

“Vacinas: O que os Cidadãos devem saber”

- ▶ José M. D. Poças
- ▶ Médico Especialista em Medicina Interna e Infeciologia
- ▶ Diretor do Serviço de Doenças Infeciosas do CHS

VACCINES WORK

Here Are the Facts



Dicotomia de atitudes: Uma opção consciente!?!....

- ▶ Ter receio da doença
- ▶ Confiar na Ciência e nos Médicos
- ▶ Respeitar direito à saúde das crianças e aceitar a sua individualidade
- ▶ Os Direitos da Comunidade
- ▶ Ter receio dos efeitos dos tratamentos
- ▶ Confiar na Pseudociência e nas opiniões dos leigos
- ▶ Entender que as crianças são propriedade dos adultos e que irão ter obrigatoriamente as mesmas crenças e valores
- ▶ Os Direitos Individuais

Os factos relacionados com os (infundados) receios



Vaccinophobia

Do you have a fear of vaccines and vaccination?

Vacinas e Doenças Autoimunes

EPMA Journal (2017) 8:295–311
DOI 10.1007/s13167-017-0101-y



REVIEW

Vaccination and autoimmune diseases: is prevention of adverse health effects on the horizon?

Maria Vadalà^{1,2} • Dimitri Poddighe³ • Carmen Laurino^{1,2} • Beniamino Palmieri^{1,2}

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© European Association for Predictive, Preventive and Personalised Medicine (EPMA) 2017

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EPMA Journal (2017) 8:295–311

Table 1 Autoimmune diseases reported after vaccination

Autoimmune disease	Type of vaccine	Ref
Systemic lupus erythematosus	HBV, tetanus, anthrax	[17]
Rheumatoid arthritis	HBV, tetanus, typhoid/parathypoid, MMR	[18]
Multiple sclerosis	HBV	[19–21]
Reactive arthritis	BCG, typhoid, DPT, MMR, HBV influenza	[22–24]
Polymiositis/ dermatomyositis	BCG, smallpox, diphtheria, DPT	[22, 25]
Polyarthritis nodosa	Influenza, pertussis, HBV	[22, 25]
Guillain-Barré syndrome	Influenza, polio, tetanus	[26–28]
Diabetes mellitus-type I	HIB	[29–31]
Idiopathic thrombocytopenia	MMR, HBV	[22, 25]
Hashimoto thyroiditis	HBV	[32]

▶ 0,01%

Vacinas e Autismo

 **Vaccine** 
Volume 32, Issue 29, 17 June 2014, Pages 3623-3629

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  

[Show more](#)

