



Human Papillomavirus and Cervical Cancer

Summary Report

PHILIPPINES

Updated year 2007 (r1)

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Preface

The main aim of this report is to summarize the information available on human papillomavirus (HPV) and cervical cancer at the country-specific level. The World Health Organization (WHO) in collaboration with the Institut Català d'Oncologia (ICO) have developed the WHO/ICO Information Centre on HPV and Cervical Cancer (HPV Information Centre) to evaluate the burden of disease in the country and to help facilitate stakeholders and relevant bodies of decision makers to formulate recommendations on cervical cancer prevention, including the implementation of the newly developed HPV vaccines.

Data aggregated are derived from data and official reports produced by the World Health Organization (WHO), International Agency for Research on Cancer (IARC), United Nations, The World Bank, and published literature. Indicators include relevant statistics on cancer, epidemiological determinants of cervical cancer such as demographics, socioeconomic factors and other risk factors, estimates on the burden of HPV infection, data on immunization and cervical cancer screening. These statistics are essential when planning and implementing cervical cancer prevention strategies. Therefore, we have integrated the most important information for each country into a report and on a website (www.who.int/hpvcentre) to provide a user-friendly tool to assess the best available information in each country.

The information presented here is intended as a resource for all who are working towards the prevention of cervical cancer.

Executive summary

Human papillomavirus (HPV) infection is now a well-established cause of cervical cancer. HPV types 16 and 18 are responsible for about 70% of all cervical cancer cases worldwide. Recently, two HPV vaccines that prevent specific HPV infections and have the potential to reduce the incidence of cervical and other anogenital cancers, have been or are being licensed worldwide.

This report provides key information for Philippines on cervical cancer, HPV-related statistics, factors contributing to cervical cancer, cervical cancer screening, and immunization. The report is intended to strengthen the guidance for health policy implementation of primary and secondary cervical cancer prevention strategies in the country.

Philippines has a population of 26.98 millions women ages 15 years and older who are at risk of developing cervical cancer. Current estimates indicate that every year 6000 women are diagnosed with cervical cancer and 4349 die from the disease. Cervical cancer ranks the 2nd most frequent cancer in women in Philippines, and the 2nd most frequent cancer among women between 15 and 44 years of age.

About 9.3% of women in the general population are estimated to harbour cervical HPV infection at a given time, and 64.4% of invasive cervical cancers in Philippines are attributed to HPVs 16 or 18.

Table 1: Key Statistics

Population	
Women at risk of cervical cancer (Female population aged ≥ 15 yrs) in millions	26.98
Burden of Cervical cancer	
Number of cervical cancer cases diagnosed annually	6000
Number of deaths due to cervical cancer annually	4349
Burden of cervical HPV infection	
HPV prevalence (%) in general population (in women with normal cytology)	9.3
Prevalence (%) of HPV 16 or HPV 18 in women with cervical cancer	64.4
Screening practices	
Cervical screening coverage	-
Other factors contributing to cervical cancer	
HIV rate (%) in adults (15-49 years)	<0.1
Smoking prevalence in women (%)	7.60
Fertility rate (live births per women)	3.8
Oral Contraceptive Use (%)	13.2
Other relevant factors for HPV vaccine introduction	
Vaccination coverage (%) in 2005 of DTP (3rd dose completed)	79
Immunization system performance (% of districts $\geq 80\%$ DTP3 coverage)	48

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1 Introduction

Figure 1: Philippines in South-Eastern Asia



The WHO/ICO Information Centre on HPV and Cervical Cancer (HPV Information Centre) aims to compile and centralize updated data and statistics on human papillomavirus (HPV) and cervical cancer. This report aims to summarize the data available to fully evaluate the burden of disease in Philippines and to facilitate stakeholders and relevant bodies of decision makers to formulate recommendations on cervical cancer prevention. Data include relevant cancer statistic estimates, epidemiological determinants of cervical cancer such as demographics, socioeconomic factors, risk factors, burden of HPV infection, screening and immunization. The report is structured into the following 6 sections:

Section 1 summarizes the socio-demographic profile of the country. For analytical purposes, Philippines is classified in the geographical region of South-Eastern Asia (Figure 1, lighter blue), which is composed of the following countries:* Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Viet Nam. Throughout the report, Philippines estimates will be complemented with the corresponding estimates in the South-Eastern Asia region to provide the regional situation. When data are not available for Philippines only the regional estimates are shown.

Section 2 describes the current burden of invasive cervical cancer in Philippines and the South-Eastern Asia region with estimates of prevalence, incidence and mortality rates.

Section 3 reports on the HPV prevalence and HPV type-specific distribution in women with nor-

*See <http://unstats.un.org/unsd/methods/m49/m49regin.htm> for more information.

mal cytology, women with cervical neoplasia and women with invasive cervical cancer.

Section 4 includes a brief description on screening practices in the country when available.

Section 5 describes factors that can modify the natural history of HPV and cervical carcinogenesis such as the use of hormonal contraceptives, parity, tobacco smoking, and co-infection with HIV.

Section 6 presents data on immunization coverage and practices for selected vaccines. This information will be relevant for assessing the country's capacity to introduce and implement the new HPV vaccines. The data are periodically updated and posted on the WHO Immunization surveillance, assessment and monitoring website. (http://www.who.int/immunization_monitoring/data/data_subject/en/index.html). Other reproductive health factors present proxy measures of sexual behaviour that may play a role in HPV infection

