



The Israeli Society for the Study and
Prevention of Sexually Transmitted Infections

Enhancing HPV elimination efforts in Israel

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Enhancing HPV elimination efforts in Israel

- **Introduction**
- HPV associated morbidity and mortality in Israel
- Cervical screening
- Immunization routine at school
- Adult vaccination role in Israel
- Proposed strategy for HPV cancers elimination



Enhancing HPV elimination efforts in Israel



Consensus Position Paper: Strategy for the Elimination of Tumors Caused by HPV in Israel

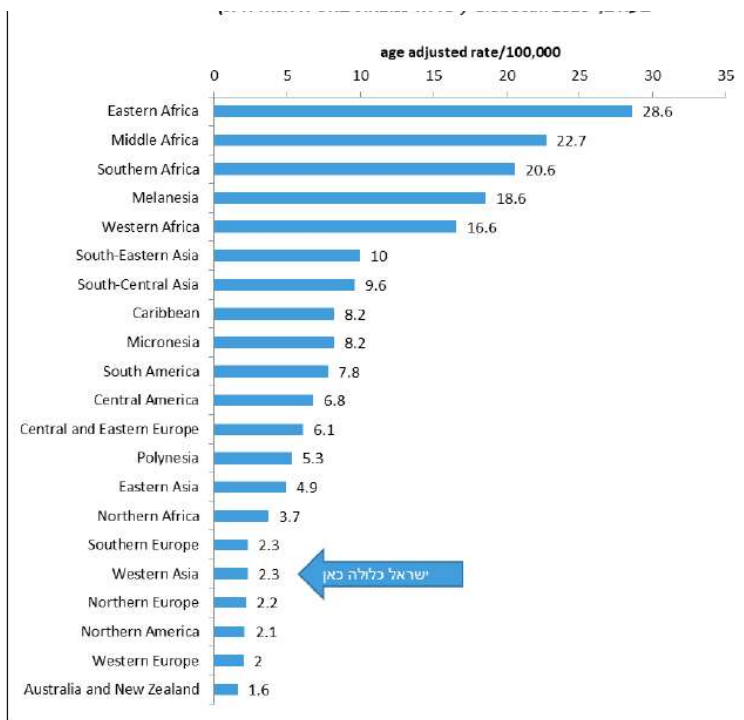
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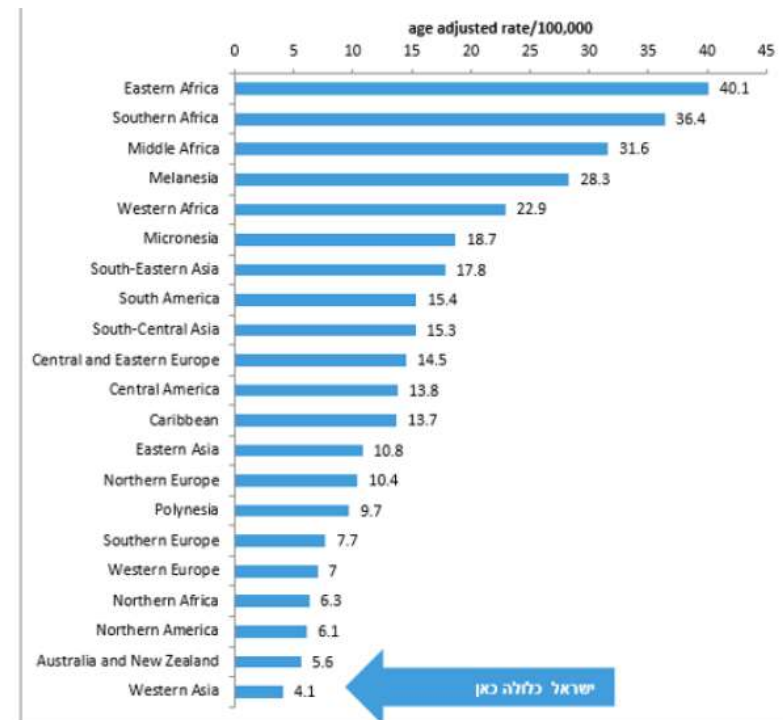


Cervical Cancer Mortality

Age Standardized Cervical Cancer Mortality per 100,000, by world regions (Globocan 2020)



Age Standardized Cervical Cancer Incidence per 100,000, by world regions (Globocan 2020)



סרטן צוואר הרחם בישראל

עדכון נתוני היארעות ותמותה, ינואר 2023

הרישום הלאומי לסרטן, המרכז הלאומי לבקורת מחלות, משרד הבריאות

Cancer of the Cervix in Israel:
Update incidence and mortality, January 2023.
National Cancer Registry,
Israeli Center of Disease Control, Ministry of Health



Incidence of APV-associated cancers in Israel

Table 1: Key Statistics in Israel

Population

Women at risk for cervical cancer (Female population aged ≥ 15 yrs) 3.13 million

Burden of cervical cancer and other HPV-related cancers

Annual number of cervical cancer cases 245

Annual number of cervical cancer deaths 121

Crude incidence rates per 100,000 population:

	Male	Female
Cervical cancer	-	5.64
Anal cancer	0.56	0.48
Vulva cancer	-	1.77
Vaginal cancer	-	0.58
Penile cancer	0.16	-
Oropharyngeal cancer	0.42	0.12
Oral cavity cancer	2.09	2.62
Laryngeal cancer	4.13	0.67

