The Anti-Vaccine Movement

Every medication can bring side effects, including vaccines. For the most part the vaccines side effects are minor and go away with a few days. Despite its benefits, there is still a wide hesitancy towards the subject. The anti-vaccine movement is as old as vaccine itself. In Britain, there was caricatures of the smallpox vaccine since the years of 1800. The obligation of vaccination caused resistance of individuals that considered it a threat to the freedom of the own body. The antivaccine movement is not new, but it is undoubtedly actual.

This movement is a more or less organized opposition to the public vaccination. The medical community believe that the movement reached its peak when the British doctor, Andrew Wakefield, published a fraudulent study on the magazine The Lancet, in this article the doctor linked the vaccine against measles, mumps and rubella to autism. The study was soon proven false.

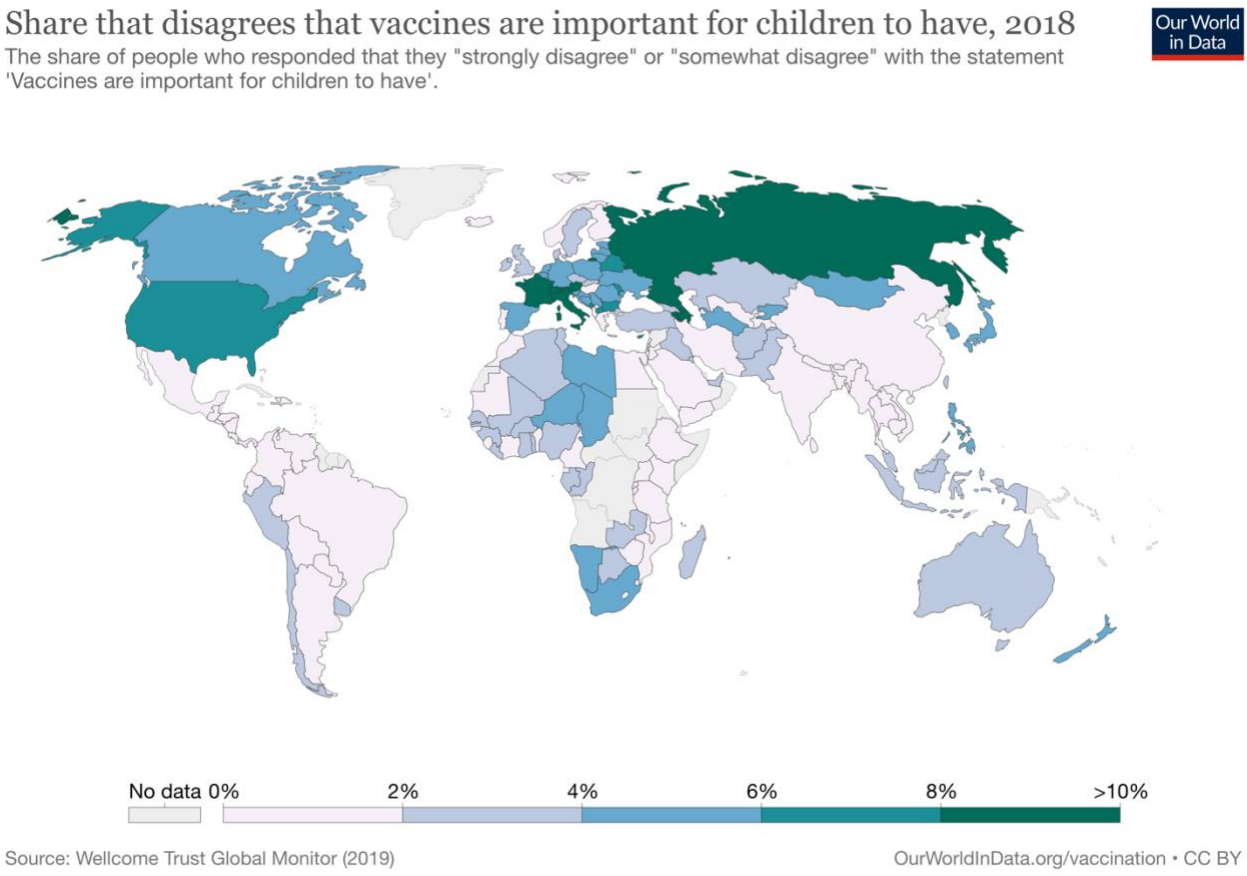
The causes that lead people to participate on this movement are very variate and yet not fully comprehended. Many people claim that vaccination is about making money, it is the way the system keeps earning money, without caring for what it might cause. They would say it is part of the government and pharmaceutical industries' agenda. The massive wave of misinformation on the Internet that spreads on a very fast pace have recently contributed to the rise of the cause.