1.1 Demographic and socioeconomic factors

Figure 2: Population pyramid of Philippines

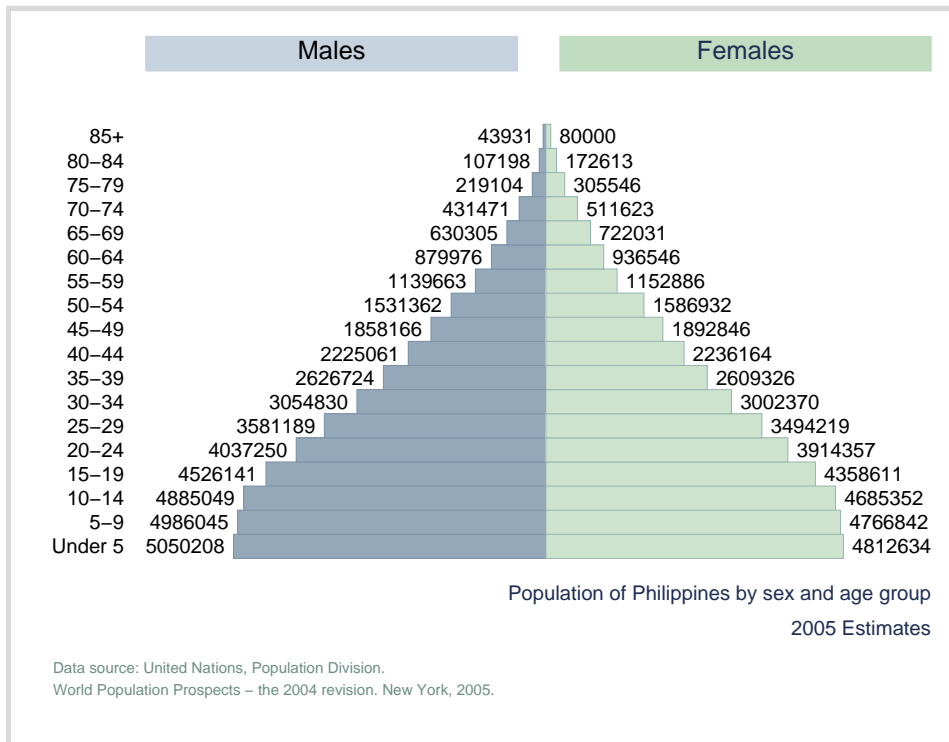


Figure 3: Population trends in Philippines by four selected age groups

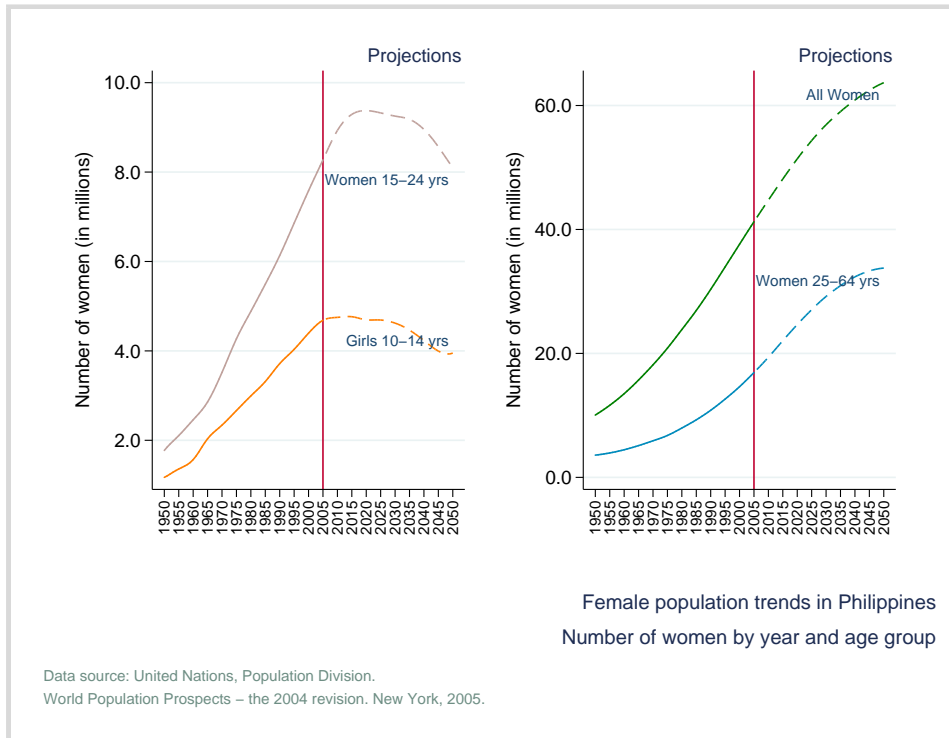


Table 2: Sociodemographic indicators of Philippines

Indicator	Male	Female	Total
Population in 1000s ^a	-	-	83054 ¹
Population annual growth rate (%) ^a	-	-	1.8 ¹
Population in urban areas (%) ^a	-	-	63 ¹
Crude birth rate per 1000 population ^b	-	-	-
Crude death rate per 1000 population ^b	-	-	4.96 ²
Life expectancy at birth (years) ^c	65 ²	72 ²	-
Adult mortality rate per 1000 (population between 15 and 60 years) ^c	269 ²	149 ²	-
Under 5 mortality rate (per 1000 live births) ^c	40 ²	28 ²	34 ²
Infant mortality rate (per 1000 live births) ^d	-	-	26 ²
Maternal mortality rate (per 100,000 live births) ^e	-	-	200 ³
Neonatal mortality rate (per 1000 live births) ^e	-	-	15 ³
Gross National Income (GNI) per capita, atlas method (current US\$) ^f	-	-	1300 ¹
Population living below the poverty line (% with <\$1 day) ^g	-	-	15.5 ³
Total expenditure on health as % of gross domestic product ^c	-	-	3.2 ⁴
Per capita total expenditure on health at international US\$ rate ^c	-	-	174 ⁴
Per capita government expenditure on health at international US\$ rate ^c	-	-	76 ⁴
General government expenditure on health as % of total expenditure on health ^c	-	-	43.7 ⁴
General government expenditure on health as % of total government expenditure ^c	-	-	5.9 ⁴
Private expenditure on health as % total expenditure on health ^c	-	-	56.3 ⁴
Physicians per 1000 ^c	-	-	0.58 ³
Adult literacy rate (>=15 years) (%) ^h	92.5 ⁵	92.7 ⁵	92.6 ⁵
Youth literacy rate (15-24 years) (%) ^h	94.5 ⁵	95.7 ⁵	95.1 ⁵
Net enrollment rate (%), primary level ⁱ	92.99 ²	94.97 ²	93.96 ²
Primary school education completion rate (%) ⁱ	93.36 ²	99.87 ²	96.55 ²
Net enrollment rate (%), secondary level ⁱ	55.72 ²	66.68 ²	61.09 ²

Year of estimation: ¹2005; ²2004; ³2000; ⁴2003; ⁵2000-2004

Data sources:

^a Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat (2005). World Population Prospects: The 2004 Revision. New York: United Nations.

^b World Bank's Health, Nutrition and Population data (<http://devdata.worldbank.org/hnpstats/>)

^c The World health report 2006: working together for health. Geneva, World Health Organization, 2006. (<http://www.who.int/whr/2006/annex/en>)

^d WHO Mortality Database. World Health Organization. (<http://www.who.int/healthinfo/morttables/en/index.html>); (ii) United Nations Children's Fund. State of the World's Children 2006. New York: United Nations Children's Fund, 2005.

^e The World health report 2005: make every mother and child count. Geneva, World Health Organization, 2005. (<http://www.who.int/whr/2005/en/index.html>)

^f The World Bank Group. (<http://siteresources.worldbank.org/DATASTATISTICS/Resources/GNIPC.pdf>)

^g The World Bank Group. (<http://devdata.worldbank.org/wdi2006/contents/Section2.htm>; Table 2.7

Expenditure Base

^h United Nations Educational, Scientific and Cultural Organization. (<http://gmr.uis.unesco.org/selectindicators.aspx>)

ⁱ Education Group of the Human Development Network (HDNED) of the World Bank in collaboration with its internal partner Development Economics Data Group (DECDG) (<http://devdata.worldbank.org/edstats/cd.asp>)

2 Cervical cancer burden

This section describes the current burden of invasive cervical cancer in Philippines and the South-Eastern Asia region with estimates of prevalence, incidence and mortality rates.

2.1 Incidence

Table 3: Incidence of cervical cancer in Philippines, South-Eastern Asia and the World

Indicator	Philippines	South-Eastern Asia	World
Crude incidence rate	15.4	15.9	16
Age-standardized incidence rate	20.9	18.7	16.2
Cumulative risk (%). Age period 0-64 years	1.5	1.5	1.3
Standardized incidence ratio (SIR)	123	112	100
Annual number of new cancer cases	6000	42538	493243

Rates are per 100,000 women.

Standardized rates have been estimated using the direct method and the World population as the reference.

Data sources:

IARC, Globocan 2002

Figure 4: Cervical cancer incidence in Philippines compared to other cancers in women of all ages

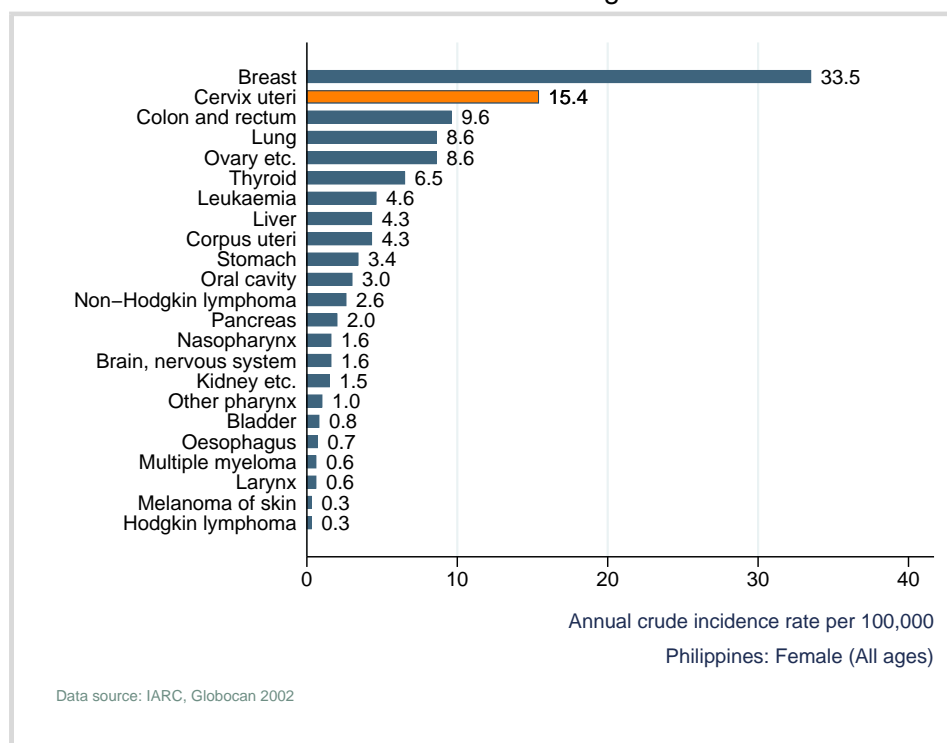


Figure 5: Specific cervical cancer incidence in Philippines compared to other cancers in women of 15-44 years of age

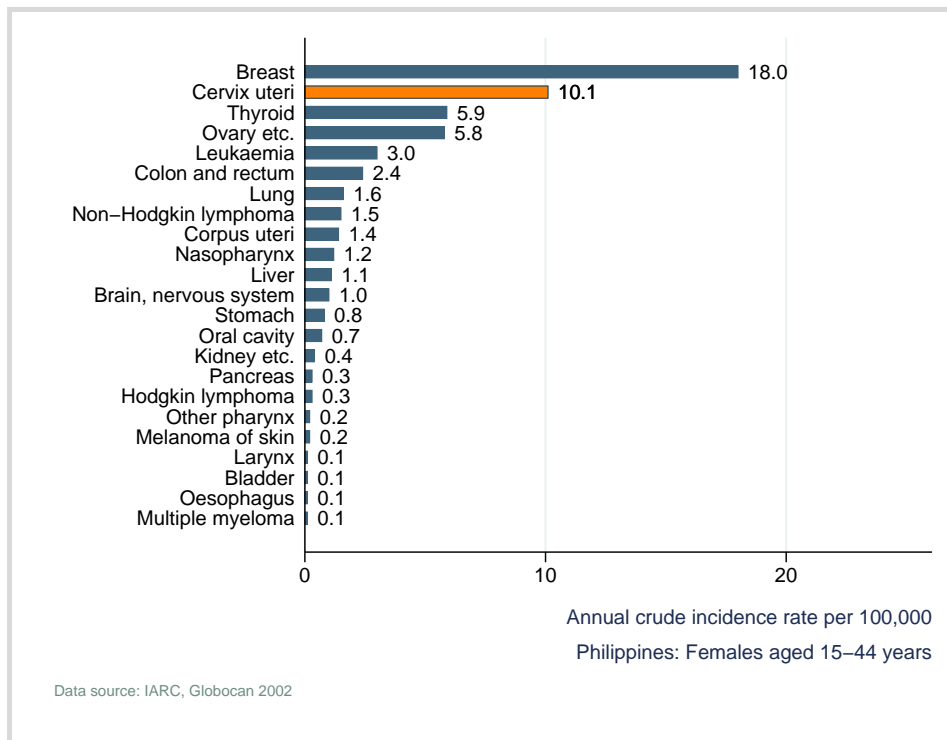
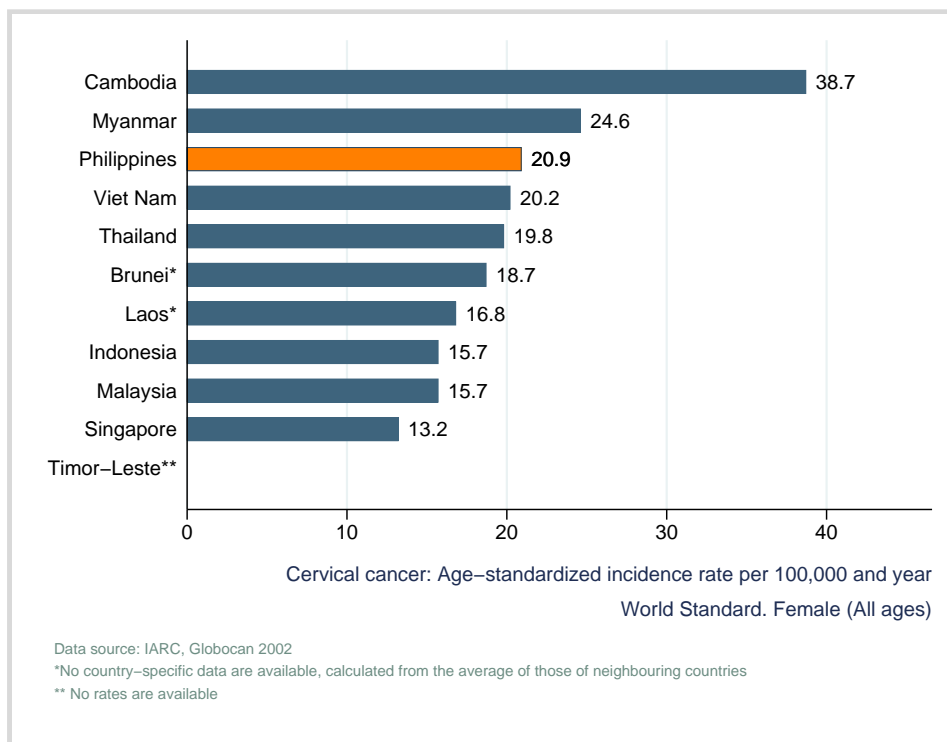


Figure 6: Cervical cancer age-standardized (ASR) incidence rates in countries of South-Eastern Asia



Rates are standardized using the direct method and the World population as reference.