**Vaccines do not cause autism.
The debate is OVER.**

REJECTED
By the medical community

REJECTED
By the autistic community

REJECTED
By the scientific community

REJECTED
By people with autism

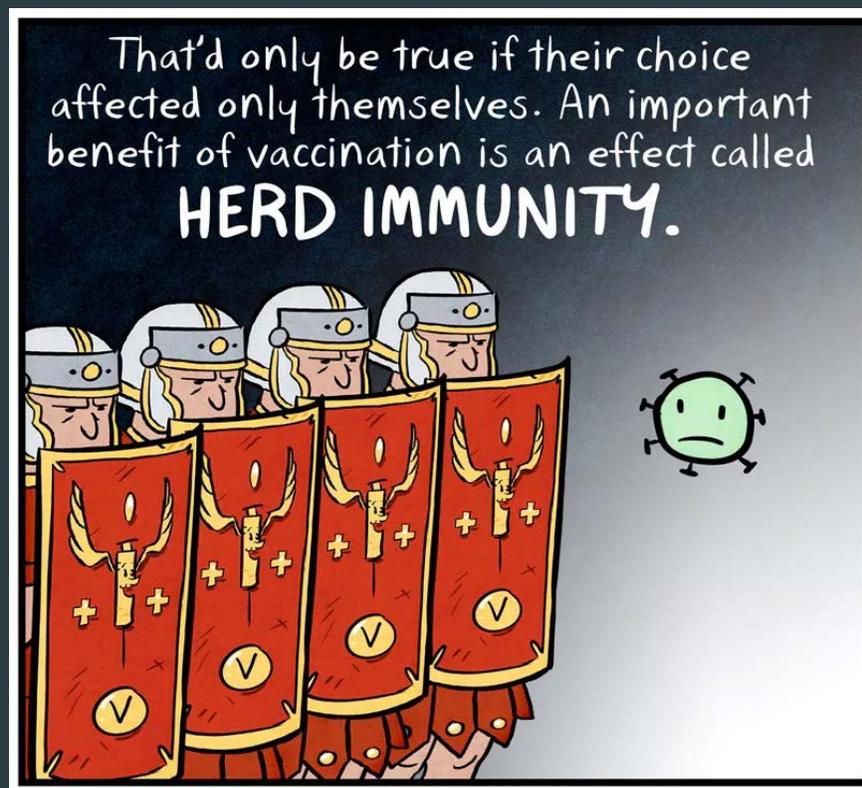
REJECTED
By the research community

This myth is busted by science. 
www.facebook.com/PCCVGN

Abstract

There has been enormous debate regarding the possibility of a link between childhood vaccinations and the subsequent development of autism. This has in recent times become a major public health issue with vaccine preventable diseases increasing in the community due to the fear of a 'link' between vaccinations and autism. We performed a meta-analysis to summarise available evidence from case-control and cohort studies on this topic (MEDLINE, PubMed, EMBASE, Google Scholar up to April, 2014). Eligible studies assessed the relationship between vaccine administration and the subsequent development of autism or autism spectrum disorders (ASD). Two reviewers extracted data on study characteristics, methods, and outcomes. Disagreement was resolved by consensus with another author. Five cohort studies involving 1,256,407 children, and five case-control studies involving 9,920 children were included in this analysis. The cohort data revealed no relationship between vaccination and autism (OR: 0.99; 95% CI: 0.92 to 1.06) or ASD (OR: 0.91; 95% CI: 0.68 to 1.20), nor was there a relationship between autism and MMR (OR: 0.84; 95% CI: 0.70 to 1.01), or thimerosal (OR: 1.00; 95% CI: 0.77 to 1.31), or mercury (Hg) (OR: 1.00; 95% CI: 0.93 to 1.07). Similarly the case-control data found no evidence for increased risk of developing autism or ASD following MMR, Hg, or thimerosal exposure when grouped by condition (OR: 0.90, 95% CI: 0.83 to 0.98; $p = 0.02$) or grouped by exposure type (OR: 0.85, 95% CI: 0.76 to 0.95; $p = 0.01$). Findings of this meta-analysis suggest that vaccinations are not associated with the development of autism or autism spectrum disorder. Furthermore, the components of the vaccines (thimerosal or mercury) or multiple vaccines (MMR) are not associated with the development of autism or autism spectrum disorder.

Falemos antes dos sucessos e de bom senso



A demonstração insofismável da eficácia

PHILOSOPHICAL
TRANSACTIONS
OF
THE ROYAL
SOCIETY

B

rstb.royalsocietypublishing.org

Review



Cite this article: Greenwood B. 2014 The contribution of vaccination to global health: past, present and future. *Phil. Trans. R. Soc. B* 369: 20130433.
<http://dx.doi.org/10.1098/rstb.2013.0433>

One contribution of 12 to a Theme Issue 'After 2015: infectious diseases in a new era of health and development'.

Subject Areas:
health and disease and epidemiology,
immunology, microbiology

The contribution of vaccination to global health: past, present and future

Brian Greenwood

Faculty of Infectious and Tropical Diseases, London School of Hygiene and Tropical Medicine, London WC1E 7HT, UK

Vaccination has made an enormous contribution to global health. Two major infections, smallpox and rinderpest, have been eradicated. Global coverage of vaccination against many important infectious diseases of childhood has been enhanced dramatically since the creation of WHO's Expanded Programme of Immunization in 1974 and of the Global Alliance for Vaccination and Immunization in 2000. Polio has almost been eradicated and success in controlling measles makes this infection another potential target for eradication. Despite these successes, approximately 6.6 million children still die each year and about a half of these deaths are caused by infections, including pneumonia and diarrhoea, which could be prevented by vaccination. Enhanced deployment of recently developed pneumococcal conjugate and rotavirus vaccines should, therefore, result in a further decline in childhood mortality. Development of vaccines against more complex infections, such as malaria, tuberculosis and HIV, has been challenging and achievements so far have been modest. Final success against these infections may require combination vaccinations, each component stimulating a different arm of the immune system. In the longer term, vaccines are likely to be used to prevent or modulate the course of some non-infectious diseases. Progress has already been made with therapeutic cancer vaccines and future potential targets include addiction, diabetes, hypertension and Alzheimer's disease.

frontiers
in Public Health

REVIEW
published: 26 November 2015
doi: 10.3389/fpubh.2015.00269

CrossMark

Vaccines Through Centuries: Major Cornerstones of Global Health

Inaya Hajj Hussein^{1*}, Nour Chams², Sana Chams², Skye El Sayegh², Reina Badran², Mohamad Raad², Alice Geroges-Geagea³, Angelo Leone⁴ and Abdo Jurjus^{2,3}

¹ Department of Biomedical Sciences, Oakland University William Beaumont School of Medicine, Rochester, MI, USA, ² Department of Anatomy, Cell Biology and Physiology, Faculty of Medicine, American University of Beirut, Beirut, Lebanon, ³ Lebanese Health Society, Beirut, Lebanon, ⁴ Department of Experimental and Clinical Neurosciences, University of Palermo, Palermo, Italy

Multiple cornerstones have shaped the history of vaccines, which may contain live-attenuated viruses, inactivated organisms/viruses, inactivated toxins, or merely segments of the pathogen that could elicit an immune response. The story began with Hippocrates 400 B.C. with his description of mumps and diphtheria. No further discoveries were recorded until 1100 A.D. when the smallpox vaccine was described. During the eighteenth century, vaccines for cholera and yellow fever were reported and Edward Jenner, the father of vaccination and immunology, published his work on smallpox. The nineteenth century was a major landmark, with the "Germ Theory of disease" of Louis Pasteur, the discovery of the germ tubercle bacillus for tuberculosis by Robert Koch, and the isolation of pneumococcus organism by George Miller Sternberg. Another landmark was the discovery of diphtheria toxin by Emile Roux and its serological treatment by Emil Von Behring and Paul Ehrlich. In addition, Pasteur was able to generate the first live-attenuated viral vaccine against rabies. Typhoid vaccines were then developed, followed by the plague vaccine of Yersin. At the beginning of World War I, the tetanus toxoid was introduced, followed in 1915 by the pertussis vaccine. In 1974, The Expanded Program of Immunization was established within the WHO for bacille Calmette-Guerin, Polio, DTP, measles, yellow fever, and hepatitis B. The year 1996 witnessed the launching of the International AIDS Vaccine Initiative. In 1988, the WHO passed a resolution to eradicate polio by the year 2000 and in 2006; the first vaccine to prevent cervical cancer was developed. In 2010, "The Decade of vaccines" was launched, and on April 1st 2012, the United Nations launched the "shot@Life" campaign. In brief, the armamentarium of vaccines continues to grow with more emphasis on safety, availability, and accessibility. This mini review highlights the major historical events and pioneers in the course of development of vaccines, which have eradicated so many life-threatening diseases, despite the vaccination attitudes and waves appearing through history.

