

# Do Any Vaccines Cause Autism ?

## An investigation of PRR safety signals for 100 different vaccines

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### 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 >= 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. These symptoms can be divided into primary and secondary symptoms.

**Primary symptoms include -**

1. Autism
2. Autism spectrum disorder
3. Broad autism phenotype
4. Aspergers

**Secondary symptoms include –**

**SPEECH**

1. Speech disorder
2. Developmental speech disorder
3. Repetitive speech
4. Speech sound disorder
5. Lack of spontaneous speech

**COGNITION**

6. Cognitive disorder
7. Attention deficit hyperactivity disorder (ADH)
8. Learning disability
9. Learning disorder
10. Intellectual disability

**DEVELOPMENT**

11. Neurodevelopmental disorder
12. Developmental delay
13. Developmental regression

**EYE CONTACT**

14. Stupor
15. Staring
16. Gaze palsy
17. Decreased eye contact

**SOCIAL BEHAVIOUR**

18. Social avoidant behavior
19. Emotional disorder
20. Emotional poverty

**HEARING**

21. Impaired hearing

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

## Results

A preliminary look at the data revealed high PRR scores for the MMR vaccine for a wide spectrum of autism related symptoms. In addition to this, MMR has a high rank compared to the other 98 vaccines in the VAERS database across all the symptoms associated with autism.

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 disord
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	Broad autism phenotyp
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	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	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

VACCINE	Lack of spontaneous speech
COVID19	7.83
MMR	3.12
FLU3	0.53

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	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	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	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

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	Speech disorder development
DTPIHI	528.06
DTPIPV	306.03
6VAX-F	43.85
DTAPHEPBIP	32.56
MMR	30.02
DTAPIPVHIB	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

## Statistical Significance

The table below shows results for **AUTISM**

- **Autism** : number of **AUTISM** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **AUTISM** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYP	Autism	A + B	C	C + D	PRR	S	LCI
MMR	1124	95204	456	8925168	231.0802	0.055426	207.2922528
DTPIPV	7	253	1573	9020119	158.6577	0.373551	76.29361858
MNC	1	14	1579	9020358	408.0502	0.963953	61.68514411
HBHEPB	5	801	1575	9019571	35.74726	0.446527	14.89880197
DTAPH	3	394	1577	9019978	43.55107	0.575699	14.091395
OPV	4	677	1576	9019695	33.81481	0.499157	12.71207053
PNC	44	15616	1536	9004756	16.51823	0.15269	12.24592096
PER	2	256	1578	9020116	44.65758	0.704789	11.21932569
DTP	22	9409	1558	9010963	13.52331	0.214453	8.882537712
MU	2	359	1578	9020013	31.84459	0.705584	7.987868454
HIBV	35	20204	1545	9000168	10.09143	0.17079	7.220608766
DTAP	56	37304	1524	8983068	8.848555	0.135965	6.778551146
DTAPHEPBIP	8	3581	1572	9016791	12.81401	0.354058	6.401846127
MEA	5	2076	1575	9018296	13.79071	0.447385	5.738058819
HEP	160	156741	1420	8863631	6.371779	0.083353	5.411393752
IPV	9	8397	1571	9011975	6.148401	0.334108	3.194208838
DT	4	4372	1576	9016000	5.234046	0.500406	1.962834827
RUB	3	3060	1577	9017312	5.605899	0.577616	1.807042419
MMRV	9	23436	1571	8996936	2.199265	0.334223	1.14230293
MEN	3	6835	1577	9013537	2.508686	0.577772	0.808418846
VARCEL	21	103508	1559	8916864	1.16041	0.21966	0.754453816
HEPA	9	37513	1571	8982859	1.371826	0.334247	0.712496189

All of the figures are provided so PRR and LCI can be manually checked.

The incidence of autism with MMR is 231 times greater than the comparator drugs. Even when we take the lower limit of the 95% confidence interval, autism is still 200 times greater than the comparator drugs.

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include

- MMR
- PNC
- DTP
- HIBV
- DTAP
- DTAPHEPBIP
- MEA
- HEP
- IPV

Note that MMR is associated with at least 17 x the incidence of autism compared to the worst of these.

The table below shows results for **AUTISM SPECTRUM DISORDER**

- **Autism spectrum disorder** : number of **ASD** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **ASD** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Autism spectrum disorder	A + B	C	C + D	PRR	S	LCI
MMR	156	95204	205	8925168	71.34	0.11	57.93
DTPIPV	2	253	359	9020119	198.62	0.71	49.75
DTPIHI	1	73	360	9020299	343.24	0.99	48.87
6VAX-F	2	879	359	9019493	57.16	0.71	14.26
DTIPV	1	281	360	9020091	89.17	1.00	12.57
DTAP	19	37304	342	8983068	13.38	0.24	8.43
MMRV	12	23436	349	8996936	13.20	0.29	7.43
HEP	44	156741	317	8863631	7.85	0.16	5.73
DTAPIPVHIB	5	9395	356	9010977	13.47	0.45	5.57
DTAPIPV	4	11466	357	9008906	8.80	0.50	3.29
HEPA	9	37513	352	8982859	6.12	0.34	3.16
PNC13	12	56511	349	8963861	5.45	0.29	3.07
DTP	3	9409	358	9010963	8.03	0.58	2.58
MEA	1	2076	360	9018296	12.07	1.00	1.70
UNK	8	61811	353	8958561	3.28	0.36	1.63
PNC	3	15616	358	9004756	4.83	0.58	1.55
IPV	2	8397	359	9011975	5.98	0.71	1.49
MENB	4	32541	357	8987831	3.09	0.50	1.16
RUB	1	3060	360	9017312	8.19	1.00	1.15
DTAPHEPBIP	1	3581	360	9016791	6.99	1.00	0.98
HPV2	3	29976	358	8990396	2.51	0.58	0.81
DT	1	4372	360	9016000	5.73	1.00	0.80
FLUX	6	105434	355	8914938	1.43	0.41	0.64
RV1	2	20802	359	8999570	2.41	0.71	0.60
MEN	1	6835	360	9013537	3.66	1.00	0.51
VARCEL	5	103508	356	8916864	1.21	0.45	0.50

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include

- MMR
- DTAP
- MMRV
- HEP
- DTAPIPVHIB
- DTAPIPV
- HEPA
- PNC13
- DTP

The table below shows results for **ASPERGER'S DISORDER**

- **Aspergers** : number of **ASPERGER'S** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **ASPERGER'S** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Asperger's disorder	A + B	C	C + D	PRR	S	LCI
MMR	12	95204	6	8925168	187.50	0.50	70.4
IPV	1	8397	17	9011975	63.13	1.03	8.40
DTP	1	9409	17	9010963	56.34	1.03	7.50
DTAP	1	37304	17	8983068	14.17	1.03	1.89
HEP	2	156741	16	8863631	7.07	0.75	1.63
HPV4	1	157025	17	8863347	3.32	1.03	0.44
6VAX-F	0	879	18	9019493	0.00	inf	0
ADEN_4_7	0	226	18	9020146	0.00	inf	0
ANTH	0	29721	18	8990651	0.00	inf	0
BCG	0	1721	18	9018651	0.00	inf	0
CEE	0	178	18	9020194	0.00	inf	0
CHOL	0	345	18	9020027	0.00	inf	0
COVID19	0	6452217	18	2568155	0.00	inf	0
COVID19-2	0	118050	18	8902322	0.00	inf	0
DF	0	1888	18	9018484	0.00	inf	0
DPP	0	220	18	9020152	0.00	inf	0
DT	0	4372	18	9016000	0.00	inf	0
DTAPH	0	394	18	9019978	0.00	inf	0
DTAPHEPBIP	0	3581	18	9016791	0.00	inf	0
DTAPIPV	0	11466	18	9008906	0.00	inf	0
DTAPIPVHIB	0	9395	18	9010977	0.00	inf	0
DTIPV	0	281	18	9020091	0.00	inf	0
DTOX	0	117	18	9020255	0.00	inf	0
DTPHEP	0	128	18	9020244	0.00	inf	0
DTPHIB	0	2445	18	9017927	0.00	inf	0
DTPIHI	0	73	18	9020299	0.00	inf	0

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include

- MMR only

Once again MMR is at the top, followed closely by IPV and DTP, then followed by DTAP and HEP

The table below shows – results for **ATTENTION DEFICIT AND HYPERACTIVITY DISORDER**

There are two symptom columns in the VAERS database with the names “**ATTENTION DEFICIT HYPERACTIVITY DISORDER**” and “**ATTENTION DEFICIT / HYPERACTIVITY DISORDER**”. These are the same symptom, so I combined both columns into one column “**ADH total**” to give the total number of symptoms of ADH for each vaccine.