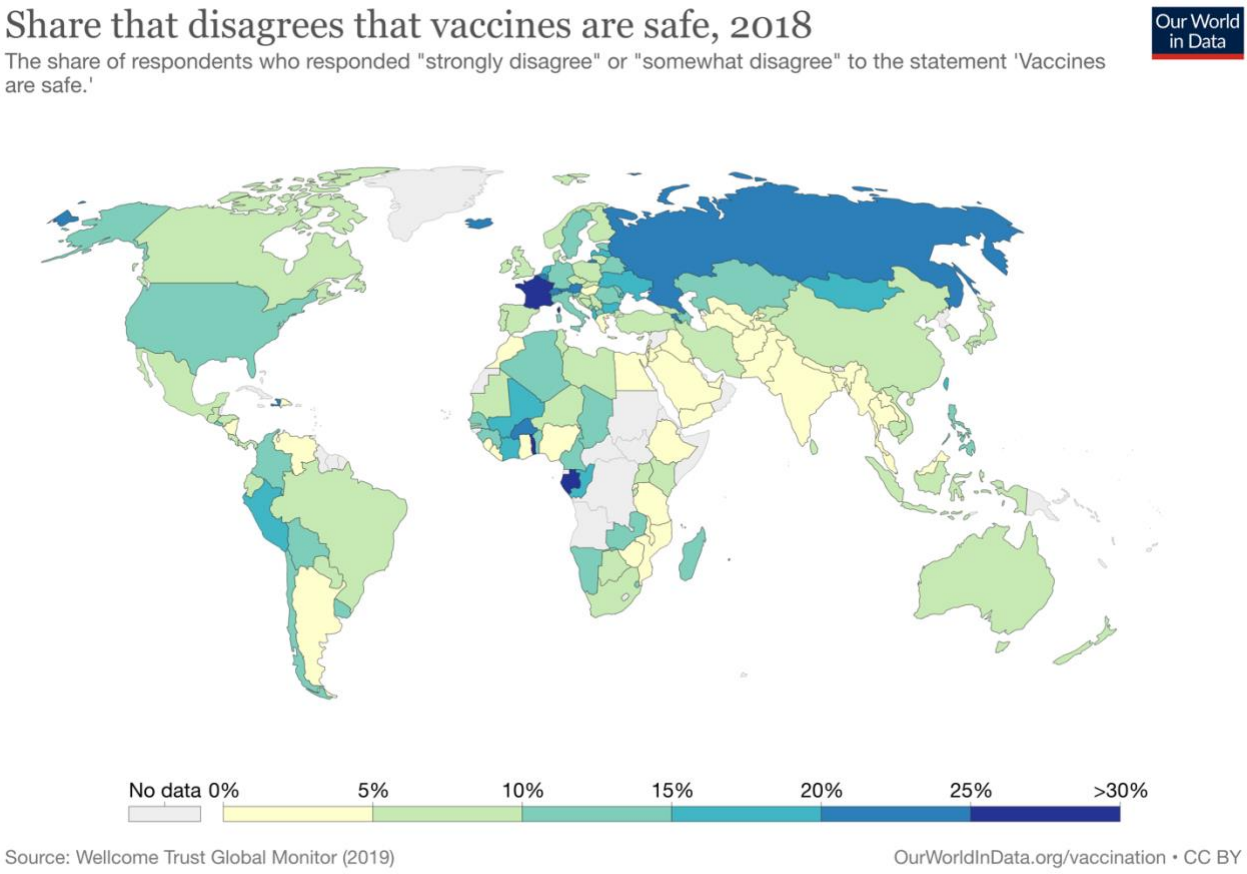
Boots and fake profiles are also very prominent on Twitter, disseminating false information on discussions about vaccination safety. These boots associate vaccination to polemic questions, such as social class (claiming that wealthier people receive purer vaccines), secret societies (implying that the Illuminati are controlling it) and religion (stating that the faithful people should believe in God's will and not on vaccines).

