

Autismus a očkování: nekonečný příběh

historie | epidemiologie | média

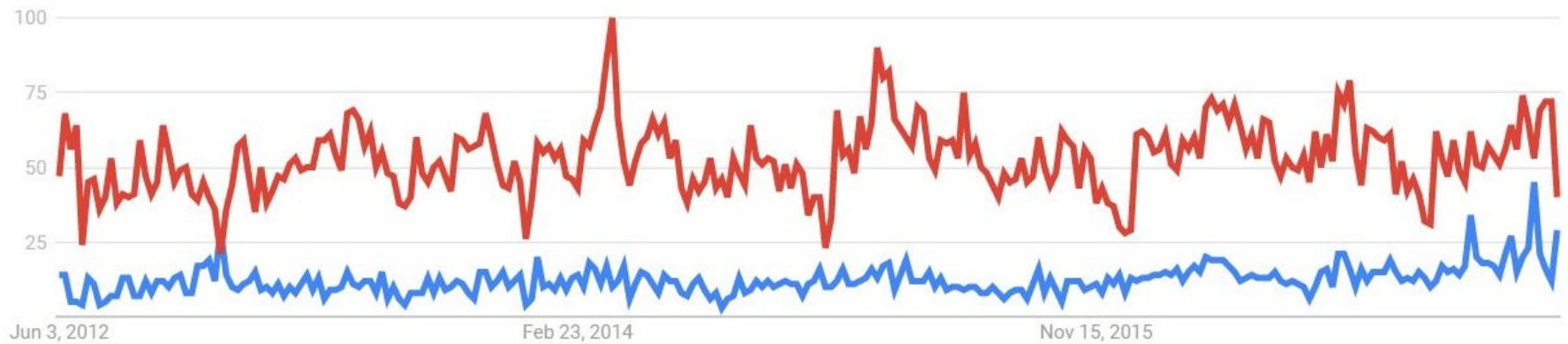
MUDr. Tomáš Nečas^a

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a) Dětské oddělení, KNTB Zlín

b) Klinika dětské neurologie a klinika dětského lékařství, FN
Brno

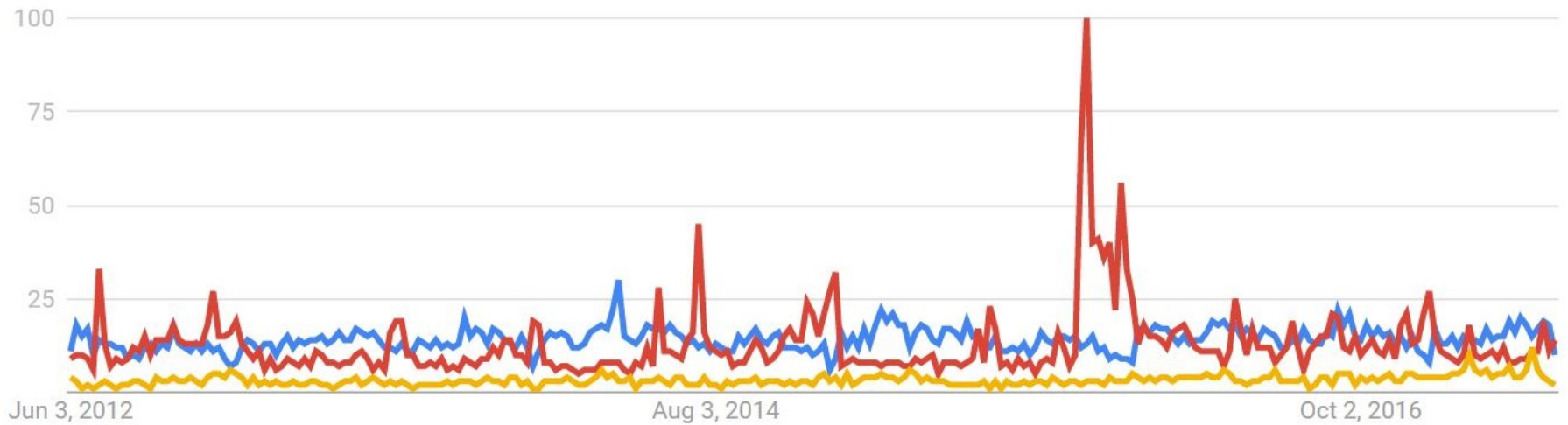
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Google Trends