- **ADH total** : number of **ADH** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **ADH** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	ADH 1	ADH 2	ADH total	A + B	C1	C2	C total	C + D	PRR	S	LCI
MMR	4	19	23	95204	109	54	163	8925168	13.22822	0.222716	8.549119
DTAPIPV	0	3	3	11466	113	70	183	9008906	12.88043	0.581988	4.116535
MEA	0	1	1	2076	113	72	185	9018296	23.48148	1.002459	3.291662
HPVX	0	2	2	9816	113	71	184	9010556	9.977672	0.710868	2.477003
HPV4	1	12	13	157025	112	61	173	8863347	4.241566	0.287571	2.414021
TDAP	4	4	8	89169	109	69	178	8931203	4.501591	0.361395	2.216869
DTAPHEPBIP	1	0	1	3581	112	73	185	9016791	13.61056	1.00256	1.907567
FLUN3	0	2	2	16471	113	71	184	9003901	5.941867	0.710897	1.475012
DTAP	1	2	3	37304	112	71	183	8983068	3.947657	0.58204	1.261528
UNK	0	4	4	61811	113	69	182	8958561	3.185379	0.505449	1.182809
MMRV	0	2	2	23436	113	71	184	8996936	4.172759	0.710909	1.035822
HEP	1	5	6	156741	112	68	180	8863631	1.884985	0.414989	0.835723
TTOX	0	1	1	8990	113	72	185	9011382	5.418262	1.002644	0.759264
MENB	2	0	2	32541	111	73	184	8987831	3.002176	0.710918	0.745231
DTP	0	1	1	9409	113	72	185	9010963	5.176736	1.002646	0.725415
VARCEL	1	2	3	103508	112	71	183	8916864	1.41224	0.582055	0.451287
PNC	0	1	1	15616	113	72	185	9004756	3.116954	1.002667	0.43676
HEPAB	0	1	1	16729	113	72	185	9003643	2.90922	1.002669	0.40765
FLU4	1	2	3	114504	112	71	183	8905868	1.275046	0.582056	0.407446
COVID19	91	0	91	6452217	22	73	95	2568155	0.381268	0.146679	0.286005
FLU3	0	4	4	269177	113	69	182	8751195	0.714526	0.505461	0.265315
ANTH	0	1	1	29721	113	72	185	8990651	1.635144	1.002682	0.229116
FLUX	2	0	2	105434	111	73	184	8914938	0.919073	0.710933	0.228135
HPV2	0	1	1	29976	113	72	185	8990396	1.621188	1.002682	0.227161
HPV9	1	0	1	40958	112	73	185	8979414	1.185052	1.002687	0.166048
PNC13	1	0	1	56511	112	73	185	8963861	0.857414	1.00269	0.120139

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include

- MMR
- DTAPIPV
- HPV4
- TDAP

Once again, the top positions are held by MMR and DTAP class of vaccines



The table below shows – results for **SPEECH DISORDER**

- **Speech disorder** : number of SPEECH DISORDER symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **SPEECH DISORDER** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Speech Disorder	A + B	C	C + D	PRR	S	LCI
MMR	402	95204	5316	8925168	7.09	0.051624	6.407061
DTP	28	9409	5690	9010963	4.71	0.189166	3.252763
TDAPIPV	2	326	5716	9020046	9.68	0.705058	2.430922
HEP	236	156741	5482	8863631	2.43	0.066432	2.137243
MEA	6	2076	5712	9018296	4.56	0.407872	2.051503
DTAP	49	37304	5669	8983068	2.08	0.143379	1.571491
HPV4	156	157025	5562	8863347	1.58	0.081139	1.350378
DTPHIB	5	2445	5713	9017927	3.23	0.446952	1.344252
FLUX	103	105434	5615	8914938	1.55	0.099384	1.27652
DF	4	1888	5714	9018484	3.34	0.499645	1.25587
DTAPIPV	15	11466	5703	9008906	2.07	0.258369	1.245431
FLU3	229	269177	5489	8751195	1.36	0.067418	1.18846
HPV2	31	29976	5687	8990396	1.63	0.180001	1.14885
RAB	21	19566	5697	9000806	1.70	0.218503	1.104992
YF	10	7810	5708	9012562	2.02	0.316302	1.087606
LYME	15	13252	5703	9007120	1.79	0.258392	1.07732
FLU(H1N1)	28	30404	5690	8989968	1.46	0.18936	1.003892
FLU4	89	114504	5629	8905868	1.23	0.106793	0.997494
HEPAB	17	16729	5701	9003643	1.60	0.242774	0.997225
HBHEPB	2	801	5716	9019571	3.94	0.706347	0.986816
FLUX(H1N1)	11	9854	5707	9010518	1.76	0.301633	0.975813
JEV1	2	824	5716	9019548	3.83	0.706372	0.959223
DTAPHEPBIP	5	3581	5713	9016791	2.20	0.447097	0.917438
DTPIPV	1	253	5717	9020119	6.24	0.998109	0.88169
PER	1	256	5717	9020116	6.16	0.998133	0.871317
TDAP	61	89169	5657	8931203	1.08	0.128681	0.839274

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include

- MMR
- DTP
- HEP
- MEA

There is a high level of consistency here. The same vaccines are associated with autism, autism spectrum disorder, Aspergers, ADH !

The table below shows – results for **SPEECH DISORDER DEVELOPMENTAL**

- **Speech disorder developmental** : number of **SPEECH DISORDER DEVELOPMENTAL** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **SPEECH DISORDER DEVELOPMENTAL** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Speech disorder developmental	A + B	C	C + D	PRR	S	LCI
DTPIPV	2	253	233	9020119	306.03	0.707347	76.49979
DTPIHI	1	73	234	9020299	528.06	0.995276	75.07338
MMR	57	95204	178	8925168	30.02	0.152155	22.27916
DTAP	19	37304	216	8983068	21.18	0.239237	13.25338
DTAPIPVHIB	6	9395	229	9010977	25.13	0.413433	11.17557
DTAPHEPBIP	3	3581	232	9016791	32.56	0.580831	10.42961
PNC	8	15616	227	9004756	20.32	0.35964	10.04233
MMRV	9	23436	226	8996936	15.29	0.339843	7.853535
6VAX-F	1	879	234	9019493	43.85	1.001567	6.157815
MEN	3	6835	232	9013537	17.05	0.580945	5.461092
HEP	29	156741	206	8863631	7.96	0.19832	5.396931
PNC13	13	56511	222	8963861	9.29	0.285324	5.30982
IPV	3	8397	232	9011975	13.88	0.580969	4.444252
HIBV	4	20204	231	9000168	7.71	0.504261	2.870949
MEA	1	2076	234	9018296	18.56	1.001894	2.605265
HEPA	5	37513	230	8982859	5.21	0.452019	2.14639
UNK	7	61811	228	8958561	4.45	0.383701	2.097599
RUB	1	3060	234	9017312	12.59	1.001971	1.767033
DT	1	4372	234	9016000	8.81	1.00202	1.236463
MENB	2	32541	233	8987831	2.37	0.710113	0.589437
VARCEL	4	103508	231	8916864	1.49	0.504301	0.555158
DTAPIPV	1	11466	234	9008906	3.36	1.002091	0.471029
FLU3	6	269177	229	8751195	0.85	0.413557	0.37872
SMALL	1	16786	234	9003586	2.29	1.002105	0.321546
MNQ	1	30304	234	8990068	1.27	1.002118	0.177839

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include

- MMR
- DTAP
- DTAPIPVHIB
- DTAPHEPBIP
- PNC
- MMRV
- MEN
- HEP
- PNC13
- IPV
- HIBV
- HEPA

Once again, MMR is at the top, followed by DTAP

The table below shows – results for **REPETITIVE SPEECH**

- **Repetitive Speech** : number of **REPETITIVE SPEECH** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **REPETITIVE SPEECH** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Repetitive speech	A + B	C	C + D	PRR	S	LCI
MEA	1	2076	54	9018296	80.45	1.009	11.13
MMR	9	95204	46	8925168	18.34	0.364	8.98
DTAPIPVHIB	1	9395	54	9010977	17.76	1.009	2.46
DTAP	2	37304	53	8983068	9.09	0.720	2.21
HPV4	4	157025	51	8863347	4.43	0.519	1.60
FLUN3	1	16471	54	9003901	10.12	1.009	1.40
MNQ	1	30304	54	8990068	5.49	1.009	0.76
HPV9	1	40958	54	8979414	4.06	1.009	0.56
COVID19	33	6452217	22	2568155	0.60	0.275	0.35
TDAP	1	89169	54	8931203	1.85	1.009	0.26
FLU4	1	114504	54	8905868	1.44	1.009	0.20
6VAX-F	0	879	55	9019493	0.00	inf	0.00
ADEN_4_7	0	226	55	9020146	0.00	inf	0.00
ANTH	0	29721	55	8990651	0.00	inf	0.00
BCG	0	1721	55	9018651	0.00	inf	0.00
CEE	0	178	55	9020194	0.00	inf	0.00
CHOL	0	345	55	9020027	0.00	inf	0.00
COVID19-2	0	118050	55	8902322	0.00	inf	0.00
DF	0	1888	55	9018484	0.00	inf	0.00
DPP	0	220	55	9020152	0.00	inf	0.00
DT	0	4372	55	9016000	0.00	inf	0.00
DTAPH	0	394	55	9019978	0.00	inf	0.00
DTAPHEPBIP	0	3581	55	9016791	0.00	inf	0.00
DTAPIPV	0	11466	55	9008906	0.00	inf	0.00
DTIPV	0	281	55	9020091	0.00	inf	0.00
DTOX	0	117	55	9020255	0.00	inf	0.00