7.36

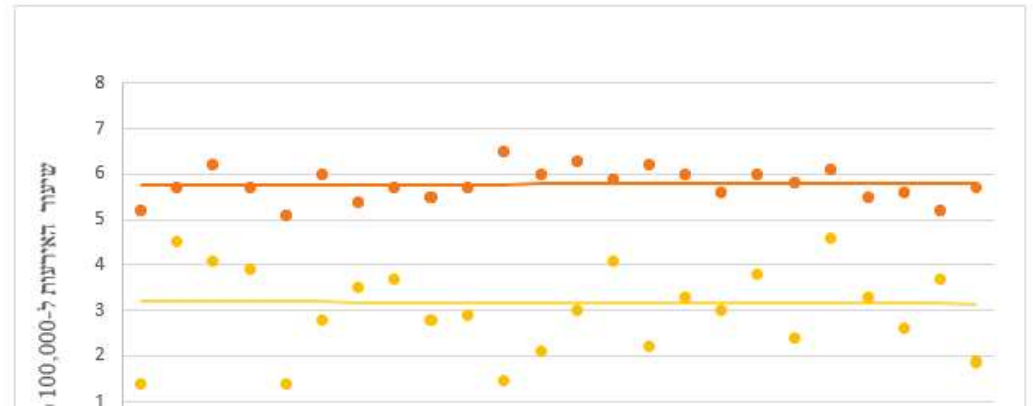
=6.64

11.88

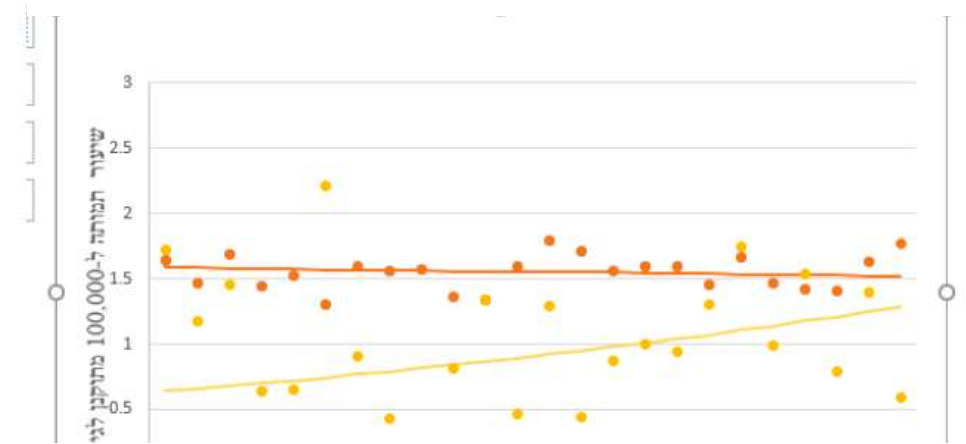
Cervical Cancer in Israel: Update Morbidity and Mortality Data



Trends of Cervical Cancer Incidence per 100,000, In Israel

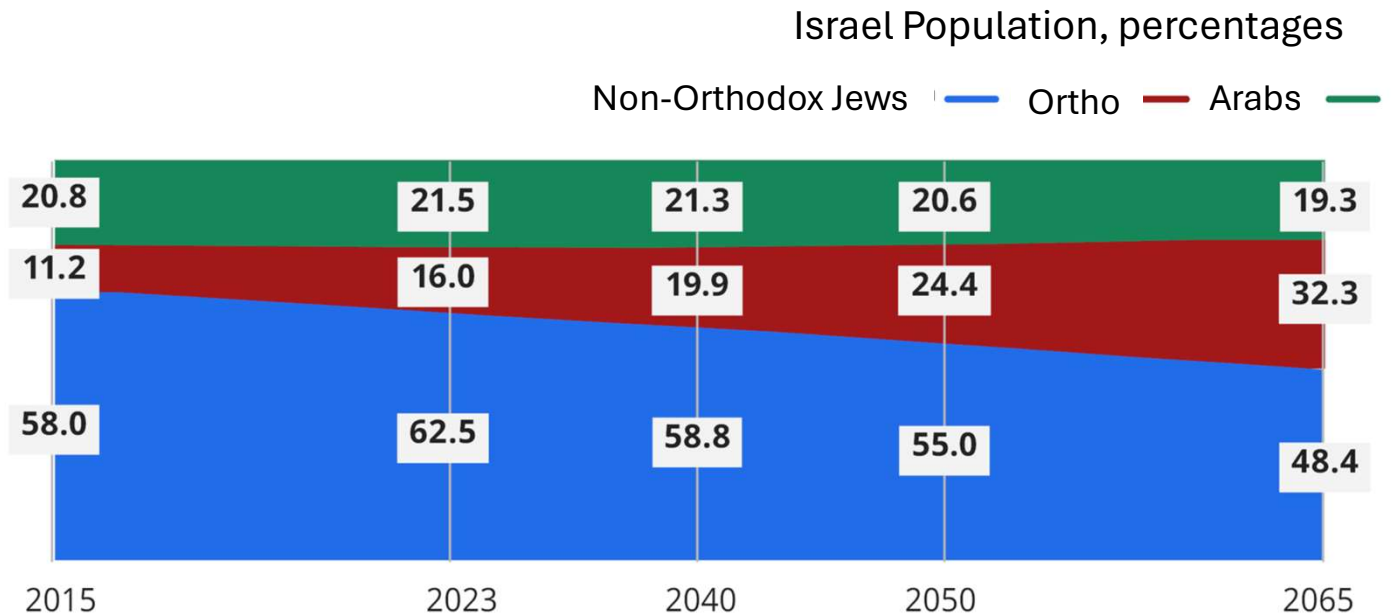


Trends of Cervical Cancer Mortality per 100,000, In Israel



What is the Cervical Cancer Incidence Rate Among Ultra-Orthodox Jewish Women?