OPEN ACCESS

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Sahin Altgammal,
King Saud bin Abdulaziz University for
Health Sciences, Saudi Arabia

Reviewed by:
Patrizia Silvia Brisacchi,
University of Padova, Italy
Paras Jain,
Albert Einstein College of Medicine,
USA

***Correspondence:**
Inaya Hajj Hussein
nehjuss@oakland.edu

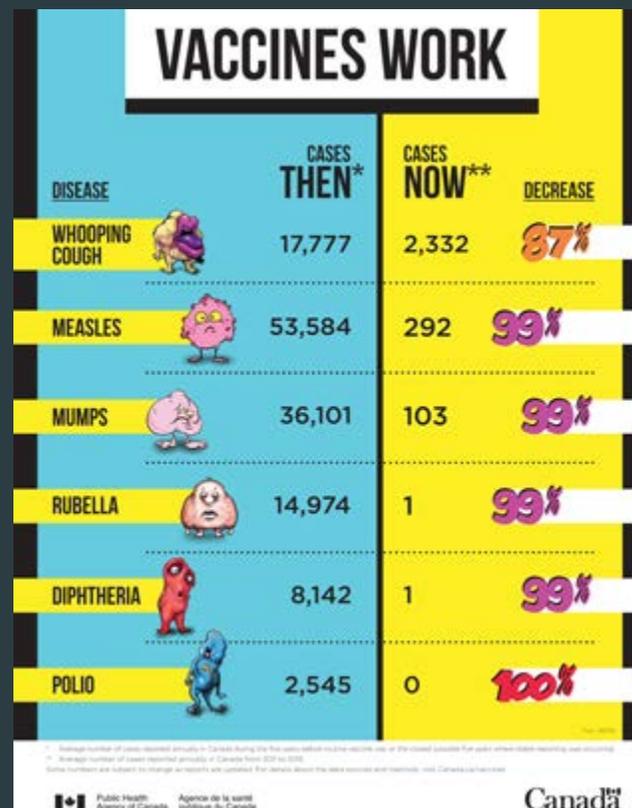
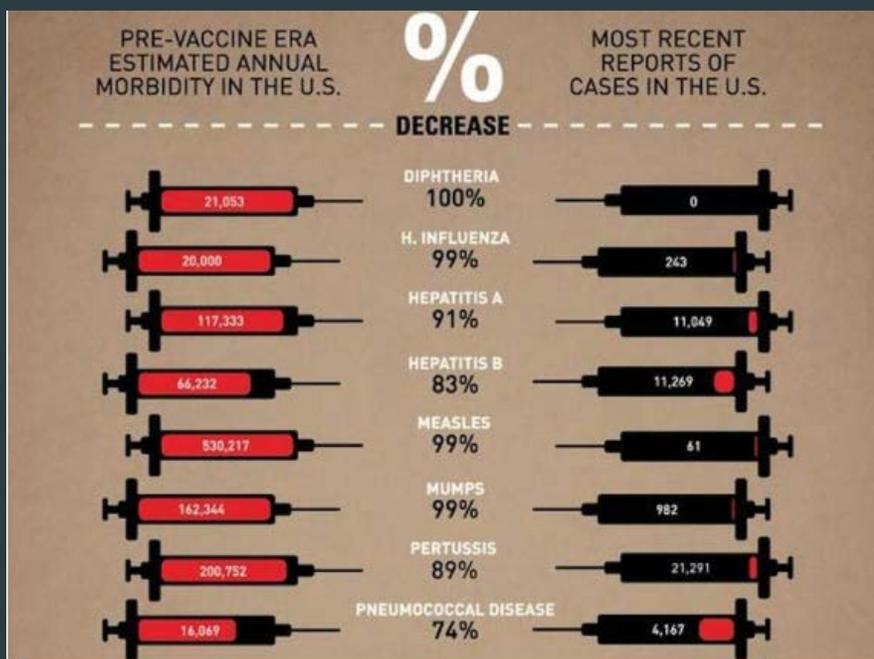
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Keywords: vaccines, immunization, history of vaccines, global health

A quantificação do seu impacto real...



Idem...

Vaccines save an estimated
42,000 lives
every year in
the U.S. alone.

3X more
than seatbelts
and child restraints
combined.

Immunize.
Prevent what's preventable.



Sources: Centers for Disease Control and Prevention, 2009-2012 Accomplishments
National Highway Traffic Safety Administration,
Lives Saved in 2008 by Restraint Use and
Minimum-Drinking-Age Laws

The Unbelievable Impact of Vaccines

U.S. Edition



vaccine nation

Faz algum sentido perguntar ao motorista, antes do início da viagem, se vai haver um acidente?



Não só as crianças, mas também os adultos...

VACCINES AREN'T JUST FOR CHILDREN
ADULTS CAN BE PROTECTED
FROM 14 DEADLY DISEASES

WHAT ARE THE RISKS?