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POLITICS

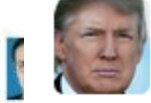
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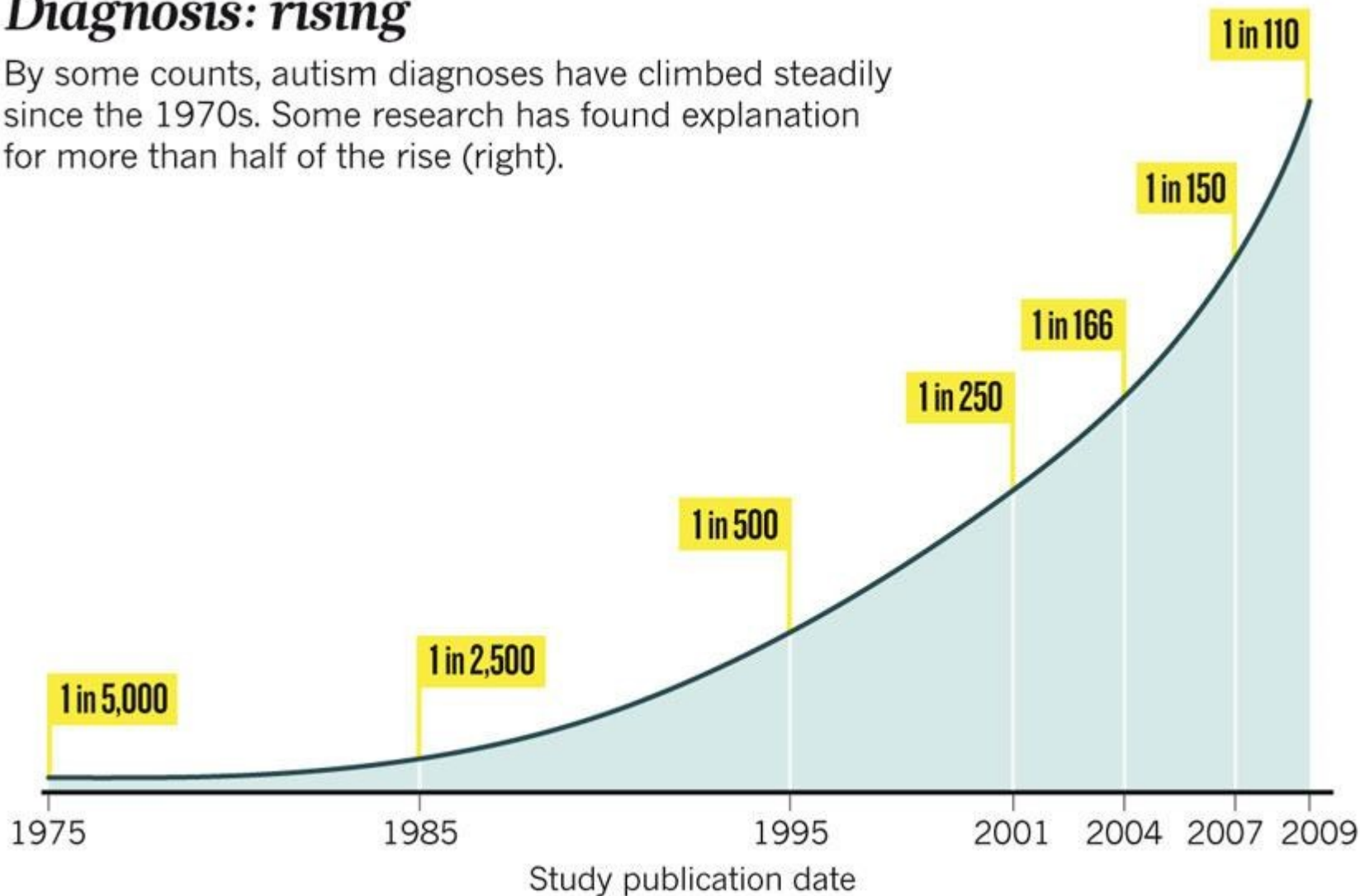
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Massive combined inoculations to small
children is the cause for big increase in
autism....

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Diagnosis: rising

By some counts, autism diagnoses have climbed steadily since the 1970s. Some research has found explanation for more than half of the rise (right).



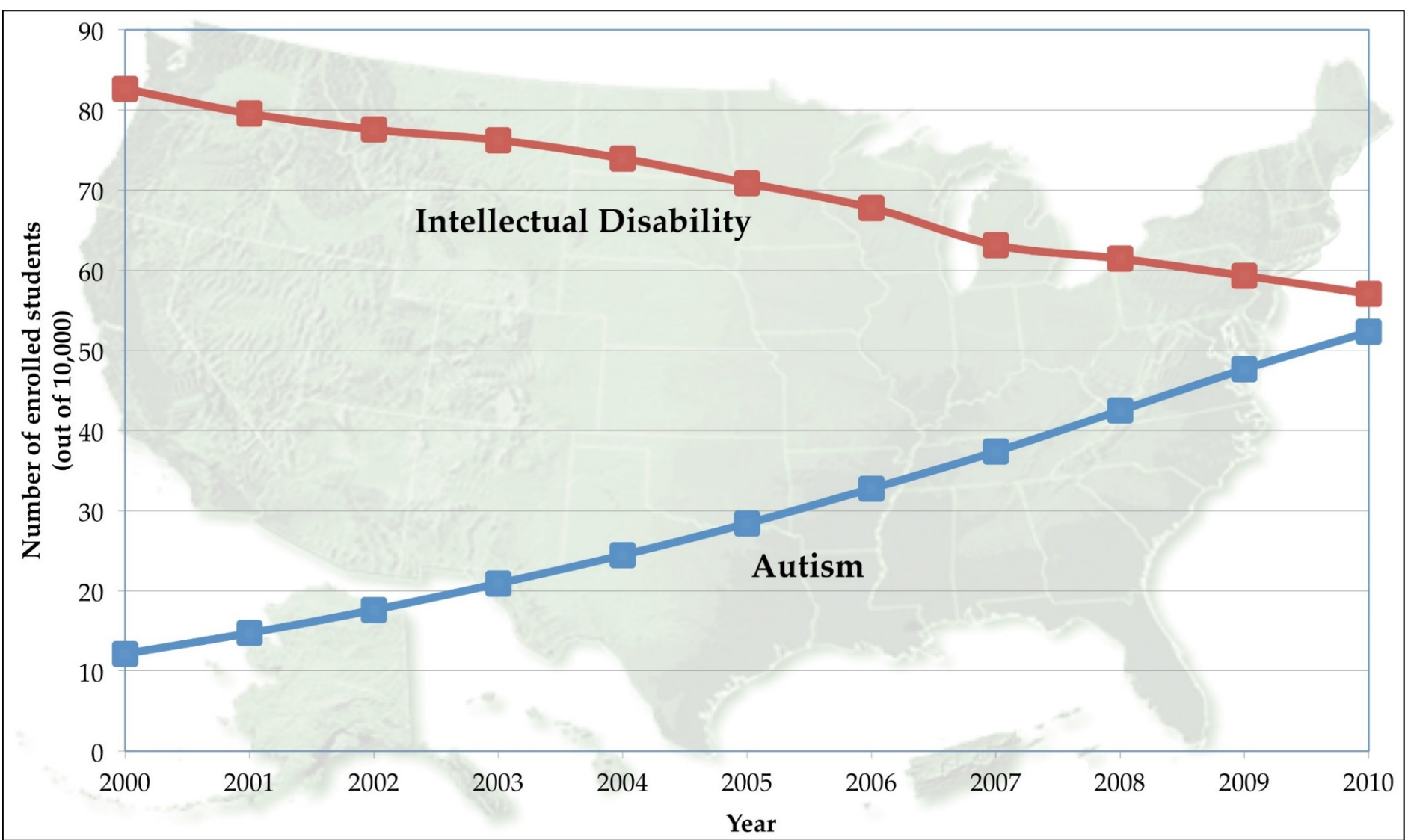
Identified Prevalence of Autism Spectrum Disorder