In 2023, Ultra-Orthodox Jews constituted 16% of the Israeli population



הלשכה המרכזית לסטטיסטיקה
Central Bureau of Statistics
دائرة الإحصاء المركزية



What is the Cervical Cancer Incidence Rate Among Ultra-Orthodox Jewish Women?

Invasive Cancer	ASR-Ultra-Orthodox	ASR Jews/Others	ASR Arabs
2016	3.07 (0.38-5.77)	5.5	3.3
2017	1.06 (-0.41-2.52)	5.6	2.6
2018	2.46 (0.05-4.86)	5.2	3.7
2019	1.53 (-0.2-3.26)	5.8	1.9

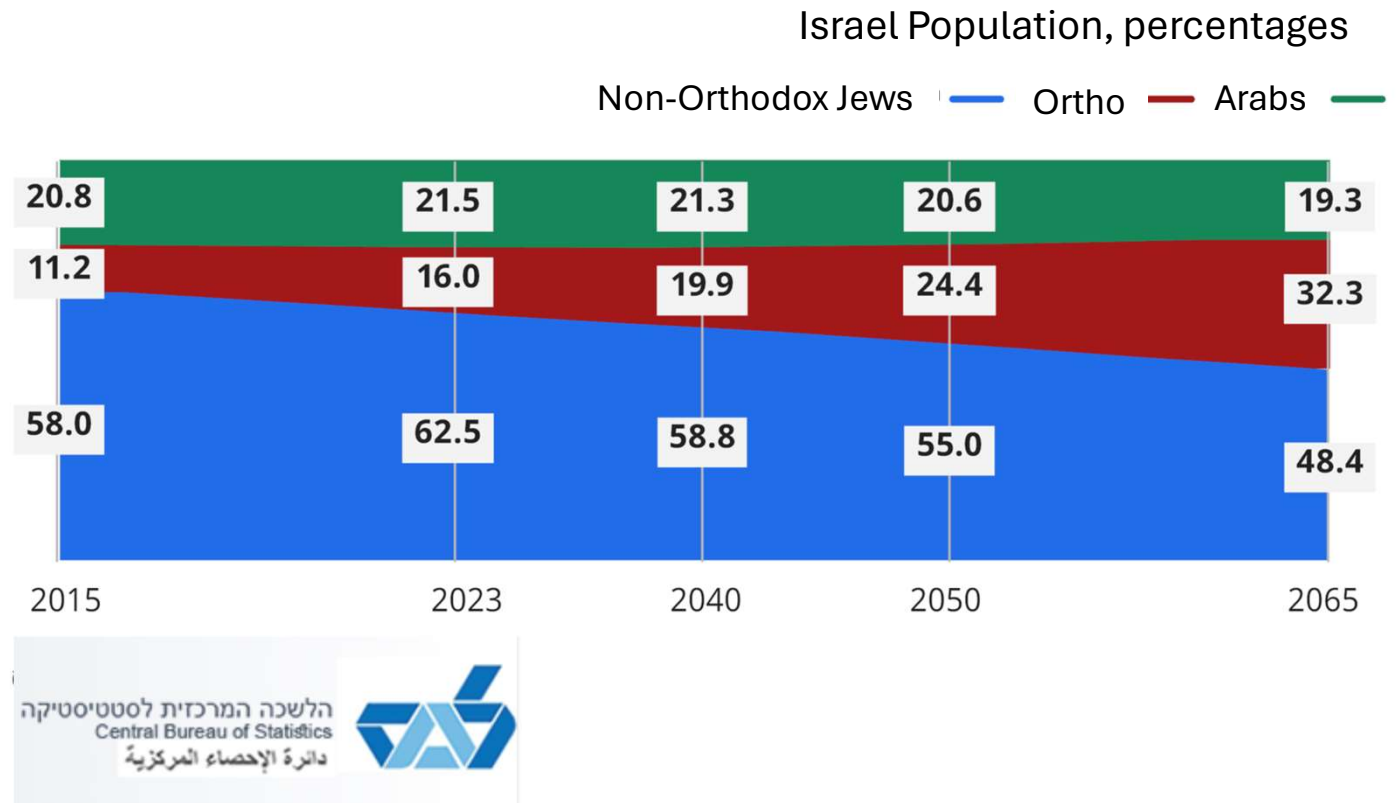
CIN	ASR-Ultra-Orthodox	ASR Jews/Others	ASR Arabs
2016	3.45 (0.38-5.77)	22.0	4.3
2017	0.38 (-0.37-1.13)	20.1	3.2
2018	2.78 (0.55-5.00)	32.1	6.6
2019	6.82 (3.58-10.05)	38.5	5.9

ASR, per 100,000. (95% CI)

National Cancer Registry,
Israeli Center of Disease Control, Ministry of Health; 2023

What is the Cervical Cancer Incidence Rate Among Ultra-Orthodox Jewish Women?