- Up to a month of missed work or school days
- Millions of hospitalizations and hundreds of thousands of deaths
- Tens of thousands of chronic illnesses and permanent disabilities
- Spreading diseases to the most vulnerable — children and older adults

Talk to your healthcare provider about which vaccines are right for you

For more information, visit adultvaccination.org

National Foundation for Infectious Diseases

ADULT VACCINATION FACTS

Vaccines protect adults from 14 serious, possibly deadly, diseases. Adults need shots based on:

- Age
- Job
- Health conditions
- Lifestyle
- Travel
- Vaccination history

Why Get Shots?

- Stay healthy.
- Prevent hospital stays.
- Avoid missed work.
- Protect people around you, like babies and cancer patients.

PROTECT YOURSELF FROM PREVENTABLE DISEASES
BE WISE — IMMUNIZE

Vaccinations are:

- Important: Shots are needed at all ages.
- Safe: Side effects usually are mild and brief, like a sore arm or redness.
- Effective: Vaccines prevent some cancers and deaths from flu.

Shots Adults Need

Everyone

- Flu: yearly
- Tdap (tetanus/lockjaw, diphtheria, and whooping cough): once as an adult, then Td every 10 years

Pregnant Women

- Tdap during each pregnancy (Others caring for baby may need Tdap, too.)
- Flu (protects mom and baby up to age 6 months)

Seniors

- Pneumococcal (lung and blood infections): 2 different shots at age 65 or older
- Zoster (shingles): at age 60

Other Shots (if missed as a child or have risk factors)

- HepA and HepB (hepatitis A and B)
- HPV (human papillomavirus)
- MMR (measles, mumps, and rubella)
- Meningococcal
- Travel vaccines (for illnesses like typhoid)
- Varicella (chickenpox)

Ask your doctor if you've had all the shots you need. Most insurance plans now pay for vaccinations at no cost to you.

TEXAS MEDICAL ASSOCIATION
Be Wise — Immunize™
Physicians Caring for Texans

Source: Centers for Disease Control and Prevention
Be Wise — Immunize is a joint initiative led by TMA physicians and medical students, and the TMA Alliance. It is funded in 2016 by TMA Foundation thanks to major gifts from H.E. and M.M. Jewett Quality Institute, along with generous contributions from physicians and their families.
Be Wise — Immunize is a service mark of the Texas Medical Association.
www.texasmedical.org/be-wise
© Texas Medical Association 2016. www.tma.org

Em especial as grávidas...

Complications during Pregnancy

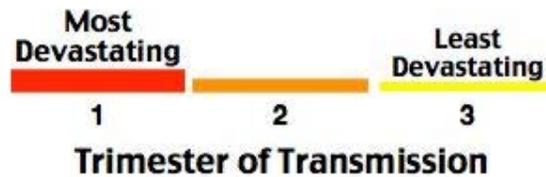


Pregnancy Problems

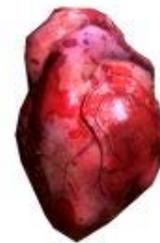
- Gestational diabetes
- Preeclampsia
- Low amniotic fluid
- Infections during pregnancy
- Rh incompatibility
- Ectopic pregnancy
- Premature birth
- Miscarriage
- Stillbirth

www.shecares.com

Congenital Rubella



Sensorineural hearing loss



Heart disease



Congenital cataract

Mas também na população adulta sénior com RCV!!!

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REVIEW

Influenza Vaccination for Secondary Prevention of Cardiovascular Events: A Systematic Review

Marlys H LeBras and Arden R Barry

Review



OPEN ACCESS

Influenza vaccine as a coronary intervention for prevention of myocardial infarction

C Raina MacIntyre,^{1,2} Abela Mahimbo,¹ Aye M Moe,¹ Michelle Barnes¹

Review

Figure 1 Mechanisms by which influenza infection may precipitate acute myocardial infarction.

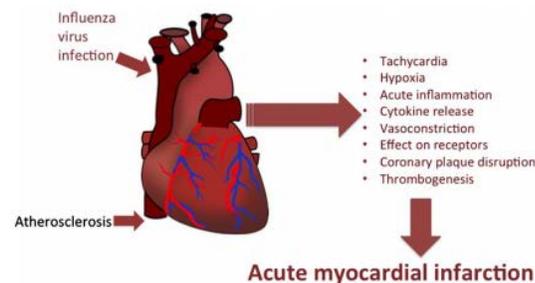


Table 1 Efficacy of accepted coronary interventions and influenza vaccine in the prevention of myocardial infarction

Coronary intervention	Prevention	Intervention efficacy/effectiveness against acute myocardial infarction (%)
Smoking cessation ^{4 23-25}	Secondary	32-43
Statins ³⁸	Secondary	19-30
Antihypertensive drugs ^{26-29 32}	Secondary	17-25
Influenza vaccine ^{5 9 18}	Secondary	15-45

Conclusões



Innovative Vaccines Companies and the Decade of Vaccines

2010 2020+

The goal of the Decade of Vaccines (DOV) initiative, launched in 2010, is to "extend, by 2020 and beyond, the full benefits of immunization to all people, regardless of where they are born, who they are or where they live."

1 in 5 One in five children worldwide don't receive the most basic vaccines.

Nearly 1.5 million children die each year—once every 20 seconds— from vaccine-preventable diseases.

1 in 20"

What will it take to sustainably deliver high quality new vaccines?