Figure 7: Age-specific incidence rates of cervical cancer in Philippines as compared to estimates for South-Eastern Asia and the World

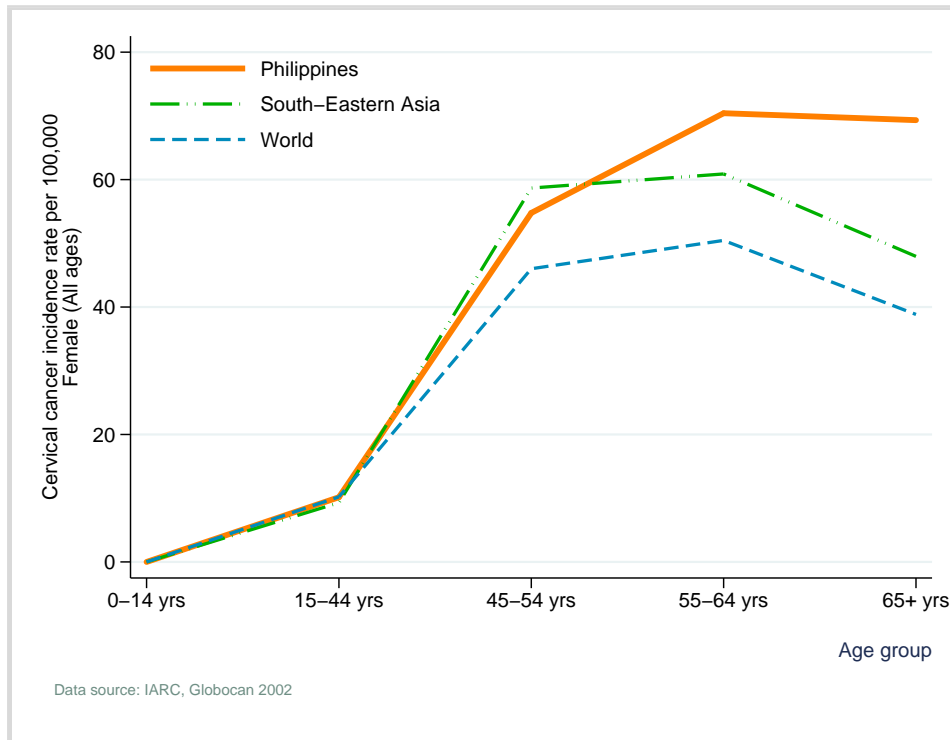
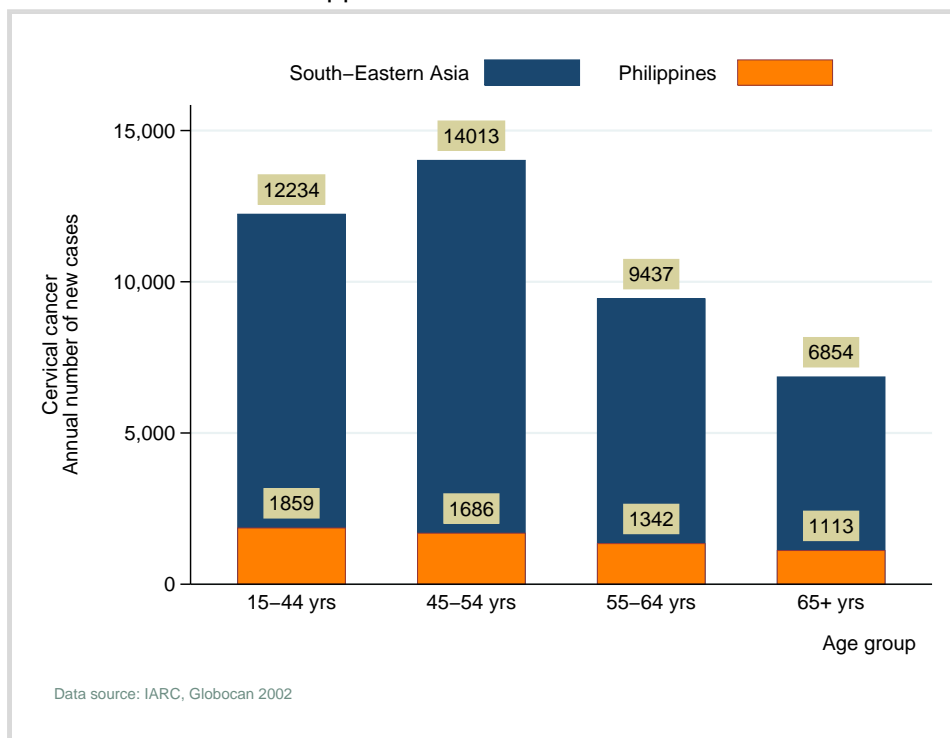


Figure 8: Annual number of new cases of cervical cancer according to age in Philippines and South-Eastern Asia



2.2 Mortality

Table 4: Mortality of cervical cancer in Philippines, South-Eastern Asia and the World

Indicator	Philippines	South-Eastern Asia	World
Crude mortality rate	11.2	8.4	8.9
Age-standardized mortality rate	15.6	10.2	9
Cumulative risk (%). Age period 0-64 years	1.1	0.8	0.7
Standardized mortality ratio (SMR)	171	112	100
Annual number of deaths	4349	22594	273505

Rates are per 100,000 women.

Standardized rates have been estimated using the direct method and the World population as the reference.

Data sources:

IARC, Globocan 2002

Figure 9: Cervical cancer mortality in Philippines compared to other cancers in women of all ages

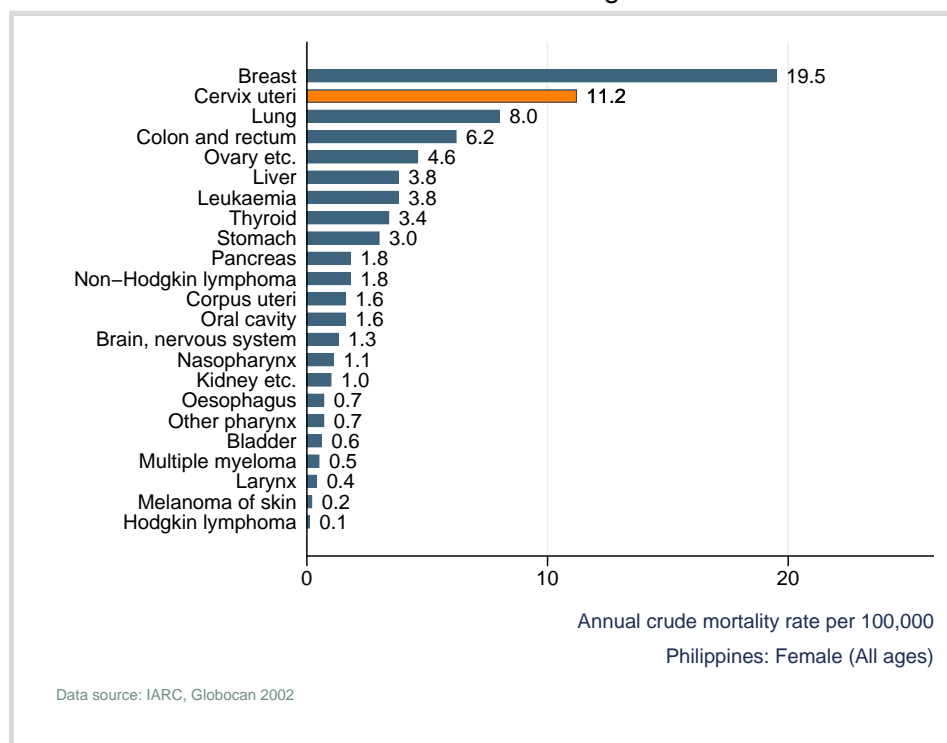


Figure 10: Specific cervical cancer mortality in Philippines compared to other cancers in women of 15-44 years of age

