

Cervical cancer practices and attitudes of health professionals in Brazil's network of primary health units

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BACKGROUND- BRAZIL

CDC office in Brazil

❑ Country office

- FETP staff arrived in 2000, embedded within MOH
- DGHA opened office in 2003 within MoH facilities
- Four staff, all locally hired
- \$1.3M/year PEPFAR funding

❑ CDC's activities in country

- HIV/AIDS, Malaria
- Immunizations, Influenza
- FETP
- Non-Communicable Diseases
- Elimination of health disparities among minorities

❑ Over U\$ 2.1M of investment in FY2011



Non-Communicable Diseases

□ Priority Areas

- Develop capacity with physical activity (PA) programs
- Expand surveillance of adult behavioral risk factors, youth behavioral risk factors, and injuries
- Assess diabetes burden on the country's population and resources

□ Results

- BMoH successful launched several annual surveillance programs VIGITEL (BRFSS), VIVA and PeNSE, all fully incorporated
- Network established in 300 municipalities from all 27 states to conduct and evaluate PA programs



Guide for Useful Interventions for
Physical Activity in Brazil & Latin America

❑ Overview

- Addresses physical activity and obesity by identifying, testing, and disseminating potentially effective interventions
- Started in 2005

❑ Results

- 19 direct articles in peer-reviewed journals
- Led to a line item in the MoH budget to support PA activities nationally
- Planned joint Brazil-CDC side meeting at the UN NCD meeting to feature Brazil's work
- Served as a model for MoH-University partnerships
- Led PRC-San Diego to test *Academia da Saúde* model in the U.S.
- Primary Care Health Networks-added cancer screening questions

BRAZIL-DEMOGRAPHIC CHARACTERISTICS

❑ 5th largest country in size and population

- Size: 6.514.876.599 km²
- Population: 190 million

❑ Geographic variations

- 5 regions: N, NE, CW, SE, S
 - SE and NE are the most populated
 - N, NE, and CW mostly rural. Poorest region
- 26 states + Federal District

❑ Race (“corpele”)

- White (47.7%), Mixed (43.1%),
Black (7.6%), Asian 1%, Indigenous (0.4%)



* 2010 Brazilian census, Courtesy of Lerner Moura. Brazilian map, courtesy of Pedro Hallal.

Brazil's Public Health Care System ("SISTEMA ÚNICO DE SAÚDE")

- ❑ **Instituted by Brazil's 1988 constitution**
- ❑ **One of the largest in the world**
- ❑ **Key principles:**
 - **Universality:** Health as a universal right (no fees or co-pays)
 - **Integrality:** Primary, secondary, tertiary levels
 - **Decentralization:** Management and organization of services is responsibility of the municipalities
- ❑ **Population covered: 75%**
 - Few have private health insurance
 - Benefit provided by employers
 - Formal employment concentrated in urban areas (S and SE)

* 2010 Brazilian census, Courtesy of Lernerlido Moura. Brazilian map, courtesy of Pedro Hallal.

Family Health Program: Brazil's Key Strategy

- ❑ Created in 1994 to increase access to care
- ❑ Comprehensive primary care, emphasis on prevention
- ❑ First started in the NE
- ❑ Network of health units- teams:
 - Physician
 - Nurse
 - 2 Nurse assistants
 - 4-6 community health workers
 - Unit coordinator
 - Linked to a spatially demarcated population (≤ 5000 people).
 - Reoriented the healthcare model



* 2010 Brazilian census, Courtesy of Lernerlido Moura. Brazilian map, courtesy of Pedro Hallal.