ADDM Network 2000 – 2012

Combing Data from All Sites

Surveillance Year	Birth Year	Number of ADDM Sites Reporting	Prevalence per 1,000 Children (range)	This is about 1 in X children...
2000	1992	6	5.7 (3.9-9.9)	1 in 150
2002	1994	11	6.6 (3.3-10.6)	1 in 150
2004	1996	11	8.0 (4.6-9.8)	1 in 125
2006	1998	11	9.0 (4.2-12.1)	1 in 110
2008	2000	14	11.3 (4.8-21.2)	1 in 88
2010	2002	11	14.7 (5.7-21.9)	1 in 68
2012	2004	11	14.6 (8.2-24.6)	1 in 68

- Christensen, Deborah L. "Prevalence and characteristics of autism spectrum disorder among children aged 8 years—autism and developmental disabilities monitoring network, 11 sites, United States, 2012." MMWR. Surveillance Summaries 65 (2016).
- Autism Spectrum Disorder (ASD): Data & Statistics. Centers for Disease Control and Prevention [online]. [cit. 2017-05-30]. Dostupné z: <https://www.cdc.gov/ncbddd/autism/data.html>



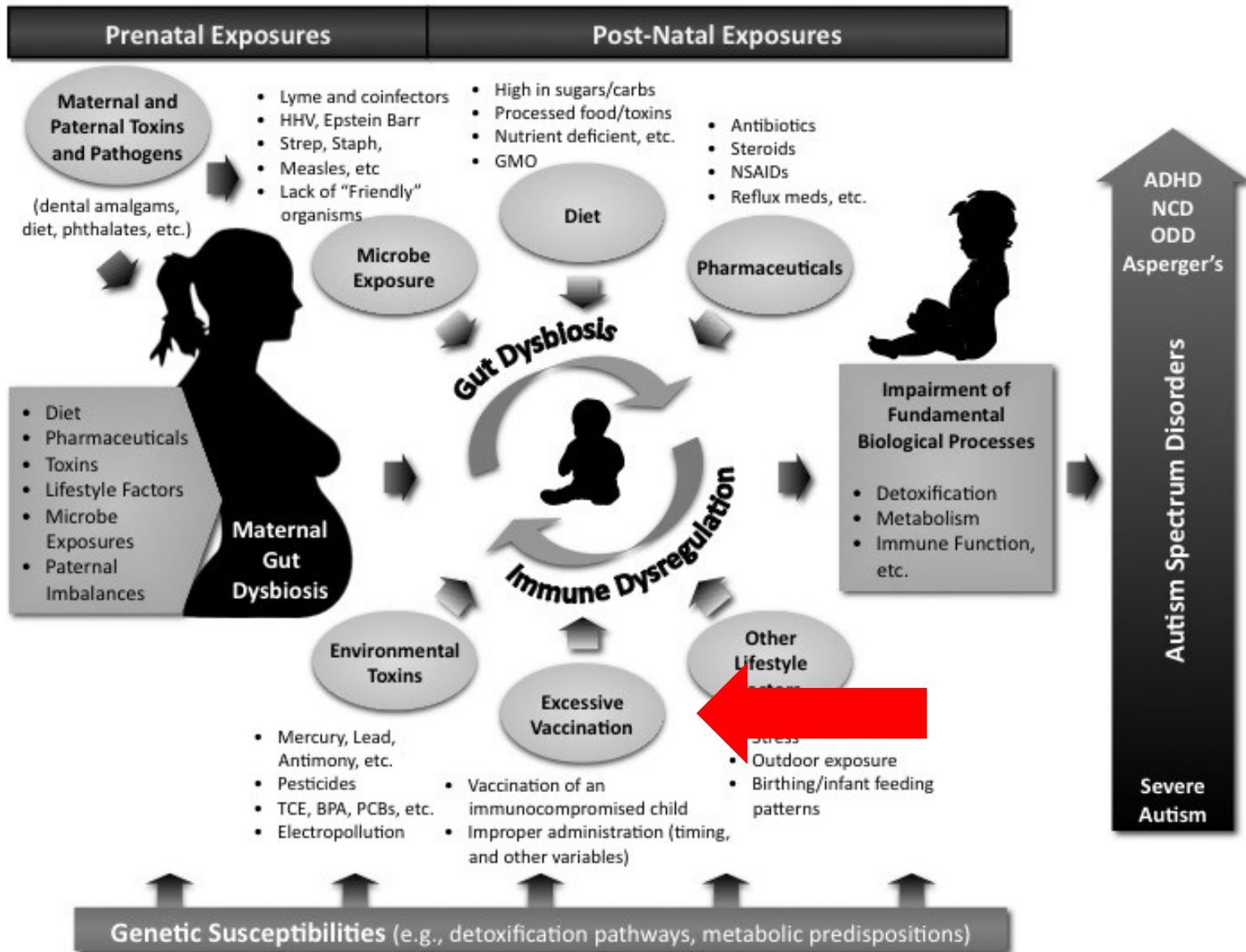
Polyak, Andrew, Richard M. Kubina, and Santhosh Girirajan. "Comorbidity of intellectual disability confounds ascertainment of autism: implications for genetic diagnosis." *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics* 168.7 (2015): 600-608.

Explaining the Increase in the Prevalence of Autism Spectrum Disorders

The Proportion Attributable to Changes in Reporting Practices

Stefan N. Hansen, MSc; Diana E. Schendel, PhD; Erik T. Parner, PhD

- **Danish national health registry**
 - Děti narozené mezi 1980 – 1991 (n = 677 915)
- Změna diagnostických kritérií: **nárůst o 33%**
- Zahrnutí ambulantních dat: **nárůst o 42%**
- Celkový efekt změny metodiky hlášení: **nárůst o 60%**



Autism Causal Factors [online]. In: . [cit. 2017-05-30]. Dostupné z: <https://epidemicanswers.org/wp-content/uploads/2013/01/Autism-Causal-Factors1.jpg>

Is measles vaccination a risk factor for inflammatory bowel disease?