The vaccine resistance was listed by the WHO as one of the top ten threats for Health in 2019. According to the Wellcome Global Monitor 2018:[1]

- Globally, eight in ten people (79%) somewhat or strongly agree that vaccines are safe, while 7% somewhat or strongly disagree. Another 11% neither agree nor disagree, and 3% said they 'don't know'.
- In high-income regions, there is less certainty about the safety of vaccines, with 72% of people in Northern America and 73% in Northern Europe agreeing that vaccines are safe. In Western Europe, this figure is even lower, at 59%, and in Eastern Europe it stands at only 40%. In low-income regions, the proportion of people who agree 'strongly' or 'somewhat' that vaccines are safe tends to be much higher at 80% or above, with highs of 95% of people in South Asia and 92% in Eastern Africa.

- In France, one in three people disagree that vaccines are safe, the highest percentage for any country worldwide.
- Despite relatively high levels of vaccine skepticism in some countries, 92% of parents worldwide said that their children have received a vaccine to prevent them from getting childhood diseases, while 6% said they did not, and 2% said they did not know. The highest percentage of parents who said their children did not receive a vaccine were Southern Africa, 9% and East Asia and Southeast Asia, 8%.
- In most regions, people who have high trust in doctors and nurses are very likely to consider that vaccines are safe. However, this is less true in Western and Eastern Europe.
- There is a clear positive relationship between overall trust in scientists, as measured by the Wellcome Trust in Scientists Index, and overall attitudes towards vaccines, though the relationship is strongest in high-income countries.