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include

MMR only

The table below shows – results for **COGNITIVE DISORDER**

- **Cognitive disorder** : number of **COGNITIVE DISORDER** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **COGNITIVE DISORDER** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Cognitive disorder	A + B	C	C + D	PRR	S	LCI
LYME	113	13252	2695	9007120	28.50	0.10	23.63
HPV2	139	29976	2669	8990396	15.62	0.09	13.18
PER	2	256	2806	9020116	25.11	0.70	6.31
DTIPV	2	281	2806	9020091	22.88	0.70	5.75
HPV4	229	157025	2579	8863347	5.01	0.07	4.38
MMR	111	95204	2697	8925168	3.86	0.10	3.19
MEA	4	2076	2804	9018296	6.20	0.50	2.33
HPVX	11	9816	2797	9010556	3.61	0.30	2.00
ANTH	26	29721	2782	8990651	2.83	0.20	1.92
HEP	100	156741	2708	8863631	2.09	0.10	1.71
RAB	13	19566	2795	9000806	2.14	0.28	1.24
HPV9	17	40958	2791	8979414	1.34	0.24	0.83
UNK	20	61811	2788	8958561	1.04	0.22	0.67
HEPA	13	37513	2795	8982859	1.11	0.28	0.65
YF	4	7810	2804	9012562	1.65	0.50	0.62
COVID19	1758	6452217	1050	2568155	0.67	0.04	0.62
DTAP	11	37304	2797	8983068	0.95	0.30	0.52
6VAX-F	1	879	2807	9019493	3.66	1.00	0.52
FLU(H1N1)	9	30404	2799	8989968	0.95	0.33	0.49
DTAPHEPBIP	2	3581	2806	9016791	1.79	0.71	0.45
FLUN4	4	10956	2804	9009416	1.17	0.50	0.44
DTAPIPV	4	11466	2804	9008906	1.12	0.50	0.42
COVID19-2	23	118050	2785	8902322	0.62	0.21	0.41
HEPAB	5	16729	2803	9003643	0.96	0.45	0.40
TTOX	3	8990	2805	9011382	1.07	0.58	0.35

Vaccines where these conditions apply : **A + B > 1000** ; **A ≥ 3** ; **PRR > 2** ; **LCI > 2** , include

- LYME
- HPV2, HPV4, HPVX
- MMR
- MEA

The table below shows – results for **LEARNING DISABILITY**

- **Learning disability** : number of **LEARNING DISABILITY** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **LEARNING DISABILITY** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Learning disability	A + B	C	C + D	PRR	S	LCI
PER	1	256	47	9020116	749.68	1.009	103.82
HPV2	6	29976	42	8990396	42.85	0.436	18.22
MMR	11	95204	37	8925168	27.87	0.343	14.22
DTP	2	9409	46	9010963	41.64	0.722	10.11
HEP	9	156741	39	8863631	13.05	0.370	6.32
HPVX	1	9816	47	9010556	19.53	1.011	2.69
DTAP	2	37304	46	8983068	10.47	0.722	2.54
HPV4	4	157025	44	8863347	5.13	0.522	1.84
FLUN3	1	16471	47	9003901	11.63	1.011	1.60
RAB	1	19566	47	9000806	9.79	1.011	1.35
ANTH	1	29721	47	8990651	6.44	1.011	0.89
FLU(H1N1)	1	30404	47	8989968	6.29	1.011	0.87
UNK	1	61811	47	8958561	3.08	1.011	0.43
TDAP	1	89169	47	8931203	2.13	1.011	0.29
COVID19	6	6452217	42	2568155	0.06	0.436	0.02
6VAX-F	0	879	48	9019493	0.00	inf	0.00
ADEN_4_7	0	226	48	9020146	0.00	inf	0.00
BCG	0	1721	48	9018651	0.00	inf	0.00
CEE	0	178	48	9020194	0.00	inf	0.00
CHOL	0	345	48	9020027	0.00	inf	0.00
COVID19-2	0	118050	48	8902322	0.00	inf	0.00
DF	0	1888	48	9018484	0.00	inf	0.00
DPP	0	220	48	9020152	0.00	inf	0.00
DT	0	4372	48	9016000	0.00	inf	0.00
DTAPH	0	394	48	9019978	0.00	inf	0.00
DTAPHEPBIP	0	3581	48	9016791	0.00	inf	0.00
DTAPIPV	0	11466	48	9008906	0.00	inf	0.00
DTAPIPVHIB	0	9395	48	9010977	0.00	inf	0.00
DTIPV	0	281	48	9020091	0.00	inf	0.00
DTOX	0	117	48	9020255	0.00	inf	0.00
DTPHEP	0	128	48	9020244	0.00	inf	0.00
DTPHIB	0	2445	48	9017927	0.00	inf	0.00
DTPIHI	0	73	48	9020299	0.00	inf	0.00
DTPIPV	0	253	48	9020119	0.00	inf	0.00
DTPPHIB	0	106	48	9020266	0.00	inf	0.00

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include

- HPV2
- MMR
- HEP

The table below shows – results for **LEARNING DISORDER**

- **Learning disorder** : number of **LEARNING DISORDER** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **LEARNING DISORDER** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Learning disorder	A + B	C	C + D	PRR	S	LCI
HPV2	21	29976	53	8990396	118.84	0.258	71.70
PER	1	256	73	9020116	482.67	1.005	67.34
HPV4	15	157025	59	8863347	14.35	0.289	8.14
DTP	2	9409	72	9010963	26.60	0.717	6.53
MMR	9	95204	65	8925168	12.98	0.356	6.46
IPV	1	8397	73	9011975	14.70	1.007	2.04
MENB	2	32541	72	8987831	7.67	0.717	1.88
FLUX	4	105434	70	8914938	4.83	0.514	1.76
HPVX	1	9816	73	9010556	12.57	1.007	1.75
DTAPIPV	1	11466	73	9008906	10.76	1.007	1.50
HEP	4	156741	70	8863631	3.23	0.514	1.18
MMRV	1	23436	73	8996936	5.26	1.007	0.73
UNK	1	61811	73	8958561	1.99	1.007	0.28
TDAP	1	89169	73	8931203	1.37	1.007	0.19
FLU3	1	269177	73	8751195	0.45	1.007	0.06
COVID19	9	6452217	65	2568155	0.06	0.356	0.03
6VAX-F	0	879	74	9019493	0.00	inf	0.00
ADEN_4_7	0	226	74	9020146	0.00	inf	0.00
ANTH	0	29721	74	8990651	0.00	inf	0.00
BCG	0	1721	74	9018651	0.00	inf	0.00
CEE	0	178	74	9020194	0.00	inf	0.00
CHOL	0	345	74	9020027	0.00	inf	0.00
COVID19-2	0	118050	74	8902322	0.00	inf	0.00
DF	0	1888	74	9018484	0.00	inf	0.00
DPP	0	220	74	9020152	0.00	inf	0.00
DT	0	4372	74	9016000	0.00	inf	0.00
DTAP	0	37304	74	8983068	0.00	inf	0.00
DTAPH	0	394	74	9019978	0.00	inf	0.00
DTAPHEPBIP	0	3581	74	9016791	0.00	inf	0.00
DTAPIPVHIB	0	9395	74	9010977	0.00	inf	0.00
DTIPV	0	281	74	9020091	0.00	inf	0.00
DTOX	0	117	74	9020255	0.00	inf	0.00
DTPHEP	0	128	74	9020244	0.00	inf	0.00
DTPHIB	0	2445	74	9017927	0.00	inf	0.00
DTPIHI	0	73	74	9020299	0.00	inf	0.00