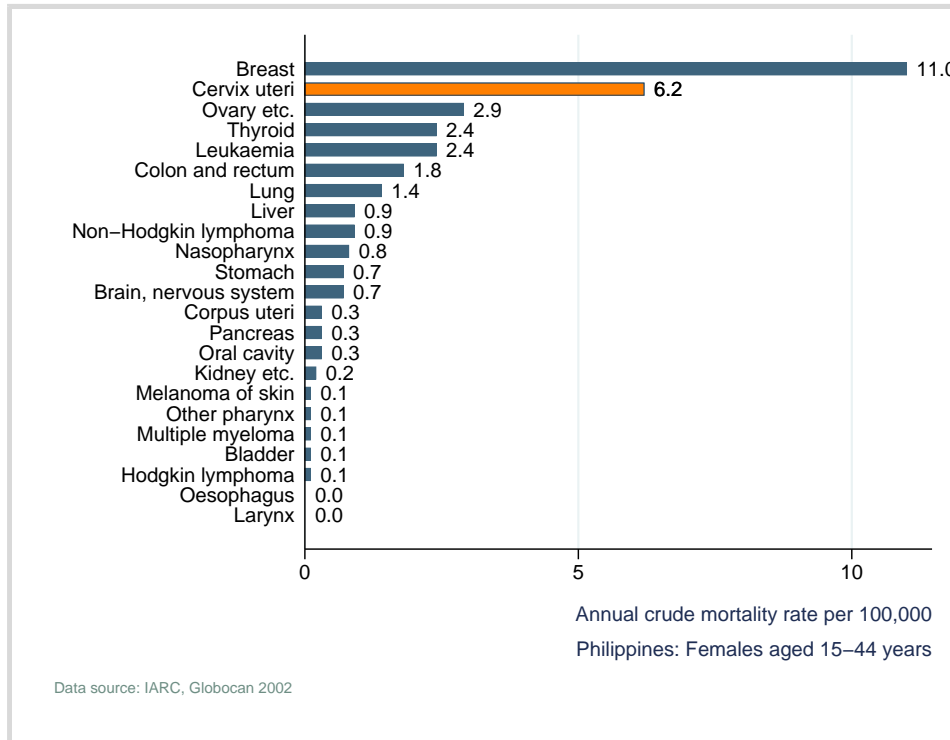
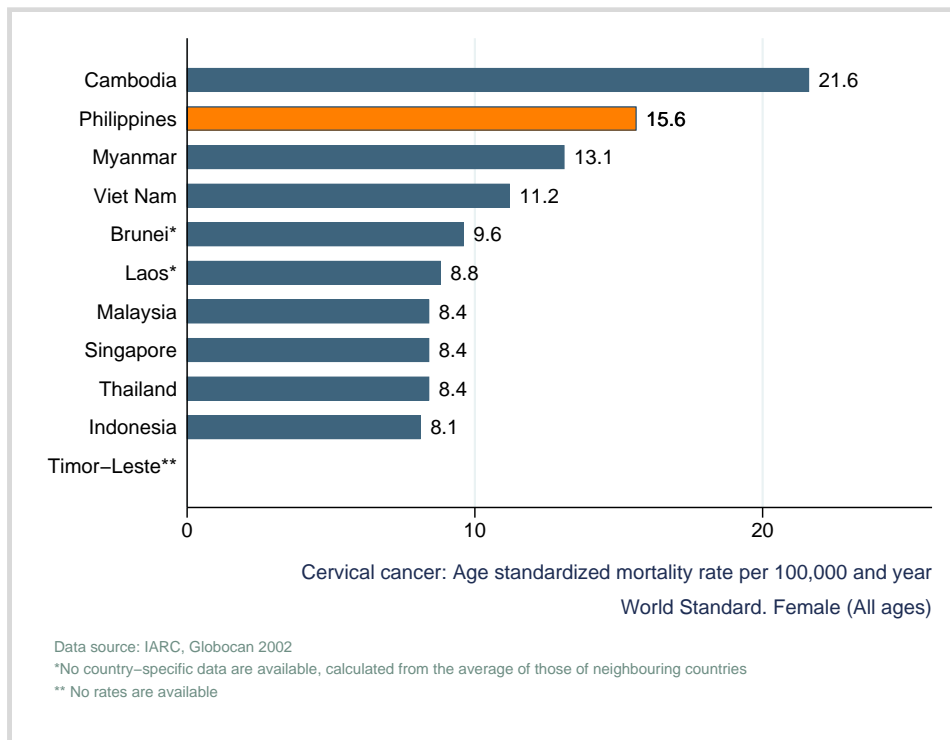


Figure 11: Cervical cancer age-standardized (ASR) mortality rates in countries of South-Eastern Asia



Rates are standardized using the direct method and the World population as reference.

Figure 12: Age-specific mortality rates of cervical cancer in Philippines as compared to estimates for South-Eastern Asia and the World

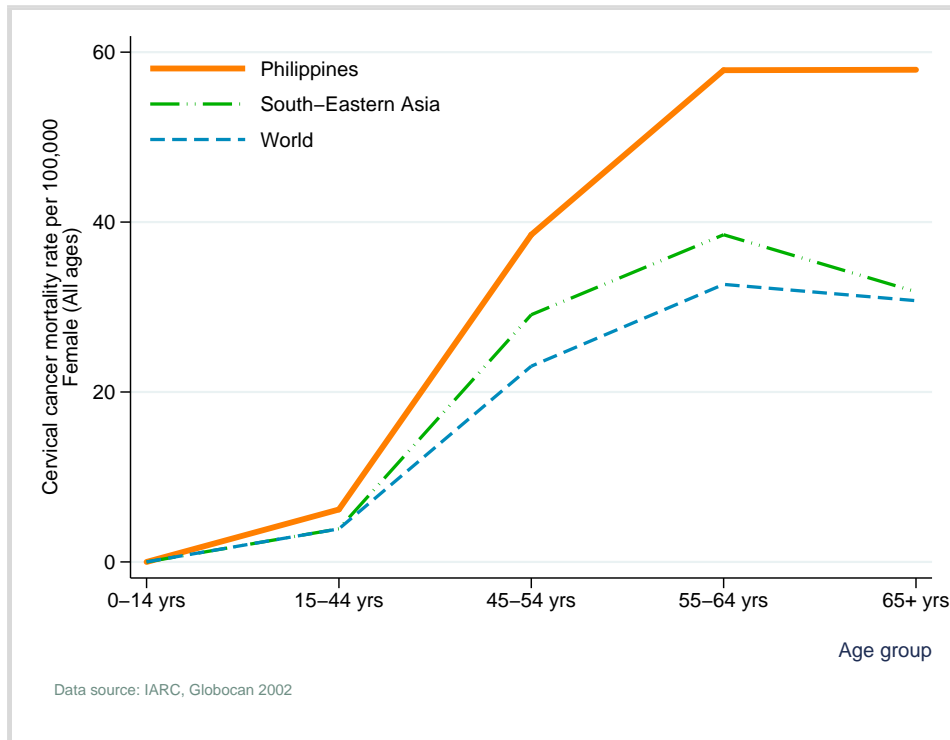
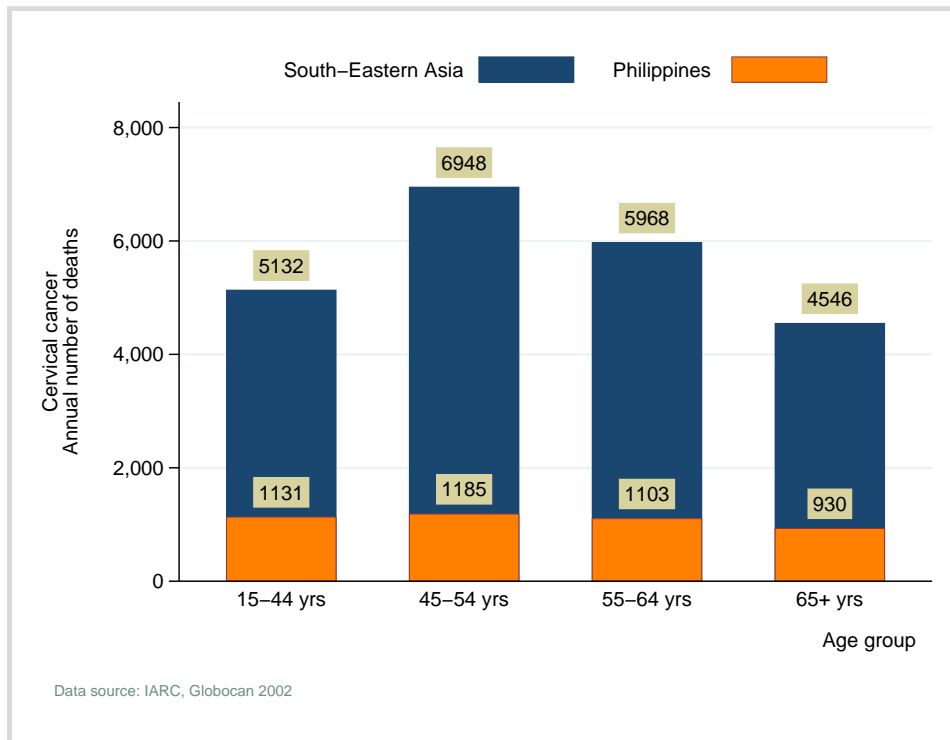
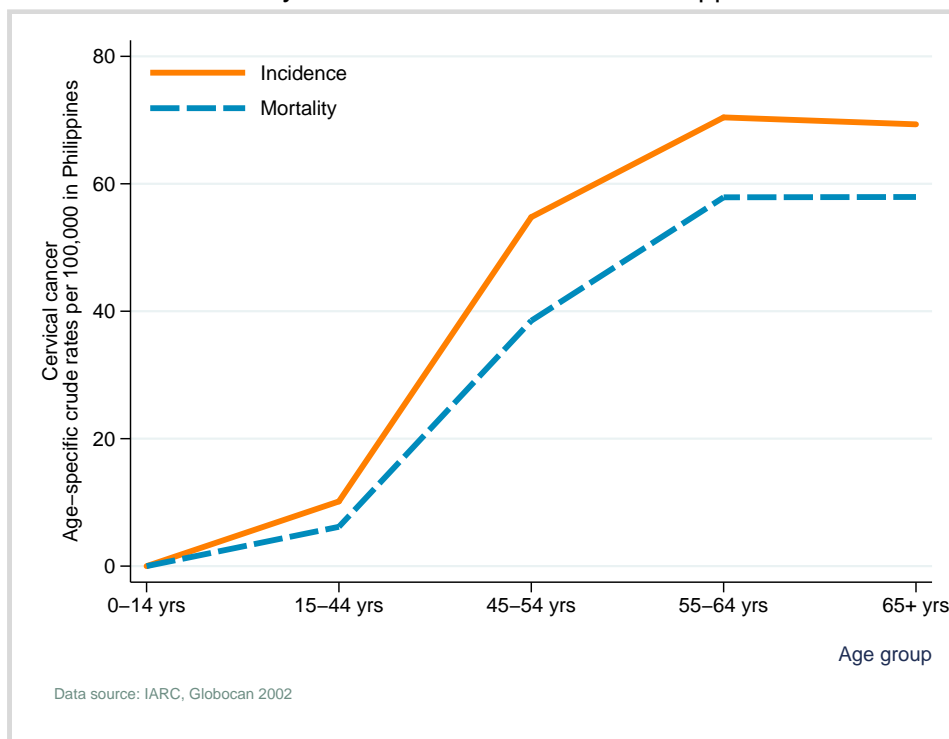


Figure 13: Annual number of deaths from cervical cancer according to age in Philippines and South-Eastern Asia



2.3 Comparison of incidence and mortality

Figure 14: A comparison of age-specific incidence rates and age-specific mortality rates of cervical cancer in Philippines



2.4 Prevalent cases and survival

Table 5: Prevalent cases of cervical cancer in Philippines

Age group	1 year survival	3 years survival	5 years survival
0-14 yrs	-	-	-
15-44 yrs	1322	3368	4909
45-54 yrs	1296	3383	5069
55-64 yrs	1379	3575	5361
65+ yrs	871	2322	3631
Total	4868	12648	18970

The number of cases are calculated according to the number of new cases and its probability of survival by time. For more information: <http://www-dep.iarc.fr/globocan/methods.htm>, prevalence section.

