

HPV vaccination in Brazil

Advances and Challenges

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Brazil

- Area: 8,5 million Km² (3,3 million sq mi)
- Border with 10 countries (15,7 mil km² of extension);
- 5 regions, 27 states and 5,570 cities;
- Population: 202 million inhab. (census 2012);
- 2,7 million of children < 1 year old;
- 12,5 million < 5 years old;
- 10,1 million of girls aged 9-14 years
- 7,1 million of boys aged 11-14 years
- Distribution of 300 million doses of immunobiologicals per year.

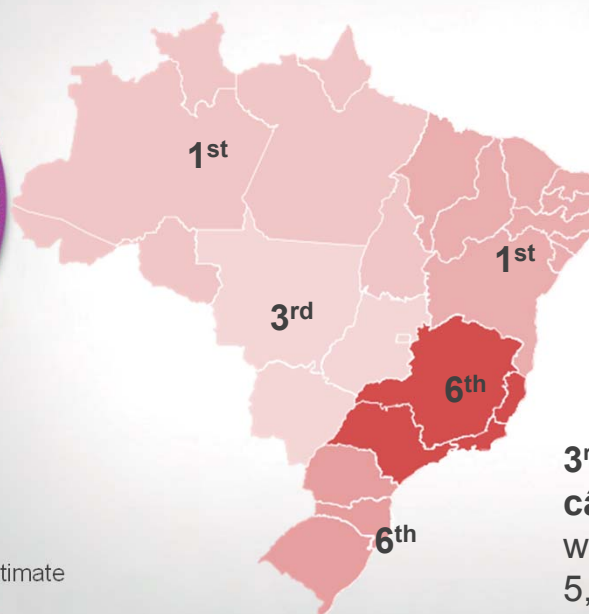


Source: Vacinas soros e imunizações no Brasil. Buss, Paulo Marchiori (org) FIOCRUZ – 2005; PNI

Cervical cancer in Brazil

3rd cancer type more frequent between women (**15,43 cases per 100,000 w.**)

2017/2018
16,370 new cases*



*Source: Inca estimate

3rd cause of death by câncer between women.
5,000 deaths by year

HPV vaccine: introduction process from 2006 to 2018

Vaccination against HPV

qHPV Licensed
2006 (Gardasil)

Production and publish of Technical Report
for professional support

Cost-effectivity study, 2012

Articulation with scientific societies, public
and private institutions

CONITEC¹ and CTAI- 2013
Recommend the introduction

Adequacy of the Information System to
monitor the progress of vaccination-
Impact study 2007

Target group definition and acquisition of
vaccines and necessities devices

¹National Commission to Technologies Incorporation in SUS (Brazilian Public Health System)

