

Vaccine coverage in decline: time to take action!

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Vaccine coverage is declining in Brazil. These are official data. The Brazilian Ministry of Health (MS) warns that more than 300 municipalities have coverage lower than 50% for poliomyelitis, up to 1 year of age¹.

In the historical series, from 2011 to 2015, the recommended coverage (95%) was achieved, with a strong drop and loss of adequate coverage over the following years. There was also a decrease in the coverage of vaccines like pneumococcal, pentavalent (DTP/Hib/HepB), triple viral, BCG, meningococcal C, rotavirus etc.².

If the homogeneity (attainment of the goal in 70% or more of the municipalities of a state) of the vaccination coverage already deserves improvement, the decrease in coverage is particularly worrying³.

This phenomenon is not unique to Brazil. Recommendation of the Council of the European Union published in April 2018 on “Strengthening cooperation against diseases that can be prevented by vaccination” shows that in 2017 alone, more than 14,000 people were infected with measles, more than three times more than in 2016. The document is clear in stating that although coverage differs between countries, they all face common challenges: “declining coverage, shortage of supply and growing hesitation to vaccinate”⁴.

In a collaborative study between the Imperial College of London, the National University of Singapore and WIN/Gallup International Association, Larson et al.^{5,6} showed that, based on responses from 65,000 people in 67 countries, although the global sentiment is positive toward vaccination (vaccines are supposedly important), controversial results occur among countries. Within a world average of 13% distrust about vaccine safety, Europeans, especially the French (41%), stand out among the 10 nations whose citizens have the least confidence in vaccine safety. Religious incompatibility with the use of vaccines was lower among Catholics than among Western Pacific religions, and older people (> 65 years) have more confidence in vaccines than younger generations. To the authors, there seems to be an inverse relationship between a country’s socioeconomic level and its population’s trust in vaccine safety⁵.

In a recent study, Brazilians showed a strong trust in the importance of vaccination (> 90%), in vaccine safety and efficacy (> 85%) and in the compatibility between their religious beliefs and vaccination (> 85%)⁷.

A study done by Research America and the American Society of Microbiology in 2018, with a sample of North Americans⁸, revealed that 90% of them believe in the importance of vaccination and 61% believe that not vaccinating children poses risks to their own children and the community. However, they are less confident in both the safety and recommendations of the vaccination system (77% vs. 85%) and in securing required vaccine supplies (67% vs. 78%) than 10 years ago. Vaccine distrust also translates into 53 percent reporting that they did not get a flu shot last season, 48 percent because they did not believe in the vaccine and 40 percent because they did not understand it is not necessary to get a vaccine. At the same time, 85% believe that the government should invest more in the search for new and better vaccines.

A recent study with Chinese, Japanese and South Korean mothers showed that listening to radiophonic information, having a better income level and a greater influence on family financial decisions are factors that interfere positively in the vaccination of children

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(BCG, DPT, polio and measles). However, the study highlights that regional and cultural factors play an important role and must be taken into account in educational campaigns⁹.

Several authors point out different and associated causes for vaccine reduction: increasing demand; reduced supply; unprepared professionals and educators; young parents who have not faced these diseases in the past and are ignoring their real risks. These factors, combined with fake news in the media (as shows an Italian study on the growing use of YouTube to spread false information - association with autism, with poisoning, potential side effects, even when in low proportions, etc.)¹⁰, would lead parents to hesitate to vaccinate themselves and their children. Vaccination hesitancy is given so much importance that there is a European guide to it¹¹.

In Brazil, the Ministry of Health recognizes as hypotheses for the decrease in vaccination: shortage of professionals; population mobility in multiple dose vaccination schemes; inadequate availability of vaccine supplies and vaccination sites; lack of awareness about vaccination programs; insufficient and inadequate time for vaccination; the false feeling of safety promoted by those who say vaccines are unnecessary, among others².

But there is something that we are not paying enough attention to. The recent study mentioned above showed that Brazilians attach importance to vaccination and trust its safety and effectiveness. Explanations that are based on a false feeling of safety concerning diseases not experienced by young parents fail to explain for what reasons this did not occur until 2014, 2015. Did parents only stop recognizing real risks in the last 2 to 3 years? This does not seem to make sense.

Vaccination campaigns have been aired on television and radio programs. Parents are asked to be civil. Parents are told that not vaccinating their children implies risks to them and to others. Parents are told that not vaccinating their own children is a crime. The punishment for noncompliance with vaccination goes to a new level: it becomes clear that vaccination is not only a

requirement for children to be enrolled in schools. It is now crystal-clear: it is a crime and it can be punished¹².