N P Thompson, S M Montgomery, R E Pounder, A J Wakefield

- **1995 - Royal Free Hospital, London, UK**
- hypotéza chronické infekce střeva virem spalniček
- Kohortová studie
 - 3545 očkovaných MMR vakcínou
 - 13 948 kontrol
- MMR je rizikový faktor pro rozvoj IBD
 - Očkovaní mají **2-3x** vyšší riziko

ECCO Topical Review

European Crohn's and Colitis Organisation Topical Review on Environmental Factors in IBD



3.4. Childhood vaccinations and the development of IBD

ECCO Current Practice Position 4

There is no support for the hypothesis that vaccinations in childhood predispose to the later development of IBD

Early report**Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children**

A J Wakefield, S H Murch, A Anthony, J Linnell, D M Casson, M Malik, M Berelowitz, A P Dhillon, M A Thomson, P Harvey, A Valentine, S E Davies, J A Walker-Smith

- **1998 - Royal Free Hospital, London, UK**
- série 12 případů dětí s IBD a ASD
 - průkaz viru spalniček ve stěně střeva
 - dle rodičů regres nastal po aplikaci MMR vakcíny
 - diskutována možná asociace s **MMR vakcínou**
- „We identified associated gastrointestinal disease and developmental regression in a group of previously normal children, which was generally associated in time with possible environmental triggers.“



- **Tisková konference a následná TZ**
 - doporučeno zastavení užívání MMR
 - preferovat užití 1-složkové spalničkové vakcíny
 - **prezentoval hypotézu souvislosti MMR a ASD**
 - „autistic enterocolitis“
 - obrovský zájem medií

I won't let our baby have MMR jab, says Livingstone

KEN LIVINGSTONE last night advised parents to shun the MMR vaccine.

The London Mayor said he would make sure his unborn child was given single jabs when the time came.

He said he believed MMR, which has

By **Beezy Marsh** and **Tahira Yaqoob**

been linked to increased rates of autism and bowel disease among children, did present a risk.

In his role as Mayor, he was advising London parents not to take that risk but to pay for single jabs instead.

Mr Livingstone told BBC Radio 5 Live that he believed injecting babies with three powerful viruses at once could overload their immune systems.

'It seems to me that a child of 14 months is incredibly vulnerable,' he said. 'Why smack them all into a child at the same time?'

'There is no way I would infect that risk on a child.'

'Until it can demonstrate beyond doubt that the MMR jab is safe, the Government should make single jabs available.'

'They say risk is minuscule, but that does not mean it's safe.'

He added that 'Government scientists' could no longer be trusted to tell the truth in the wake of the BSE scandal. 'This whole debate is all about administrative convenience,' he said. 'It's a matter of a huge saving of time and money rather than having to chase people up to make sure they get them all separately.'

The 57-year-old politician, whose partner, Emma Beal, is expecting a baby, said he was not talking as an individual but as a Mayor advising on health matters.

Mr Livingstone's decision to speak out puts him on a collision course with the Government's Chief Medical Officer, Sir Liam Donaldson.

There are fears of a measles epidemic if the current take-up of inoculations continues to fall. Incidences of the killer disease are already on the rise.

'The number of children caught with measles quadrupled in the first three months of this year, compared with the previous three months.'

Doctors, virologists and patient support groups say a public inquiry is needed to restore confidence in the jab and avoid accusations of a 'cover-up' over MMR.

The Patients' Association said people had 'lost confidence' in the vaccination.

Many have been angered by



Above: The Mayor's partner Emma Beal.
Left: Ken Livingstone

the Prime Minister's refusal to discuss whether his son Leo has been given the jab.

British expert Dr Andrew Wakefield was vilified by the establishment after discovering a rare form of bowel disease in autistic children which may be linked to the jab.

More than 2,000 families say their children have been damaged by MMR and research continues to raise questions about its safety.

A study by Sunderland University's Autism Research Unit last week suggested that one in every 1,500 MMR jabs could trigger autism.

Last night Government health experts insisted that MMR was the safest and best

Lynda Lee-Potter
- Page 11

Ban three-in-one jab, urge doctors after new fears

By **JENNY HOPE**
Medical Correspondent

DOCTORS are calling for the three-in-one measles, mumps and rubella jab to be suspended and protection to be given to toddlers in single injections instead.

Safety fears have been heightened by new research published today into a link between autism and a newly identified bowel disease found in some children after having MMR vaccination.

But a split has emerged among leading doctors involved. Some claim the evidence is not strong enough to support a far-reaching change in UK vaccination policy that could leave thousands of children at risk of diseases that can kill.

The latest study will raise questions for millions of parents being targeted by Government campaigns to ensure their babies are vaccinated against childhood diseases.

Experts at the Royal Free Hospital School of Medicine in London have discovered a new syndrome in children that links inflammation of the gut and autism. The bowel disorder is entirely new, although similar to colitis with symptoms of diarrhoea, constipation and

abdominal pain. Researchers studied 12 children referred to gut specialists at the hospital after developing behavioural problems. All were found to have the same unique bowel syndrome and nine had autism, says a report in *The Lancet* medical journal.

In eight cases the parents or the child's GP noticed that the changes followed soon after the child had MMR vaccination, at around 15 months. Before that they had been developing normally.

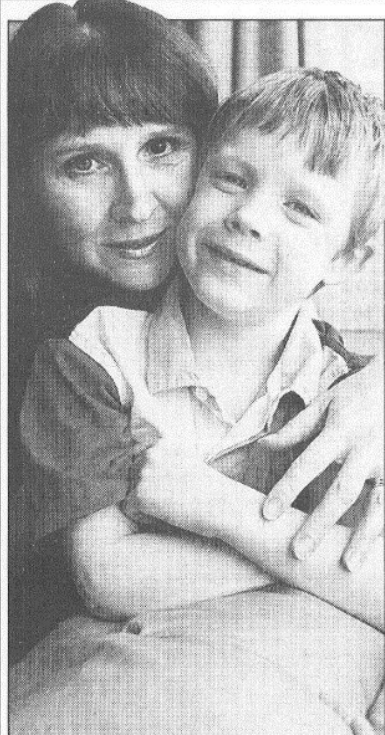
The research team, led by Dr Andrew Wakefield, reader in experimental gastroenterology, and Professor John Walker-Smith, with 39 out of 40 having the same combination of intestinal and behavioural problems.

Dr Wakefield, who has carried out previous research suggesting the measles virus could be involved in triggering gut and immune system problems, said the possible link between intestinal disorders, autism and MMR vaccination could no longer be ignored.