Cervical Cancer in Brazil

□ National Cervical Cancer Control Program (“VIVA MULHER”)

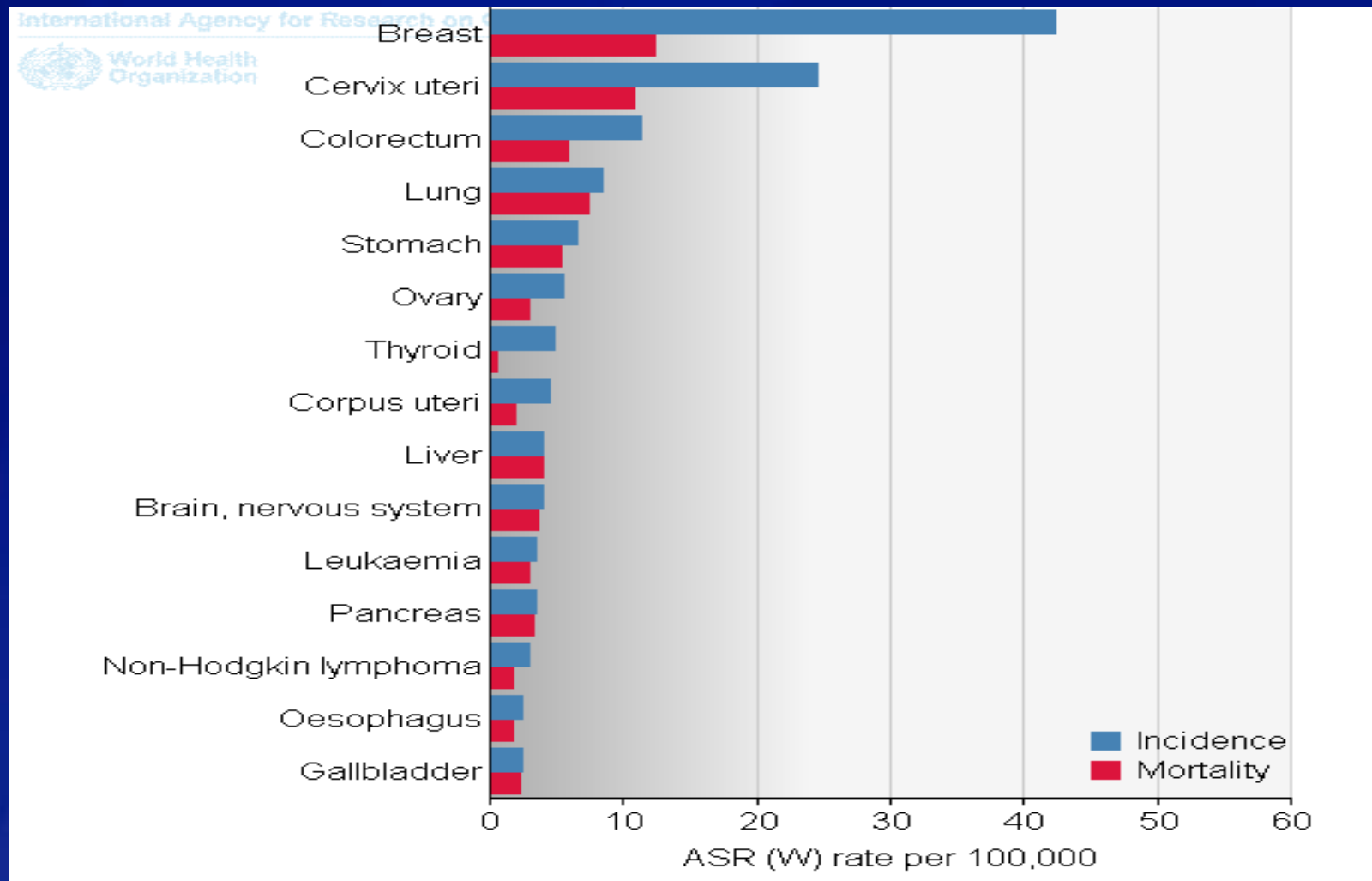
- Launched in 1998 by INCA
- Opportunistic-organized approach
- Three-year interval after 2 negative consecutive Pap tests
- Target age group: 25-59
- Does not include HPV vaccination
- Re-launched in 2011
 - Improve access, speed up diagnosis, build capacity
 - \$2.8 billion investment for a 4-year period



*Quadros et al., 2004.