Global health community **R&D vaccine industry**

Existing life-saving vaccines and the new ones that are in the pipeline are the result of years of work by research-based vaccine industry. That fact plus a long-standing track record of success and specialized expertise uniquely position vaccine companies to help deliver the promise of the DOV initiative. While the global health community sets the strategy and goals for the DOV, industry can help explain what it is required, from an experienced perspective, to maintain momentum on vaccine innovation, manufacturing and supply.

Os OBJETIVOS de uma ESTRATÉGIA MUNDIAL- I

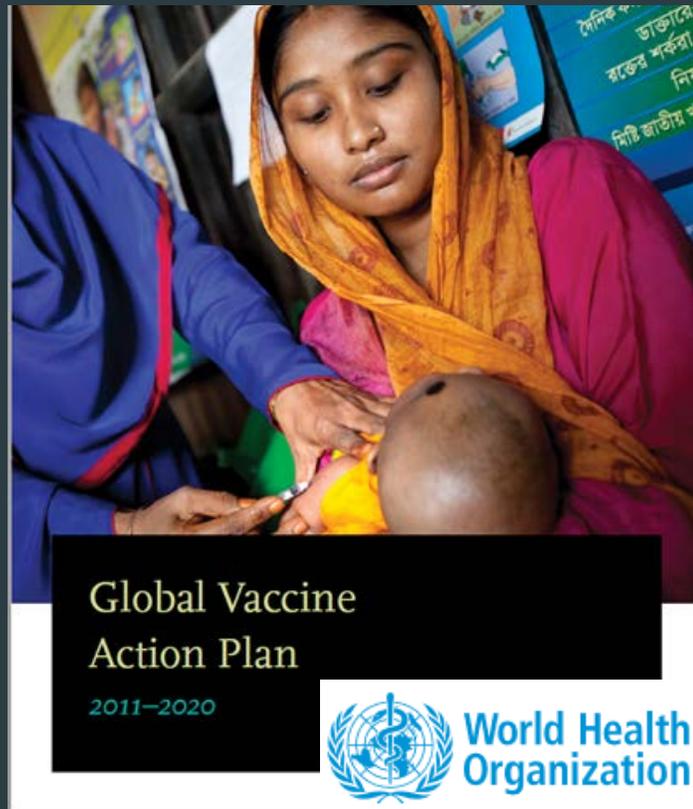
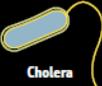
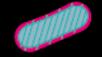
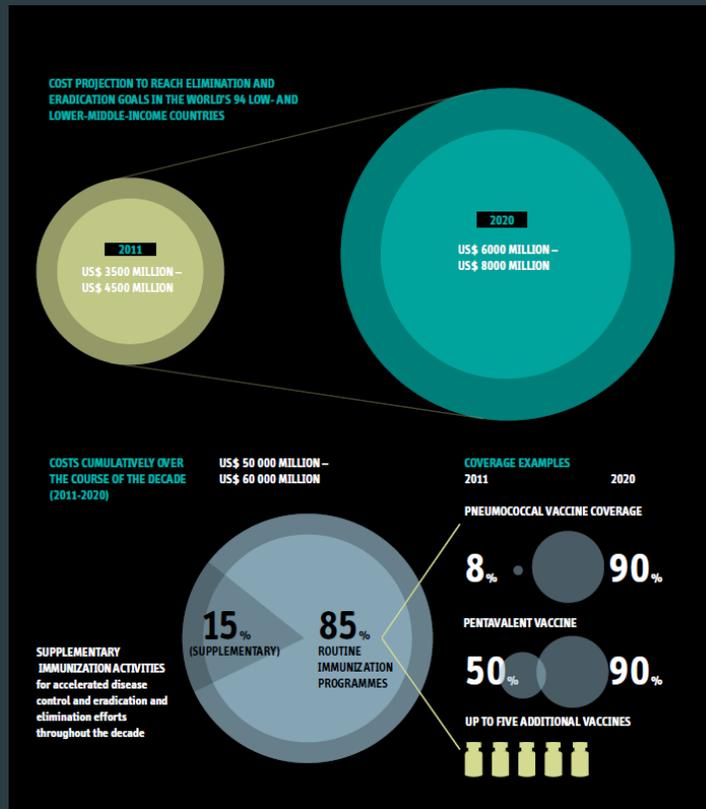


TABLE 1: VACCINE-PREVENTABLE INFECTIOUS AGENTS OR DISEASES

 Anthrax	 Measles	 Rubella	 Cholera	 Meningococcal Disease
 Influenza	 Diphtheria	 Mumps	 Tetanus	 Hepatitis A
 Pertussis	 Tuberculosis	 Hepatitis B	 Pneumococcal disease	 Typhoid fever
 Hepatitis E	 Poliovirus	 Tick-borne encephalitis	 Haemophilus influenzae type b	 Rabies
 Varicella and herpes zoster (shingles)	 Human papilloma-virus	 Rotavirus gastroenteritis	 Yellow fever	 Japanese encephalitis

Os OBJETIVOS de uma ESTRATÉGIA MUNDIAL- II



24-26
million future deaths
could be averted

E também na comunidade Europeia!!!



Council of the European Union

Brussels, 20 November 2018
(OR. en)

14152/1/18
REV 1

Interinstitutional File:
2018/0115(NLE)

SAN 385
PHARM 56
MI 821
SOC 697
RECH 482
EDUC 420
TELECOM 396

LEGISLATIVE ACTS AND OTHER INSTRUMENTS

Subject: COUNCIL RECOMMENDATION on strengthened cooperation against vaccine-preventable diseases

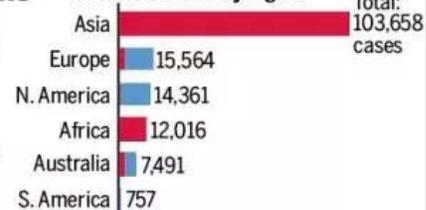
Vaccine-preventable outbreaks

Cases of whooping cough and measles around the globe in 2014. California is now battling a whooping cough epidemic and a measles outbreak.