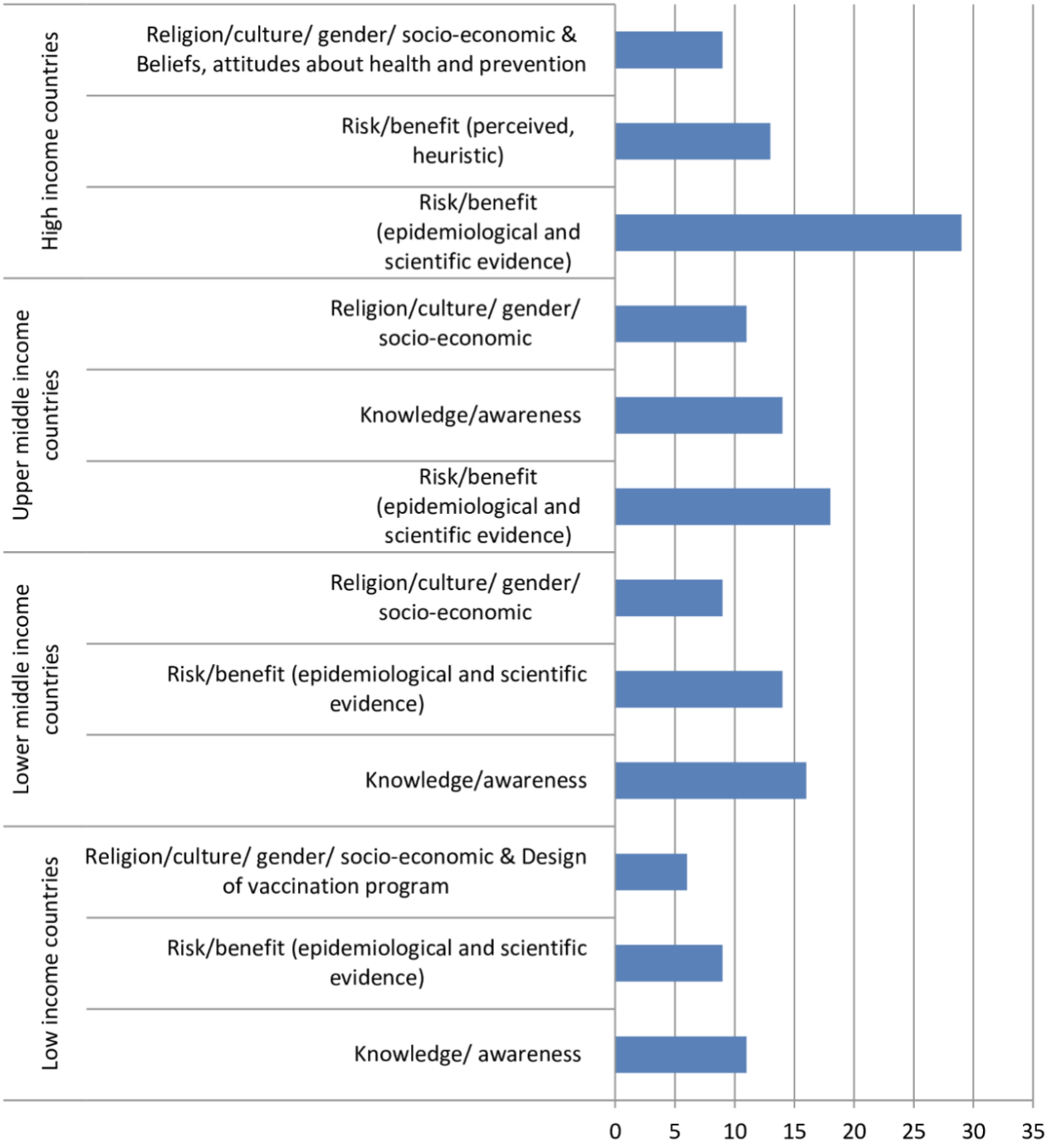




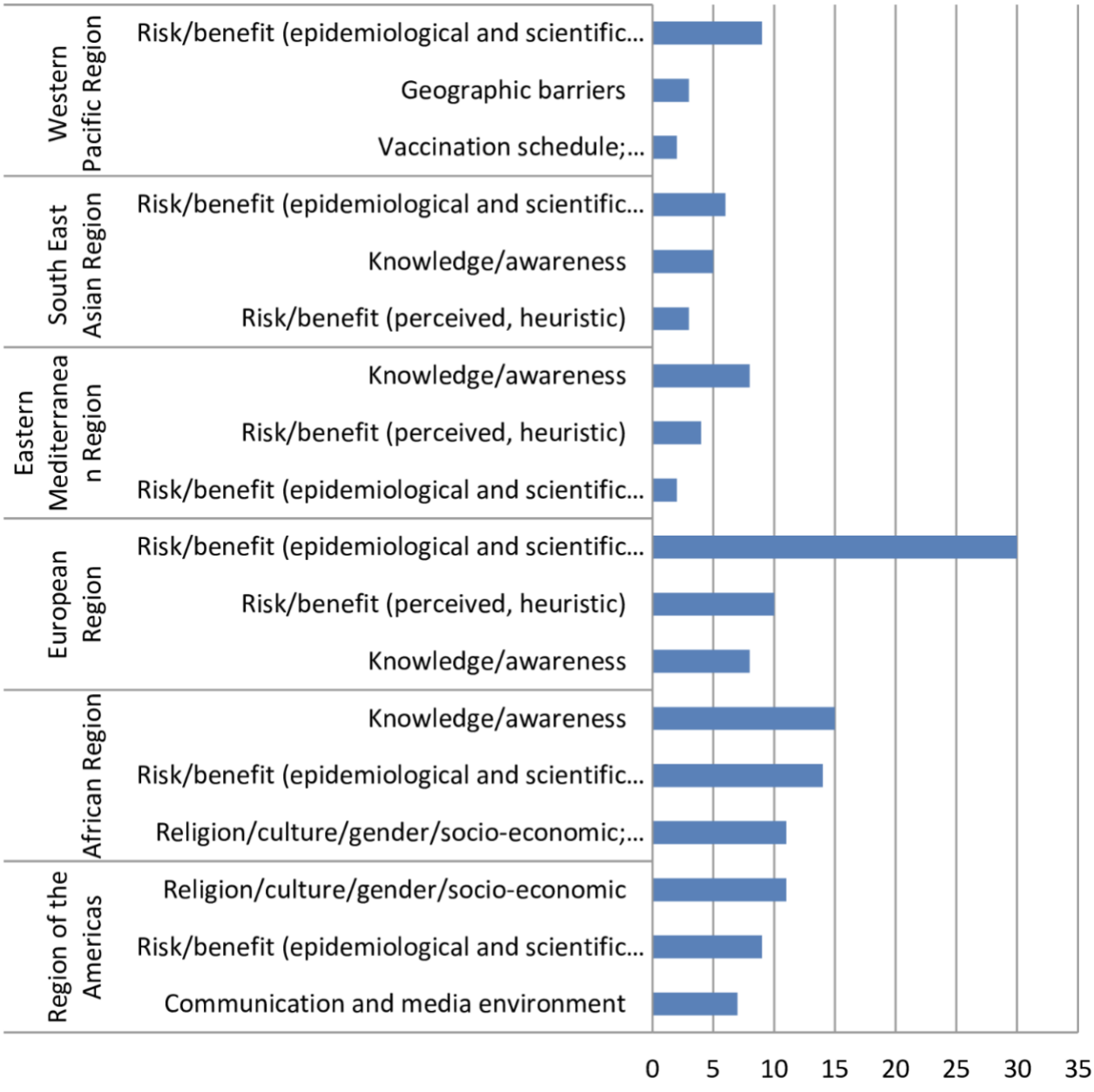
Vaccine hesitancy is defined as a delay in acceptance or refusal of vaccines despite available vaccination services. It is a complex, context-specific, and rapidly changing global phenomenon that varies across time, place and vaccines. [2] It is affected by trust, complacency and convenience.