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include

- HPV2
- HPV4
- MMR

The table below shows – results for **INTELLECTUAL DISABILITY**

- **Intellectual disability** : number of **INTELLECTUAL DISABILITY** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **INTELLECTUAL DISABILITY** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Intellectual disability	A + B	C	C + D	PRR	S	LCI
6VAX-F	1	879	72	9019493	142.52	1.006	19.83
MEA	1	2076	72	9018296	60.33	1.007	8.39
DTP	2	9409	71	9010963	26.98	0.717	6.62
MMR	6	95204	67	8925168	8.40	0.426	3.64
UNK	3	61811	70	8958561	6.21	0.590	1.96
DTAPIPVHIB	1	9395	72	9010977	13.32	1.007	1.85
HPVX	1	9816	72	9010556	12.75	1.007	1.77
DTAP	2	37304	71	8983068	6.78	0.717	1.66
PNC	1	15616	72	9004756	8.01	1.007	1.11
PNC13	2	56511	71	8963861	4.47	0.717	1.10
HIBV	1	20204	72	9000168	6.19	1.007	0.86
TDAP	2	89169	71	8931203	2.82	0.717	0.69
HPV2	1	29976	72	8990396	4.17	1.007	0.58
MENB	1	32541	72	8987831	3.84	1.007	0.53
HPV4	2	157025	71	8863347	1.59	0.717	0.39
COVID19	41	6452217	32	2568155	0.51	0.236	0.32
VARZOS	2	365754	71	8654618	0.67	0.717	0.16
FLUX	1	105434	72	8914938	1.17	1.007	0.16
HEP	1	156741	72	8863631	0.79	1.007	0.11
PPV	1	163717	72	8856655	0.75	1.007	0.10
ADEN_4_7	0	226	73	9020146	0.00	inf	0.00
ANTH	0	29721	73	8990651	0.00	inf	0.00
BCG	0	1721	73	9018651	0.00	inf	0.00
CEE	0	178	73	9020194	0.00	inf	0.00
CHOL	0	345	73	9020027	0.00	inf	0.00
COVID19-2	0	118050	73	8902322	0.00	inf	0.00
DF	0	1888	73	9018484	0.00	inf	0.00
DPP	0	220	73	9020152	0.00	inf	0.00
DT	0	4372	73	9016000	0.00	inf	0.00
DTAPH	0	394	73	9019978	0.00	inf	0.00
DTAPHEPBIP	0	3581	73	9016791	0.00	inf	0.00
DTAPIPV	0	11466	73	9008906	0.00	inf	0.00
DTIPV	0	281	73	9020091	0.00	inf	0.00
DTOX	0	117	73	9020255	0.00	inf	0.00
DTPHEP	0	128	73	9020244	0.00	inf	0.00

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include

- MMR only



The table below shows – results for **NEURODEVELOPMENTAL DISORDER**

- **Neurodevelopmental disorder** : number of **NEURODEVELOPMENTAL DISORDER** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **NEURODEVELOPMENTAL DISORDER** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Neurodevelopmental disorder	A + B	C	C + D	PRR	S	LCI
MMR	198	95204	138	8925168	134.5077	0.110843	108.2419
HBHEPB	3	801	333	9019571	101.4449	0.578868	32.62032
OPV	2	677	334	9019695	79.77866	0.708179	19.91008
DTAP	23	37304	313	8983068	17.69509	0.215977	11.58802
HIBV	14	20204	322	9000168	19.36803	0.272919	11.34416
HEP	67	156741	269	8863631	14.08483	0.136515	10.77823
DTPHIB	3	2445	333	9017927	33.22805	0.579592	10.66955
MU	1	359	335	9020013	75.00115	1.0001	10.56248
PNC	9	15616	327	9004756	15.87073	0.337794	8.185788
DTP	3	9409	333	9010963	8.627893	0.579853	2.769004
RUB	1	3060	335	9017312	8.796519	1.001328	1.235842
MEN	1	6835	335	9013537	3.936515	1.001418	0.552952
VARCEL	3	103508	333	8916864	0.776096	0.579937	0.249037
FLU3	5	269177	331	8751195	0.491102	0.450574	0.203065
TD	1	45393	335	8974979	0.590201	1.00148	0.082894
PNC13	1	56511	335	8963861	0.473497	1.001483	0.066503
UNK	1	61811	335	8958561	0.432641	1.001483	0.060764
6VAX-F	0	879	336	9019493	0 inf		0
ADEN_4_7	0	226	336	9020146	0 inf		0
ANTH	0	29721	336	8990651	0 inf		0
BCG	0	1721	336	9018651	0 inf		0
CEE	0	178	336	9020194	0 inf		0
CHOL	0	345	336	9020027	0 inf		0
COVID19	0	6452217	336	2568155	0 inf		0
COVID19-2	0	118050	336	8902322	0 inf		0
DF	0	1888	336	9018484	0 inf		0
DPP	0	220	336	9020152	0 inf		0
DT	0	4372	336	9016000	0 inf		0
DTAPH	0	394	336	9019978	0 inf		0
DTAPHEPBIP	0	3581	336	9016791	0 inf		0
DTAPIPV	0	11466	336	9008906	0 inf		0
DTAPIPVHIB	0	9395	336	9010977	0 inf		0
DTIPV	0	281	336	9020091	0 inf		0
DTOX	0	117	336	9020255	0 inf		0
DTPHEP	0	128	336	9020244	0 inf		0

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include

- MMR
- DTAP
- HIBV
- HEP
- DTPHIB
- PNC
- DTP



The table below shows – results for **DEVELOPMENTAL DELAY**

- **Developmental delay** : number of **DEVELOPMENTAL DELAY** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **DEVELOPMENTAL DELAY** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Developmental delay	A + B	C	C + D	PRR	S	LCI
PER	4	256	217	9020116	649.49	0.50	243.4259
DTPIPV	3	253	218	9020119	490.63	0.58	158.066
DTAPIPVHIB	10	9395	211	9010977	45.46	0.32	24.1129
MMR	55	95204	166	8925168	31.06	0.16	22.89867
DTAPHEPBIP	4	3581	217	9016791	46.41	0.50	17.2731
PNC	11	15616	210	9004756	30.20	0.31	16.47692
DTPPVHBHPB	1	583	220	9019789	70.32	1.00	9.878348
DTAP	14	37304	207	8983068	16.29	0.28	9.479901
MEN	4	6835	217	9013537	24.31	0.50	9.044138
HEP	39	156741	182	8863631	12.12	0.18	8.575085
HBHEPB	1	801	220	9019571	51.18	1.00	7.186401
PNC13	15	56511	206	8963861	11.55	0.27	6.838643
RV1	7	20802	214	8999570	14.15	0.38	6.666607
DTP	4	9409	217	9010963	17.65	0.50	6.567565
6VAX-F	1	879	220	9019493	46.64	1.00	6.547934
DTPHIB	1	2445	220	9017927	16.77	1.00	2.351957
HIBV	3	20204	218	9000168	6.13	0.58	1.961977
MENB	4	32541	217	8987831	5.09	0.50	1.893812
DT	1	4372	220	9016000	9.37	1.00	1.314797
RV5	3	30921	218	8989451	4.00	0.58	1.280406
HEPA	3	37513	218	8982859	3.30	0.58	1.054622
UNK	4	61811	217	8958561	2.67	0.50	0.993741
IPV	1	8397	220	9011975	4.88	1.00	0.684186
HPVX	1	9816	220	9010556	4.17	1.00	0.585178
DTAPIPV	1	11466	220	9008906	3.57	1.00	0.50087
TYP	1	12634	220	9007738	3.24	1.00	0.454502

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include –

- DTAPIPVHIB
- MMR
- DTAPHEPBIP
- PNC
- DTAP
- MEN
- HEP
- PNC13
- RV1
- DTP

Once again, DTAP and MMR have the highest scores on PRR and LCI

The table below shows – results for **DEVELOPMENTAL REGRESSION**

- **Developmental regression** : number of **DEVELOPMENTAL REGRESSION** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **DEVELOPMENTAL REGRESSION** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Developmental regression	A + B	C	C + D	PRR	S	LCI
MMR	20	95204	59	8925168	31.78	0.258725	19.13851
6VAX-F	1	879	78	9019493	131.55	1.005824	18.31992
DTAP	10	37304	69	8983068	34.90	0.338328	17.98165
PNC13	8	56511	71	8963861	17.87	0.372916	8.605198
DTAPIPVHIB	2	9395	77	9010977	24.91	0.716157	6.120818
MENB	4	32541	75	8987831	14.73	0.51313	5.388124
MMRV	3	23436	76	8996936	15.15	0.588599	4.780722
RV5	3	30921	76	8989451	11.48	0.588607	3.620383
HEPA	3	37513	76	8982859	9.45	0.588612	2.981972
HIBV	2	20204	77	9000168	11.57	0.716196	2.842587
UNK	4	61811	75	8958561	7.73	0.513144	2.827314
IPV	1	8397	78	9011975	13.76	1.006331	1.914235
DTP	1	9409	78	9010963	12.28	1.006337	1.708133
FLUN4	1	10956	78	9009416	10.54	1.006344	1.46667
HEP	4	156741	75	8863631	3.02	0.513154	1.103119
PNC	1	15616	78	9004756	7.39	1.006358	1.028439
MNQ	1	30304	78	8990068	3.80	1.006373	0.529086
FLU4	2	114504	77	8905868	2.02	0.716225	0.496286
TDAP	1	89169	78	8931203	1.28	1.006384	0.178628
VARCEL	1	103508	78	8916864	1.10	1.006385	0.153635
FLUX	1	105434	78	8914938	1.08	1.006385	0.150796
HPV4	1	157025	78	8863347	0.72	1.006387	0.100666
COVID19	4	6452217	75	2568155	0.02	0.51316	0.007764
ADEN_4_7	0	226	79	9020146	0.00	inf	0
ANTH	0	29721	79	8990651	0.00	inf	0
BCG	0	1721	79	9018651	0.00	inf	0