Data sources:
IARC, Globocan 2002

3 HPV burden in women with normal cytology, precancerous cervical lesions or invasive cervical cancer

The statistics shown in this section focus on HPV infection in the cervix uteri. HPV cervical infection results in cervical morphological lesions ranging from normalcy (cytologically normal women) to different stages of precancerous lesions (CIN-1, CIN-2, CIN-3/CIS) and invasive cervical cancer. HPV infection is measured by means of HPV DNA detection in cervical cells (fresh tissue, paraffin embedded or exfoliated cells).

The relative frequency of HPV-16/18 increases with the severity of the lesion. Worldwide, HPV-16 and 18 contribute to over 70% of all cervical cancer cases, between 41 and 67% of high-grade cervical lesions and 16-32% of low-grade cervical lesions. After HPV-16/18, the six most common HPV types are the same in all world regions, namely 31, 33, 35, 45, 52 and 58; these account for an additional 20% of cervical cancers worldwide (Clifford G et al. *Vaccine* 2006;24(S3):26).

HPV is also responsible for other benign genital infections such as genital warts, mainly caused by HPV types 6 and 11.

Note: The methodologies used to compile the information on HPV burden presented in this section are derived from a systematic review and meta-analysis of the literature. Because of the limitations of HPV DNA detection techniques and study designs used, these data should be interpreted cautiously and used only as a guidance to assess the burden of HPV infection in the population.

For instance, the prevalence of low risk types HPV-6 and 11 may be underestimated because most studies used assays that only detected high risk types

3.1 Terminology

Cytologically normal women

No abnormal cells are observed on the surface of their cervix upon cytology.

Cervical Intraepithelial Neoplasia (CIN) / Squamous Intraepithelial Lesions (SIL)

SIL and CIN are two commonly used terms to describe precancerous lesions or the abnormal growth of squamous cells observed in the cervix. SIL is an abnormal result derived from cervical cytological screening or Pap smear testing. CIN is a histological diagnosis made upon analysis of cervical tissue obtained by biopsy or surgical excision.

Low-grade cervical lesions (LSIL/CIN-1)

Low-grade cervical lesions are defined by early changes in size, shape, and number of abnormal cells formed on the surface of the cervix and may be referred to as mild dysplasia, LSIL, or CIN-1.

High-grade cervical lesions (HSIL/ CIN-2 / CIN-3 / CIS)

High-grade cervical lesions are defined by a large number of precancerous cells on the surface of the cervix that are distinctly different from normal cells. They have the potential to become cancerous cells and invade deeper tissues of the cervix. These lesions may be referred to as moderate or severe dysplasia, HSIL, CIN-2, CIN-3, or cervical carcinoma in situ (CIS).

Carcinoma in situ (CIS)

Cancerous cells are confined to the cervix and have not spread to other parts of the body.

Invasive cervical cancer (ICC) / Cervical cancer

If the high-grade precancerous cells invade deeper tissues of the cervix or to other tissues or organs, then the disease is called invasive cervical cancer or cervical cancer.

3.2 HPV prevalence

Table 6: Prevalence of HPV in women with normal cytology, precancerous cervical lesions and invasive cervical cancer in Philippines.

	Philippines		South-Eastern Asia		World	
	No. tested	HPV prevalence % (95% CI)	No. tested	HPV Prevalence % (95%CI)	No. tested	HPV Prevalence % (95%CI)
Normal cytology	377	9.3 (6.6-12.7)	4194	6.2 (5.5-6.9)	157879	10.0 (9.8-10.1)
Low-grade lesions ^a	-	--	27	33.3 (16.5-54.0)	8640	71.6 (70.6-72.5)
High-grade lesions ^b	-	--	207	61.8 (54.8-68.5)	7094	84.9 (84.1-85.7)
Cervical Cancer	356	93.5 (90.5-95.9)	1090	92.1 (90.3-93.6)	14595	87.2 (86.7-87.8)

The samples for HPV testing come from cervical specimens (fresh / fixed biopsies or exfoliated cells).

Abbreviations used:

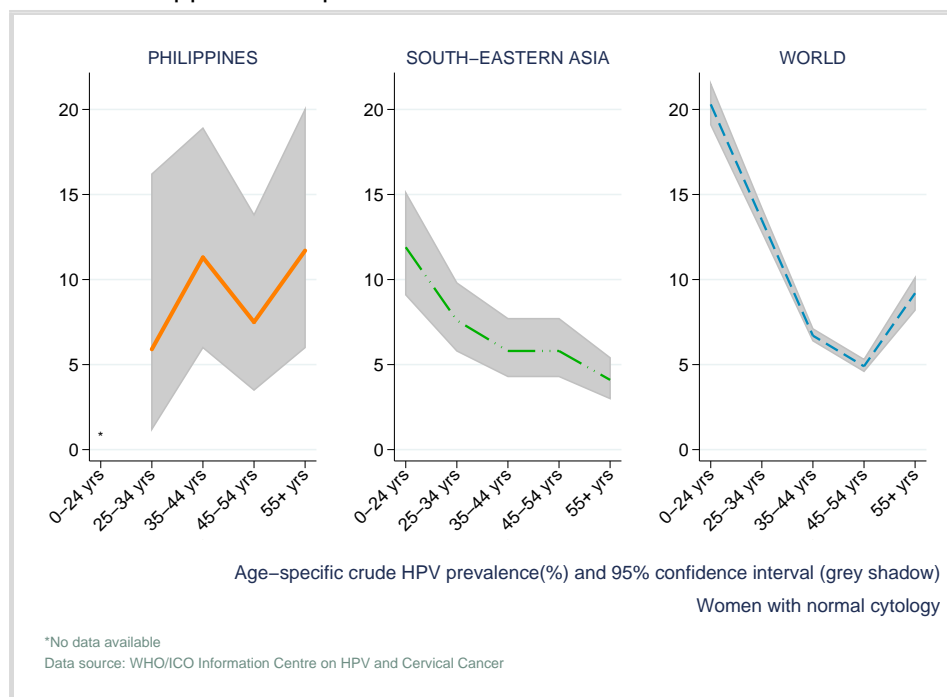
95% CI: 95% Confidence Interval

^a Low-grade lesions: LSIL or CIN-1

^b High-grade lesions: CIN-2, CIN-3, CIS or HSIL

Data sources: See sources at the end of the chapter

Figure 15: Age-specific crude prevalence in women with normal cytology in Philippines compared to South-Eastern Asia and the World.



3.3 HPV type distribution

Figure 16: Ten most frequent HPV types in women with normal cytology in Philippines as compared to South-Eastern Asia and the World

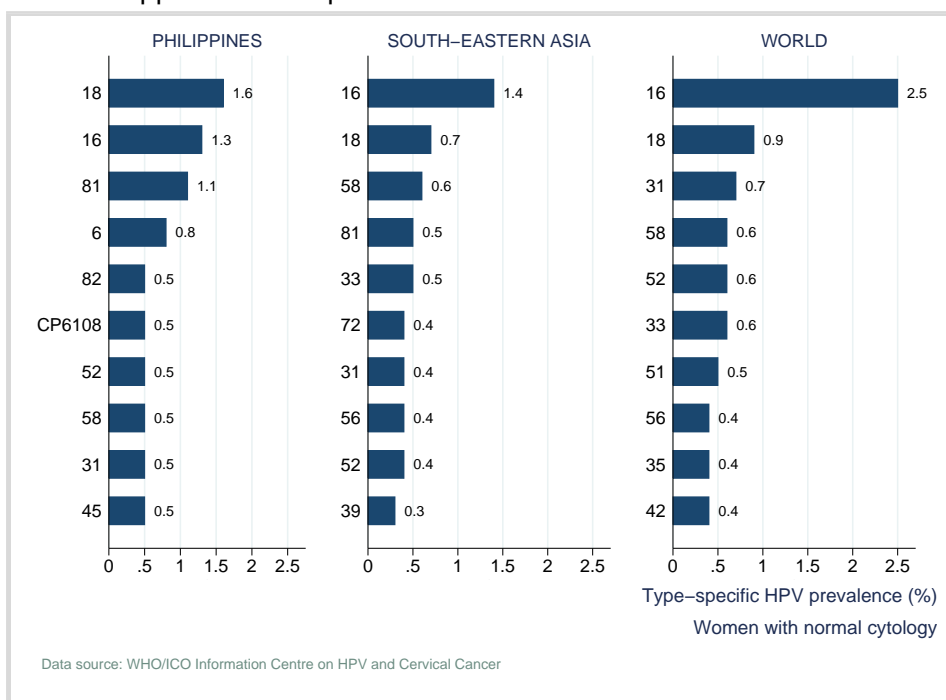


Figure 17: Ten most frequent HPV types in women with low-grade cervical lesions (LSIL/CIN-1) in Philippines as compared to South-Eastern Asia and the World