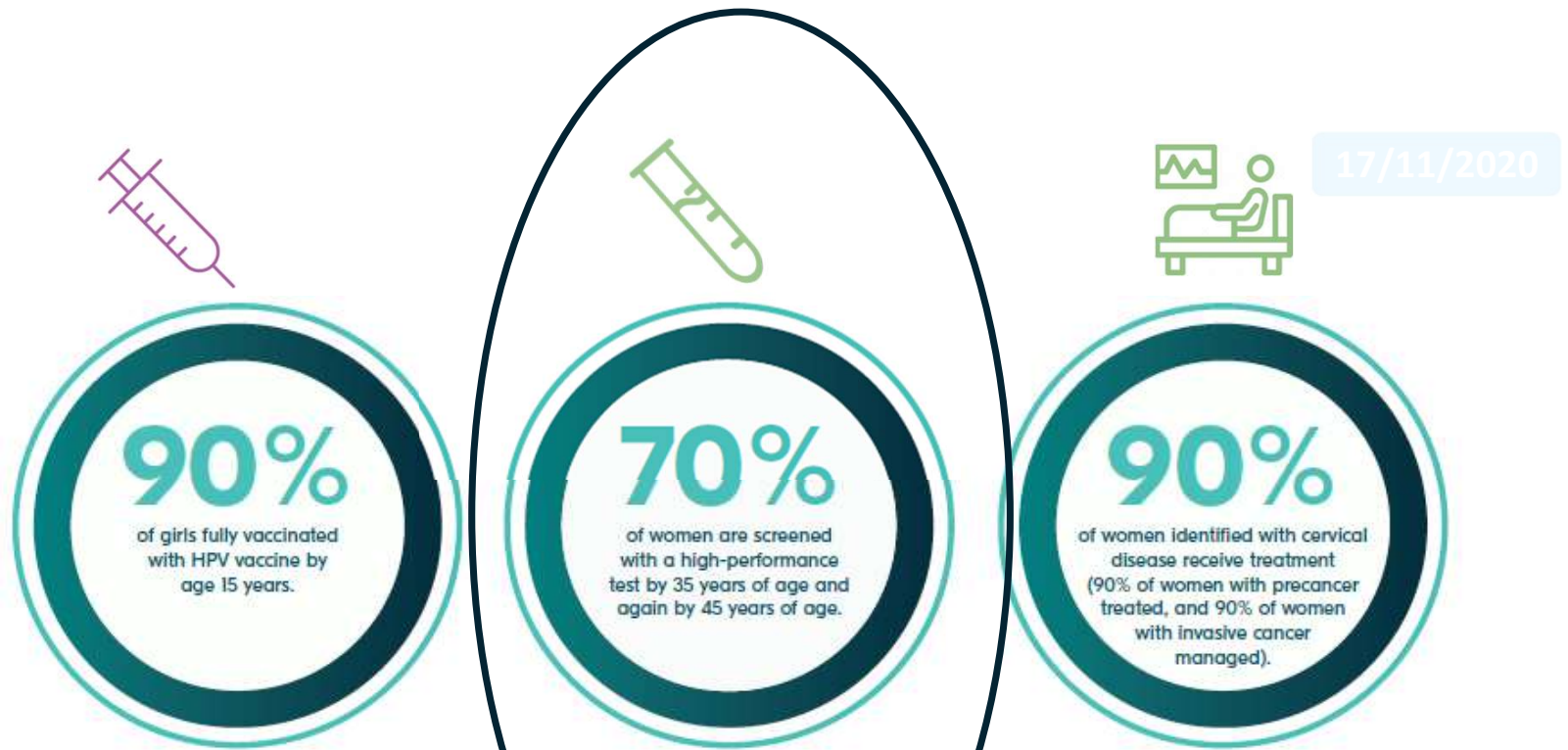
- In 2023, Ultra-Orthodox Jews constituted 16% of the Israeli population
- Assuming an incidence of 2/100,000
- Then the Incidence in the non-Ultraorthodox Jewish Women is 6.3/100.000