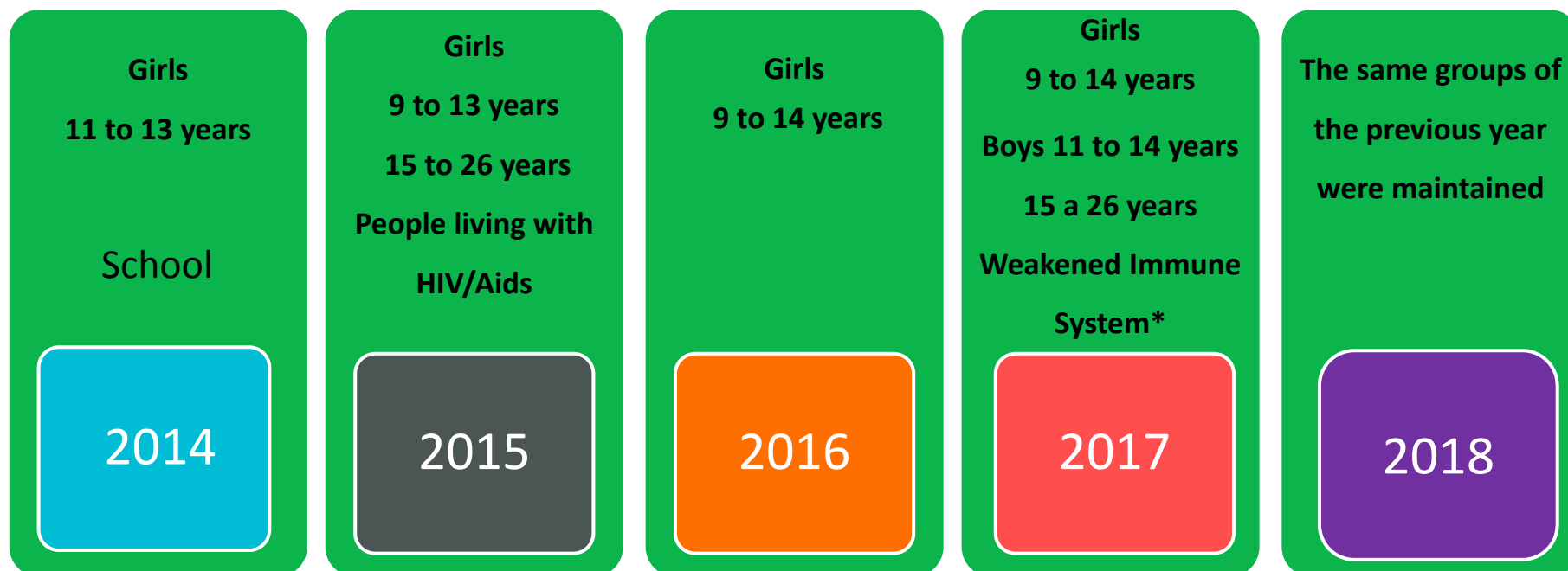
²Advisory Committee on Immunizations

³State Secretaries of Health

HPV Vaccine: introduction process

Vaccination against HPV

Target Group in each year:



*People living with HIV/Aids, transplantation of solid organs, bone marrow and oncological

Boys – 7,169,407

Girls - 10,177,813

HPV Vaccine Distribution*

Vaccination against HPV

Distribution of HPV vaccine doses*, Brazil. 2014 to 2018

Year	Distributed doses
2014	11,008,949
2015	7,912,014
2016	6,377,814
2017	6,022,746
2018	6,264,721
Total	37,586,244

Source: SIES (Information System of Strategic Devices). *October/2018

*Human Papillomavirus - Unit price \$ 10. In 2017, the age range was extended up to 26 years in some states as not to waste 1,500,000 doses that would win.

STUDY OF HUMAN PAPILLOMAVIRUS PREVALENCE IN BRAZIL: POP-Brazil/2017

AIMS:

- ✓ **To estimate HPV prevalence and genotypes in Brazil, between men and women aged 16 to 25 years old;**
- ✓ Compare the HPV prevalence in each region of the Brazil;
- ✓ Identify demographic, socioeconomic, behavioral and regional factors associated to HPV infection and genotypes, especially by 16 and 18 genotypes – Epidemiology of infection HPV related;
- ✓ **Stablish a base line to evaluate the effectivity of HPV vaccination in Brazil.**

First national inquiry about HPV infection

7.693 samples (**6.585 women - 1.350 men**)



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- **Cross-sectional study**

Sample - 7,586 people (5,812 women and 1,774 men) aged 16 to 25 years, with active sex life

Recruitment:

- List of registered users in Family Health Units
- Invitation to people who attended health facilities
- Invitation from Community Health Agents in the community
- Invitation made in schools