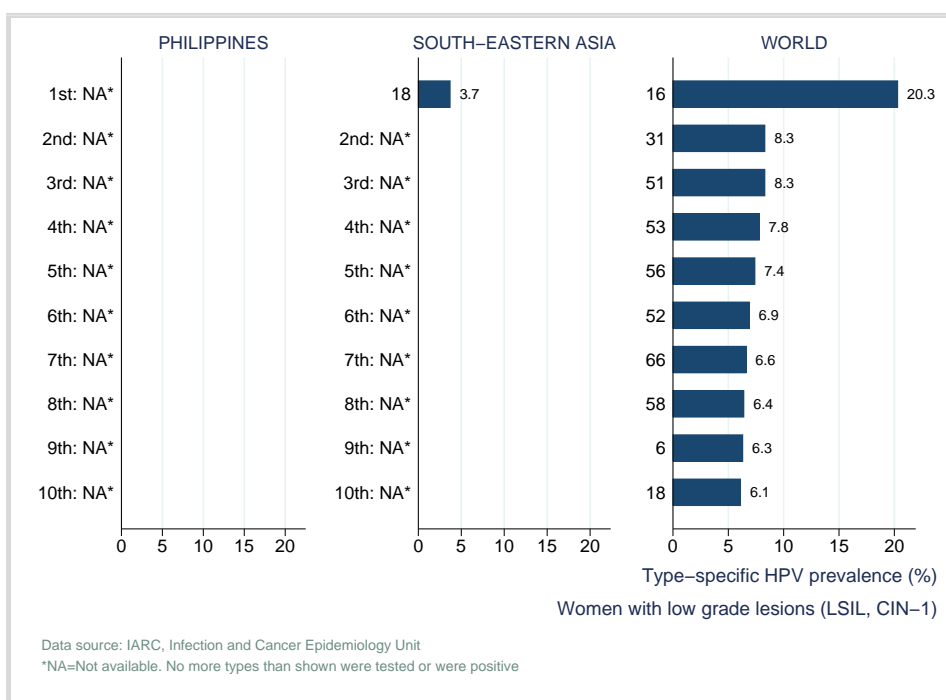


Figure 18: Ten most frequent HPV types in women with high-grade cervical lesions (CIN-2, CIN-3, CIS and HSIL) in Philippines as compared to South-Eastern Asia and the World

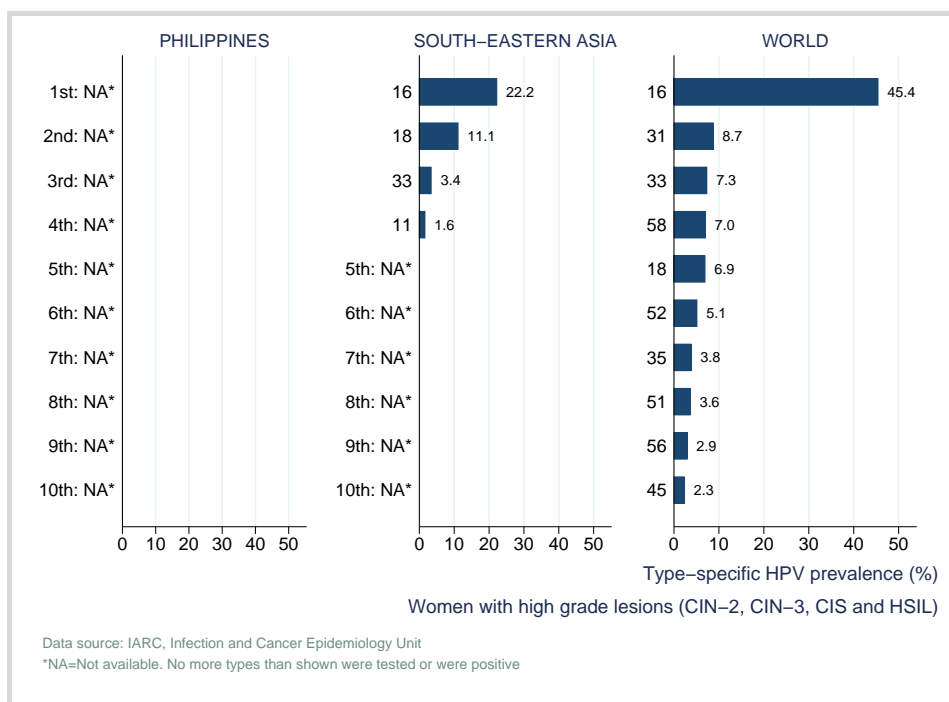


Figure 19: Ten most frequent HPV types in women with invasive cervical cancer in Philippines as compared to South-Eastern Asia and the World

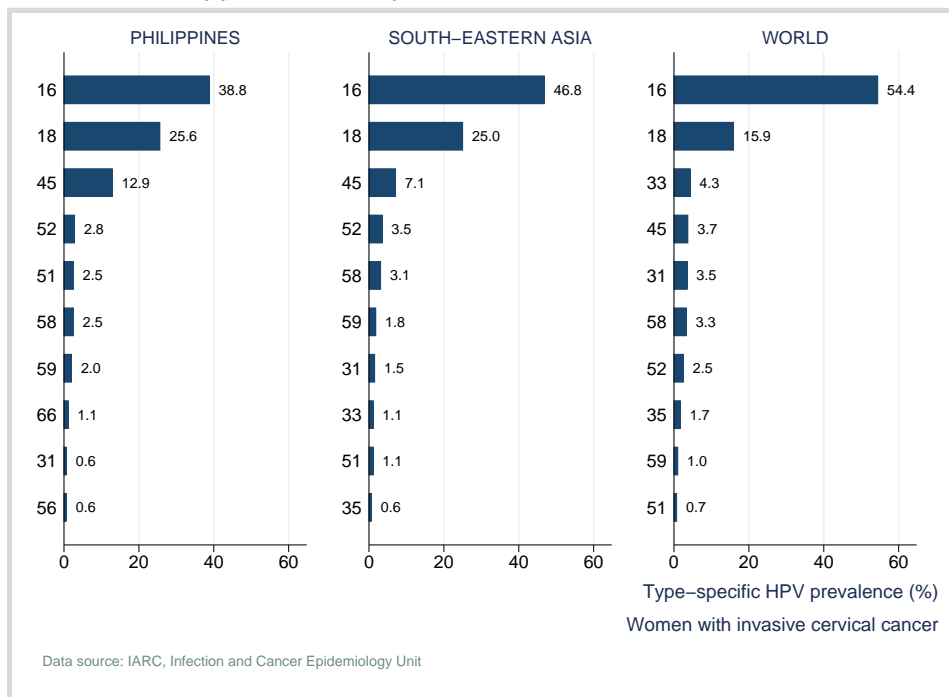


Table 7: Type-specific HPV prevalence in women with normal cytology, precancerous cervical lesions and invasive cervical cancer in Philippines

HPV Type	Normal cytology		Low-grade lesions ^a		High-grade lesions ^b		Cervical cancer	
	Women tested	HPV Prev % (95%CI)	Women tested	HPV Prev % (95%CI)	Women tested	HPV Prev % (95%CI)	Women tested	HPV Prev % (95%CI)
6	377	0.8 (0.2-2.3)	-	--	-	--	356	0.0 (0.0-1.0)
11	377	0.3 (0.0-1.5)	-	--	-	--	356	0.0 (0.0-1.0)
16	377	1.3 (0.4-3.1)	-	--	-	--	356	38.8 (33.7-44.0)
18	377	1.6 (0.6-3.4)	-	--	-	--	356	25.6 (21.1-30.4)
22	-	--	-	--	-	--	-	--
26	377	0.0 (0.0-1.0)	-	--	-	--	-	--
30	-	--	-	--	-	--	-	--
31	377	0.5 (0.1-1.9)	-	--	-	--	356	0.6 (0.1-2.0)
32	-	--	-	--	-	--	-	--
33	377	0.0 (0.0-1.0)	-	--	-	--	356	0.0 (0.0-1.0)
34	377	0.0 (0.0-1.0)	-	--	-	--	-	--
35	377	0.0 (0.0-1.0)	-	--	-	--	356	0.0 (0.0-1.0)
39	377	0.0 (0.0-1.0)	-	--	-	--	356	0.3 (0.0-1.6)
40	377	0.3 (0.0-1.5)	-	--	-	--	-	--
42	377	0.0 (0.0-1.0)	-	--	-	--	-	--
43	377	0.0 (0.0-1.0)	-	--	-	--	-	--
44	377	0.3 (0.0-1.5)	-	--	-	--	-	--
45	377	0.5 (0.1-1.9)	-	--	-	--	356	12.9 (9.6-16.9)
51	377	0.0 (0.0-1.0)	-	--	-	--	356	2.5 (1.2-4.7)
52	377	0.5 (0.1-1.9)	-	--	-	--	356	2.8 (1.4-5.1)
53	-	--	-	--	-	--	-	--
54	377	0.3 (0.0-1.5)	-	--	-	--	-	--
55	-	--	-	--	-	--	-	--
56	377	0.3 (0.0-1.5)	-	--	-	--	356	0.6 (0.1-2.0)
57	377	0.0 (0.0-1.0)	-	--	-	--	-	--
58	377	0.5 (0.1-1.9)	-	--	-	--	356	2.5 (1.2-4.7)
59	377	0.0 (0.0-1.0)	-	--	-	--	356	2.0 (0.8-4.0)
61	377	0.0 (0.0-1.0)	-	--	-	--	-	--
62	-	--	-	--	-	--	-	--
64	-	--	-	--	-	--	-	--
66	377	0.0 (0.0-1.0)	-	--	-	--	356	1.1 (0.3-2.9)
67	-	--	-	--	-	--	-	--
68	377	0.0 (0.0-1.0)	-	--	-	--	356	0.6 (0.1-2.0)
69	-	--	-	--	-	--	-	--
70	377	0.0 (0.0-1.0)	-	--	-	--	356	0.0 (0.0-1.0)
71	-	--	-	--	-	--	-	--
72	377	0.0 (0.0-1.0)	-	--	-	--	-	--
73	377	0.3 (0.0-1.5)	-	--	-	--	356	0.3 (0.0-1.6)
74	-	--	-	--	-	--	-	--
81	377	1.1 (0.3-2.7)	-	--	-	--	-	--
82	377	0.5 (0.1-1.9)	-	--	-	--	356	0.3 (0.0-1.6)
83	377	0.0 (0.0-1.0)	-	--	-	--	-	--
84	-	--	-	--	-	--	-	--
85	-	--	-	--	-	--	-	--
86	-	--	-	--	-	--	-	--
89	-	--	-	--	-	--	-	--
90	-	--	-	--	-	--	-	--
91	-	--	-	--	-	--	-	--
CP6108	377	0.5 (0.1-1.9)	-	--	-	--	-	--
JC9710	-	--	-	--	-	--	-	--
X	-	--	-	--	-	--	-	--
multiple	377	--	-	--	-	--	356	8.4 (5.8-11.8)

The samples for HPV testing come from cervical specimens (fresh / fixed biopsies or exfoliated cells).