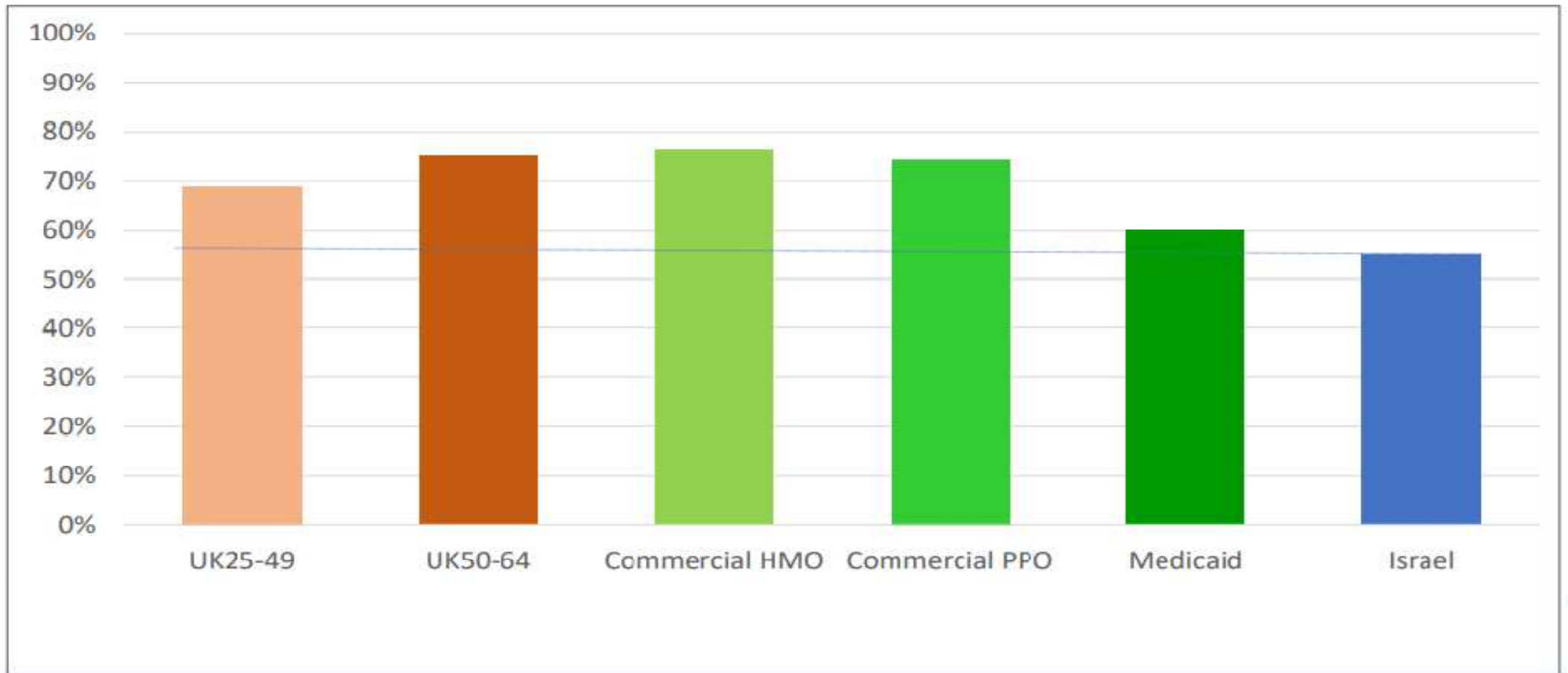
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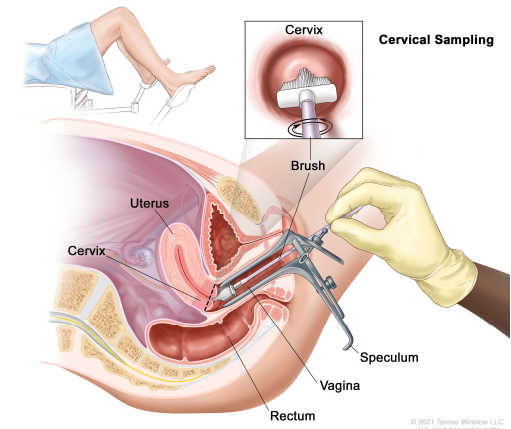


Compliance with cervical cancer screening in the UK (2021), USA (2019), and Israel



Cervical Screening in Israel

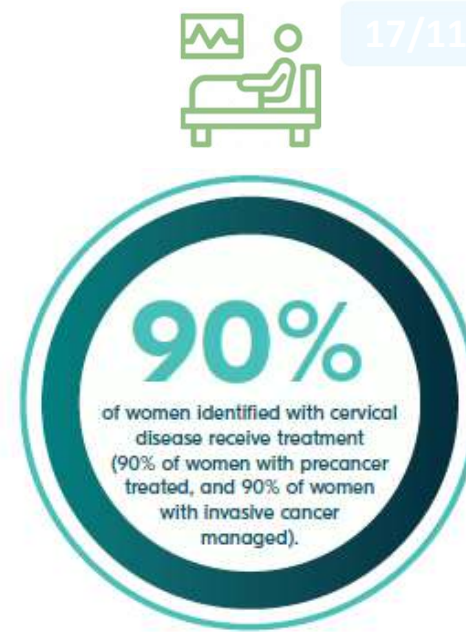
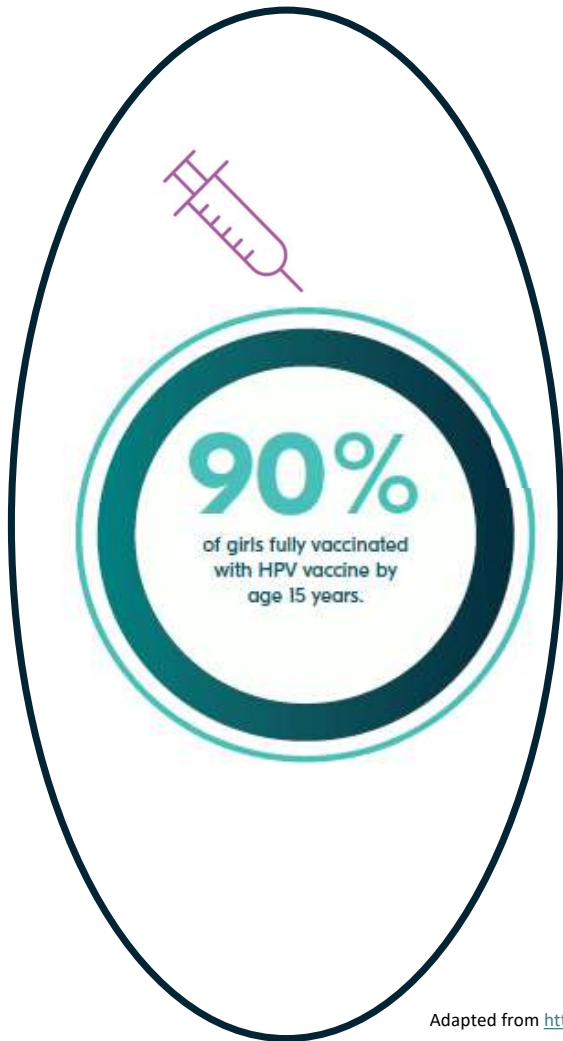
- In Israel, cervical cancer screening is included in the healthcare services basket for women aged 25 to 65
- All 4 Health Maintenance Organizations (HMOs) employ HPV screening methods
- Nevertheless, the approach to screening is opportunistic, as a national, organized screening program has not been implemented