But will such arguments and announcement times suffice? Some questions remain and other hypotheses and needs for improvement of insufficient coverage emerge:

- a. Could the insufficient coverage, at least in part, be due to the increased distrust not only of the vaccination system, but of the health sector and the State it represents?
- b. Is the television advertising time dedicated to vaccination adequate? Is it at least similar to the time devoted to violence, corruption, accidents and misfortunes that have become daily occurrences? If it is not, is this appropriate?
- c. When one logs in to social networks, customized ads appear almost right away. Why doesn't the State do something about that? Is access to vaccination necessary for everyone? Is it free of charge? Does Brazil have the largest free program worldwide? What are we waiting for to act in accordance with the times we live in? Where are the campaigns inviting people to take vaccines, to vaccination programs? The consumption of vaccines is necessary for everyone.

What are we waiting for to take bolder steps?

The new hope for polio and measles is the campaign of August 2018. One can almost hear a collective prayer of the health sector for the population to respond to the calls made in the media.

We simply cannot afford to assign our vaccination ideology to third parties. People cannot be left to chance. Health is a right and vaccinating is a must. Encouraging vaccination is everyone's job. The State fail is the fail of all. There are no winners, we will all be defeated.

It is time to take action. *Visa em Debate* gives high priority to this topic and is committed to publishing specific studies on this area in its next issues.

Collaborate, disseminate, criticize.

REFERENCES

1. Ministério da Saúde (BR). Alerta: 312 cidades têm baixa cobertura vacinal da pólio. Brasília, DF: Ministério da Saúde; 2018[acesso 11 ago 2018]. Disponível em: <http://portalms.saude.gov.br/noticias/agencia-saude/43797-ministerio-da-saude-alerta-para-baixas-coberturas-vacinais-para-polio>
2. Ministério da Saúde (BR). Secretaria de Vigilância em Saúde. Coordenação Geral do Programa Nacional de Imunizações. Avaliação das coberturas vacinais. Brasília, DF: Ministério da Saúde; 2018.
3. Ministério da Saúde (BR). Secretaria de Vigilância em Saúde. Programa Nacional de Imunizações, Coberturas Vacinais no Brasil - Período 2010-2014. Brasília, DF: Ministério da Saúde; 2015.
4. Comissão Europeia. Proposta de Recomendação do Conselho sobre o reforço da cooperação contra as doenças que podem ser prevenidas por vacinação. Bruxelas: Comissão Europeia; 2018[acesso 11 ago 2018]. Disponível em: <https://eur-lex.europa.eu/legal-content/PT/TXT/PDF/?uri=CELEX:52018DC0244&from=PT>
5. Larson HJ, Jarrett C, Schulz WS, Cjadhuri M, Zhou Y, Dube E et al. Measuring vaccine hesitancy: the development of a survey tool. *Vaccine*. 2015;33(34):4165-75. <https://doi.org/10.1016/j.vaccine.2015.04.037>
6. Larson HJ, Figueiredo A, Xiahong Z, Schulz WS, Verder P, Johnston IG et al. The state of vaccine confidence 2016: global insights through a 67-country survey. *EBioMedicine*. 2016;12:295-301. <https://doi.org/10.1016/j.ebiom.2016.08.042>



7. Vaccine Confidence Project; London School of Hygiene & Tropical Medicine. The state of vaccine confidence: 2016. London: Vaccine Confidence Project; 2016[acesso 11 ago 2018]. Disponível em: <http://www.vaccineconfidence.org/research/the-state-of-vaccine-confidence-2016/>
8. Research America. Americans' views on vaccines and infectious diseases. Arlington: Research America; 2018[acesso 11 ago 2018]. Disponível em: https://www.researchamerica.org/sites/default/files/MAY182018_VaccinePressRelease_final.pdf
9. Minsoo J. The effect of maternal decisional authority on children's vaccination in East Asia. PlosOne. 2018. <https://doi.org/10.1371/journal.pone.0200333>
10. Donzelli G, Palomba G, Federigi I, Aquino F, Cioni L, Verani M et al. Misinformation on vaccination: a quantitative analysis of YouTube videos. Hum Vaccin Immunother. 2018;14(7):1654-9. <https://doi.org/10.1080/21645515.2018.1454572>
11. European Centre for Disease Prevention and Control. Let's talk about hesitancy: enhancing confidence in vaccination and uptake. Stockholm: European Centre for Disease Prevention and Control; 2016.
12. Fraga V. Em nome dos filhos. Rio de Janeiro: OABRJ; 2017[acesso 11 ago 201]. Disponível em: <http://www.oabrj.org.br/materia-tribuna-do-advogado/19548-em-nome-dos-filhos>

Conflict of Interest

Authors have no potential conflict of interest to declare, related to this study's political or financial peers and institutions.



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