Abbreviations used:

95% CI: 95% Confidence Interval

^a Low-grade lesions: LSIL or CIN-1

^b High-grade lesions: CIN-2, CIN-3, CIS or HSIL

Data sources: See sources at the end of the chapter

3.4 References

See the methods file www.who.int/hpvcentre for a list of references contributing to regional and world estimates. Some authors have been contacted and have provided complementary data not shown in the paper.

Data on precancerous lesions and invasive cervical cancer have been compiled by the IARC Unit of Infection and Cancer Epidemiology and published as a systematic review and meta-analysis in Clifford GM. *Cancer Epidemiol Biomarkers Prev.* 2005; 14: 1157, Clifford GM. *Br J Cancer.* 2003; 89: 101, Clifford GM. *Br J Cancer.* 2003; 88: 63 and Smith JS. *Int J Cancer.* 2007; 121: 621. Data on cytologically normal women have been compiled by ICO Epidemiology and Cancer Registry Unit and published in De Sanjosé S. *Lancet Infect Dis.* 2007; 7: 453.

The specific references for Philippines HPV estimates are shown below:

Normal cytology:

Ngelangel C, *J Natl Cancer Inst* 1998; 90: 43

Low-grade lesions:

No data available

High-grade lesions:

No data available

Cervical cancer:

Ngelangel C, *J Natl Cancer Inst* 1998; 90: 43

4 Screening practices

Table 8: Main characteristics of cervical cancer screening in Philippines.

Indicator	Value
Screening ages (years)	-
Screening interval (years) or Frequency of screens	-
Lifetime number of recommended smears	-
Estimated Coverage	-
Smear taker	-

Comments:

The Department of Health in the Philippines has proposed an organized cervical cancer screening programme, with recommendations for regular cytological tests every three years, although a recent policy shift has recommended visual inspection methods (Ngelangel and Wang, 2002; Ngelangel et al., 2003). Changes in public health policy, including aspects related to education of screening personnel, strategies for ensuring compliance with screening and health insurance coverage for preventive services, have been mentioned as barriers to the development and implementation of a screening programme (Ngelangel et al., 2003). The lack of a skilled workforce is also an issue. The Philippines Cancer Society is involved in cytological testing, although this is not widely available (<http://www.kanser.com.ph>).

Data source:

All information has been extracted from: IARC Handbooks of Cancer Prevention Vol. 10: Cervix Cancer Screening. IARC Press. Lyon, 2005.

5 Factors contributing to cervical cancer

HPV is a necessary cause of cervical cancer, but it is not a sufficient cause. Other cofactors are necessary for progression from cervical HPV infection to cancer. Long-term use of hormonal contraceptives, high parity, tobacco smoking, and co-infection with HIV have been identified as established cofactors; co-infection with *Chlamydia trachomatis* and herpes simplex virus type-2, immunosuppression, and certain dietary deficiencies are other probable cofactors. Genetic and immunological host factors and viral factors other than type, such as variants of type, viral load and viral integration, are likely to be important but have not been clearly identified (Muñoz N, Vaccine 2006; 24S3: S3-1).

Table 9: Factors contributing to cervical carcinogenesis in Philippines.
Fertility rate is used as a "proxy" for parity.

Cofactors	Indicator	Male	Female	Total
Smoking	Prevalence of smoking (% of adults) ^a	40.50 ¹	7.60 ¹	-
	Total Fertility Rate per Woman ^b	-	3.8 ²	-
Parity	Age-specific fertility rate per 1000 women ^b	15-19 yrs	50 ²	-
		20-24 yrs	177 ²	-
		25-29 yrs	210 ²	-
		30-34 yrs	161 ²	-
		35-39 yrs	106 ²	-
		40-44 yrs	43 ²	-
		45-49 yrs	8 ²	-
HIV	HIV rate (%), adults (15-49 years) ^c	-	-	<0.1 ³
	HIV rate (%), young adults (15-24 years) ^c	-	-	-
	Number of adults and children with HIV ^c	-	-	12000 ³
	Number of adults (15+ years) with HIV ^c	-	3400 ³	12000 ³
	Number of children (0-14 years) with HIV ^c	-	-	-
	HIV Antiretroviral Therapy Coverage (%) ^d	-	-	<0.1 ³
Hormonal Contraception	Oral Contraceptive Use (%) ^e	-	-	13.2 ³

Year of estimation:¹2003; ²1996; ³2005

Data sources:

^a World Bank's Health, Nutrition and Population data (<http://devdata.worldbank.org/hnpstats>)

^b World Fertility Patterns, 2004; World Population Prospects: The 2004 Revision. Population database. Population Division, Department of Economic and Social Affairs, United Nations Secretariat. (<http://esa.un.org/unpp>)

^c 2006 Report on the global AIDS epidemic, UNAIDS/WHO, May 2006.

^d Progress on global access to HIV antiretroviral therapy. A report on '3 by 5' and beyond. Geneva, World Health Organization and Joint United Nations Programme on HIV/AIDS, March 2006. Data for high-income countries have been added to the original list

^e United Nations, Department of Economic and Social Affairs, Population Division. World Contraceptive Use 2005 (<http://www.un.org/esa/population/publications/contraceptive2005/WCU2005.htm>)

6 Other relevant factors for HPV vaccine introduction

This section presents data on immunization coverage and practices for selected vaccines. This information will be relevant for assessing the country's capacity to introduce and implement the new HPV vaccines. The data are periodically updated and posted on the WHO Immunization surveillance, assessment and monitoring website. (http://www.who.int/immunization_monitoring/data/data_subject/en/index.html). Other reproductive health factors present proxy measures of sexual behaviour that may play a role in HPV infection

6.1 Immunization practices

6.1.1 Immunization coverage estimates

Figure 20: DTP (Diphtheria, Tetanus and Pertussis) vaccine coverage (3rd dose completed) in Philippines