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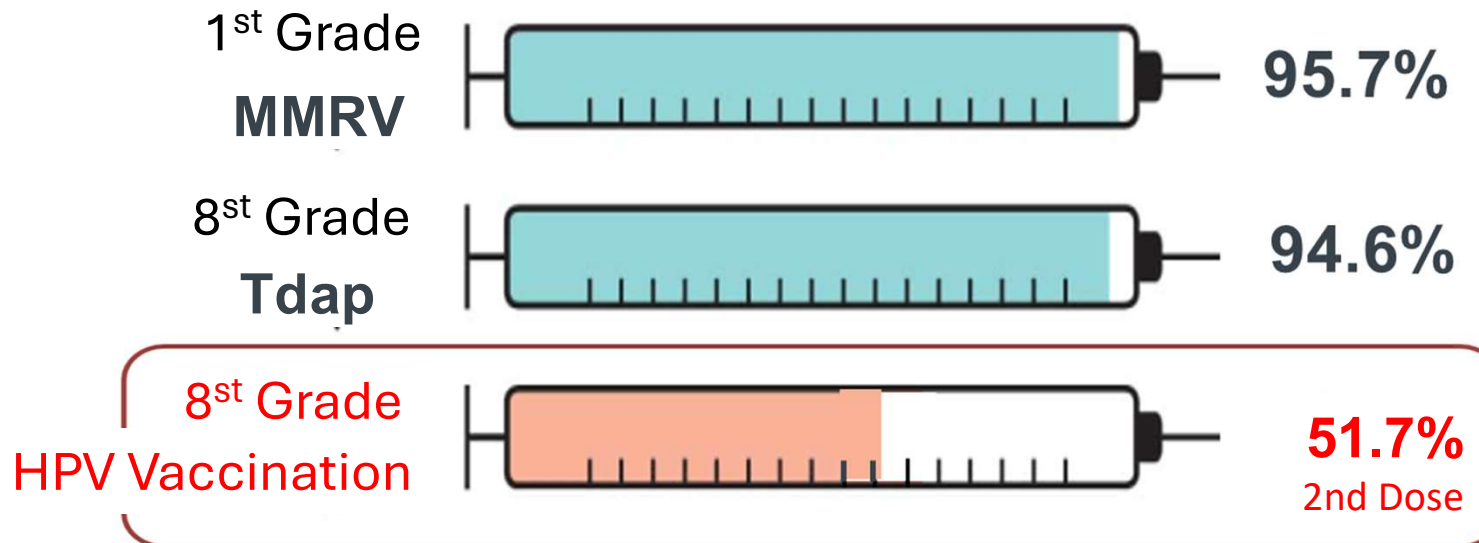




