

Certified
AI 0%
Human Intelligence only

France 2026

Vaccination coverage is a strategic issue

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Why am I standing here before you?

Boss! We have
~~a problem!!!~~
problems!!!



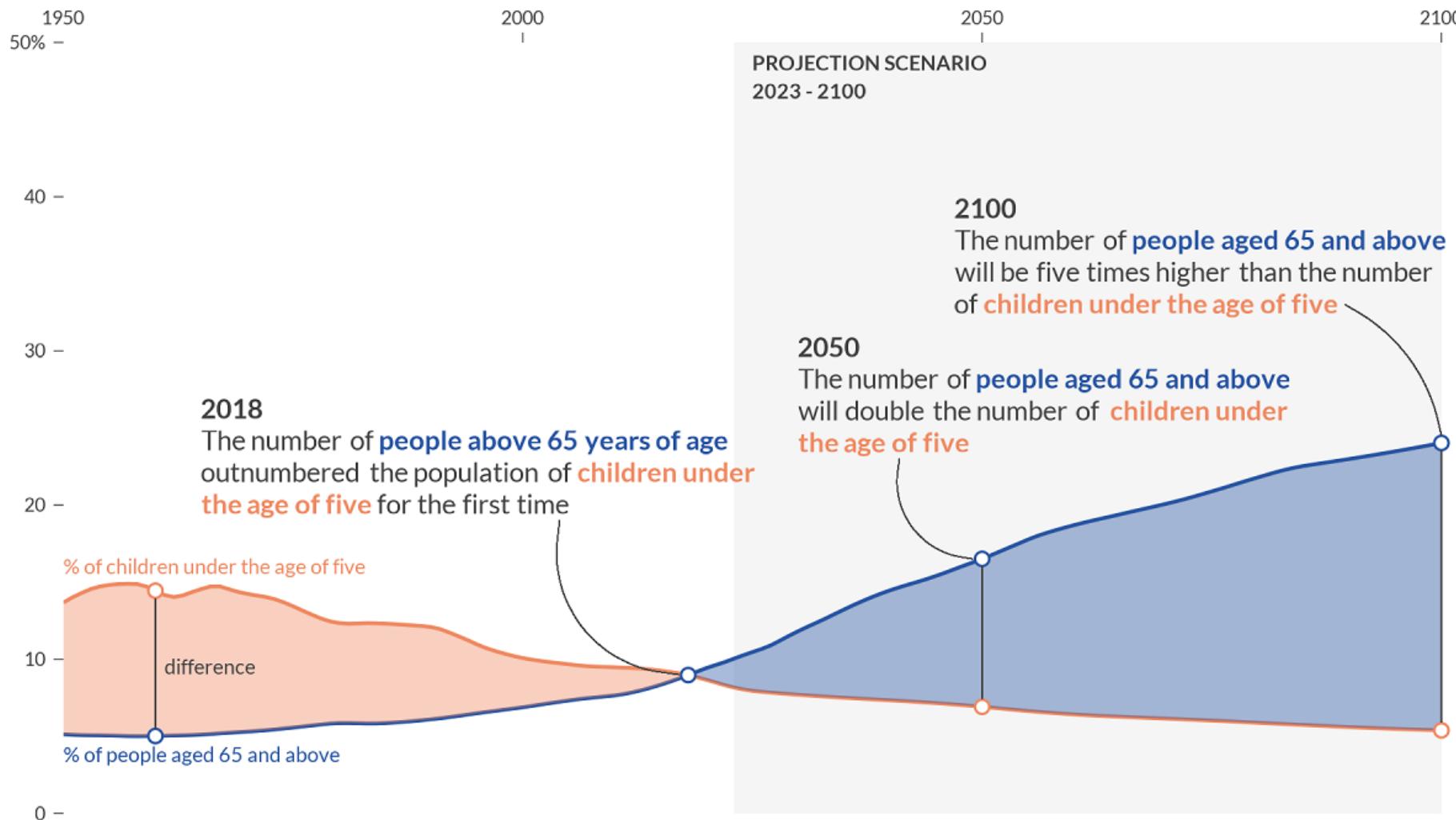
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Réseau d'Observation des Maladies et des Épidémies

The world's population is aging

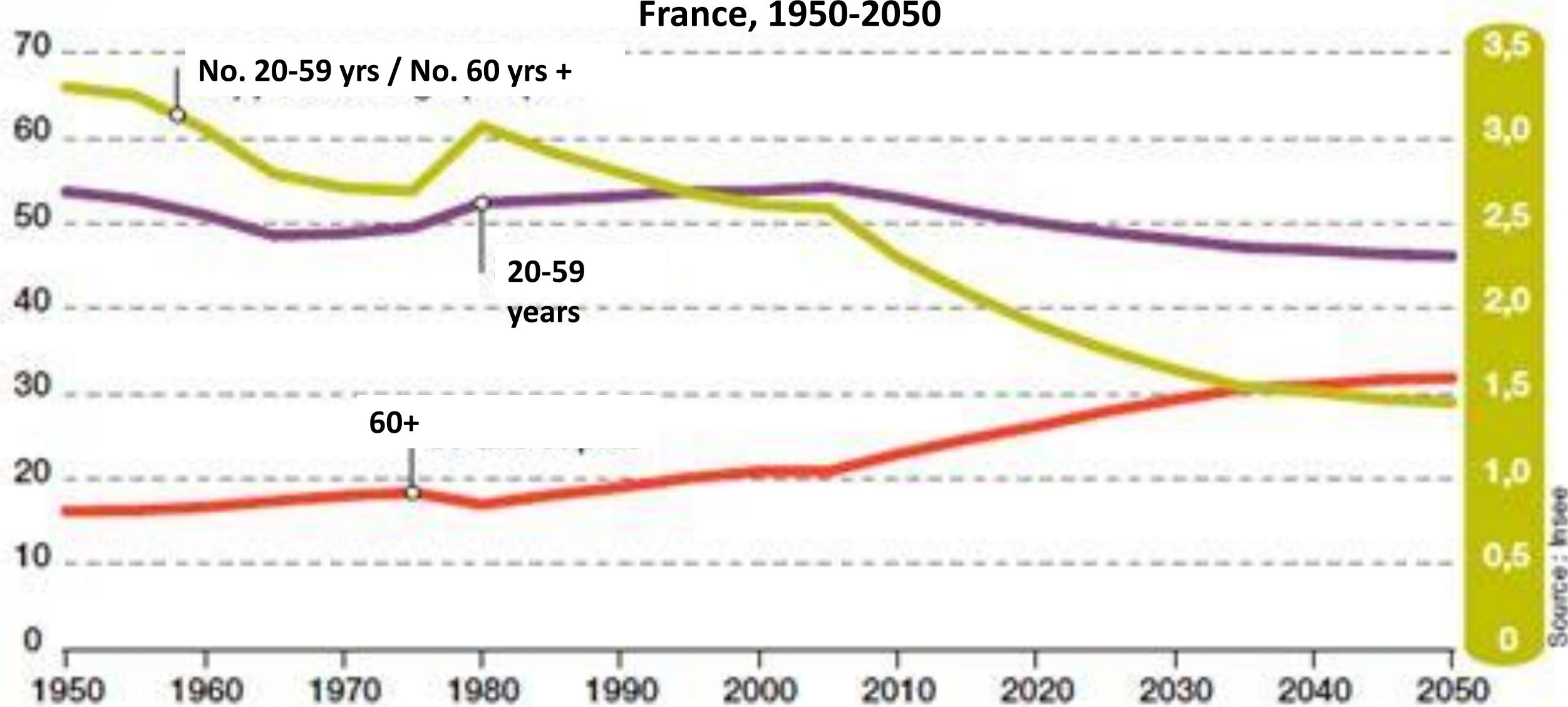
Global population share of **children under the age of five** versus the global population of **people over the age of 65**