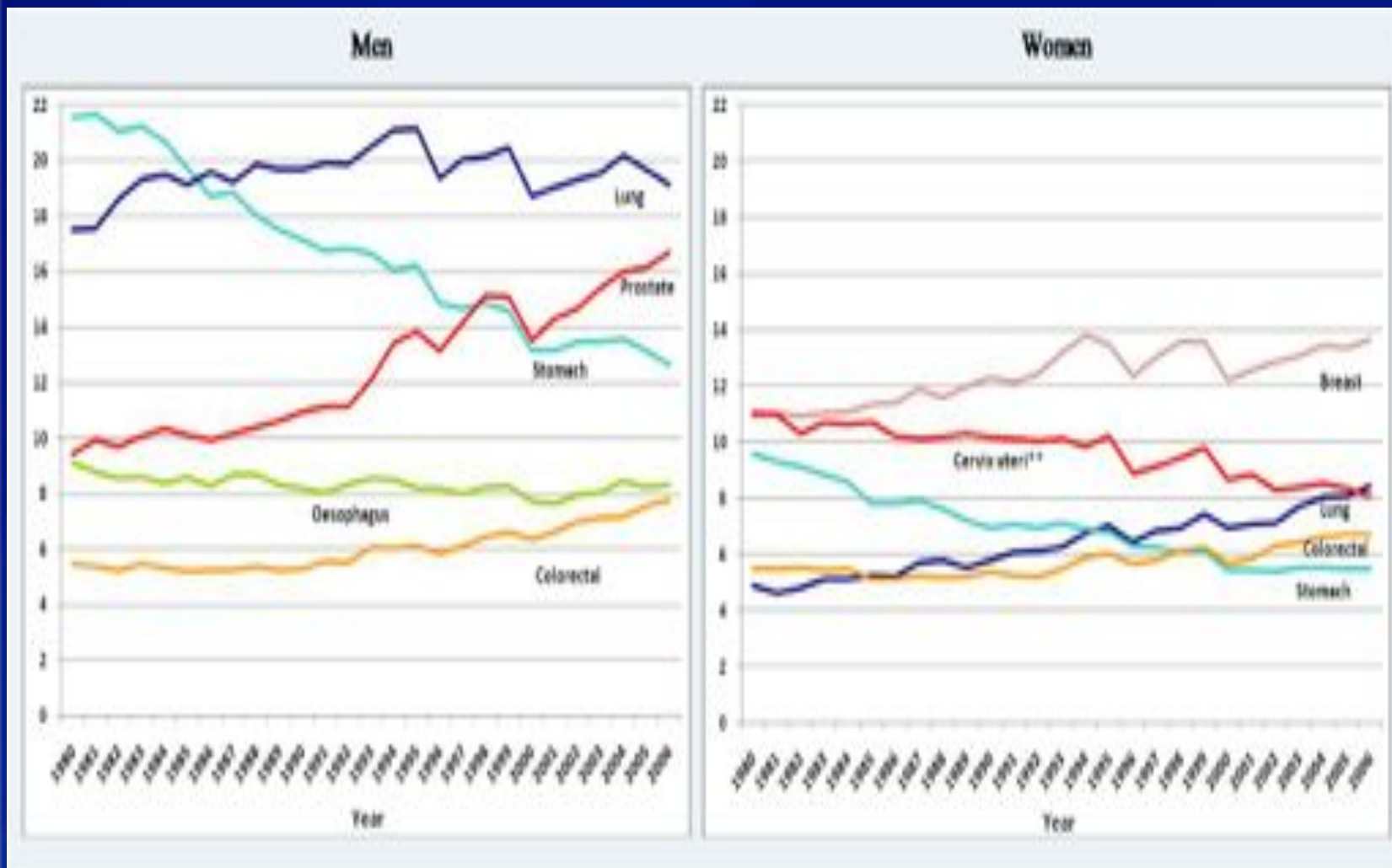
* Union for International Cancer Control (UICC). Press release. 2011.

Cervical Cancer incidence and mortality in Brazil



* Globocan, 2008.

Age standardized mortality rates for main sites of cancer in men and women, 1980-2006



* Schmidt et al, 2011.