17/11/2020



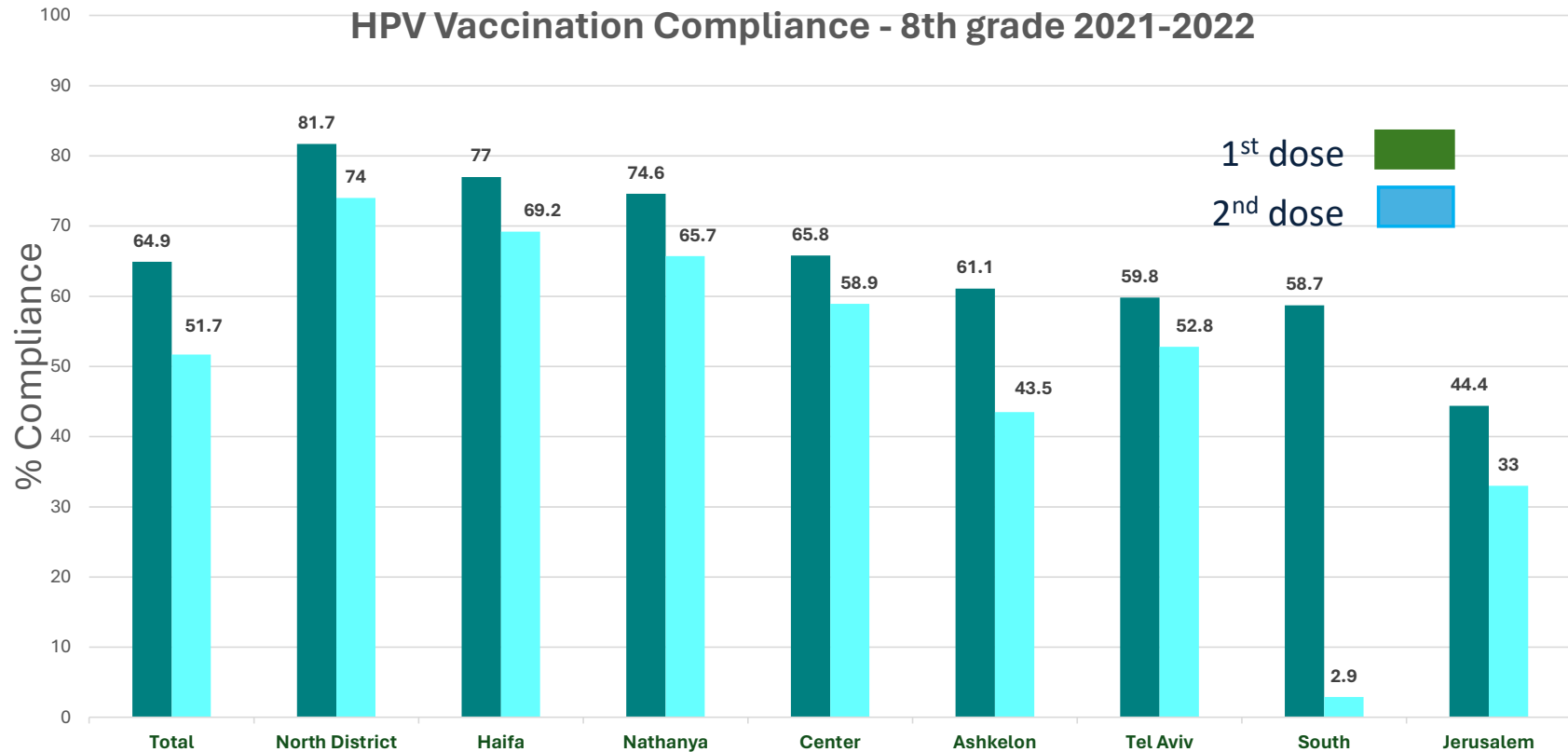
Vaccination Compliance among 8th Grade Girls and Boys



Taken from the report of students' health services 2022,
Nursing section, Public Health Department, Ministry of Health, Israel