He said some US researchers had found a similar link - but there had never been any such problems reported when children had measles, mumps and rubella vaccine given as separate jabs, preferably a year apart.

'It's a moral issue for me and I can't support the continued use of these three vaccines given in combination until this issue has been resolved,' he

THE HEARTBREAK OF ONE FAMILY



Problems: Matthew with his mother Rochelle

How our happy child changed

AT seven, Matthew Poulter has some of the most difficult behavioural problems caused by autism.

The happy toddler seen in early home videos is now socially withdrawn, uncoordinated, aggressive and has continence problems.

His parents Rochelle, 37, and Graham, 41, from Brighton, now know he has a

previously unrecognised bowel disorder syndrome after he took part in the Royal Free study.

They believe his MMR jab at 15 months caused the development of behavioural problems over the following weeks.

'They would like the jabs given separately again, as in Japan.'

'This is what we have wanted for a long time and now doctors are backing us,' said Mrs Poulter.

Europe alone without reports of any dramatic side effects and the World Health Organisation this month confirmed it was safe,' he said.

A Department of Health spokesman said: 'MMR vaccine should continue to be used as recommended.'

The vaccine was introduced in October 1988. Hundreds of families who believe it has damaged their children are taking legal action.

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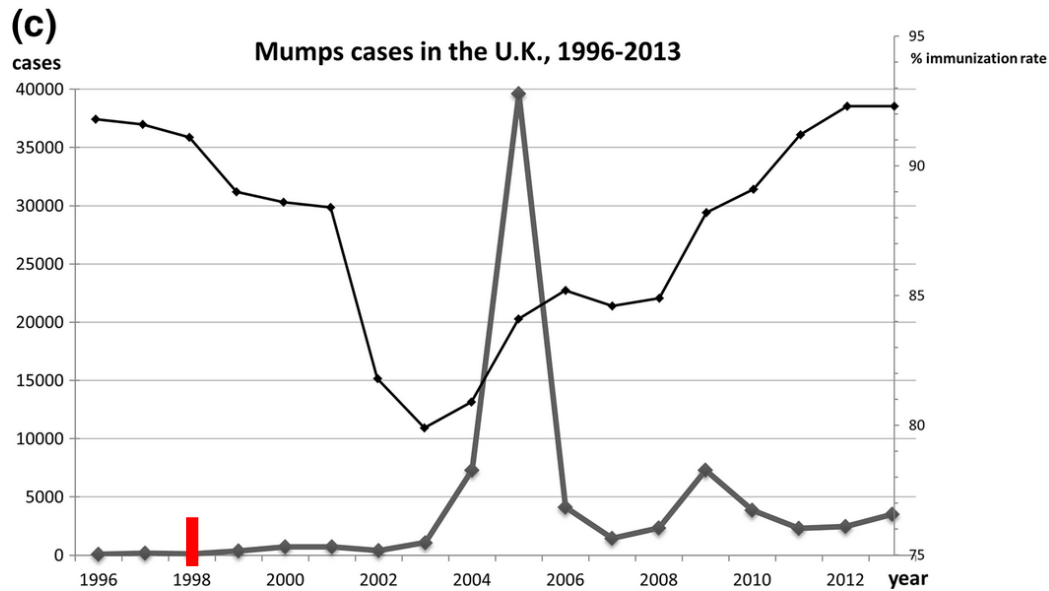
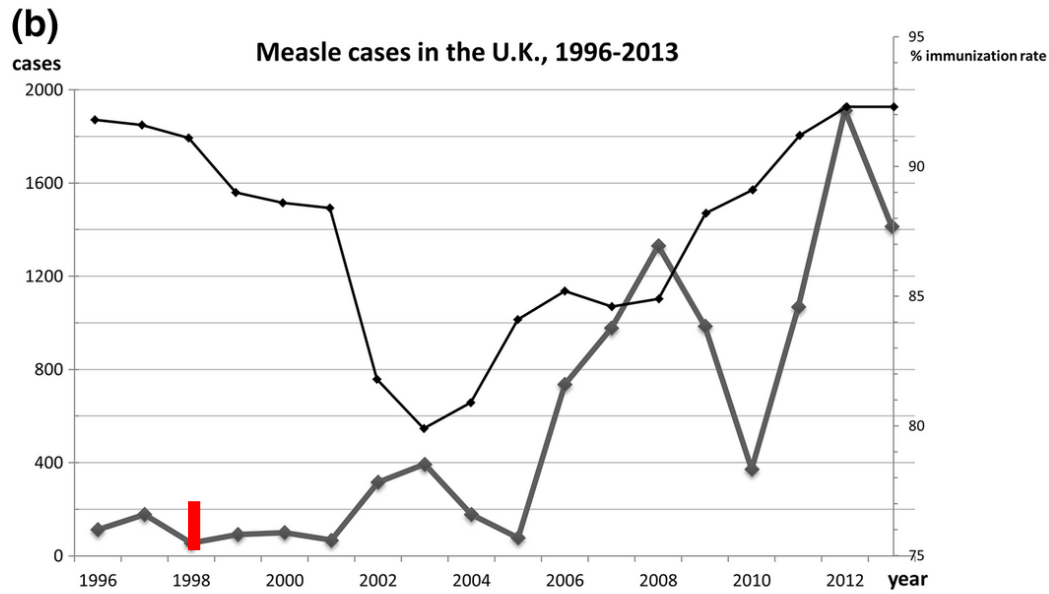
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Schulz, Jörg B., Mark R. Cookson, and Laura Hausmann. "The impact of fraudulent and irreproducible data to the translational research crisis—solutions and implementation." *Journal of neurochemistry* 139.S2 (2016): 253-270.