Visualization: Pablo Alvarez | Source: United Nations World Population Prospects (2022) (via OurWorldInData.org)

Demographic issues

France, 1950-2050



Source: INSEE, 2025

Demographic issues

1940–1944

Defeat of the French army
1,800,000 soldiers taken prisoner



1945

Return of 1,800,000 soldiers
5,800,000 births



1952–1975

Economic boom
Virtually free healthcare

Marshall Plan (loans from the USA)
Strong growth
Reconstruction
Industrialisation
Full employment
Social security
Contributions as a percentage of salary
Intensive hospital-centred care
Prevention- major goals

- Child vaccination
- School medicine
- Tuberculosis screening

Source: Open Rome

Economic problems

1952–1975

Economic boom
Virtually free healthcare

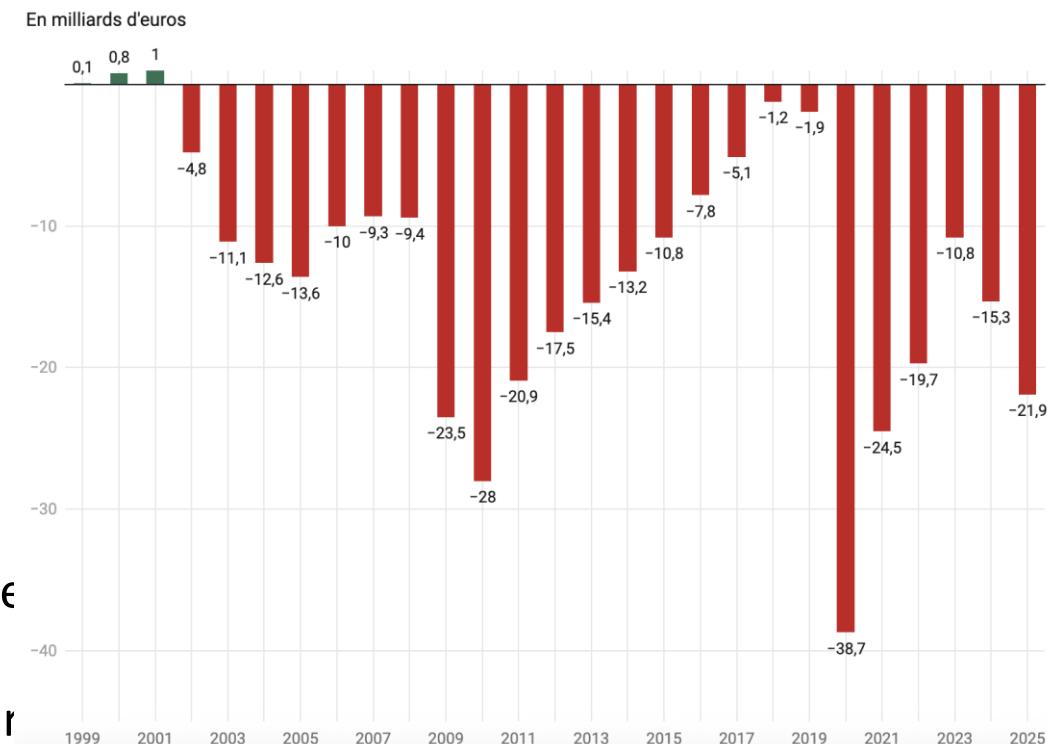
Marshall Plan (loans from the USA)
Strong growth
Reconstruction
Industrialisation
Full employment
Social security
Contributions as a percentage of salary
Intensive hospital-centred care

1976–2026

Economic stagnation
Virtually free healthcare

US and Chinese aggression
Low growth
Elderly boom
Deindustrialisation
Unemployment (young people, 50+ years old)
Social security deficit
Contributions as a percentage of salary
Intensive hospital-centred care

Social security and the Old Age Solidarity Fund Deficit from 1995 to 2025



Prevention:

- Child vaccination
- School medicine
- Tuberculosis screening

Source: Open Rome

Prevention:

- Vaccination
- Anti-smoking campaign
- HIV
- Antibiotic resistance



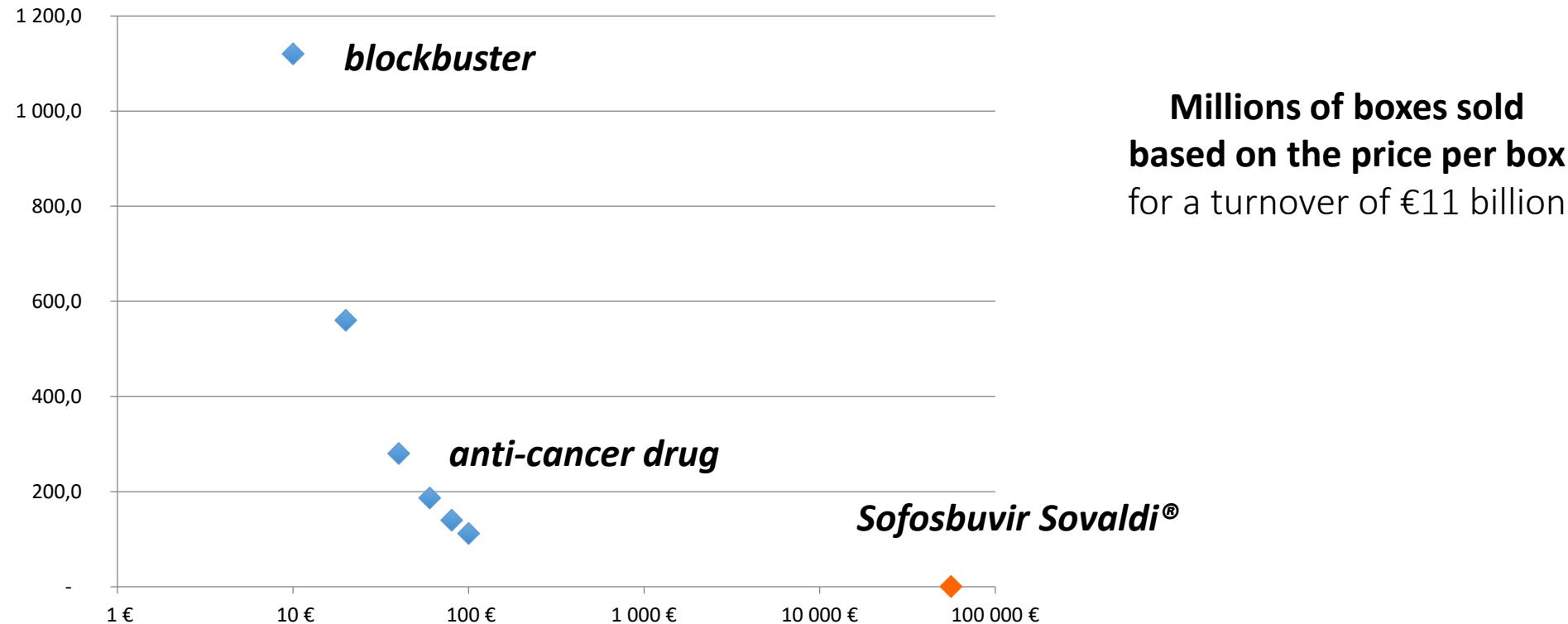
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Worldwide,

- => **90% of healthcare expenditure is spent on chronic patients: prevention is essential**
- => Vaccines: disappearance of certain cancers (e.g. HPV and cervical cancer)
- => Cancer, hormone therapy, chronic outpatient disease (e.g. melanoma)
- => **Medicines: from mass marketing to niche marketing (« nested marketing »?)**



Worldwide,

- => **90% of healthcare expenditure is spent on chronic patients: prevention is essential**
- => Vaccines: disappearance of certain cancers (e.g. HPV and cervical cancer)
- => Cancer, hormone therapy, chronic outpatient disease (e.g. melanoma)
- => **Hospitals no longer meet future needs**



Before

Melanoma
Hospitalisation + debilitating treatment
Rapid death (6 months)

Today

Melanoma
Outpatient surgery
+ possibly immunotherapy
Recovery or chronic disease requiring monitoring



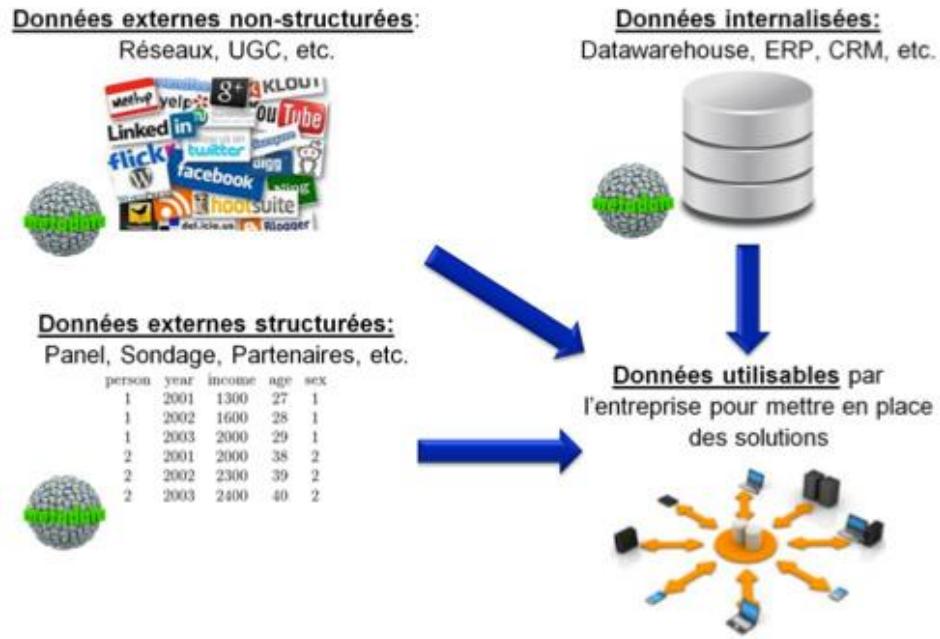
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Open, sick and healthy information systems, hospital and outpatient care



- Big data: reliability of sources, false data, missing data
- sick but also healthy
- common information system
 - Hospital-city?
 - Hospital-city-payers?

Examples of shortcomings

- No vaccination register
- No effective interfaces between hospitals and
- Public-private inequalities
- Inequalities between doctors and paramedics
- Underuse of biological data
- Underuse of virological data

Source: The hospital of the future. Open Rome study, 2021

AI, networks, web... the quality of the results depends on the source from which



USA (ChatGPT, Gemini, etc.):

- Conspiracy theorists' propaganda and anti-vaccine fake news are a major source of digital pollution
- The US government is methodically destroying credible official agencies and forcing them to adopt a non-scientific discourse.

China

- No comment
- No comment
- No comment

**We need independent AI engines
using reliable, uncontaminated data.**

and perhaps dosimeters to measure the degree of pollution or purification stations.

Source: Open Rome, Vaccination and Social Cohesion, 2025

We need analytical tools that take complexity into account



Complexity = multiple interactions between factors

What use?

- Lifetime medicine
- monitoring of protocols
- studies and research

Taking what into account?

- Patients
- healthy individuals

How?