The French are the most skeptical people in the world about the safety of vaccines, with one in three French people (33%) disagreeing that vaccines are safe. This level of skepticism is present and consistent across several demographic groupings within French society; it does not vary significantly by education, age, gender, urban or rural status, or whether people are parents. Skepticism about vaccines in France is not new, but researchers noticed an increase after the controversial influenza pandemic vaccination campaign in 2009, during which the WHO was alleged to have been influenced by pharmaceutical companies. [3]

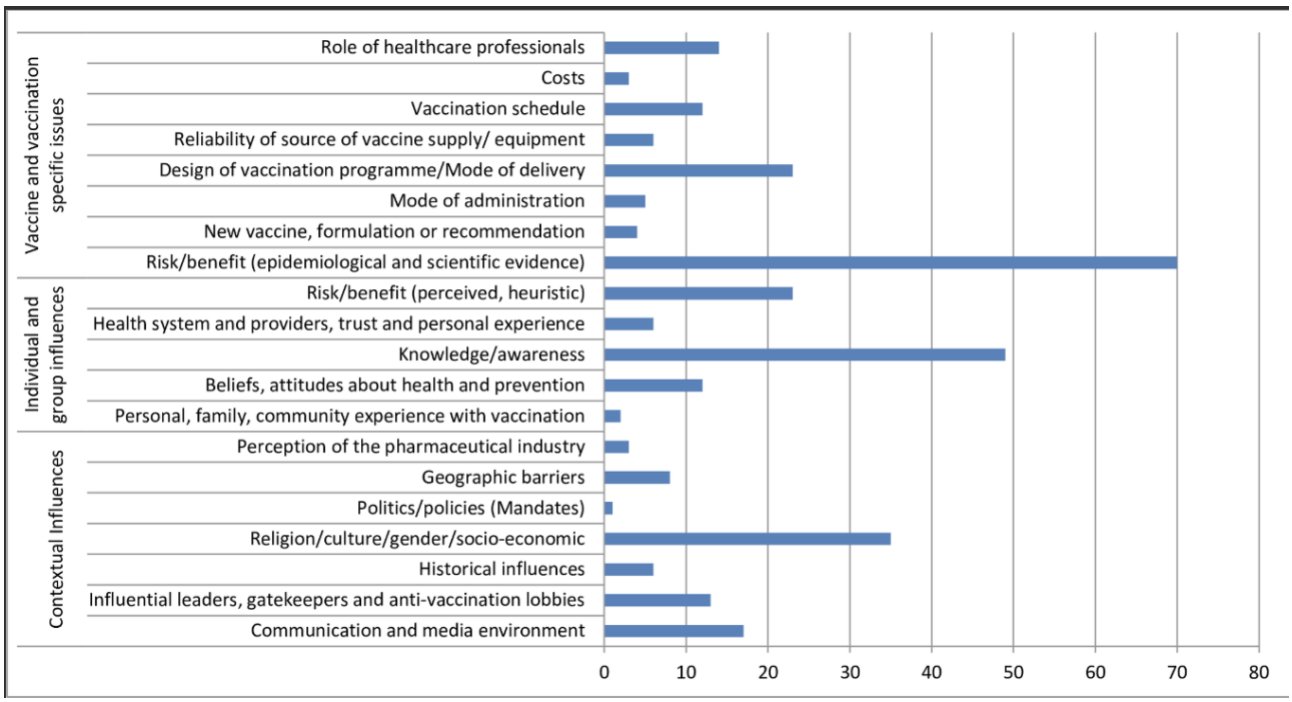
Top three reasons of vaccine hesitancy by level of income globally. [4]



