The challenge for improving vaccine coverage in Brazil.

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Drop in vaccination coverage in the country warning lights

**Poliomyelitis**

- **3rd dose**
  - 2011: 100%
  - 2018: 89,3%
  - 2019: 81,9%

**MMR**

- **1st dose**
  - 2011: 100%
  - 2018: 92,6%
  - 2019: 90,7%

- **2nd Dose**
  - 2011: 92,8%
  - 2018: 77,0%
  - 2019: 76%

Source: pni.datasus.gov.br  *Acess in 05/18/2020*
Drop in vaccination creates conditions for the return of diseases that no longer circulate in Brazil.

Population does not believe in vaccines.

Population believes in vaccines but is not being vaccinated.

The population is being vaccinated but is not being properly registered.
Poliomyelitis

Acute viral contagious disease, characterized by a sudden onset of flaccid paralysis

IN BRASIL

There has been no circulation of wild poliovirus since 1990

IN THE WORLD

Poliomyelitis remains endemic in two countries: Afghanistan and Pakistan, with a record of 59 cases in 2020*. None confirmed in the Americas

Population does not believe in vaccines

Benefit X Risk of vaccines

- Fake news
- Anti-vaccine groups

Map shows the damage caused by the anti-vaccine movement

Circulation of fake news on the internet and WhatsApp causing doubts in the population about the safety and efficacy of vaccines
Population does not believe in vaccines

Fear adverse events associated with vaccine
Population believes in vaccines but is not being vaccinated

**Introduction of new vaccines, schedule became complex**

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Age for simultaneous immunization schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG vaccine</td>
<td>at birth</td>
</tr>
<tr>
<td>hepatitis B vaccine</td>
<td>at birth</td>
</tr>
<tr>
<td>DTP, hepatitis B and <em>Haemophilus influenzae type b</em> vaccine</td>
<td>2, 4 months</td>
</tr>
<tr>
<td>Inactivated poliovirus vaccine</td>
<td>2, 4 months</td>
</tr>
<tr>
<td>Pneumococcal 10-valent conjugate vaccine</td>
<td>2, 4, 6 months</td>
</tr>
<tr>
<td>Rotavirus vaccine</td>
<td>2, 4, 6 months</td>
</tr>
<tr>
<td>Meningococcal serogroup C vaccine</td>
<td>3, 5 months</td>
</tr>
<tr>
<td>Yellow Fever vaccine</td>
<td>9 months</td>
</tr>
<tr>
<td>Measles, mumps, and rubella vaccine</td>
<td>12 months</td>
</tr>
<tr>
<td>Pneumococcal 10-valent conjugate vaccine</td>
<td>12 months</td>
</tr>
<tr>
<td>Meningococcal serogroup C vaccine</td>
<td>12 months</td>
</tr>
<tr>
<td>Measles, mumps, rubella and varicella vaccine</td>
<td>15 months</td>
</tr>
<tr>
<td>Hepatitis A vaccine</td>
<td>15 months</td>
</tr>
<tr>
<td>Diphtheria, tetanus, and pertussis vaccine</td>
<td>4 years</td>
</tr>
<tr>
<td>Varicella vaccine</td>
<td>4 years</td>
</tr>
<tr>
<td>Human papillomavirus vaccine</td>
<td>11 years</td>
</tr>
<tr>
<td>Meningococcal serogroups A, C, W, Y vaccine</td>
<td>11 years</td>
</tr>
</tbody>
</table>

Ignorance on the part of health professionals:
- about vaccines available on calendars
- recommended vaccine schedules for each vaccine

Source: Nacional Immunization Program/Ministry of Health-Brazil
### Loss of vaccination opportunity

Vaccination coverage according to vaccination schedule simultaneously. Brazil, 2018 *

#### 4 months

<table>
<thead>
<tr>
<th>Vacina</th>
<th>Nº de doses</th>
<th>Cob vacinal (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCV 10</td>
<td>2.606.078</td>
<td>91,30</td>
</tr>
<tr>
<td>Rotavirus</td>
<td>2.501.903</td>
<td>87,65</td>
</tr>
</tbody>
</table>

**104.175 doses of rotavirus were not applied**

#### 6 months

<table>
<thead>
<tr>
<th>Vacina</th>
<th>Nº de doses</th>
<th>Cob vacinal (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPV</td>
<td>2.458.546</td>
<td>86,13</td>
</tr>
<tr>
<td>Penta (DTP/HB/Hib)</td>
<td>2.427.790</td>
<td>85,06</td>
</tr>
</tbody>
</table>

**30.756 doses of Penta were not applied**

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Source: [http://pni.datasus.gov.br](http://pni.datasus.gov.br) * Preliminary data access in 04/26/2019
Population believes in vaccines but is not being vaccinated

- Partial shortage of some products that several vaccination programs have been suffering over the past few years
The population believes in vaccination but is not being vaccinated.

Urban violence

Reforço do Exército em ação emergencial contra sarampo em Manaus segue até domingo
A população acredita na vacinação mas não está sendo vacinada

Difficulty in accessing health services

Yellow fever vaccination outbreak Minas Gerais, 2018
The population believes in vaccination but is not being vaccinated

Lack of time to attend vaccination services
The population believes in vaccination but is not being vaccinated

Opening hours of vaccination services
Population is being vaccinated but not being registered

Poor data recording or transmission problems
Contributions of the immunization task force group

- Improve strategies communication between health professionals and the population about the benefits and importance of vaccination.

- Organize a global survey on the population's perception of vaccines, in order to understand the motivations for non-vaccination to look for regional strategies to resume high vaccination coverage:
  - motivations can be related to ideological, religious or cultural issues.
Thank you!
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