- Open information system
- Taking into account all interactions
- complex systems analysis
- multi-agent systems

Source: The hospital of the future. Open Rome study, 2021

Strategic problem

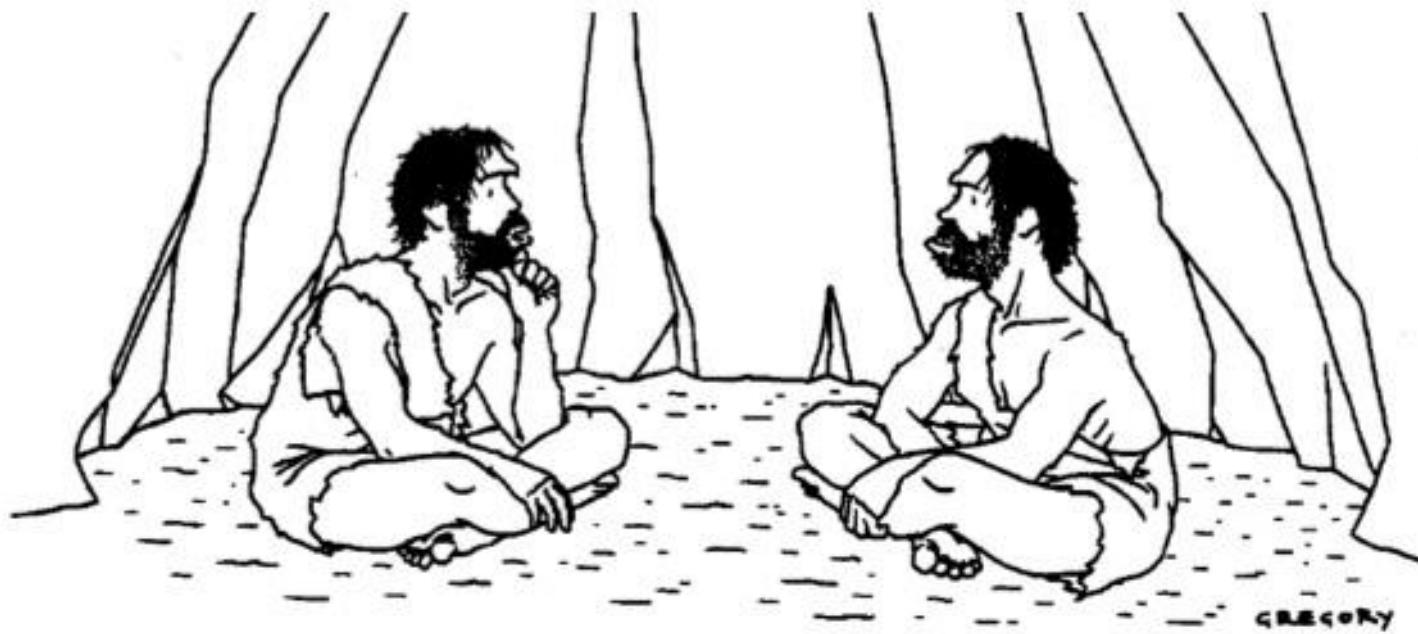
Currently, we have a series of temporary fixes for the healthcare system that are becoming increasingly expensive and less and less effective.



We urgently need a long-term health strategy based on prevention.
Let us take inspiration from the development strategy of our aviation industry since 1950.

Source: Open Rome

Prevention is our strategic objective



“Something’s just not right—our air is clean, our water is pure, we all get plenty of exercise, everything we eat is organic and free-range, and yet nobody lives past thirty.”

Reproduced with permission from The New Yorker, Back to Nature, May 2010, Alex Gregory: copyright 2010

In France,
life expectancy increased when

- Famines disappeared (17th century)
- vaccines were widely used (20th century)

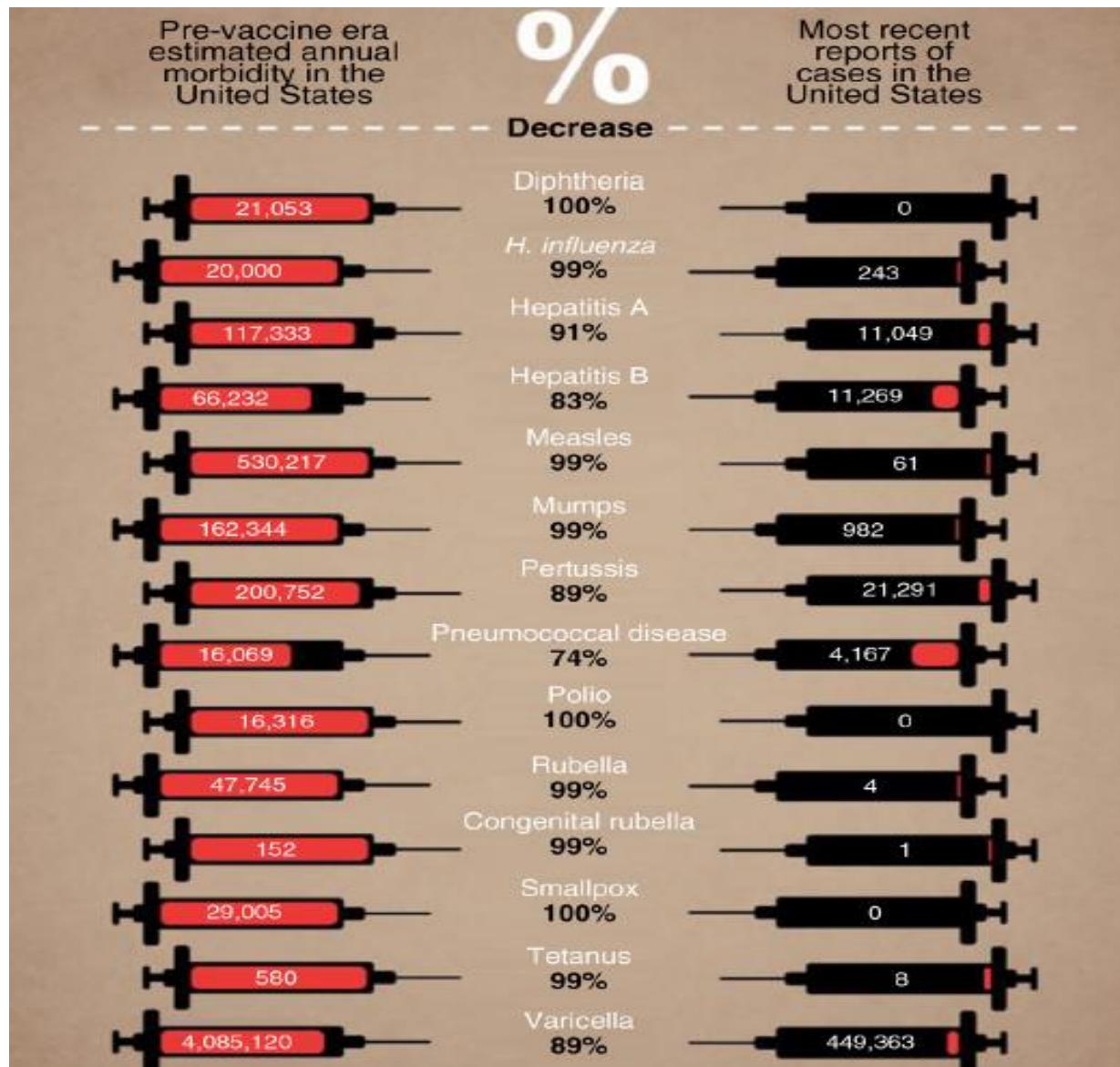


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Estimated annual morbidity before and after vaccination in the USA



Prevention:
Vaccines are remarkably effective.