- **Exclusion Criteria:**

Pregnant women

Women who have undergone withdrawal from the cervix

Recent history of severe cervical lesions

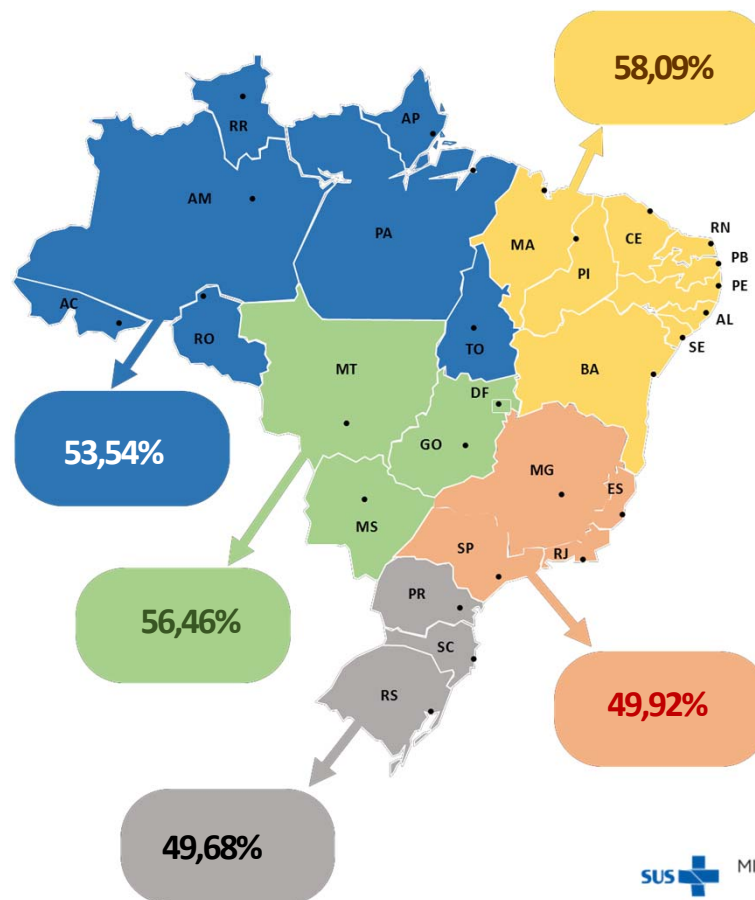
Vaccinated

- **Test used: Roche Linear Array (PCR)**

Results: differences between regions

Vaccination against HPV

The HPV prevalence* was significantly higher in the Northeast and Center-West regions compared to the South region



*Human Papillomavírus

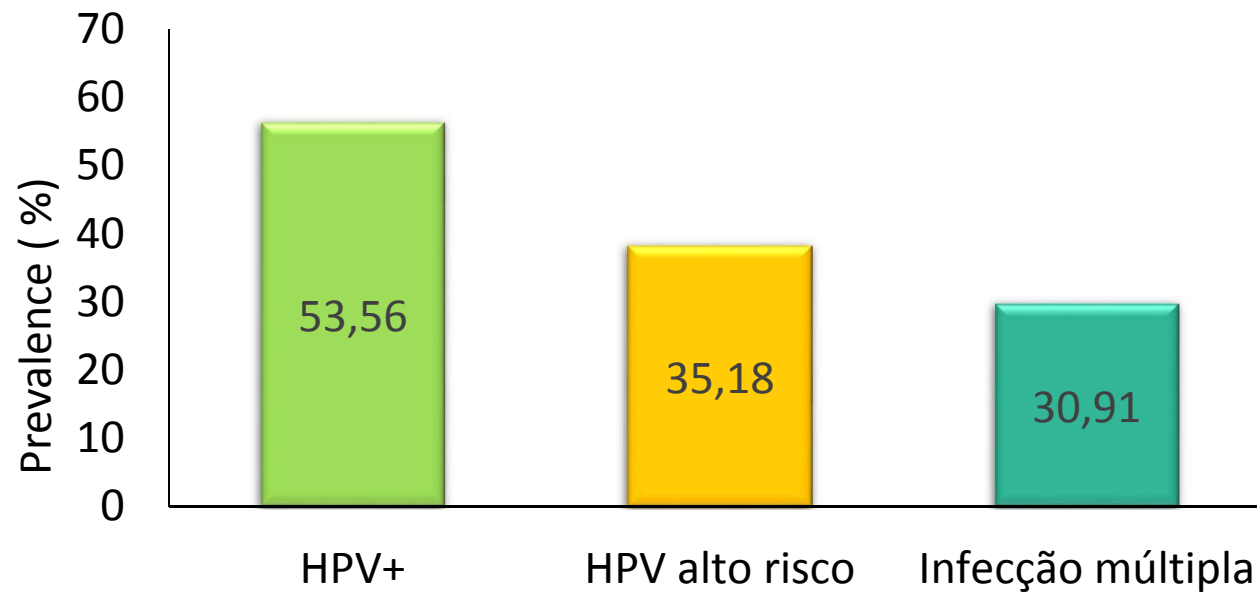
Results



ESTUDO DE PREVALÊNCIA DO
PAPILOMAVIRUS NO BRASIL

Vaccination against HPV

Prevalence of HPV+, HPV high-risk genotypes and co-infection with others STI in men and women aged 16 to 25 years old.