Number of cases by disease



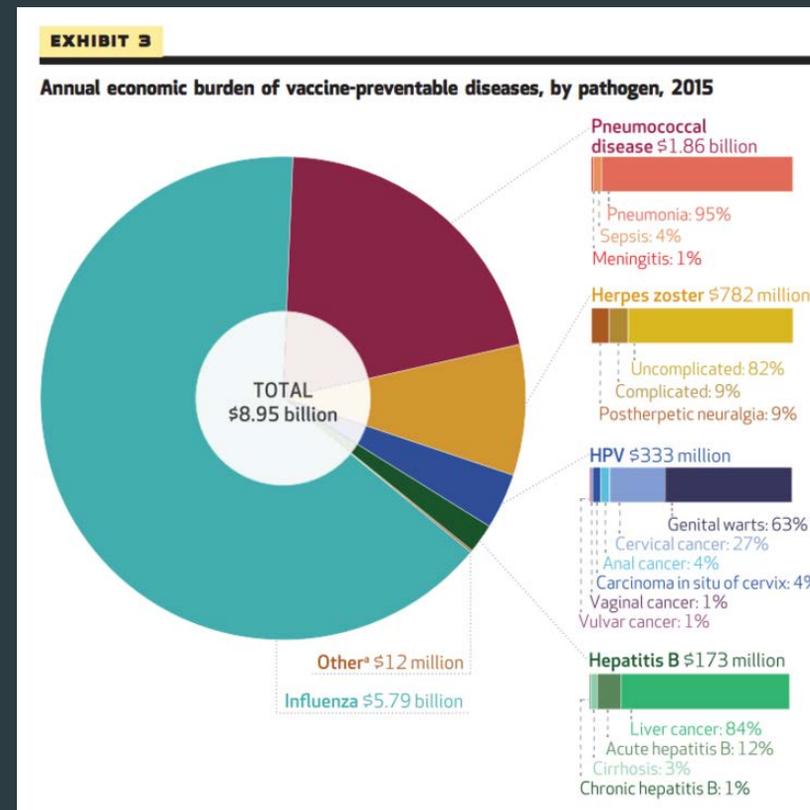
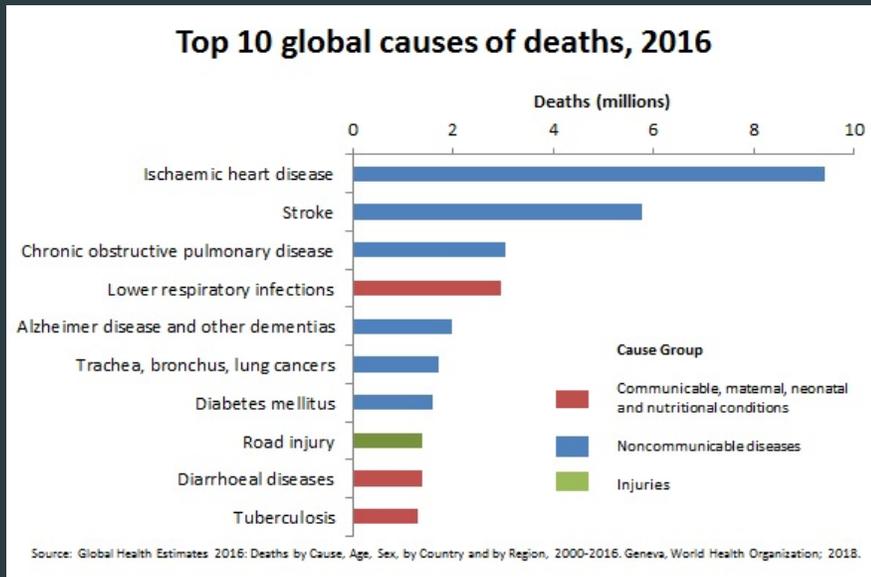
Number of cases by region



Source: Council on Foreign Relations

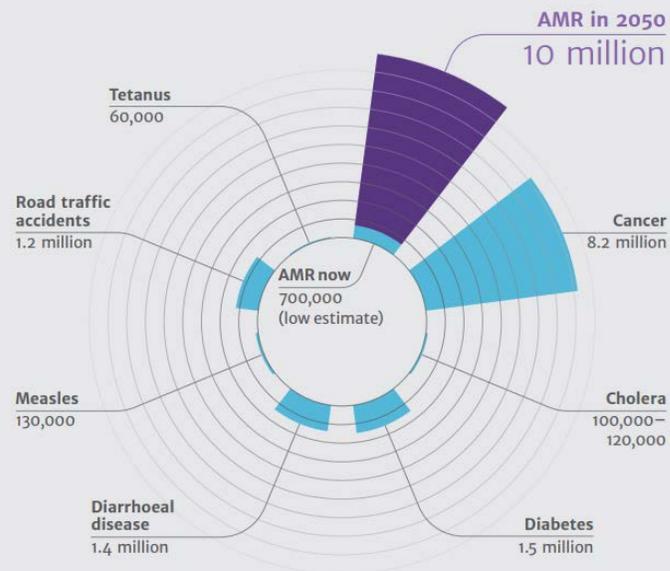
JEFF DURHAM/BAY AREA NEWS GROUP

Doenças infecciosas: Um impacto global em termos de carga de doença e dispêndio económico nada desprecioso