Source: Leon Farrant: <https://www.behance.net/gallery/2878481/Vaccine-Infographic>

Boss! We have
~~an anti-vaxxer!!!~~
anti-vaxxers!!!



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Fake news “Vaccinating infants can cause autism”

1998

Andrew Wakefield
MMR vaccine controversy



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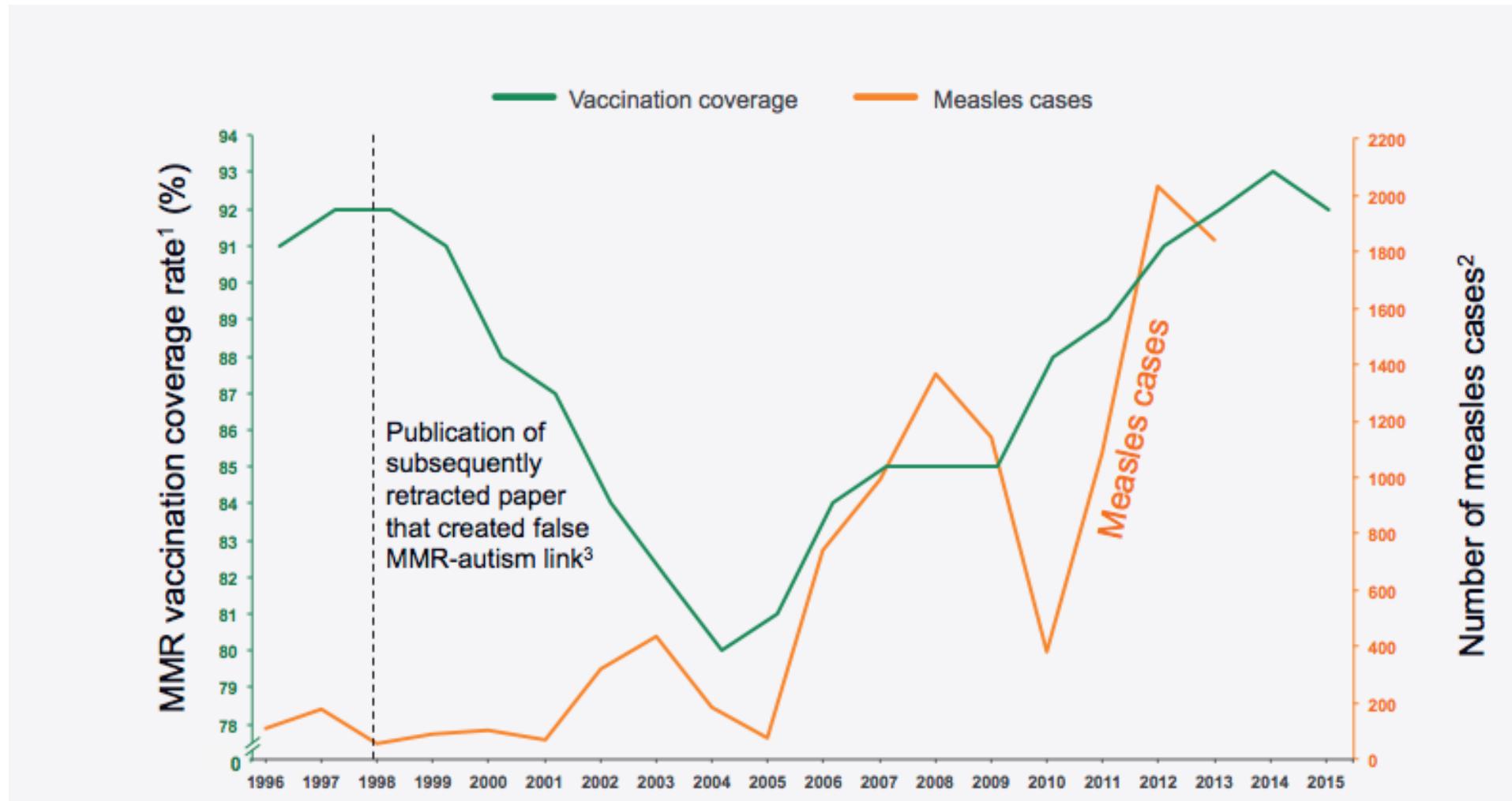
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Volume 351, No. 9103, p637–641, 28 February 1998

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Fake news “Vaccinating infants can cause autism”

2015



1. NHS Immunisation Statistics, England 2015–2016.

Available from: <http://content.digital.nhs.uk/catalogue/PUB21651/nhs-immu-stat-eng-2015-16-tab.xlsx>.

2 The National Archives. Confirmed cases of measles by region and age 1996–2013.

Available from <http://webarchive.nationalarchives.gov.uk/20140505192926/>

http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733778332

3. Godlee F, et al. BMJ (Clinical research ed.) 2011; 342:c7452.



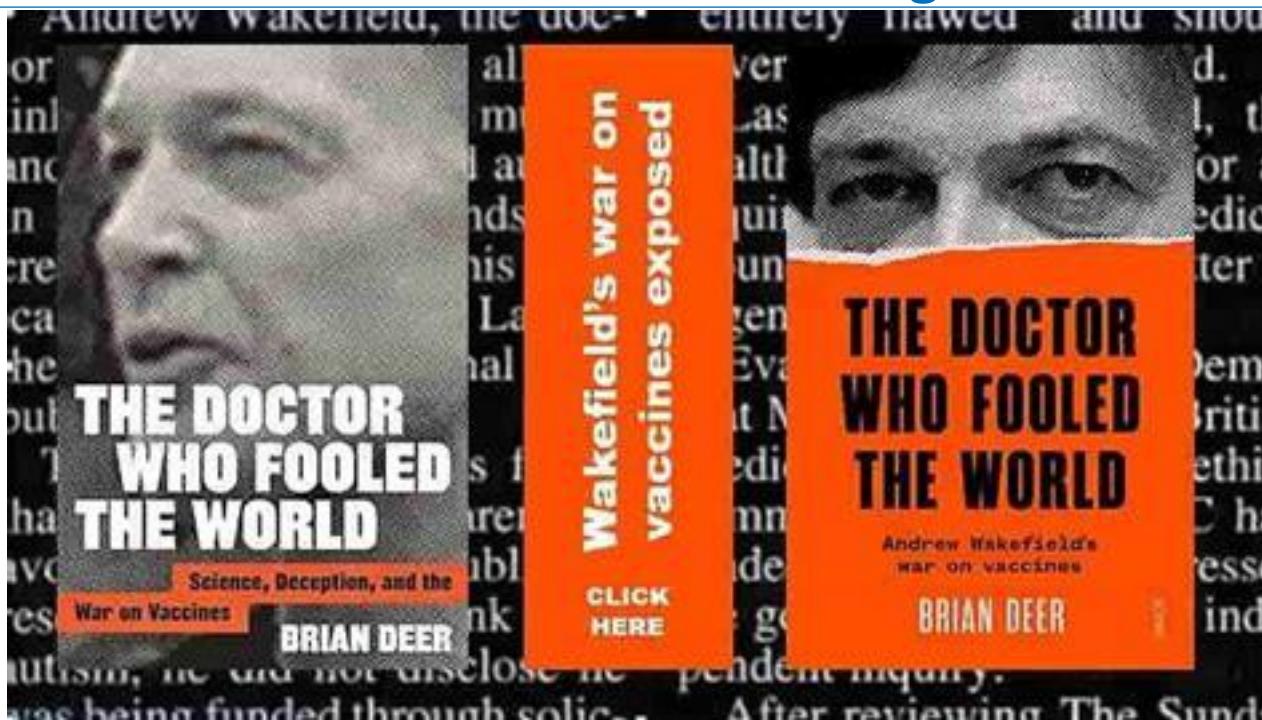
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Fake news: "Vaccinating infants can cause autism"