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include –

- MMR
- DTAP
- PNC13
- MENB
- MMRV
- RV5
- HEPA

The table below shows – results for **STUPOR**

- **Stupor** : number of **STUPOR** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **STUPOR** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Stupor	A + B	C	C + D	PRR	S	LCI
DTPHIB	36	2445	782	9017927	169.7945	0.169256	121.857
DTP	102	9409	716	9010963	136.4316	0.105329	110.9832
PLAGUE	2	97	816	9020275	227.9229	0.700654	57.72702
RV	3	459	815	9019913	72.3358	0.576525	23.36711
MMR	149	95204	669	8925168	20.87956	0.090529	17.48482
DT	8	4372	810	9016000	20.36755	0.354973	10.15733
HEP	140	156741	678	8863631	11.6769	0.092797	9.735023
DTAP	40	37304	778	8983068	12.38083	0.162045	9.011863
TD	44	45393	774	8974979	11.23974	0.15491	8.296486
PNC	15	15616	803	9004756	10.77154	0.260476	6.464814
MM	1	247	817	9020125	44.69856	0.998587	6.313634
HIBV	18	20204	800	9000168	10.02295	0.238235	6.283563
PER	1	256	817	9020116	43.12708	0.998658	6.090814
RAB	11	19566	807	9000806	6.270447	0.303475	3.459198
TYP	7	12634	811	9007738	6.153923	0.379488	2.924998
FLU3	62	269177	756	8751195	2.66624	0.132091	2.058076
IPV	4	8397	814	9011975	5.273894	0.501108	1.975057
TTOX	4	8990	814	9011382	4.925692	0.501116	1.844628
6VAX-F	1	879	817	9019493	12.55947	1.000043	1.768957
HEPA	9	37513	809	8982859	2.663954	0.335142	1.381172
FLUX	19	105434	799	8914938	2.010687	0.232107	1.275767
VARCEL	15	103508	803	8916864	1.609215	0.260581	0.965613
MEA	1	2076	817	9018296	5.317103	1.000371	0.748414
HEPAB	3	16729	815	9003643	1.981125	0.57836	0.637679
RUB	1	3060	817	9017312	3.606896	1.000448	0.507615
PPV	13	163717	805	8856655	0.873622	0.279569	0.505067
DTAPHEPBIP	1	3581	817	9016791	3.08195	1.000472	0.433717
ANTH	3	29721	815	8990651	1.113503	0.578383	0.358395
HPV4	7	157025	811	8863347	0.487199	0.379584	0.231525
YF	1	7810	817	9012562	1.412457	1.000548	0.198743
UNK	3	61811	815	8958561	0.533502	0.578398	0.171709
FLUA3	1	9178	817	9011194	1.201745	1.000557	0.169091
LYME	1	13252	817	9007120	0.831922	1.000574	0.117051
FLUN3	1	16471	817	9003901	0.669096	1.000581	0.094141
SMALL	1	16786	817	9003586	0.656517	1.000582	0.092371

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include –

- |          |        |        |        |
|----------|--------|--------|--------|
| • DTPHIB | • DT   | • TD   | • RAB  |
| • DTP    | • HEP  | • PNC  | • TYP  |
| • MMR    | • DTAP | • HIBV | • FLU3 |

Once again DTP and MMR have the highest ranks.

The table below shows – results for **STARING**

- **Starling** : number of **STARING** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **STARING** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Starling	A + B	C	C + D	PRR	S	LCI
DTAPHEPBIP	11	3581	938	9016791	29.5282378	0.3028132	16.31089
DTAPIPV	2	326	947	9020046	58.4347471	0.7056829	14.65486
DTPPHIB	1	106	948	9020266	89.7646087	0.9958016	12.74858
MMR	126	95204	823	8925168	14.352644	0.0956084	11.90004
DTAPIPVHIB	18	9395	931	9010977	18.5437653	0.2377459	11.63656
PNC	27	15616	922	9004756	16.8863191	0.1950833	11.52064
DTAP	54	37304	895	8983068	14.5291434	0.1400318	11.04187
MEA	4	2076	945	9018296	18.3876115	0.5005761	6.893287
MENB	30	32541	919	8987831	9.01632891	0.1854471	6.268649
DPP	1	220	948	9020152	43.249674	0.9982531	6.112975
6VAX-F	2	879	947	9019493	21.6707163	0.7070489	5.420272
DTPIPV	1	253	948	9020119	37.6082745	0.99855	5.312519
IPV	8	8397	941	9011975	9.12422925	0.3548852	4.551052
DTAPIPV	10	11466	939	9008906	8.36747697	0.3177698	4.488523
HIBV	13	20204	936	9000168	6.18700917	0.2791807	3.579624
MNQ	16	30304	933	8990068	5.08746411	0.2520688	3.104102
FLUN4	7	10956	942	9009416	6.11071113	0.3792457	2.905837
HEPA	18	37513	931	8982859	4.62972942	0.2379136	2.904286
FLU(H1N1)	14	30404	935	8989968	4.42734991	0.2691934	2.612172
PNC13	21	56511	928	8963861	3.58949572	0.2206328	2.329309
HPV4	44	157025	905	8863347	2.74430924	0.154356	2.027882
FLUX(H1N1)	5	9854	944	9010518	4.8432313	0.4482831	2.011634
OPV	1	677	948	9019695	14.0538349	0.9997888	1.980421
HPV9	13	40958	936	8979414	3.0449261	0.2792256	1.761551
HBHEPB	1	801	948	9019571	11.8780467	0.9999031	1.673441
MMRV	8	23436	941	8996936	3.26370957	0.3549928	1.627554

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include –

- DTAPHEPBIP
- MMR
- DTAPIPVHIB
- PNC
- DTAP
- MEA
- MENB
- IPV
- DTAPIPV
- HIBV
- MNQ
- FLUN4
- HEPA
- FLU(H1N1)
- PNC13
- HPV4
- FLUX(H1N1)

Once again DTAP class of vaccines and MMR have the highest ranks.

The table below shows – results for **GAZE PALSY**

- **Gaze palsy** : number of **GAZE PALSY** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **GAZE PALSY** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Gaze palsy	A + B	C	C + D	PRR	S	LCI
DTPHIB	13	2445	1528	9017927	31.3796323	0.277792	18.20482
DTP	39	9409	1502	9010963	24.8669438	0.1618654	18.10672
MM	2	247	1539	9020125	47.4577319	0.7046993	11.9249
MENB	59	32541	1482	8987831	10.9958248	0.1326389	8.478584
DTAPIPVHIB	18	9395	1523	9010977	11.3356832	0.2368662	7.125627
HPV4	180	157025	1361	8863347	7.46523236	0.0792706	6.390971
MMR	114	95204	1427	8925168	7.48931474	0.0972732	6.189298
HPV2	37	29976	1504	8990396	7.37834621	0.1663083	5.325919
PNC	18	15616	1523	9004756	6.81513951	0.2369557	4.283256
DTAP	37	37304	1504	8983068	5.9241108	0.166328	4.276042
6VAX-F	2	879	1539	9019493	13.3347423	0.7067616	3.33716
HEPA	30	37513	1511	8982859	4.75433277	0.1843051	3.312881
DTPIPV	1	253	1540	9020119	23.1510677	0.998347	3.271605
DTAPIPV	11	11466	1530	9008906	5.6488673	0.3024489	3.122566
DF	3	1888	1538	9018484	9.31743707	0.5774545	3.004396
JEV	2	998	1539	9019374	11.744573	0.7068576	2.93865
DTAPHEPBIP	4	3581	1537	9016791	6.55290401	0.5003711	2.457589
CHOL	1	345	1540	9020027	16.9772765	0.9988747	2.396673
HEP	77	156741	1464	8863631	2.97425844	0.1168913	2.36526
FLU(H1N1)	18	30404	1523	8989968	3.49462053	0.2370214	2.196056
DTAPH	1	394	1540	9019978	14.8658086	0.9990551	2.097856
TD	24	45393	1517	8974979	3.128025	0.2056787	2.090225
HPVX	7	9816	1534	9010556	4.18880093	0.3786912	1.994074
FLUX(H1N1)	7	9854	1534	9010518	4.17263005	0.3786917	1.986374
MMRV	13	23436	1528	8996936	3.2661125	0.2784506	1.892384
HIBV	11	20204	1530	9000168	3.2026871	0.3025113	1.770157