Uma outra sessão, uma outra perspectiva, mas a mesma problemática

Deaths attributable
to AMR every year
compared to other
major causes of death

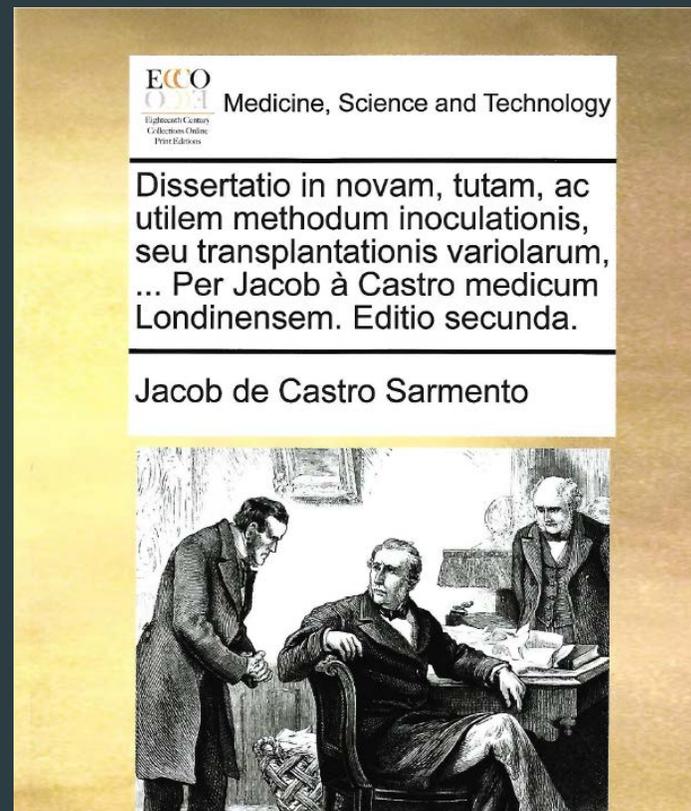
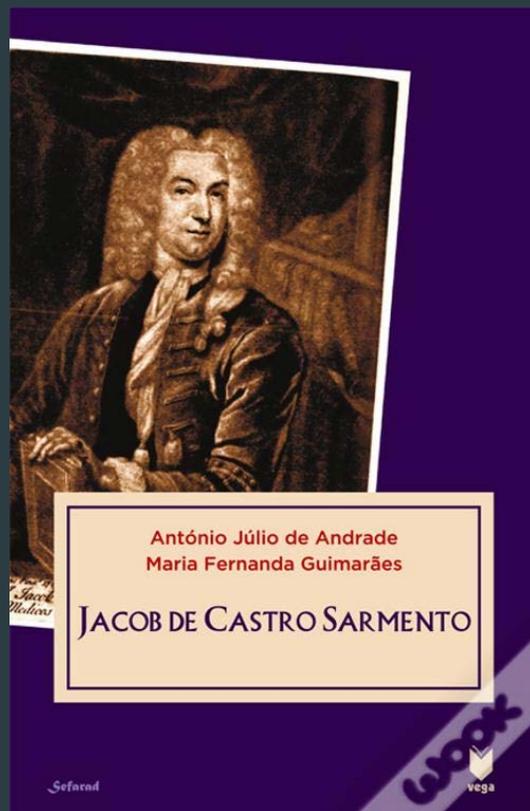


KPMG
cutting through complexity

The global economic impact of anti-microbial resistance

KPMG LLP
11 December 2014
www.kpmg.co.uk

O Respeito pela Tradição de Médicos Portugueses Ilustres (Jacob Castro Sarmiento, Bragança, 1691, Londres, 1762, Membro da Diáspora de Judeus Sefarditas)



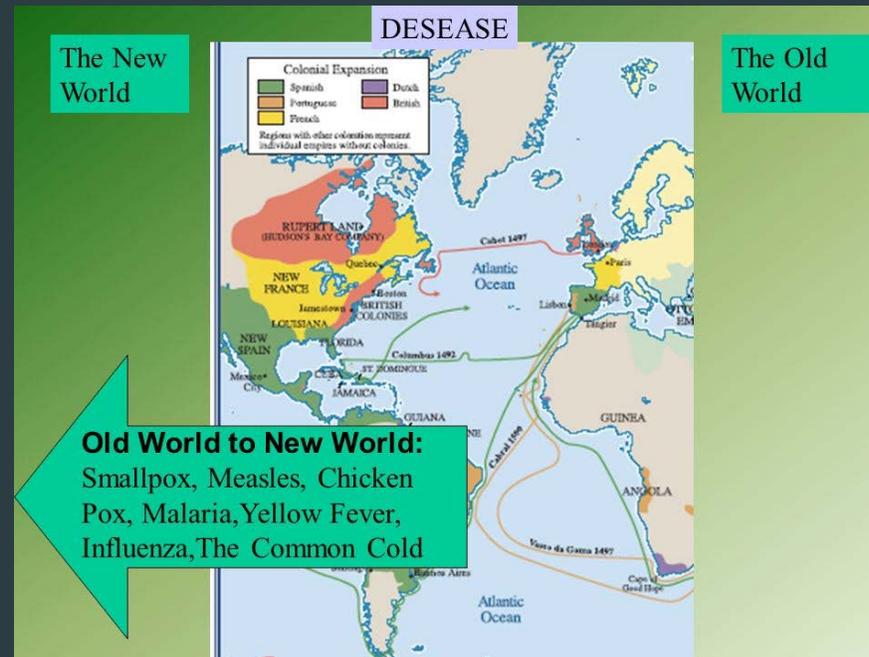
Imunização: Uma invenção chinesa com mais de 1000 anos



FIGURES SHOWING VACCINATION PUSTULES
From a Chinese work on Vaccination



Uma outra explicação para a "extinção" das populações indígenas do continente americano



O testemunho de alguém que acabou por se arrepender de ter tido mais medo da inovação científica do que da doença que vitimou o seu filho!!!