Source: Study POP-Brazil 2017

qHPV vaccine

Aim: to vaccine 80% of teens.



Vaccine Coverage in 2018	
Age Group	Girls
9 to 14 years (Dose 1)	63,4%
9 to 14 years (Dose 2)	41,8%

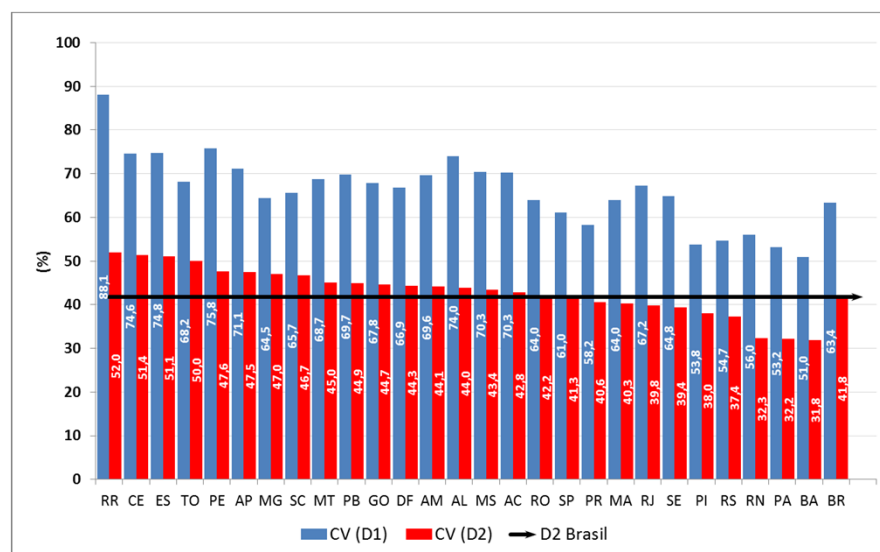


Vaccine Coverage in 2018	
Age Group	Boys
11 to 14 years (Dose 1)	35,7%
11 to 14 years (Dose 2)	12,7%

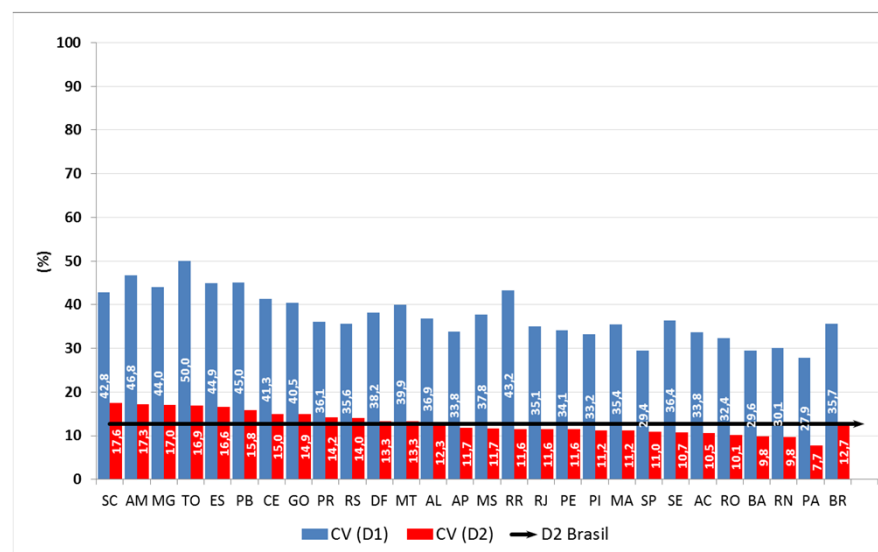
Source: NIP Information System (PNI/SIPNI/CGPNI/DEVIT/SVS/MS) – Up to date 7/30/2018
Note: Partial data from January to July 2018.