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include –

- DTPHIB
- DTP
- MENB
- DTAPIPVHIB
- HPV4
- MMR
- HPV2
- PNC
- DTAP
- HEPA
- DTAPIPV
- DF
- DTAPHEPBIP
- HEP
- FLU(H1N1)



The table below shows – results for **DECREASED EYE CONTACT**

- **Decreased eye contact** : number of **DECREASED EYE CONTACT** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **DECREASED EYE CONTACT** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Decreased eye contact	A + B	C	C + D	PRR	S	LCI
DTPIPV	2	253	1540	9020119	46.3021354	0.7076949	85.22626
6VAX-F	3	879	1539	9019493	20.0021134	0.5805198	47.43542
MMR	63	95204	1427	8925168	4.13883183	0.1503967	29.71802
DTAPIPVHIB	10	9395	1523	9010977	6.29760175	0.3238342	25.29448
DTAP	21	37304	1504	8983068	3.36233316	0.2299028	16.96047
HIBV	13	20204	1530	9000168	3.78499385	0.2862236	16.68987
DTAPHEPBIP	3	3581	1537	9016791	4.91467801	0.5812587	11.62327
MMRV	9	23436	1528	8996936	2.26115481	0.3406154	8.773333
PNC13	8	56511	1521	8963861	0.83430125	0.3604279	3.084279
MEA	1	2076	1541	9018296	2.81899625	1.0021378	2.901623
MENB	5	32541	1482	8987831	0.93184956	0.4525743	2.761136
PNC	3	15616	1523	9004756	1.13585659	0.5814438	2.660879
HEPA	5	37513	1511	8982859	0.7923888	0.4525788	2.393827
DTP	2	9409	1502	9010963	1.27522789	0.7104071	2.277197
RV1	3	20802	1531	8999570	0.84774011	0.5814575	1.99631
RUB	1	3060	1541	9017312	1.91228682	1.002215	1.968039
DTAPIPV	2	11466	1530	9008906	1.02706678	0.7104206	1.868193
DT	1	4372	1539	9016000	1.33997017	1.002264	1.377115
RV5	3	30921	1532	8989451	0.56930124	0.581471	1.341465
FLUN3	2	16471	1534	9003901	0.71271415	0.7104392	1.29974
PNC20	1	5253	1541	9015119	1.11368257	1.0022831	1.145999
UNK	4	61811	1534	8958561	0.3779263	0.5047917	1.041297
HEP	6	156741	1464	8863631	0.2317604	0.4141717	0.734981
IPV	1	8397	1536	9011975	0.69872231	1.0023187	0.716615
FLUA3	1	9178	1541	9011194	0.63713527	1.0023237	0.655571
FLUX	4	105434	1508	8914938	0.22428297	0.5047983	0.607483

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include –

- MMR
- DTAPIPVHIB
- DTAP
- HIBV
- DTAPHEPBIP
- MMRV
- PNC13
- MENB
- PNC
- HEPA

The table below shows – results for **SOCIAL AVOIDANT BEHAVIOUR**

- **Social avoidant behavior** : number of **SOCIAL AVOIDANT BEHAVIOUR** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **SOCIAL AVOIDANT BEHAVIOUR** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Social avoidant behaviour	A + B	C	C + D	PRR	S	LCI
MMR	86	95204	7402	164	2.0014E-05	0.133097153	37.87226
HPV4	33	157025	7310	217	6.2386E-06	0.186828381	5.951845
DTAPIPVHIB	4	9395	7463	246	1.4034E-05	0.503942943	5.808113
DTAPHEPBIP	2	3581	7479	248	1.852E-05	0.709755518	5.052076
DTAP	7	37304	7449	243	6.1214E-06	0.383334646	3.272352
DTP	2	9409	7490	248	7.0381E-06	0.70987736	1.921084
HEP	13	156741	7436	237	2.6434E-06	0.284843805	1.774844
PNC13	6	56511	7456	244	3.4746E-06	0.413215706	1.735351
HIBV	3	20204	7483	247	4.9012E-06	0.580803159	1.733197
DTAPIPV	2	11466	7482	248	5.7817E-06	0.709890789	1.57604
LYME	2	13252	7496	248	4.9931E-06	0.709899068	1.363341
ANTH	3	29721	7494	247	3.3269E-06	0.580816803	1.17693
HPV2	3	29976	7460	247	3.3136E-06	0.58081705	1.166885
PNC	2	15616	7471	248	4.2514E-06	0.709907114	1.156632
HEPA	3	37513	7431	247	2.6582E-06	0.580822819	0.931646
HPV9	3	40958	7406	247	2.4428E-06	0.58082475	0.852954
MMRV	2	23436	7476	248	2.8309E-06	0.709922163	0.770001
IPV	1	8397	7475	249	3.967E-06	1.001946537	0.604815
FLU(H1N1)	2	30404	7456	248	2.188E-06	0.70992905	0.593065
MENB	2	32541	7411	248	2.0567E-06	0.709930571	0.553984
HPVX	1	9816	7486	249	3.3886E-06	1.001955128	0.517293
TDAP	3	89169	7430	247	1.1184E-06	0.580836113	0.389675
FLU3	6	269177	7320	244	7.4301E-07	0.41323262	0.355664
FLUN3	1	16471	7483	249	2.0202E-06	1.001975669	0.308044
FLU4	3	114504	7321	247	8.8395E-07	0.580838248	0.302594
UNK	2	61811	7454	248	1.0765E-06	0.70994082	0.290695

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include –

- MMR
- HPV4
- DTAPIPVHIB
- DTAP

The table below shows – results for **HEARING IMPAIRED**

- **Hearing impaired** : number of **HEARING IMPAIRED** symptoms for a vaccine
- **A + B** : total number of symptoms for a vaccine
- **C** : number of **HEARING IMPAIRED** symptoms for other vaccines
- **C + D** : total number of symptoms for other vaccines
- **S** : standard deviation for PRR score
- **LCI** : Lower limit of the 95% confidence interval

VAX_TYPE	Hearing impaired	A + B	C	C + D	PRR	S	LCI
LYME	15	13252	191	9007120	53.38	0.2680050	31.5669
MMR	32	95204	174	8925168	17.24	0.1923187	11.82652
JEV	1	998	205	9019374	44.09	1.0019360	6.18624
ANTH	8	29721	198	8990651	12.22	0.3605783	6.028677
HEP	28	156741	178	8863631	8.90	0.2032874	5.972076
PNC	5	15616	201	9004756	14.34	0.4526709	5.906835
FLU(H1N1)	8	30404	198	8989968	11.95	0.3605793	5.892788
FLU3	32	269177	174	8751195	5.98	0.1923364	4.101192
FLUN3	4	16471	202	9003901	10.82	0.5048659	4.0241
HPV4	19	157025	187	8863347	5.74	0.2407751	3.577577
RAB	4	19566	202	9000806	9.11	0.5048755	3.38633
MEN	2	6835	204	9013537	12.93	0.7104615	3.212177
HEPAB	3	16729	203	9003643	7.95	0.5815492	2.544185
DTPHIB	1	2445	205	9017927	17.99	1.0022319	2.52323
DTAPHEPBIP	1	3581	205	9016791	12.28	1.0022967	1.722351
TDAP	7	89169	199	8931203	3.52	0.3845399	1.658113
PPV	9	163717	197	8856655	2.47	0.3408533	1.267103
IPV	1	8397	205	9011975	5.24	1.0023765	0.73401
MNQ	2	30304	204	8990068	2.91	0.7105412	0.7225
FLUN(H1N1)	1	8709	205	9011663	5.05	1.0023787	0.707686
TTOX	1	8990	205	9011382	4.89	1.0023805	0.685542
FLUX	4	105434	202	8914938	1.67	0.5049167	0.622375
DTAP	2	37304	204	8983068	2.36	0.7105455	0.586463
HEPA	2	37513	204	8982859	2.35	0.7105457	0.583182
FLUN4	1	10956	205	9009416	4.01	1.00239	0.562392
TYP	1	12634	205	9007738	3.48	1.0023965	0.4876

Vaccines where these conditions apply : **A + B > 1000** ; **A >= 3** ; **PRR > 2** ; **LCI > 2** , include –

- LYME
- MMR
- ANTHRAX
- HEP
- PNC
- FLU (H1N1)
- FLU3
- FLUN
- HPV4
- RAB
- HEPAB



## **Discussion**

Some vaccines show-

1. High PRR ratios for primary symptoms of autism including -
  - a. Autism
  - b. Aspergers
  - c. Broad autism phenotype
  - d. Autism Spectrum Disorder
2. High PRR ratios for related secondary symptoms of autism including –

### **SPEECH**

- a. Speech disorder
- b. Developmental speech disorder
- c. Repetitive speech
- d. Speech sound disorder
- e. Lack of spontaneous speech

### **COGNITION**

- a. Cognitive disorder
- b. Attention deficit hyperactivity disorder (ADH)
- c. Learning disability
- d. Learning disorder
- e. Intellectual disability

### **DEVELOPMENT**

- a. Neurodevelopmental disorder
- b. Developmental delay
- c. Developmental regression

### **EYE CONTACT**

- a. Stupor
- b. Staring
- c. Gaze palsy
- d. Decreased eye contact

### **SOCIAL BEHAVIOUR**

- a. Social avoidant behavior
- b. Emotional disorder
- c. Emotional poverty

### **HEARING**

- a. Impaired hearing

There is, therefore considerable confirmation of the high PRR ratios for autism in both primary symptom consistency and related secondary symptom consistency. A strong pattern of consistency is apparent across multiple symptoms.