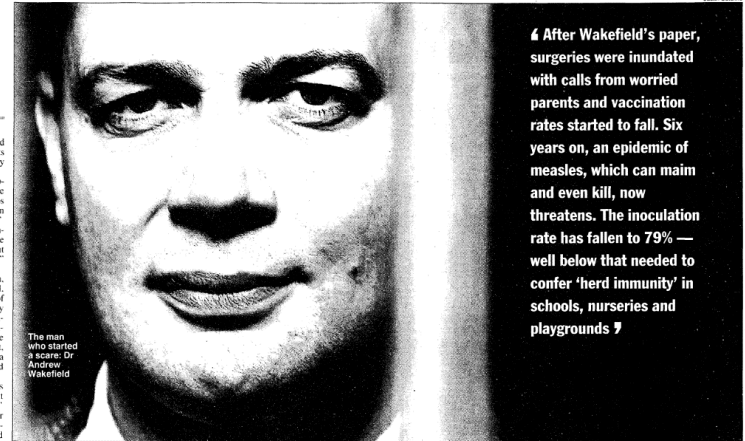
Brian Deer


THE SUNDAY TIMES
MMR: THE TRUTH

Six years ago Andrew Wakefield linked MMR with autism. It sparked a national health scare that could yet see children die. **Brian Deer** reveals the doctor's secret

To call a national press conference in order to announce the results of a scientific trial is rare. For a prestigious teaching hospital to do so for a study involving just 12 children is unprecedented. So when journalists were called to attend an urgent press briefing at the Royal Free hospital in London in February 1998 they arrived expecting a scoop. Under television lights, five doctors, including the dean of the medical school, lined up to make their announcement. They had they informed the hushed room, important news from the front line of medicine: injections of the combined measles, mumps and rubella vaccine (MMR) had been linked for the first time to a bowel disorder and the onset of a severe form of regressive behaviour, generally known as autism, in children. Richard Horton, the dapper young editor of The Lancet, waited expectantly in his

together with diarrhoea and abdominal pain", read its remarkably media-friendly opening page. "Onset of behavioural symptoms was associated, by the parents, with measles, mumps and rubella vaccination in eight out of the 12 children." Eight out of 12, it was a stunning proportion. Worse, the damage had become evident on average just "6.3 days" after the jobs were given. Professor Aric Zuckerman, dean of the medical school, then sounded a word of caution. It was "absolutely essential" that public confidence in MMR was not damaged by the publication of the study. Eight children did not, after all, provide proof of a link between MMR and autism, he noted. However, if Zuckerman was cautious, others were not. At the centre of the speakers' table sat the principal author of the study, Dr Andrew Wakefield. Cutting a dashing and charismatic figure, the young gastroenterologist had a very



The man who started a scare: Dr Andrew Wakefield

After Wakefield's paper, surgeries were inundated with calls from worried parents and vaccination rates started to fall. Six years on, an epidemic of measles, which can maim and even kill, now threatens. The inoculation rate has fallen to 79% — well below that needed to confer 'herd immunity' in schools, nurseries and playgrounds 7

- **2004 - série investigativních článků v The Sunday Times**
 - Wakefield nezveřejnil **významné konflikty zájmů**:
 - placen právníky připravujícími proces proti výrobci MMR vakcíny
 - někteří pacienti ve studii byli klienty těchto právníků
 - celý výzkum byl iniciován právníky chystajícími žalobu na výrobce
 - v roce 1998 podal patent na 1-složkovou vakcínu proti spalničkám
 - v biopsované tkáni **nebyl prokázán virus spalniček**
 - mnohé údaje o pacientech (např. příznaky ASD) byly **zcela chybné!**

Early report

Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children

A J Wakefield, S H Murch, A Anthony, J Linnell, D M Casson, M Malik, M Berelowitz, A P Dhillon, M A Thomson, P Harvey, A Valentine, S E Davies, J A Walker-Smith

Summary

Background We investigated a consecutive series of children with chronic enterocolitis and regressive developmental disorder.

Methods 12 children (mean age 6 years [range 3–10], 11 boys) were referred to a paediatric gastroenterology unit with a history of normal development followed by loss of acquired skills, including language, together with diarrhoea and abdominal pain. Children underwent gastroenterological, neurological, and developmental assessment and review of developmental records. Ileocolonoscopy and biopsy sampling, magnetic-resonance imaging (MRI), electroencephalography (EEG), and lumbar puncture were done under sedation. Barium follow-through radiography was done where possible. Biochemical, haematological, and immunological profiles were examined.

Findings Onset of behavioural symptoms was associated by the parents, with measles, mumps, and rubella vaccination in eight of the 12 children, with measles infection in one child, and otitis media in another. All 12 children had intestinal abnormalities ranging from lymphoid nodular hyperplasia to atypical ulceration. Histology showed patchy chronic inflammation in 11 children and reactive ileal lymphoid hyperplasia in seven, but no granulomas. Behavioural disorders included autism (nine), disintegrative psychosis (one), and possible postviral or vaccinal encephalitis (two). There were no focal neurological abnormalities and MRI and EEG tests were normal. Abnormal laboratory results were significantly raised urinary methylmalonic acid compared with age-matched controls ($p < 0.03$), low haemoglobin in four children, and low serum IgA in four children.

Interpretation We identified an associated gastrointestinal disease and developmental regression in a group of previously normal children, which was generally associated in time to possible environmental triggers.

Lancet 1998; **351**: 637–41
See Commentary page

Inflammatory Bowel Disease Study Group, University Departments of Medicine and Histopathology (A J Wakefield *mrcs*, A Anthony *mb*, J Linnell *mrcs*, A P Dhillon *mrcps*, S E Davies *mrcps*) and the University Departments of Paediatric Gastroenterology (S H Murch *mb*, D M Casson *mrcp*, M Malik *mrcp*, M A Thomson *mrcp*, J A Walker-Smith *mrcs*), Child and Adolescent Psychiatry (M Berelowitz *mrcps*), Neurology (P Harvey *mrcp*), and Radiology (A Valentine *mrcs*), Royal Free Hospital and School of Medicine, London NW3 2QG, UK

Correspondence to: Dr A J Wakefield

Introduction

We saw several children who, after a period of apparent normality, lost acquired skills, including communication. They all had gastrointestinal symptoms, including abdominal pain, diarrhoea, and vomiting and, in some cases, food intolerance. We describe the clinical findings, and gastrointestinal features of these children.

Patients and methods

12 children, consecutively referred to the department of paediatric gastroenterology with a history of a pervasive developmental disorder with loss of acquired skills and intestinal symptoms (including abdominal pain, bloating and food intolerance), were investigated. All children were admitted to the ward for a week, accompanied by their parents.