HPV vaccine coverage in girls and boys. Brazil. 2018

Girls



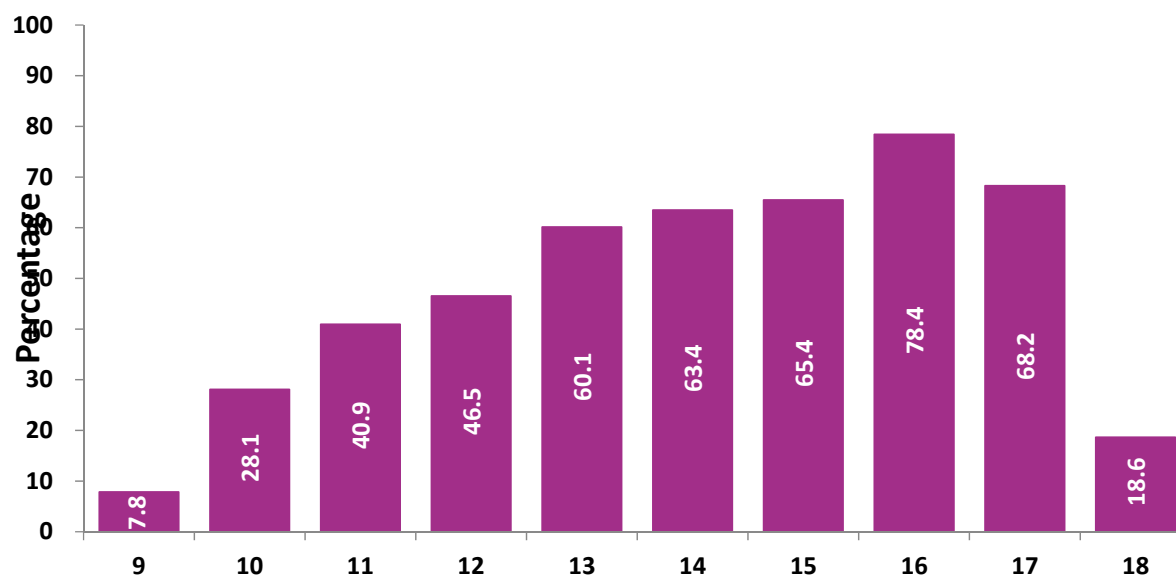
Boys



Source: NIP Information System/
SIPNI/CGPNI/DEVIT/SVS/MS

- 63,4% = 4,0 million of girls aged 9 to 14 years received the 1st dose
- 41,8% = 6,4 million of girls aged 9 to 14 years received the 2nd dose
- 35,7% = 2,5 million of boys aged 11 to 14 years received the 1st dose
- 12,7% = 911,000 of boys aged 11 to 14 years received the 2nd dose

Vaccine coverage in girls by age, with cumulative doses of the HPV vaccine. Brazil 2013 to 2018*



Second dose by age (years)

Source: National Immunization Program Information System. *Data until July 2018

Principal Challenges

Vaccination against HPV

Jovens ficam sem o movimento das pernas após vacina: 'Paralisou'

Duas adolescentes estão internadas no Hospital Municipal de Bertioga, SP. Ministério da Saúde afirma que a vacina contra o HPV é segura.

Jéssica Bitencourt
Do G1 Santos

Twitter 347



Mariana (dir.) e Luana (esq.) estão internadas após reação à vacina (Foto: Arquivo Pessoal/Fabiola Freitas)

September 3, 2014

80 girls aged 11 to 13 years vaccinated at school – Bertioga/SP

13 girls (16,2%) presented:

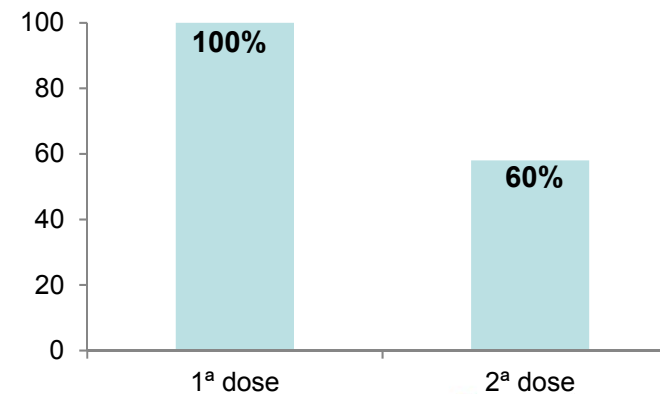
Clinical symptoms: paresis, numbness, temporary legs paralysis (stop walking and with spontaneous recovering) - with normal neurological examinations, normal MRI

All hospitalized / Good evolution with discharge in good health

Causality assessment: Immunization anxiety related reaction

- ✓ Strategy of vaccination: at school x immunization clinics
- ✓ Fear of adverse effects/reactions
- ✓ The children are too young
- ✓ The doctor did not recommend the HPV vaccine