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. This may require 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.

## A Proposed Mechanism

Encephalitis, or inflammation of the brain, may be the mechanism causing autism. [Relevance of Neuroinflammation and Encephalitis in Autism - PMC \(nih.gov\)](#). So is encephalitis associated with MMR vaccines?

VAX_TYPE	Encephalitis	A + B	C	C + D	PRR	S	LCI
MEA	15	2076	1800	9018296	36.20061	0.2583417	21.8178
YF	16	7810	1799	9012562	10.26328	0.250854	6.277039
RAB	36	19566	1779	9000806	9.309062	0.1681924	6.694801
MMR	149	95204	1666	8925168	8.384409	0.0854461	7.091519
DF	3	1888	1812	9018484	7.908509	0.5773694	2.550515
DTAPHEPBIP	5	3581	1810	9016791	6.955672	0.4475189	2.893366
PNC	20	15616	1795	9004756	6.42492	0.2247064	4.136126
DTP	12	9409	1803	9010963	6.374018	0.2894505	3.614332
HEP	180	156741	1635	8863631	6.225637	0.07849	5.337916
HPVX	12	9816	1803	9010556	6.109456	0.2894581	3.464263
HEPAB	19	16729	1796	9003643	5.693713	0.2304962	3.624042

**MEA**, the measles vaccine, has the highest PRR value

When ordered by LCI values we have –

VAX_TYPE	Encephalitis	A + B	C	C + D	PRR	S	LCI
MEA	15	2076	1800	9018296	36.20061	0.2583417	21.8178
MMR	149	95204	1666	8925168	8.384409	0.0854461	7.091519
RAB	36	19566	1779	9000806	9.309062	0.1681924	6.694801
YF	16	7810	1799	9012562	10.26328	0.250854	6.277039
HEP	180	156741	1635	8863631	6.225637	0.07849	5.337916
PNC	20	15616	1795	9004756	6.42492	0.2247064	4.136126

Its curious that **MEA** and **MMR** have the two top ranks for encephalitis.

These results are supported by the incidence of abnormal EEG (electroencephalogram)

VAX_TYPE	Electroencephalogram abnormal	A + B	C	C + D	PRR	S	LCI
DTP	25	9409	1053	9010963	22.73733	0.2020972	15.30068
MEA	6	2076	1072	9018296	24.31384	0.4088003	10.91128
PNC	26	15616	1052	9004756	14.25147	0.1983632	9.660722
MMR	106	95204	972	8925168	10.22353	0.1022358	8.367119
HPV4	135	157025	943	8863347	8.080738	0.0919857	6.747629
RUB	5	3060	1073	9017312	13.73175	0.4478896	5.707878
HPVX	11	9816	1067	9010556	9.463359	0.3028932	5.226577
YF	9	7810	1069	9012562	9.71543	0.3345421	5.043059
DTAPIPVHIB	10	9395	1068	9010977	8.980569	0.3175371	4.819598
HEP	94	156741	984	8863631	5.40209	0.1079262	4.372131
HPV2	23	29976	1055	8990396	6.538536	0.2106956	4.326461
MENB	22	32541	1056	8987831	5.754171	0.2153385	3.772966
DTAP	24	37304	1054	8983068	5.483274	0.2063699	3.659101
DTAPHEPBIP	4	3581	1074	9016791	9.377852	0.5006513	3.515122
HIBV	14	20204	1064	9000168	5.861377	0.2689216	3.460103
DTPHIB	3	2445	1075	9017927	10.29297	0.5778014	3.3167
FLUN3	11	16471	1067	9003901	5.635585	0.3029612	3.112098
HEPAB	9	16729	1069	9003643	4.531199	0.3346441	2.351572
FLUX(H1N1)	6	9854	1072	9010518	5.117922	0.4092651	2.29467
HPV9	17	40958	1061	8979414	3.512714	0.2444208	2.175643
FLUX	36	105434	1042	8914938	2.921275	0.169493	2.095545
HEPA	15	37513	1063	8982859	3.37902	0.2599628	2.030047

When ordered by LCI, the measles vaccine and MMR vaccine have high PRR values and high LCI values.

They are also supported by the incidence of encephalopathy

VAX_TYPE	Encephalopathy	A + B	C	C + D	PRR	S	LCI
MEA	6	2076	1298	9018296	20.08046	0.4086016	9.014984
DTP	23	9409	1281	9010963	17.19517	0.210125	11.39054
DTPHIB	5	2445	1299	9017927	14.19674	0.4476167	5.904317
HPVX	9	9816	1295	9010556	6.379546	0.3343371	3.312808
YF	6	7810	1298	9012562	5.334255	0.4090341	2.392748
LYME	10	13252	1294	9007120	5.252551	0.3173283	2.820038
HPV2	22	29976	1282	8990396	5.14683	0.2149444	3.377345
DT	3	4372	1301	9016000	4.755298	0.5778176	1.532249
MMR	56	95204	1248	8925168	4.206633	0.136557	3.218807
DTAP	21	37304	1283	8983068	3.941504	0.2199353	2.561234
DTAPIPVHIB	5	9395	1299	9010977	3.691781	0.4479545	1.534367
TTOX	4	8990	1300	9011382	3.084241	0.5006575	1.156059

The measles vaccine has the highest PRR and LCI.

The incidence rate for MMR is high also (PRR = 4.2) and is significant at the 5% level, with a lower confidence level of 3.21.

They are also supported by the incidence of subacute sclerosing panencephalitis

VAX_TYPE	subacute sclerosing panencephalitis	A + B	C	C + D	PRR	S	LCI
MMR	16	95204	6	8925168	249.9942	0.4787025	97.82507
FLUN4	1	10956	21	9009416	39.15843	1.023488	5.267624
FLUN3	1	16471	21	9003901	26.03104	1.0235029	3.501613
MMRV	1	23436	21	8996936	18.28066	1.0235117	2.459014
COVID19	3	6452217	19	2568155	0.062846	0.6212603	0.018597

They are also supported by the incidence of brain injury

VAX_TYPE	Brain injury	A + B	C	C + D	PRR	S	LCI
DTP	8	9409	395	9010963	19.39638	0.3569667	9.635281
HPVX	4	9816	399	9010556	9.202464	0.5023985	3.437588
PNC	4	15616	399	9004756	5.780817	0.5024362	2.15927
MMR	17	95204	386	8925168	4.12879	0.2477975	2.540349
FLUN3	3	16471	400	9003901	4.099888	0.5794588	1.316821
DTAP	6	37304	397	8983068	3.639402	0.411289	1.625301
HPV2	4	29976	399	8990396	3.006715	0.5024667	1.123011
FLU(H1N1)	3	30404	400	8989968	2.217628	0.5794828	0.712234
HEP	11	156741	392	8863631	1.586849	0.3057018	0.8716
UNK	4	61811	399	8958561	1.45298	0.5024838	0.542671
TDAP	5	89169	398	8931203	1.258297	0.4500014	0.520876
PNC13	3	56511	400	8963861	1.189661	0.5794959	0.382073
HPV4	8	157025	395	8863347	1.143199	0.3571067	0.567736
FLUX	4	105434	399	8914938	0.847666	0.5024905	0.316589
COVID19	273	6452217	130	2568155	0.835856	0.1065587	0.678308
FLU4	3	114504	400	8905868	0.583333	0.5795037	0.187341
COVID19-2	3	118050	400	8902322	0.565586	0.5795039	0.181641
VARZOS	9	365754	394	8654618	0.540512	0.3371147	0.279156
FLU3	6	269177	397	8751195	0.491349	0.4113171	0.219417

The PRR score for MMR is 4.12 and the LCI is 2.54. Both of these are above 2, which means that MMR is associated with a high incidence of brain injury that is significant at the 5% level of probability.

Nuclear magnetic resonance imaging of the brain shows abnormal results for MEA and MMR vaccines. MMR has a PRR value of 3.35 and a LCI of 2.44, indicating a high incidence of abnormal NMR images, which is significantly higher than the PRR = 2 threshold.