Clinical investigations

We took histories, including details of immunisations and exposure to infectious diseases, and assessed the children. In 11 cases the history was obtained by the senior clinician (JW-S). Neurological and psychiatric assessments were done by consultant staff (PH, MB) with HMS-4 criteria.¹ Developmental investigations included a review of prospective developmental records from parents, health visitors, and general practitioners. Four children did not undergo psychiatric assessment in hospital; all had been assessed professionally elsewhere, so these assessments were used as the basis for their behavioural diagnosis.

After bowel preparation, ileocolonoscopy was performed by SHM or MAT under sedation with midazolam and pethidine. Paired frozen and formalin-fixed mucosal biopsy samples were taken from the terminal ileum; ascending, transverse, descending, and sigmoid colons, and from the rectum. The procedure was recorded by video or still images, and were compared with images of the previous seven consecutive paediatric colonoscopies (four normal colonoscopies and three on children with ulcerative colitis), in which the physician reported normal appearances in the terminal ileum. Barium follow-through radiography was possible in some cases.

Also under sedation, cerebral magnetic-resonance imaging (MRI), electroencephalography (EEG) including visual, brain stem auditory, and sensory evoked potentials (where compliance made these possible), and lumbar puncture were done.

Laboratory investigations

Thyroid function, serum long-chain fatty acids, and cerebrospinal-fluid lactate were measured to exclude known causes of childhood neurodegenerative disease. Urinary methylmalonic acid was measured in random urine samples from eight of the 12 children and 14 age-matched and sex-matched normal controls, by a modification of a technique described previously.² Chromatograms were scanned digitally on computer, to analyse the methylmalonic-acid zones from cases and controls. Urinary methylmalonic-acid concentrations in patients and controls were compared by a two-sample *t* test. Urinary creatinine was estimated by routine spectrophotometric assay.

Children were screened for antidiomysal antibodies and boys were screened for fragile-X if this had not been done



- 2010:
- retrakce článku z The Lancet
- odebrání lékařské licence v UK

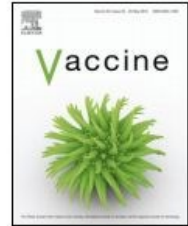


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Vaccine

journal homepage: www.elsevier.com/locate/vaccine



Vaccines are not associated with autism: An evidence-based meta-analysis of case-control and cohort studies



Luke E. Taylor, Amy L. Swerdfeger, Guy D. Eslick*

The Whiteley-Martin Research Centre, Discipline of Surgery, The University of Sydney, Nepean Hospital, Level 3, Clinical Building, PO Box 63, Penrith 2751, NSW, Australia

- **2014 – nejnovější metaanalýza**

- „In conclusion, this meta-analysis provides **no evidence** of a relationship between vaccination and autism or autism spectrum disorders and as such **advocate the continuation of immunisation** programs according to national guidelines.“

Taylor, Luke E., Amy L. Swerdfeger, and Guy D. Eslick. "Vaccines are not associated with autism: an evidence-based meta-analysis of case-control and cohort studies." *Vaccine* 32.29 (2014): 3623-3629.





News › World › Americas

Anti-vaccine activists spark US state's worst measles outbreak in decades

Advocates in Minnesota have repeatedly invited Andrew Wakefield, the British founder of the modern anti-vaccine movement, to talk to worried parents

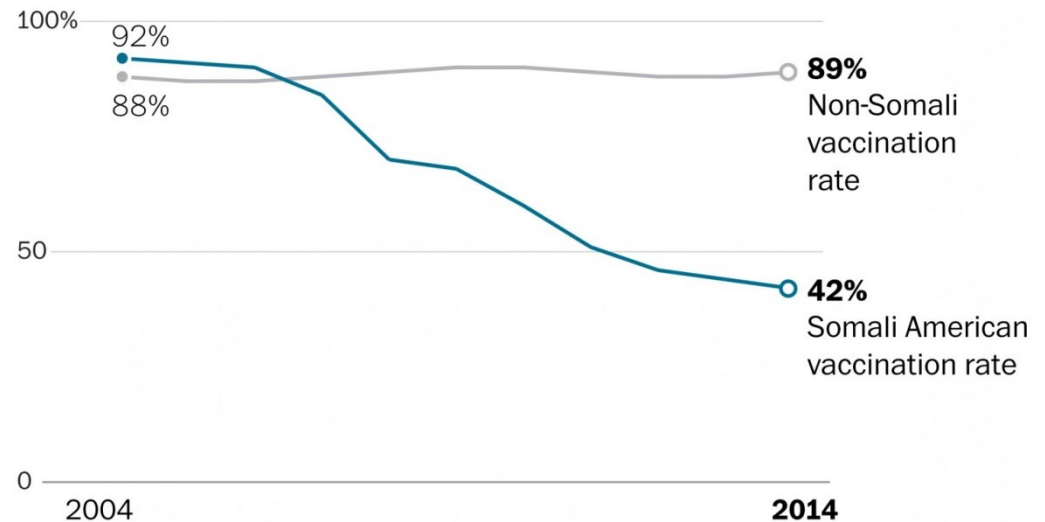
Lena H Sun | Friday 5 May 2017 20:21 BST |  7 comments