2004



Sunday Times. Brian Deer.
Revealed: MMR research scandal.
Startup & fundraising.
Promised revenue: €32 million

2010

General
Medical
Council

Regulating doctors
Ensuring good medical practice

British General Medical Council.
Andrew Wakefield is banned (reason: child abuse)

https://fr.wikipedia.org/wiki/Andrew_Wakefield



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Volume 351, No. 9103, p637–641, 28 February 1998

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Early Report

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

Dr AJ Wakefield, FRCS¹, SH Murch, MB, A Anthony, MB, J Linnell, PhD, DM Casson, MRCP, M Malik, MRCP, M Berelowitz, FRCPsych, AP Dhillon, MRCPath, MA Thomson, FRCP, P Harvey, FRCP, A Valentine, FRCR, SE Davies, MRCPath, JA Walker-Smith, FRCP

Altmetric 1,056

DOI: [http://dx.doi.org/10.1016/S0140-6736\(97\)11096-0](http://dx.doi.org/10.1016/S0140-6736(97)11096-0)

Article Info

RETRACTED



1998. Lancet – MMR and 'autistic enterocolitis'

2004. Sunday Times. Brian Deer. Revealed: MMR research scandal.

Startup & fundraising. Promised revenue: €32 million

2010. British General Medical Council. Striking off. Lancet: Article retracted.

2012. Court of Rimini (Italy). Compensation for a case of autism.

2015. Departure of Andrew Wakefield to the US

2016. Twitter. Donald Trump. Announcement of Senate committee on autism and vaccines

Fake news “Vaccinating infants can cause autism”

1998



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2016

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Trump: Vaccines Cause Autism And Will Be Investigated

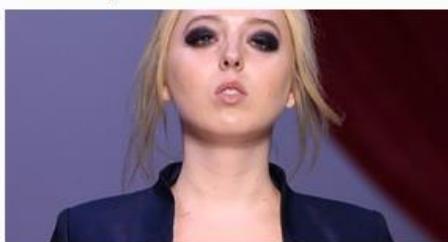
Posted on November 13, 2016 by Baxter Dmitry in News, US // 578 Comments

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President-elect Donald Trump believes vaccines are responsible for the autism epidemic and he has promised to find out the truth and “save our children and their future” when he takes office in January.

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Ads by Revcontent



Why Donald Trump Avoids Talking About His Daughter Tiffany!



20 Pictures That Hillary Clinton Wishes Would Go Away

JAMA Forum



Assault on the Centers for Disease Control and Prevention—Budget Cuts, Political Control, and the Erosion of Trust

Lawrence O. Gostin, JD¹; Peter Lurie, MD, MPH²

» Author Affiliations | Article Information

Budget Cuts and Program Eliminations

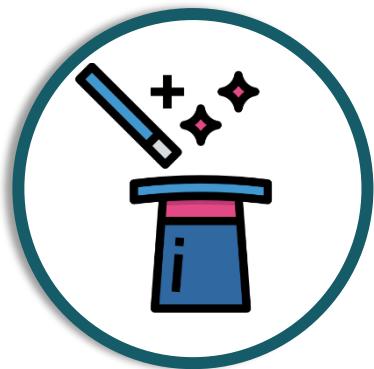
Trump's FY 2026 budget proposes a 50% reduction in the CDC's funding from \$9.2 billion to \$4.3 billion. Consistent with Kennedy's view that the CDC should confine itself to infectious diseases, the National Center for Chronic Disease Prevention and Health Promotion would be eliminated. Kennedy has claimed that many of these functions will be centralized in a yet-unformed new HHS agency called the Administration for a Healthy America. Whether the president's budget and the new Administration for a Healthy America will go into effect is uncertain. But the HHS has already slashed more than \$12 billion in federal grants to states, including \$11.4 billion distributed by the CDC. The HHS also cut COVID-19 funding intended for surveillance and vaccines for children and uninsured adults.

US budget 2026
US CDC -50%

***Liars want to eliminate
those who contradict them***

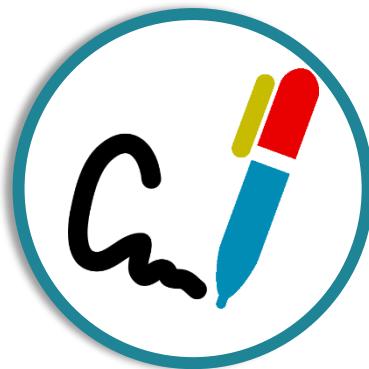
- 1 – While lies travel around the world, the truth puts on its shoes.
- 2 – Anti-vaccine lies can kill innocent people.
- 3 – Anti-vaccine liars can kill without going to prison.
- 4 – Fear of vaccines can serve electoral interests.
- 5 – Being an honest doctor requires political courage.