STUDY OBJECTIVES AND METHODOLOGY

OBJECTIVES

- ❑ **To inform the Brazil's national cervical cancer control by**
 - Providing baseline data on cervical cancer related knowledge, practices and attitudes of health professionals working in primary care units
 - Providing information on how to approach new technologies for cervical cancer prevention (e.g., VIA, HPV testing, HPV vaccination)
 - Self-report data from physicians, nurses, community health workers
 - Assessing cervical cancer related services offered in primary care units
 - Self-report data from unit coordinators

METHODS

❑ Independent random samples by region

- Master file: 42,000 units
- Total no. in sample: 1,600 units

❑ Phone interviews

- One coordinator and one health professional per unit (either physician, nurse, or community health worker)
 - 1,600 with coordinators + 1,600 with health professionals= 3,200 interviews
 - 2 surveys
- Responses obtained from 1,251 coordinators, 182 physicians, 347 nurses, 273 community health workers

❑ Questions:

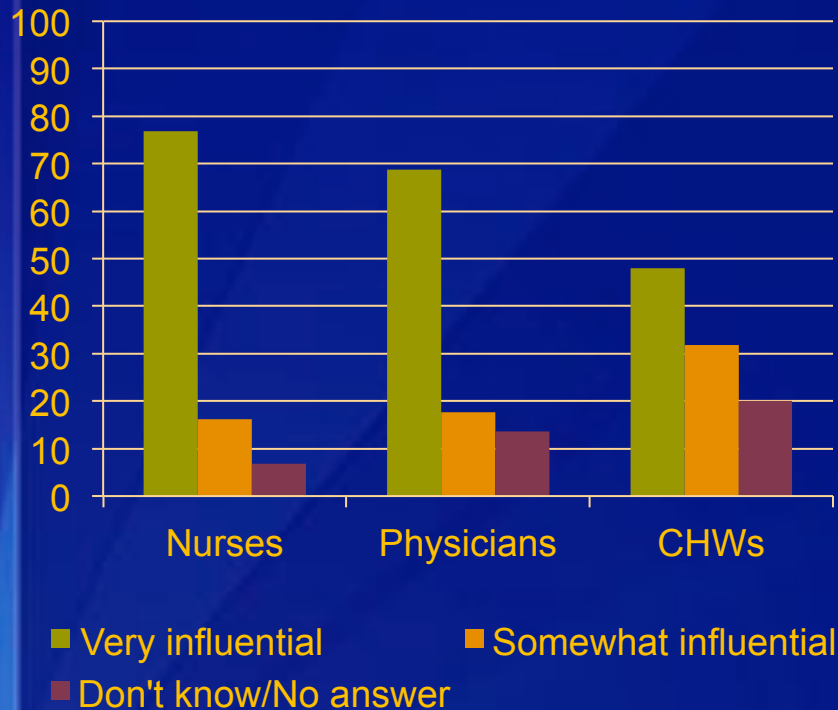
- Unit characteristics, familiarity and compliance with guidelines, knowledge of screening tests, attitudes towards HPV vaccination

STUDY KEY FINDINGS

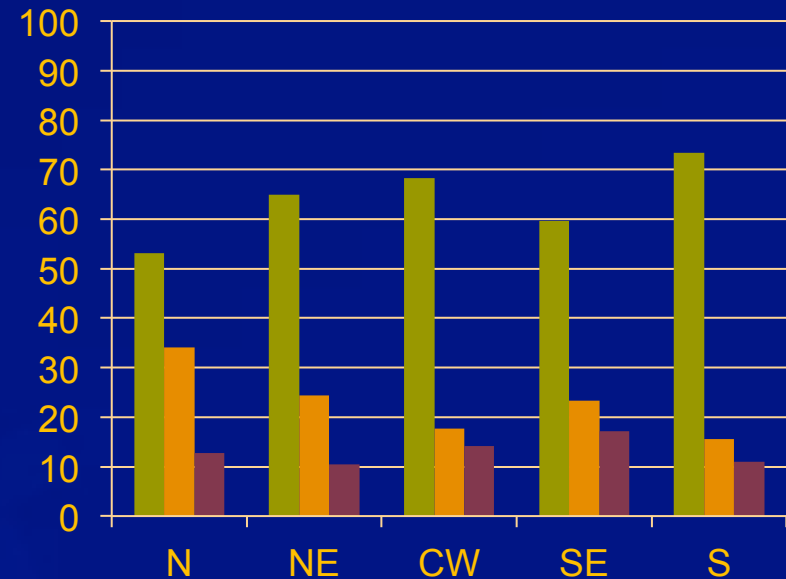
Characteristics of health units based on coordinator responses (N= 1 251)

