech disorder development
DTPIHI	528.06
DTPIPV	306.03
6VAX-F	43.85
DTAPHEPBIP	32.56
MMR	30.02
DTAPIVHIB	25.13
DTAP	21.18
PNC	20.32
MEA	18.56
MEN	17.05
MMRV	15.29
IPV	13.88
RUB	12.59
PNC13	9.29
DT	8.81
HEP	7.96
HIBV	7.71
HEPA	5.21
UNK	4.45
DTAPIPV	3.36
MENB	2.37
SMALL	2.29
VARCEL	1.49
MNQ	1.27
RV5	1.24

VACCINE	Speech sound disorder
RAB	17.04
DTAP	8.92
MMR	3.47
VARCEL	3.19
PPV	2.00
COVID19	1.83
DTPIHI	0.00

VACCINE	Cerebral palsy
DTPIPV	488.39
PER	482.67
HBHEPB	154.25
DTP	26.60
HPVX	25.50
FLUR4	18.22
PNC	16.02
HIBV	12.37
SMALL	7.35
MMR	6.79
HPV2	4.11
FLU(H1N1)	4.05
MENB	3.78
HPV9	3.00
TDAP	2.78
PNC13	2.17
HEP	1.57
VARZOS	1.35
VARCEL	1.18
COVID19-2	1.03

VACCINE	Hearing impaired
LYME	53.38
JEV	44.09
DTPHIB	17.99
MMR	17.24
PNC	14.34
MEN	12.93
DTAPHEPBIP	12.28
ANTH	12.22
FLU(H1N1)	11.95
FLUN3	10.82
RAB	9.11
HEP	8.90
HEPAB	7.95
FLU3	5.98
HPV4	5.74
IPV	5.24
FLUN(H1N1)	5.05
TTOX	4.89
FLUN4	4.01
TDAP	3.52
TYP	3.48
MNQ	2.91
PPV	2.47
DTAP	2.36
HEPA	2.35
HIBV	2.17

The vaccines that stand out as most associated with these symptoms are –

- Developmental delay MMR DTPIPV DTP
- Developmental regression MMR DTAPIVHIB DTAP
- Speech Disorder MMR DTPIPV TDAPIPV
- Speech Disorder Development MMR DTPIPV DTAPIVHIB, DTAPHEPBIP, DTAP
- Speech Sound Disorder MMR DTAP
- Cerebral Palsy MMR DTAPIPV DTP HPV
- Hearing Impaired MMR DTPHIB, DTAPHEPBIP

APPENDIX B : Number of records for each vaccine

COVID19	6452217	TYP	12634	MER	472
VARZOS	365754	DTAPIPV	11466	RV	459
FLU3	269177	FLUN4	10956	DTAPH	394
PPV	163717	FLUX (H1N1)	9854	MU	359
HPV4	157025	HPVX	9816	PNC15	353
HEP	156741	DTP	9409	CHOL	345
COVID19-2	118050	DTAPIPVHIB	9395	TDAPIPV	326
FLU4	114504	FLUA3	9178	DTIPV	281
FLUX	105434	TTOX	8990	PER	256
VARCEL	103508	FLUN (H1N1)	8709	DTPIPV	253
MMR	95204	IPV	8397	MM	247
TDAP	89169	YF	7810	TBE	238
UNK	61811	MEN	6835	ADEN_4_7	226
PNC13	56511	FLUR4	6777	DPP	220
TD	45393	FLUA4	5994	EBZR	191
HPV9	40958	PNC20	5253	CEE	178
HEPA	37513	SMALLMNK	4931	DTPHEP	128
DTAP	37304	DT	4372	DTOX	117
MENB	32541	FLUC3	3712	DTPPHIB	106
RV5	30921	DTAPHEPBIP	3581	JEVX	102
FLU (H1N1)	30404	RUB	3060	PLAGUE	97
MNQ	30304	DTPHIB	2445	PNC10	86
HPV2	29976	MEA	2076	HEPATYP	77
ANTH	29721	RVX	2011	DTPIHI	73
MMRV	23436	DF	1888	HBPV	53
RV1	20802	RSV	1748	H5N1	26
HIBV	20204	BCG	1721	MUR	23
RAB	19566	JEV	998	MENHIB	22
FLUC4	19235	FLUR3	884	MNQHIB	16
SMALL	16786	6VAX-F	879	SSEV	16
HEPAB	16729	JEV1	824	MNC	14
FLUN3	16471	HBHEPB	801		
PNC	15616	OPV	677		
LYME	13252	DTPPVHBHPB	583		

Due to the small number of records for vaccines in the third column, PRR scores for these can be disregarded until more data is available.