The Petnet study



Creation of single-use
email addresses

400



Signing petitions
against vaccination

14



Observation of emails
received as spam

234

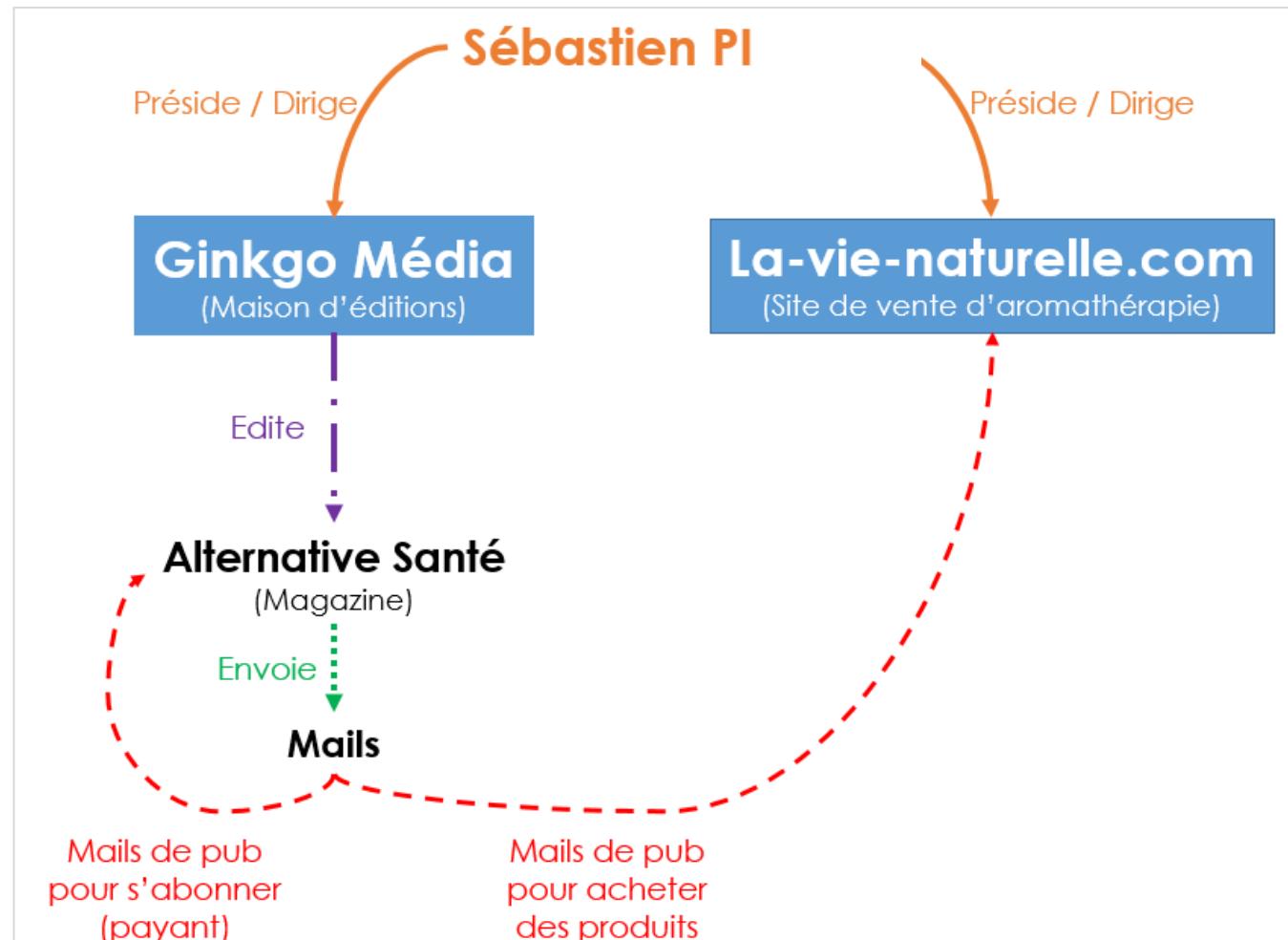


Analysis of
advertisements and
senders

3

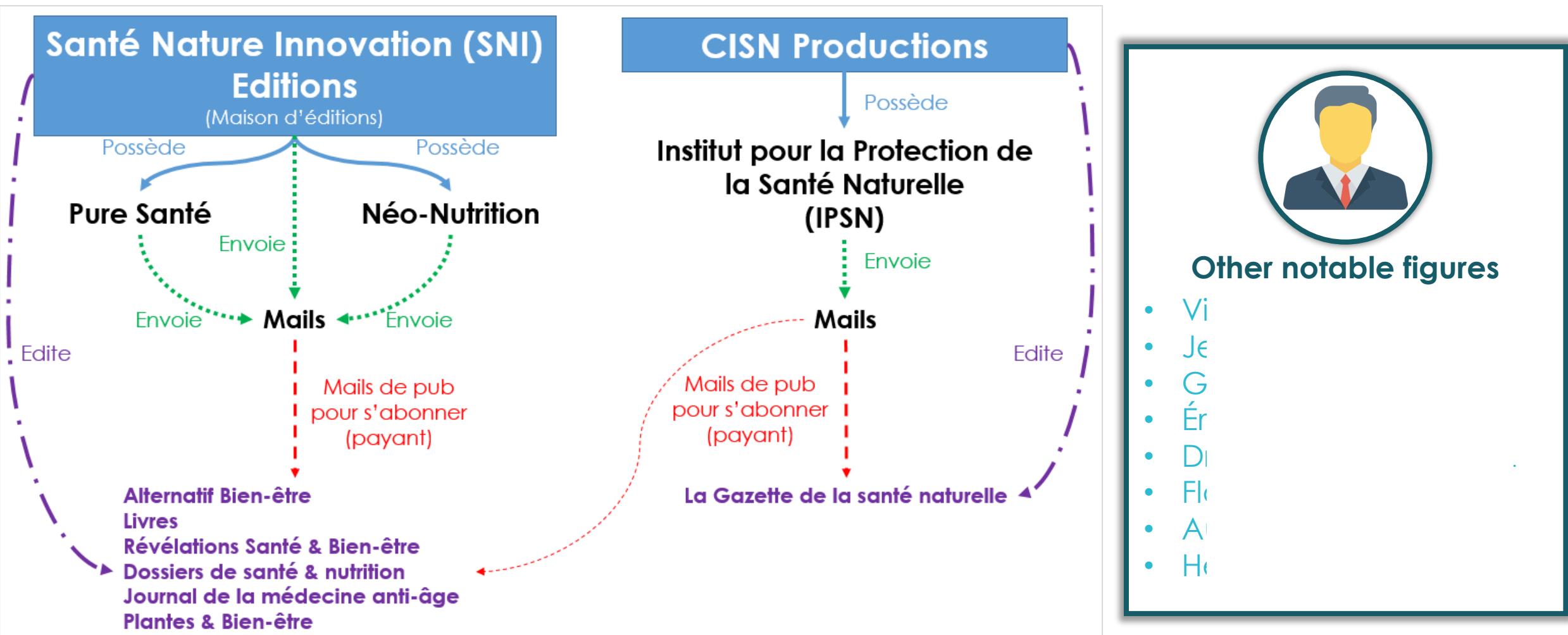
Source: Crozet R et al, Petnet methodology, Pharmacy Thesis, University of Lyon 1,