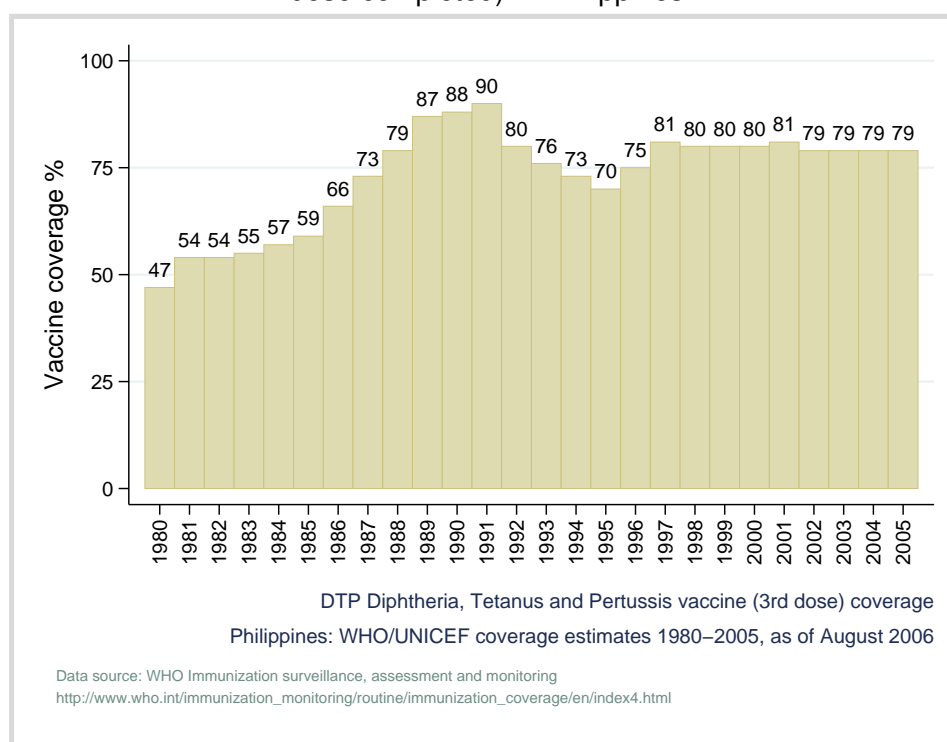


Figure 21: Hepatitis B vaccine coverage (3rd dose completed) in Philippines

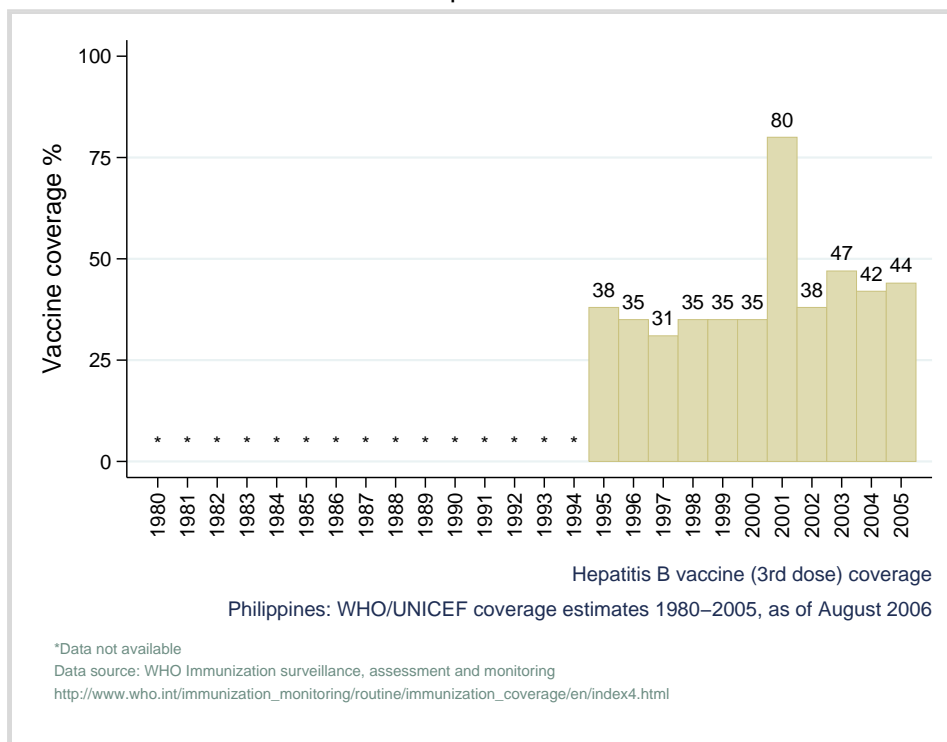


Figure 22: Measles-containing vaccine coverage in Philippines

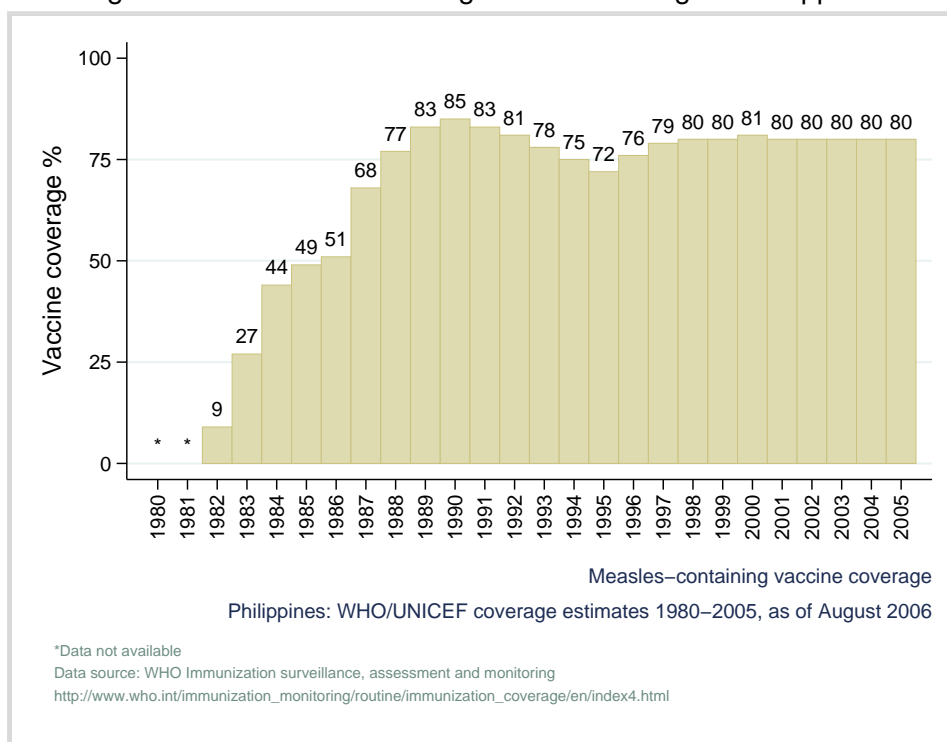
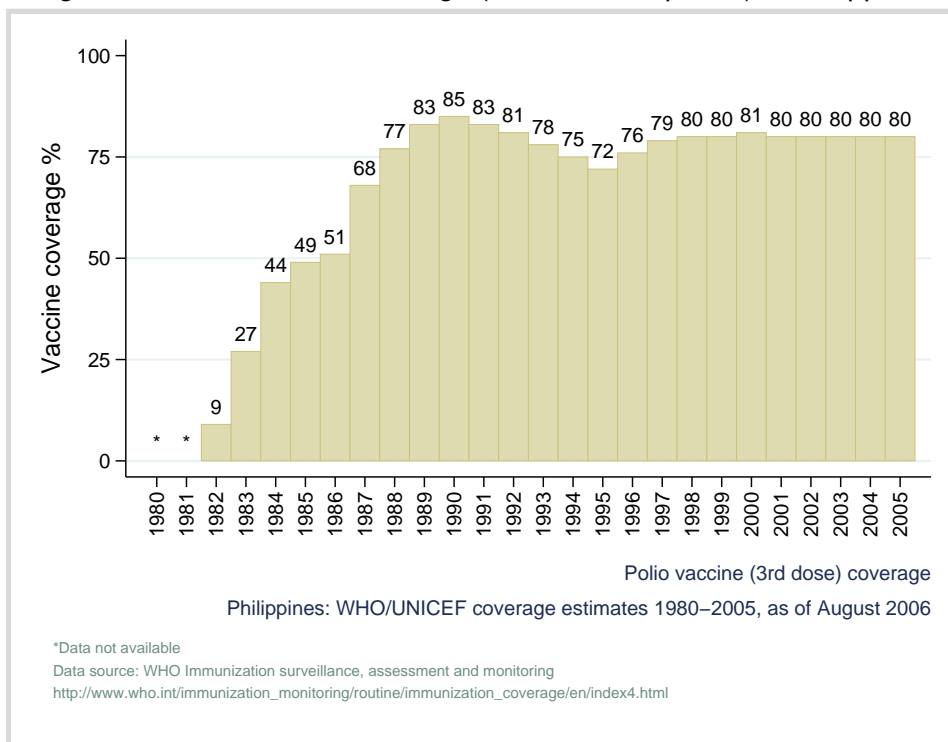


Figure 23: Polio vaccine coverage (3rd dose completed) in Philippines



6.1.2 Immunization schedule

Table 10: General immunization schedule.

Vaccine	Schedule	Coverage*
Bacille Calmette-Guérin vaccine (BCG)	birth	entire
Diphtheria and tetanus toxoid with whole cell pertussis vaccine (DTwP)	6, 10, 14 weeks	entire
Hepatitis B vaccine (HepB)	6, 10, 14 weeks	entire
Measles vaccine (Measles)	9 months	entire
Meningococcal C conjugate vaccine (MenC_conj)	-	-
Oral polio vaccine (OPV)	6, 10, 14 weeks	entire
Tetanus toxoid (TT)	CBAW 1st contact; 1, 6 months; +1, +1 year	entire
Vitamin A supplementation (VitaminA)	6, 12, 18, 24, 30, 36 months	entire

*Entire or part of the population covered.

Data sources:

WHO Immunization surveillance, assessment and monitoring (http://www.who.int/immunization_monitoring/data/data_subject/en/)

6.1.3 Other immunization indicators

Table 11: Relevant indicators of vaccine implementation in Philippines.

Indicator		Value*
Immunization planning and management	Was there a strategic plan for the national immunization system that covers three to five years?	Yes ¹
	Was there an annual budget for advocacy and communication?	Yes ¹
	Was there an updated inventory (models, location, age and working status) of all refrigeration equipment in the country?	Partially ¹
Immunization system performance	% of districts \geq 80% DTP3 coverage	48 ¹
	Drop-out rate between DTP1 and DTP3 coverage estimates	3.66 ¹
Surveillance	Feedback included coverage by district (at least DTP3)	Yes ¹
Safety	Sterilizable: Type of injection equipment used for routine immunizations	-
	Non AD disposables: Type of injection equipment used for routine immunizations	Yes ¹
	Are safety boxes distributed with all vaccine deliveries	No ¹
	Was there any monitoring for immunization safety (i.e. monitoring of adverse events following immunization)?	Yes ¹
Finance	Was there a line item in the national budget for purchase of vaccines used in routine immunizations?	Yes ¹
	Was there a line item in the national budget for purchase of injection supplies (syringes, needles, sharp boxes) for routine immunizations?	No ¹
	What percentage of routine vaccine costs was financed by the government (including loans)	100 ¹
	% of immunization spending financed using Government funds	100 ¹
New vaccine introduction	Is Hepatitis B vaccine integrated into the routine immunization systems?	Yes ¹
	Is Rubella vaccine integrated into the routine immunization systems?	No ¹

*'A' means Adolescents, 'E' means Estimates and 'P' means Partial

Reported for year:¹2005

Data sources:

WHO Immunization surveillance, assessment and monitoring (http://www.who.int/immunization_monitoring/data/data_subject/en/)

6.2 Reproductive health indicators

Table 12: Reproductive health indicators

Factor	Indicator	Male	Female	Total	
Contraceptive use	Any contraceptive use (%) ^a	-	-	48.9 ¹	
	Modern methods ^a	Condom use (%)	-	-	1.9 ¹
		Intrauterine device (%)	-	-	4.1 ¹
		Injectable or implant (%)	-	-	3.1 ¹
		Pill (%)	-	-	13.2 ¹
		Sterilization (%)	0.1 ¹	10.5 ¹	-
		Vaginal barrier method (%)	-	-	0.0 ¹
		Other modern methods (%)	-	-	0.4 ¹
		Total prevalence of modern methods, (%)	-	-	33.4 ¹
	Traditional methods ^a	Withdrawal (%)	-	-	8.2 ¹
Rhythm (%)		-	-	6.7 ¹	
Other traditional method (%)		-	-	0.6 ¹	
Age at first marriage	Average age first marriage ^b	26.3 ²	23.8 ²	-	
	Age specific percentage of ever married ^b	Ages 15-19	3.0 ²	10.5 ²	-
		Ages 20-24	26.8 ²	44.3 ²	-
		Ages 45-49	95.5 ²	93.9 ²	-
	Difference in average age at first marriage between men and women ^b	-	-	2.5 ²	
Married or in union	Women aged 15-49, married or in union (in thousands) ^a	-	-	12718 ³	

For fertility rates and oral contraceptives, see section 5.

Year of estimation:¹2003; ²1990; ³2005

Data sources:

^a United Nations, Department of Economic and Social Affairs, Population Division. World Contraceptive Use 2005 (<http://www.un.org/esa/population/publications/contraceptive2005/WCU2005.htm>)

^b World Marriage Patterns, 2000. Population Division, Department of Economic and Social Affairs, United Nations Secretariat. (<http://esa.un.org/unpp>)

Note to the reader

Anyone who is aware of relevant published data that may not have been included in the WHO/ICO Information Centre on HPV and Cervical Cancer is encouraged to contact the HPV Information Centre for potential contributions.

Although efforts have been made by the HPV Information Centre to prepare and include as accurately as possible the data presented, mistakes may occur. Readers are requested to communicate any errors to the HPV Information Centre, so that corrections can be made in future volumes.

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