	n	%
Conducts cervical cancer screening	1150	91.9
Tests used for screening		
Pap	1133	98.5
VIA	415	36.1
VILI	377	32.8
HPV	404	35.1
Conducts outreach or recruitment activities		
Cervical cancer	592	99.2
Breast cancer	581	97.3
Colon cancer	146	24.5
Type of outreach or recruitment activity conducted		
Flyers, brochures, pamphlets	1027	82.1
Posters	859	68.7
Home visits	1043	83.4
Support groups	413	33.0
Announcements on radio	433	34.6
Interviews	301	24.1
School presentations	750	60.0
Provides follow-up for patients who have not returned to discuss Pap test results	1102	88.1
Follow-up method		
Home visits	1053	95.6
Phone calls	299	27.1

Perceived level of influence of cervical cancer screening guidelines by health professional type (n= 802)



Perceived level of influence of cervical cancer screening guidelines by region (N= 802)

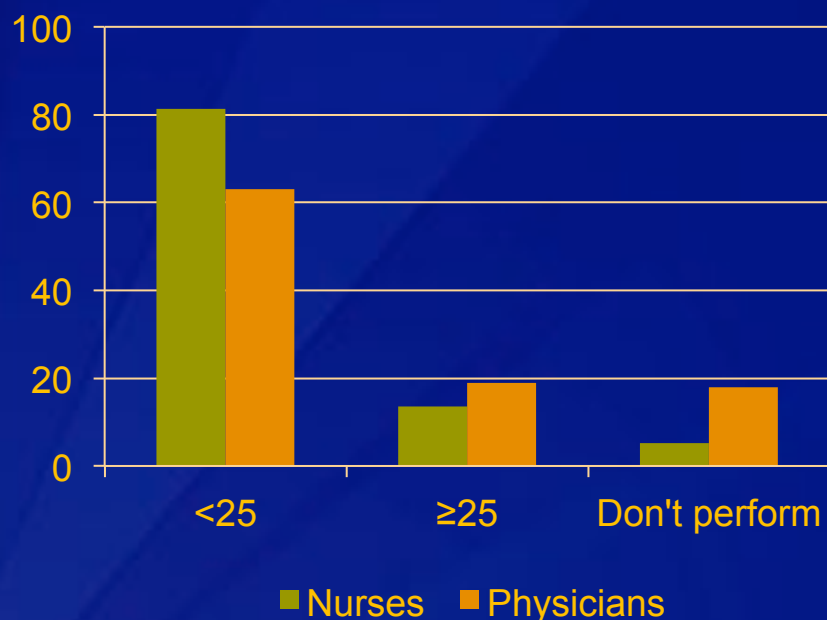


Effectiveness of cervical cancer screening tests, by health professional, gender, and test type (N= 802)