The Petnet study



Source: Crozet R et al, Petnet methodology, Pharmacy Thesis, University of Lyon 1,

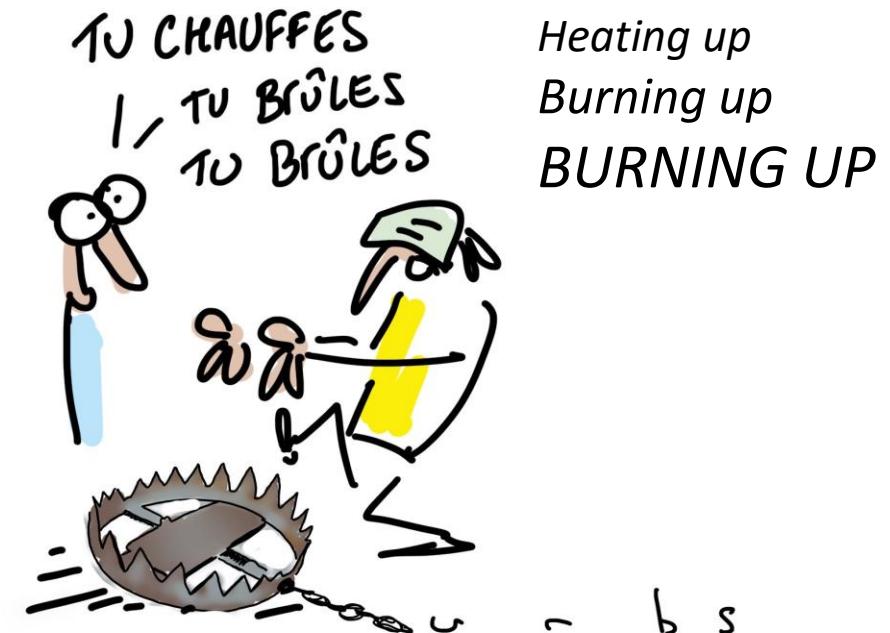
The Petnet study



Source: Crozet R et al, Petnet methodology, Pharmacy Thesis, University of Lyon 1,

Business model

1. Create a company with headquarters outside the EU (Switzerland, etc.)
2. Hide shareholders behind shell companies
3. Create an online platform in a suitable country (Belgium, etc.)
4. Create a periodic newsletter for each product range
5. Launch a petition
6. Collect the email addresses of signatories
7. Offer a free newsletter upon registration
8. Distribute newsletter: factual + sensational + hidden advertising
9. Sell on an online platform
10. 1 purchase^{er} : Register credit card
11. Any subsequent click on product page = purchase
12. Regularly change the address of the head office
13. Regularly change the structure of shell companies
14. Diversify product ranges



Anti-vaccine strategy on social media

Swarm attacks to get opponents banned

1. Each member of the group creates as many accounts and pseudonyms as possible
2. When an opponent begins to gain an audience, they are singled out for condemnation by the group.
3. Each member then uses all their accounts to report the targeted opponent to the social media administrators for making "inappropriate comments".
4. This sudden influx of reports is recorded by the bots that control the network.
5. The opponent's account is blocked, silencing them for several weeks or even months.
6. To recover their account, the dissenter must apologise and swear that they will never again contradict those who have stigmatised them.



***Liars want to eliminate
those who contradict them***

What should you do? The trigger phrase (systematic, with everyone)



Have you updated your vaccinations?

What can be done? A touching story (about « traces of poison in vaccines»)



What can be done? Change the way we think about our profession



Source: R. Ortiz de Lizarazu, JM Cohen. *Salud pública, tapas y sangría*, Valladolid, 2015

What can be done? Social marketing



Learned societies

[International Social Marketing Association \(ISMA\)](http://www.isma.org)

[European Social Marketing Association \(ESMA\)](http://www.esma.org)

[Australian Association of Social Marketing \(AASM\)](http://www.aasm.org)

www.i-socialmarketing.org

www.europeansocialmarketing.org

www.aasm.org.au

Source: W D Evans. *Branding and social marketing strategies.*

Vaccine acceptance science, policy, and practice in a "post-fact" world. Annecy, 26-28 Sept. 2017.

CANVAX WEBINAR SERIES

The Emmie Program: Motivational Interviewing Intervention in Maternity Wards

PRÉSENTÉ EN ANGLAIS

Dr. Arnold Degroote
University of Ghent
Ghent Research Centre

What to do? Influential parents



Family Matters

By Bonnie Rochman

VACCINES

How Social Networks Influence Parents' Decision to Vaccinate

A small group of parent advocates is mobilizing "gentle propaganda" against vaccine naysayers

By Bonnie Rochman @brochman April 15, 2013 0

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At her son's preschool near Seattle, Robin Haight is a foot soldier in the vaccine wars. She arranged for a pediatrician to speak about vaccines at the home of a school parent. She put up posters — she calls them "gentle propaganda" — that touted the importance of immunization in stopping the spread of disease. Her husband helped create a spreadsheet to track which children at the school are missing which vaccinations.



Getty Images / Getty Images

Some parents have said that Haight's pro-vaccination message has no place at preschool, that it's disrespectful and patronizing, that the decision to vaccinate a child is nobody else's business. One mother got so emotional that she broke out in hives. But Haight thinks a conversation is critical, and the latest research published in the journal *Pediatrics* backs her up.

"I'm just trying to let people know that if you don't vaccinate your children, it might affect other children's health," says Haight. "It directly affects a community of young children. How do we not talk about this?"

(MORE: Jenny McCarthy, Vaccine Expert? A Quarter of Parents Trust Celebrities)

Contact: Clarissa Hsu hsu.c@ghc.org



What can be done? Changing the habits of healthcare workers



**By the way,
which profession has a 100% vaccination rate against influenza?**

Contact: Clarissa Hsu hsu.c@ghc.org



So what?



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- Think and act: not alone! All together!
- Turkish-French cooperation: Univ Atlas – Univ Lyon, Open Rome
- To begin with, Halil Gencer's pharmacy thesis: comparisons between Turkey and France
- Developing common tools based on tools that exist in one country but not in the other
- Test original methods in both countries and compare the results
- Describe together the problems we encounter
- Working together to devise solutions to problems arising in one or both countries.
- Never forget Mandela's motto

Everything you do for me without me is against me

(Nelson Rolihlahla Mandela)



Nelson Mandela (1918–2013),
photographed in Pretoria on 12 June 1964.
Granger NYC/Granger NYC/Rue des Archives