Benjamin Franklin

(1706-1790)

- ▶ “I long regretted that I had not given it to him by inoculation, which I mention for the sake of parents who omit that operation on the supposition that they should never forgive themselves if a child died under it; my example showing that the regret may be the same either way, and that therefore the safer should be chosen”



É que o conhecimento da História da Medicina é mesmo imprescindível!!!

MICROBIOLOGICAL REVIEWS, Dec. 1983, p. 455-509
0146-0749/83/040455-55\$02.00/0
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Vol. 47, No. 4

The Smallpox Story: Life and Death of an Old Disease†

ABBAS M. BEHBEHANI

Department of Pathology and Oncology, University of Kansas School of Medicine, Kansas City, Kansas 66103

Perspectives

DOI 10.1007/s12038-011-9146-6

Smallpox in the modern scientific and colonial contexts 1721-1840

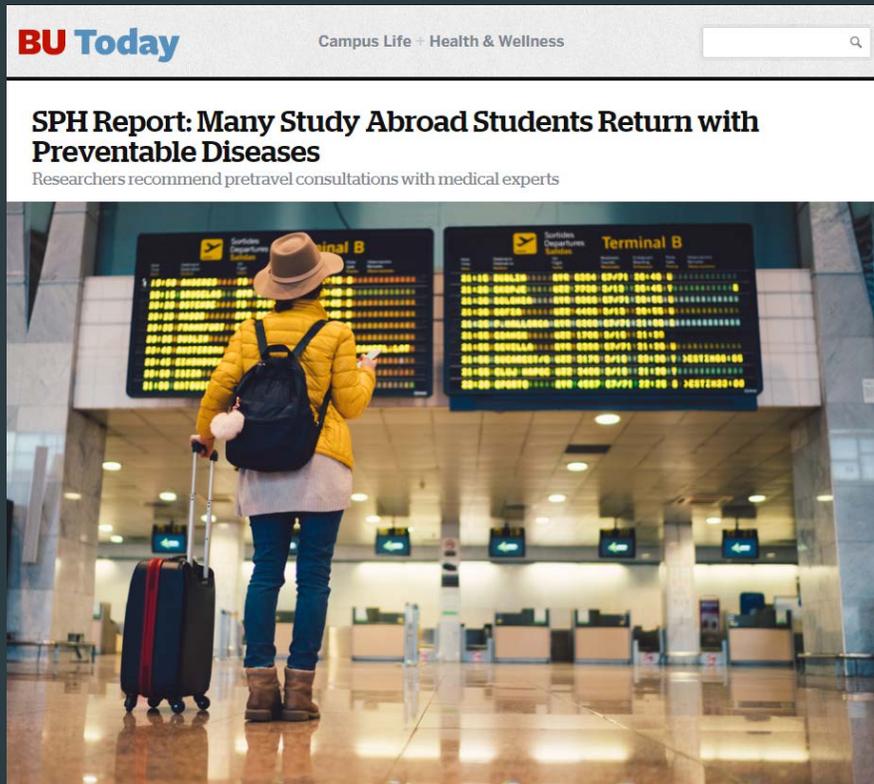
RAJESH KOCHHAR

Indian Institute of Science Education and Research, Sector 26, Chandigarh 160 019, India

(Email, rkochhar2000@yahoo.com)



Poderá o passado ser o futuro?



Newshub. AKL 22° 15

Anti-vaxxers blamed for rise in measles cases worldwide

01/12/2018 | Dan Satherley [Tweet](#)

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Opinion MMR

Anti-vaxxers are still spreading false claims as people die of measles

Helen Stokes-Lampard

Como lidar com esta situação?

GLOBAL VOICES
ASIA

دري پښتو

Afghanistan: Battle Over Polio Vaccine

Medics fight rumours that programme is a Western plot against Muslims.

By Gul Ahmad Ehsan



Man held after unvaccinated son catches polio

Abdul Sami Paracha | January 23, 2015



No estrangeiro tal como em Portugal

Morte H1N1: Francisco Xavier «cumpriu regras»

Sociedade Portuguesa de Pediatria garante que os «critérios de atendimento e despistagem do vírus H1N1» foram cumpridos no caso do rapaz de 10 anos que morreu com gripe A

INÍCIO / MUNDO

Sarampo causou 35 mortes na região europeia só no ano passado. Uma foi em Portugal

Em 2017, Portugal teve dois surtos simultâneos de sarampo (num total de 29 casos), que chegaram a provocar a morte de uma jovem de 17 anos

Tenhamos pois o Bom Senso de fazer as escolhas mais adequadas para os cidadãos e para a comunidade, e não de nos deixemos influenciar por atavismos sem fundamento científico credível



A ciência não passa do bom senso exercitado e organizado.

(Aldous Huxley)