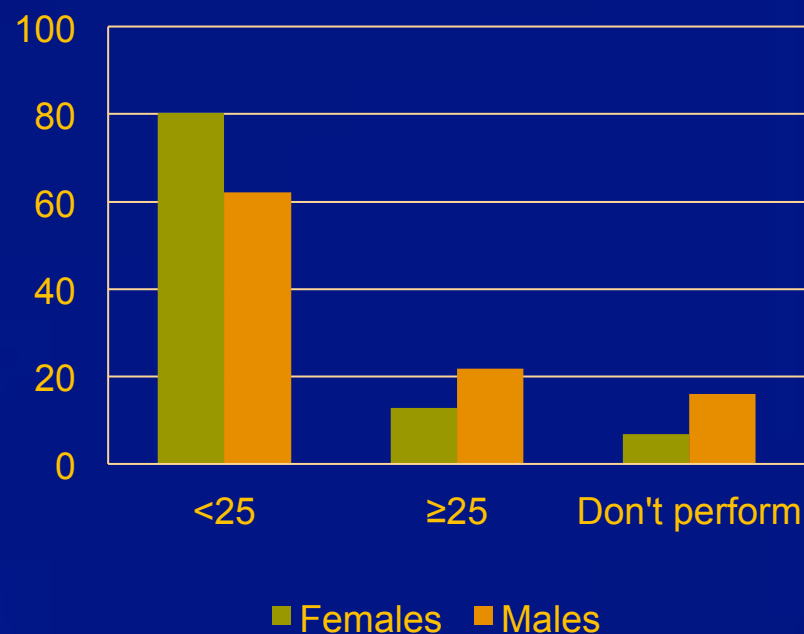
Test		Health professional			Gender		
Pap	n	Nurses	Physicians	CHWs	Female	Male	Total
Very effective	750	96.5	90.7	91.6	94.9	90.8	93.5
Somewhat effective	32	2.0	7.7	4.0	2.9	7.6	4.0
Don't know/No answer	20	1.4	1.6	4.4	2.1	1.6	2.5
p value		N/A			N/A		
VIA/VILI							
Very effective	415	64.8	59.3	30.0	52.2	51.4	51.7
Somewhat effective>	179	23.1	39.0	10.3	18.9	34.1	22.3
Don't know/No answer	208	12.1	1.6	59.7	28.9	14.6	25.9
p value		<0.001			<0.001		
HPV test							
Very effective	647	85.9	72.5	79.5	83.4	73.5	80.7
Somewhat effective>	89	7.5	25.8	5.9	8.2	21.1	11.1
Don't know/No answer	66	6.6	1.6	14.7	8.5	5.4	8.2
p value		<0.001			<0.001		

Note: "Somewhat effective includes a minority of participants who stated the test is "not effective." N/A= Does not meet criteria for chi square test.

Cervical cancer screening initiation, by patient age and health professional type (N= 494)