Salah, 26 years

A plummeting vaccination rate in Minnesota

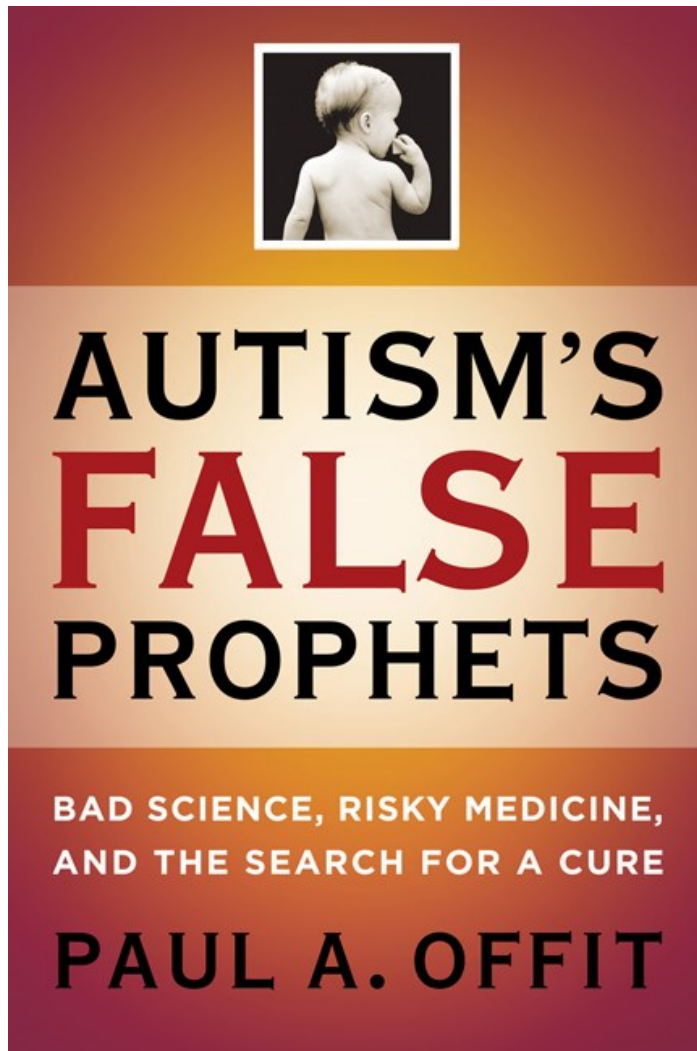
The vaccination rate for measles, mumps and rubella began falling sharply a decade ago among children of Somali descent who live in Minnesota. That drop is now being blamed for a major measles outbreak within the Somali American community there.



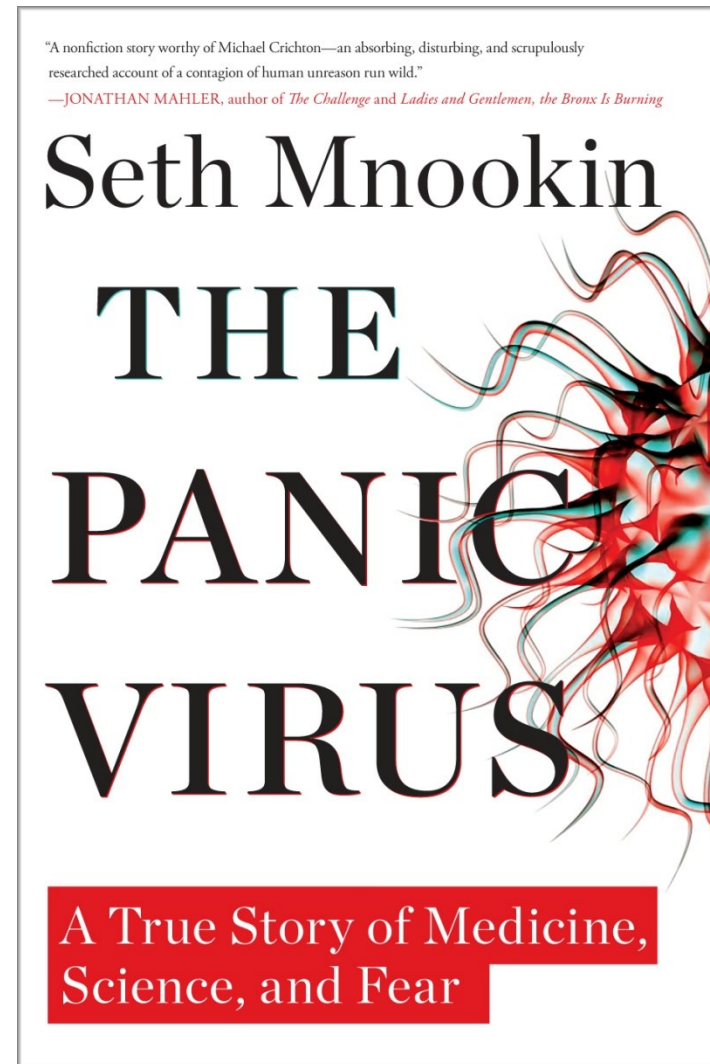
Rates at 24 months in Minnesota-born children

Source: Minnesota Department of Health

THE WASHINGTON POST

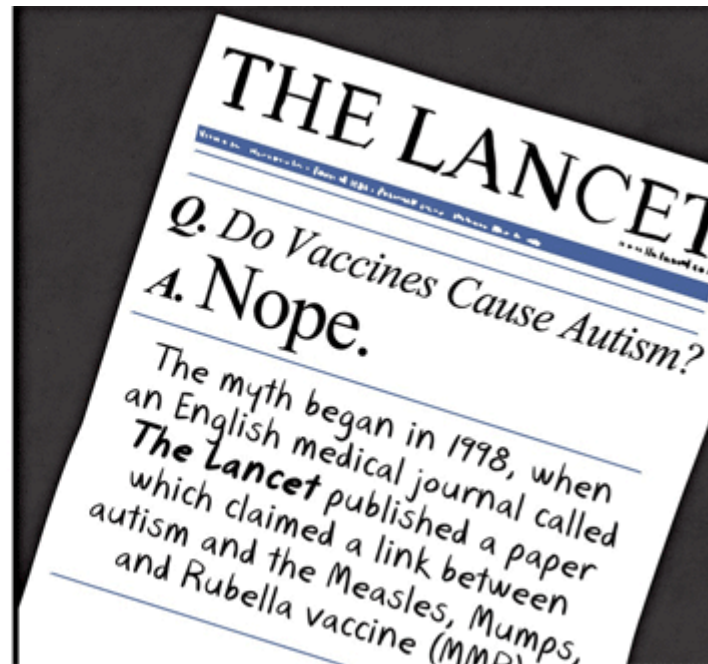


2008 – Paul Offit, CHOP



2011 – Seth Mnookin, MIT

- Offit, Paul. *Autism's false prophets: Bad science, risky medicine, and the search for a cure*. Columbia University Press, 2008.
- Mnookin, Seth. *The panic virus: a true story of medicine, science, and fear*. Simon and Schuster, 2011.



- lékař je nejdůležitější článek v podpoře očkování
- znalost tématu, včetně **alternativních pohledů a argumentů** zvyšuje naši důvěryhodnost před rodiči
- následky „Wakefieldovy studie“:
 - výkyvy v proočkování
 - četná opatření proti „**bad-science**“
 - dokážeme lépe čelit propagandě a fake-news



foto: Státní okresní archiv Zlín

Děkuji za pozornost!

MUDr. Tomáš Nečas
tnecas@mail.muni.cz