Vaccine Coverage girls aged 11 to 13 years, Brazil. 2014



Incidence of Serious Adverse Events Following Immunizations (SAE) with HPV4 administered doses. Brazil. 2014 to June 2018

Ano	EAG ¹	Incidência	Doses administradas
2014	49	0,61	7.988.677
2015	58	0,98	5.889.416
2016	13	0,54	2.402.193
2017	31	0,5	6.158.341
2018	12	0,68	1.772.207
Total	163	0,67	24.210.834

Fonte: SIPNI/SIEAPV/DATASUS. Dados preliminares, sujeitos a alterações

¹Evento Adverso Grave; ^{*}Incidência por 100.000 doses administradas; ²Bhotherton et.al, 2008

N = 3.197

**Serious adverse event
0.1 to 1.0 per 100.000 doses**



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Seeking ways

- ✓ Improve the interface between Health and Education sectors, especially the Health in School Programme
- ✓ Immunization Requirement for school entry
- ✓ Improve the Quality of information and evaluation
- ✓ Partnership with scientific societies and civil society
- ✓ Improve the quality of information: progress in the operation of the NIP Information System throughout the country



HPV vaccination: a decade on

Human papillomavirus (HPV) causes almost all cervical cancers and most other anogenital cancers and warts in both men and women. Worldwide prevalence is 11.7% in women, causing 4.5% of new cancers in women each year. Despite an effective vaccine being licensed in 2006, only last week was it approved for girls in China and endorsed for boys in the USA.

In China, the vaccine is limited to girls in the country. Trials were done between 2002 and 2005 in other Asian countries but were not accepted by the Chinese Government, with a Chinese trial started in 2008 finally leading to approval this year. Travel agencies even offer package deals from the mainland to Hong Kong for HPV vaccinations to circumvent the problem. Improvement efforts are underway, such as a so-called four-colour light strategy for prioritisation and hiring of more staff to wade through the application backlog.

In the USA, despite approval for girls in 2006 and boys in 2011, uptake has been shockingly low. In 2014, just 37% of girls received the three-dose course compared with 13% of boys. Misconceptions have driven the low uptake, including the belief that vaccination is only needed for sexually active individuals or that vaccination of preteens will

be licensed in China. These parents all need to understand the importance of the vaccine. To deny girls and boys the full protection of the vaccine can no longer be tolerated.

The HPV vaccine has proven efficacy. But a decade on, its uptake has been poor, with a worldwide coverage of only 1.4% of women. Vaccines are one of the strongest levers to improve public health; their study, licensing, and implementation require more urgency than China and the USA have so far displayed.

■ *The Lancet*

For the Chinese approval see
<http://www.gsk-china.com/en-gb/media/press-releases/2016/gsk-announces-cervarix-approved-in-china-to-help-protect-women-from-cervical-cancer>

For the US endorsement see
<http://onlinelibrary.wiley.com/doi/10.3322/caac.21355/full>

For vaccination coverage see
[http://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(16\)30099-7/fulltext](http://www.thelancet.com/journals/langlo/article/PIIS2214-109X(16)30099-7/fulltext)

FIGO Global Declaration on Cervical Cancer Elimination

We declare:

We, the participants of the **XXII FIGO World Congress of Obstetrics and Gynecology** held in Rio De Janeiro between 14th and 19th October 2018, hereby declare that, we will work collaboratively to scale up interventions with the aim of eliminating cervical cancer as a public health concern.

In line with cervical cancer elimination priority actions:

Introduce and scale up HPV vaccination to achieve high coverage among girls by 15 years of age

Increase access to diagnosis and treatment of cervical cancer and ensure palliative care with financial risk protection

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We agree to:

Undertake in all countries, in our various individual and collective capacities, to support efforts to promote the following actions for impact for girls and women worldwide:

Advocate for national cervical cancer strategies which align with the global call to elimination

Support countries in rolling out the HPV vaccine for adolescent girls and cervical cancer screening and adequate management for older women

Harness FIGO collaborations and partnerships to promote cervical cancer elimination efforts in the context of overall wellbeing of women

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HPV Vaccine

Give this gift to your daughter... She will thank you!



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