Top three reasons for vaccine hesitancy by region. [4]



Frequency of main themes indicated as top three reasons for vaccine hesitancy within all WHO regions. [4]



"One of the most important interventions to counteract doubts and worries about vaccines is to have health workers really well trained and able and ready to recommend vaccinations based on scientific truth and to be able to respond correctly to questions and concerns that parents have and communities have," says Ann Lindstrand of the World Health Organization to *BBC*.

Changes occurred in the last decades, concerning the relation doctor-patient and in the concept of shared decisions, gave more autonomy to the patient, changing the process of decision making when it comes to vaccination.

Health workers, specially pediatricians, that maintains direct and frequent contact with the parents, have a key role on the maintenance of trust on vaccines, they are considered the principal and most reliable source of information to the patient. The communication with the parents and caregivers should be respectful and would ideally proportionate, in a creative and ethical way, medical perspective towards infant vaccination. The health workers should embrace the patient's fears and questions. Due to the large amount of information that people have on the Internet today, it is even more difficult to

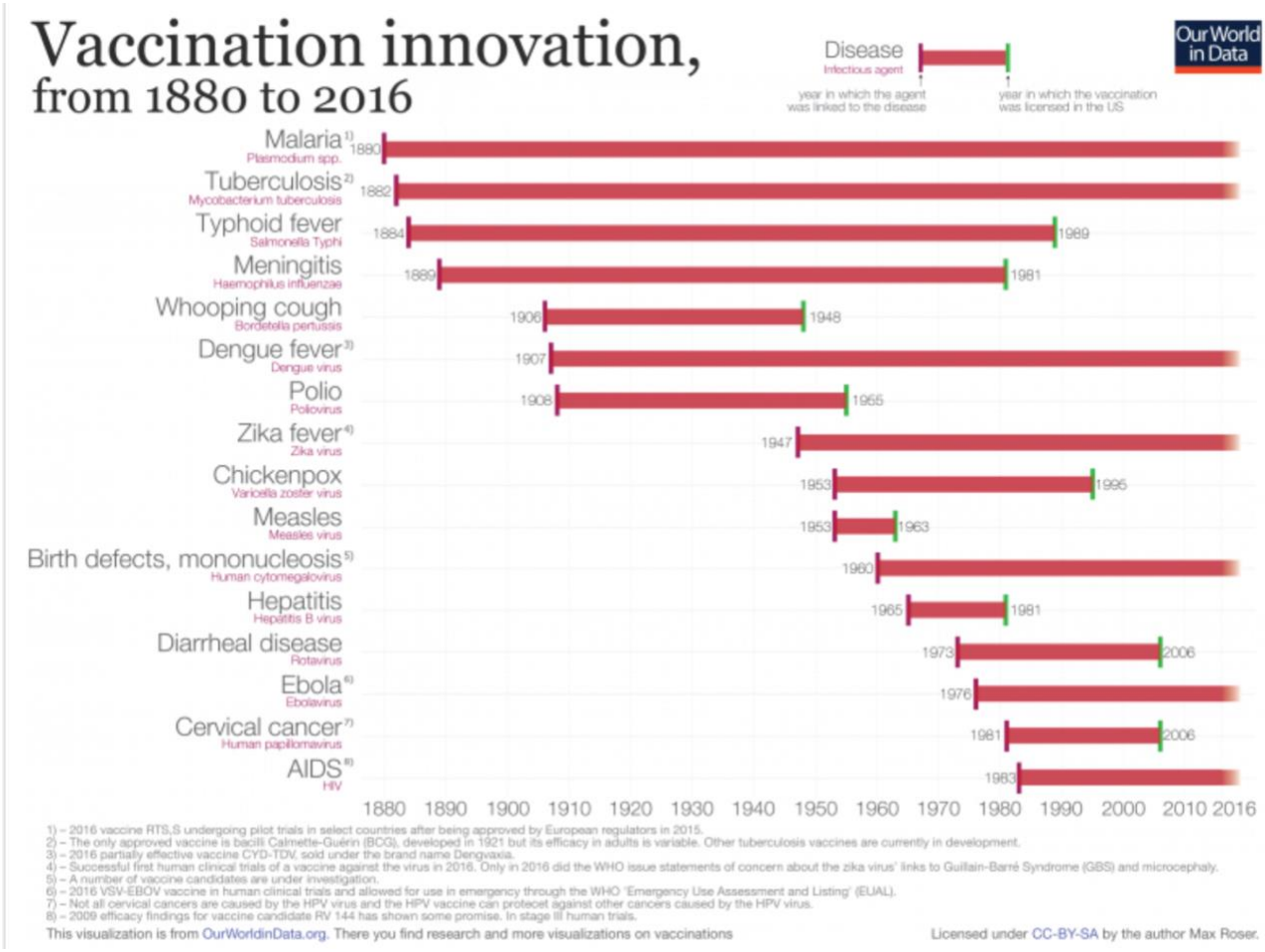
A study carried on France with Medicine students to evaluate their knowledge about vaccination showed lack of understanding and unpreparedness for the medical practice. On this study, the author suggests that the instruction about vaccines is not enough and it is necessary to invest on this field. [5]

Doctors graduated less than twenty or thirty years ago, rarely had to take care of patients suffering from polyomelite, diphtheria and smallpox. The lack of memory of these diseases, its gravity and its sequels, make the necessity of avoiding them less memorable.

Fortunately, there is a growing resource of evidence and experience from various settings that we can learn from. However, to truly address challenges in most places requires long-term, diligent and intelligent investment in a multifaceted intervention targeting the core of the problem. To inform such an investment, research with and engagement of the target groups is necessary.[6]

The development of the technology

How important is it the community pressure to enhance the vaccination technique?



In the last decades, the observed advance in technology production of vaccines resulted in a significative offer of new products, more efficient and more reliable. With the advances coming from the new biology of the 21st Century. It is time to consider how might new genetic and molecular biology information inform vaccinology practices of the future? [7]

Should it be mandatory?

The obligatoriness of vaccination confronts the individual freedom of choice.

Vulnerable individuals, both male and female, will neither have the same antibody response nor the same level of tolerance to serious adverse reactions as non-vulnerable individuals. [8]

……. To be continued

- Are anti-vax necessary? Do they contribute with something? (Like, pointing out the bad ingredients used – so new technology should be used. New logistics (to use less conservatives)
- Are they linked to any political preference?
- They seem to share one thing in common: they don't trust the system. But do they trust science? Who is science working for?
- Ethical approach: making it mandatory should not be a good idea – it will reinforce the pattern. Also, only evidences and research can convince one of the importance of the vaccine. (Compare anti-vax movement where vaccination is mandatory vs. where it is not)
- Twitter analysis
- Who is in the background of this movement? Who are the influencers? And who are the influenced?

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