VAX_TYPE	Nuclear magnetic resonance imaging brain abnormal	A + B	C	C + D	PRR	S	LCI
JEV1	3	824	857	9019548	38.31757	0.5773097	12.35896
HEP	153	156741	707	8863631	12.23774	0.0891285	10.27622
HPVX	15	9816	845	9010556	16.2949	0.2602847	9.783467
FLUX(H1N1)	15	9854	845	9010518	16.23199	0.2602854	9.745684
HPV4	139	157025	721	8863347	10.88199	0.0925998	9.075821
RAB	24	19566	836	9000806	13.2064	0.2069097	8.803578
FLUX	93	105434	767	8914938	10.25239	0.1097582	8.267936
LYME	13	13252	847	9007120	10.43193	0.2793352	6.033781
FLU(H1N1)	23	30404	837	8989968	8.12512	0.2112818	5.370109
MEA	3	2076	857	9018296	15.20679	0.5779432	4.898717
PNC	11	15616	849	9004756	7.471145	0.3033526	4.122572
HPV2	18	29976	842	8990396	6.411587	0.2381381	4.020299
FLUN3	11	16471	849	9003901	7.082649	0.3033581	3.908158
FLUN4	8	10956	852	9009416	7.721381	0.3550807	3.849853
FLUN(H1N1)	6	8709	854	9011663	7.269927	0.4095396	3.257788
HIBV	11	20204	849	9000168	5.771627	0.3033766	3.184629
IPV	5	8397	855	9011975	6.276242	0.4483864	2.606306
HEPAB	8	16729	852	9003643	5.053575	0.3551251	2.519475
MMR	31	95204	829	8925168	3.505648	0.1829036	2.449501

These results show that encephalitis, or inflammation of the brain, is associated with MMR, and is possibly a causal factor.

[Inflammation associated with autism,](#)

[Relevance of Neuroinflammation and Encephalitis in Autism](#)

If this is the case, then anti-inflammatories should produce improvements for children with autism. This is confirmed by a number of studies –

[Immunoregulatory and/or Anti-inflammatory Agents for the Management of Core and Associated Symptoms in Individuals with Autism.](#)

## The next question is what causes the encephalitis?

Measles-induced encephalitis is the most frequent neurological complication of measles virus infection. [Measles-induced encephalitis](#). So is MMR associated with measles infection?

VAX_TYPE	Measles	A + B	C	C + D	PRR	S	LCI
MMR	184	95204	111	8925168	155.4018	0.1201382	122.7983
MEA	9	2076	286	9018296	136.7016	0.3378251	70.50356
IPV	6	8397	289	9011975	22.28175	0.4123199	9.9306
RUB	2	3060	293	9017312	20.11491	0.7092856	5.009126
MMRV	13	23436	282	8996936	17.69723	0.2835955	10.15089
DTP	4	9409	291	9010963	13.16421	0.503319	4.908637
HPVX	1	9816	294	9010556	3.122265	1.0016483	0.438379
PNC13	5	56511	290	8963861	2.734854	0.4510327	1.129815
DTAPIPV	1	11466	294	9008906	2.67247	1.0016556	0.37522
PNC	1	15616	294	9004756	1.961349	1.0016672	0.275371
HEPA	2	37513	293	8982859	1.634539	0.7094971	0.406873
HIBV	1	20204	294	9000168	1.515186	1.0016745	0.212727
RV1	1	20802	294	8999570	1.471531	1.0016752	0.206598
HPV2	1	29976	294	8990396	1.020135	1.0016825	0.143222
MENB	1	32541	294	8987831	0.939456	1.0016838	0.131894
HPV9	1	40958	294	8979414	0.745696	1.001687	0.104691
HEP	3	156741	292	8863631	0.580988	0.5803029	0.186296
FLUX	2	105434	293	8914938	0.577165	0.7095092	0.143666
HPV4	2	157025	293	8863347	0.385293	0.7095114	0.095905
TDAP	1	89169	294	8931203	0.340682	1.0016936	0.047829
VARZOS	4	365754	291	8654618	0.325256	0.5034219	0.121256
VARCEL	1	103508	294	8916864	0.293016	1.0016944	0.041137
COVID19	49	6452217	246	2568155	0.079282	0.1564374	0.058346

Notice that both MEA and MMR vaccines result in a higher incidence of measles compared to any other vaccine, as shown by the very high PRR score of 155. The lower limit of the 95% confidence interval is also very high at 122.

Mumps virus can also cause encephalitis - [Mumps encephalitis: return with a vengeance](#)

Rubella virus can also cause encephalitis - [Neurological aspects of rubella virus infection](#)

So, is the MMR vaccine associated with Rubella infection ?

VAX_TYPE	Rubella	A + B	C	C + D	PRR	S	LCI
MMR	53	95204	45	8925168	110.4141	0.2026809	74.21627
COVID19	37	6452217	61	2568155	0.241426	0.2083745	0.160477

MMR is the only vaccine that is associated with Rubella infection , with a very high PRR (110), and that is significant at the 5% level (LCI = 74)

So, is the MMR vaccine associated with Mumps infection ?

VAX_TYPE	Mumps	A + B	C	C + D	PRR	S	LCI
MMR	552	95204	52	8925168	995.1692	0.1450233	748.9462
MU	3	359	601	9020013	125.4179	0.576378	40.52627
MM	1	247	603	9020125	60.56173	0.9988041	8.550649
MMRV	4	23436	600	8996936	2.559292	0.5016213	0.957483
DTAPIPV	1	11466	603	9008906	1.302995	1.0007852	0.183256

MMR is associated with Mumps infection, with a very high PRR (995), and that is significant at the 5% level (LCI = 74). Also notice that the Mumps vaccine us also associated with Mumps infection, and this also is significant at the 5% level.

### Measles infection

A mechanism : MMR → Mumps infection → Encephalitis → Autism

### Rubella infection

## Conclusion

This study confirms that –

- a. 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.
- b. Other vaccines are also with similar associated with autism
- c. MMR is associated with encephalitis which is a known cause of autistic symptoms.
- d. MMR is associated with infection by Rubella, Measles and Mumps, and these viruses are known causes of encephalitis.
- e. Therapies that can combat inflammation may help people suffering from autism

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

- [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.

## Childhood vaccine schedule

The results of PRR analysis reveal that MMR, DTAP, HEP, HIBV and PNC vaccines are all associated with a significant risk of autism (brain damage). They generate definite safety signals.

MMR, DTAP, HEP are included on the childhood vaccine schedule. PARENTS ARE NOT BEING ADVISED OF RISK.

A doctor can get £400 for every 2 year old who is fully vaccinated with 24 vaccines ([incentives paid to doctors](#)). However, the money is only paid out if the doctor reaches a quota of 63% of their clients. The schedule includes 4 DTAP vaccines, 3 IPV vaccines, 1 MMR vaccine, and 4 HEP vaccines. You have seen how each of these is associated with autism and cognitive disability.

CHILDHOOD IMMUNIZATIONS – COMBO 10	
Product lines	BCN Commercial
Source	HEDIS
Description	<p>The percentage of children 2 years of age who meet the combination 10 criteria on or before their second birthday:</p> <ul style="list-style-type: none"><li>• (4) DTaP* vaccinations</li><li>• (3) IPV* vaccinations</li><li>• (1) MMR vaccination</li><li>• (1) VZV vaccination</li><li>• (3) HiB* vaccinations</li><li>• (3) Hepatitis B vaccinations</li><li>• (4) PCV* vaccinations</li><li>• (1) HepA vaccination</li><li>• (2 or 3) RV* vaccinations</li><li>• (2) Influenza** vaccinations</li></ul> <p>*Vaccinations administered prior to 42 days after birth are not counted as a numerator hit. **Vaccinations administered prior to 180 days after birth are not counted as a numerator hit.</p>
Continuous enrollment	Must be continuously enrolled 12 months prior to child's second birthday

A question arises as to why such vaccines remain on the childhood vaccine schedule despite their harmful side-effects. The answer often given is that the benefits out weigh the risks.

But why are parents not informed of the risks so they can decide for themselves? Why do medical professionals pretend there is no risk?

When challenged they reply that such side effects are transient and rare – but we have seen that 2.7% of all children now suffer from autism - numbers that have tripled since 2006... so its not rare at all. And developmental disorders have risen to a staggering 17% of children.

If a cause for neurological damage is apparent, then why is it not removed?

## Risk of Autism

All children are given these vaccines, yet not all develop clinical manifestations of autism. It is possible that sub-clinical levels of autism (“asymptomatic” autism) may be present in others, and lead to a subtle cognitive deficit.

If the mechanism for autism involves encephalitis engendered by infection, then only those children developing an infection (measles, mumps or rubella) following vaccination with MMR will be at risk of developing autism.

Parents should be warned of the risk of infection and the resulting encephalitis, and its impact on social and cognitive functioning.