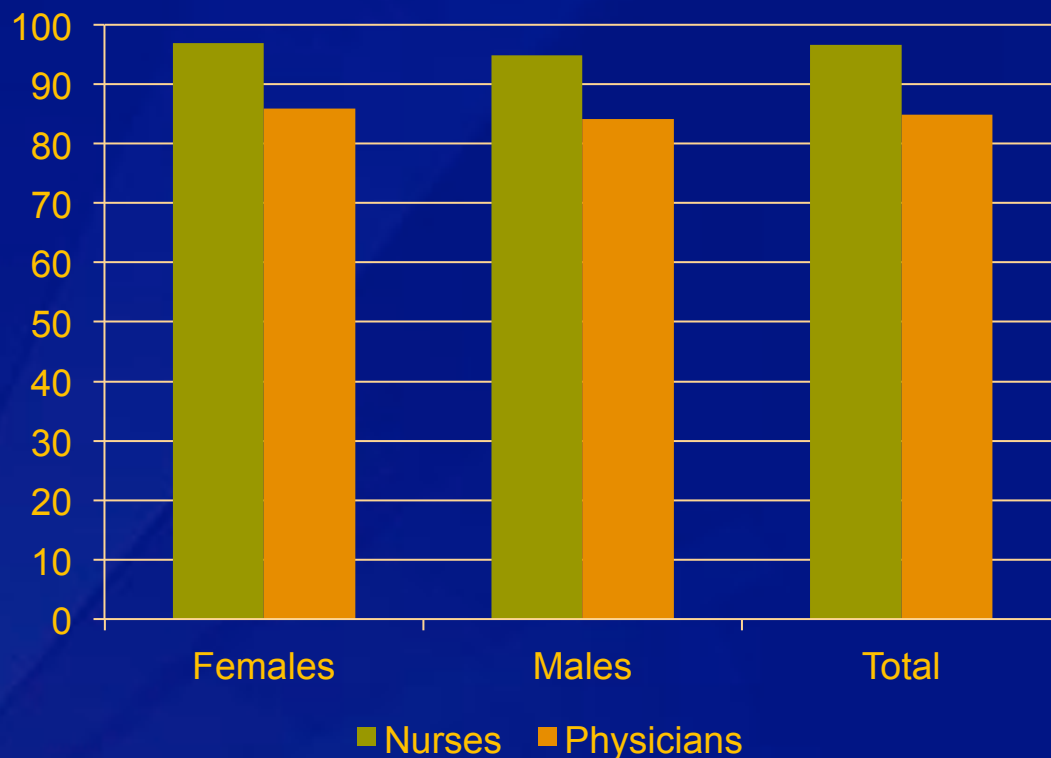


Cervical cancer screening initiation, by patient age and health professional gender (N= 494)



•*This item did not apply to community health workers.

Percentage that performs cervical cancer screening yearly, by health professional type and gender (N= 447)



•*This item did not apply to community health workers.

Intentions to recommend HPV vaccination, by health professional type and gender (N= 494)

	n	Gender		Health Professional		Total
HPV vaccine		Females	Males	Nurses	Physicians	
Would recommend the vaccine to females	474	97.5	88.3	97.5	88.3	94.2
P value		N/A		N/A		
Age groups for which participant would recommend the vaccine						
9-12	145	34.8	28.6	34.8	28.6	32.7
13-26	254	53.8	63.6	53.8	63.6	57.2
>26	45	11.4	7.8	11.4	7.8	10.1
P value		0.009		0.123		

Note: N/A = Does not meet criteria for Chi Square Test.

Conclusion and Implications

- ❑ Health professional practices related to screening frequency and initiation were inconsistent with National guidelines for cervical cancer screening**
- ❑ Attitudes related to HPV vaccination were out of step with international recommendations**
- ❑ Provider education about the value and effectiveness of alternative technologies for cervical cancer prevention is needed**
- ❑ Brazil is more likely to increase coverage of screening by developing interventions to target the eligible population and decreasing over-screening.**

Acknowledgements:

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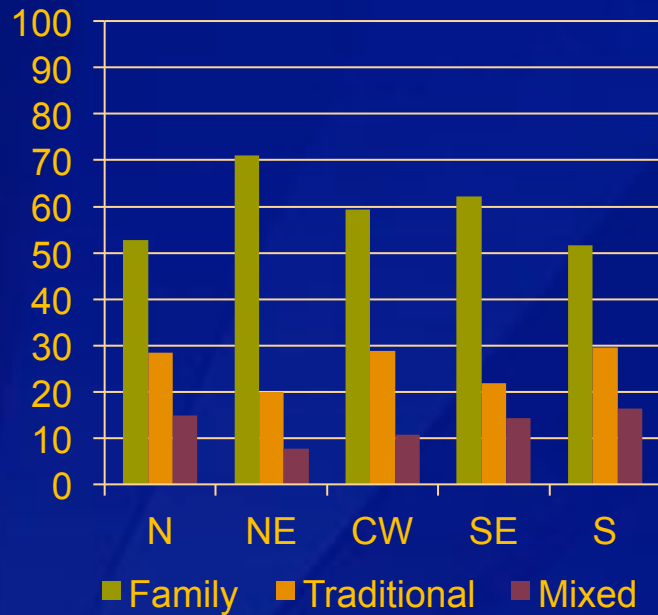
The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



Sampling strategy

Regions	N cities in the sample	% Cities/region in the sample	Units/region in the sample	% Units/region in the sample
South	229	16.2	250	15.6
Southeast	400	28.2	473	29.6
Midwest	96	6.8	103	6.4
Northeast	567	40.0	629	39.3
North	118	8.3	138	8.6
Federal District	7	0.5	7	0.4
Total	1417	100%	1600	100%

Type of unit, by region (N = 802)



Population coverage, by region (N= 802)