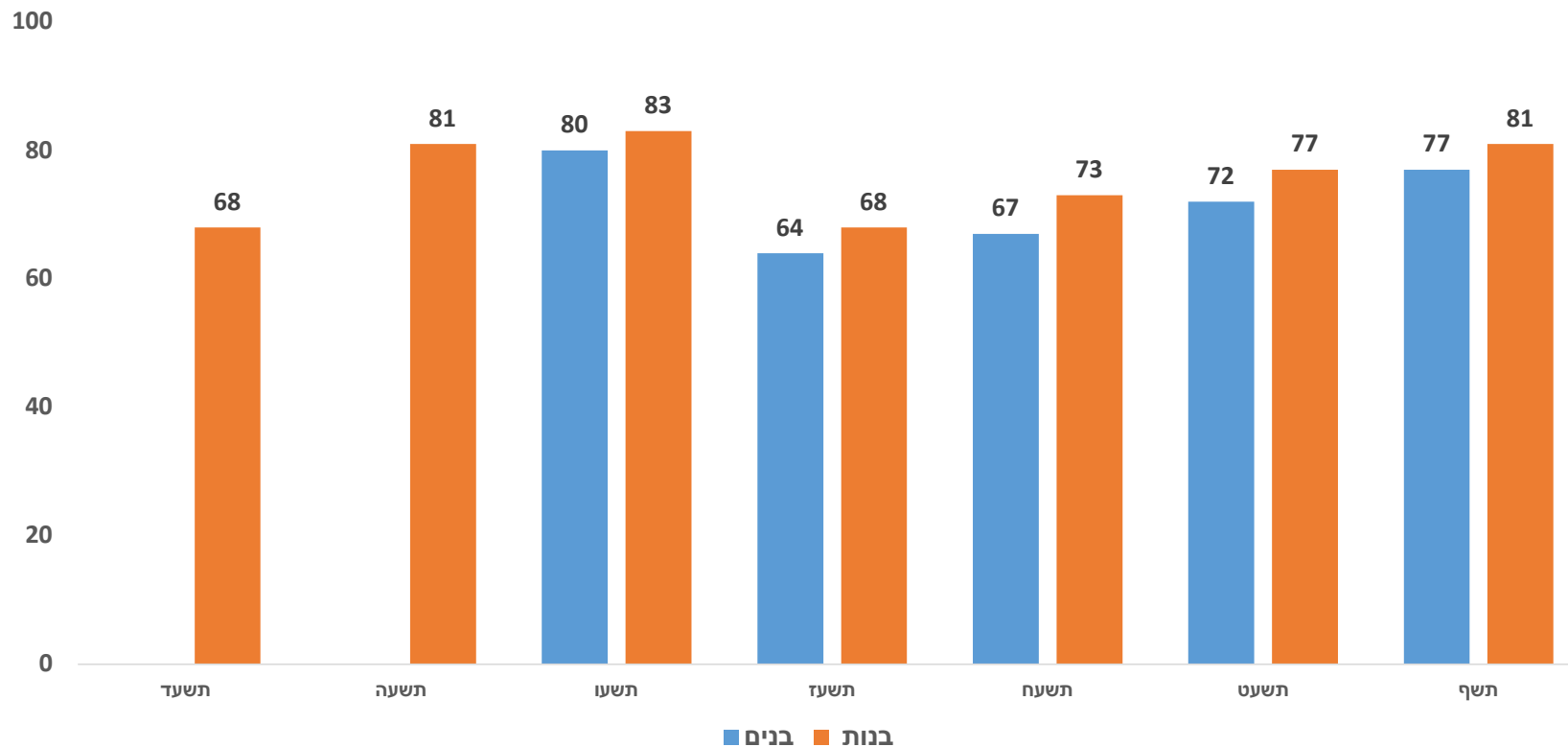


Vaccination Compliance in School 8 grade



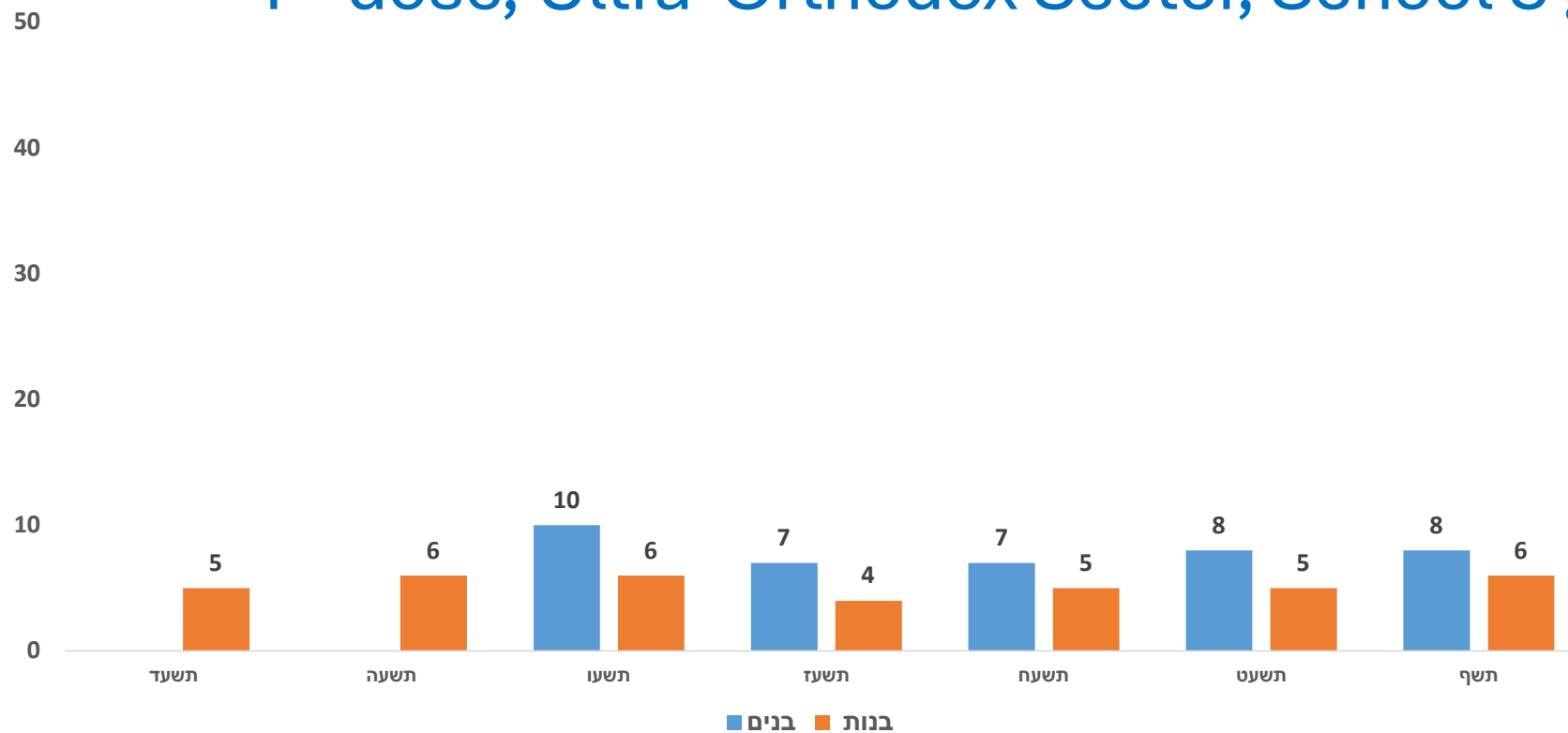
Taken from the report of students' health services 2022,
Nursing section, Public Health Department, Ministry of Health, Israel

Vaccination Compliance – 1st dose, Secular Sector, School 8 grade



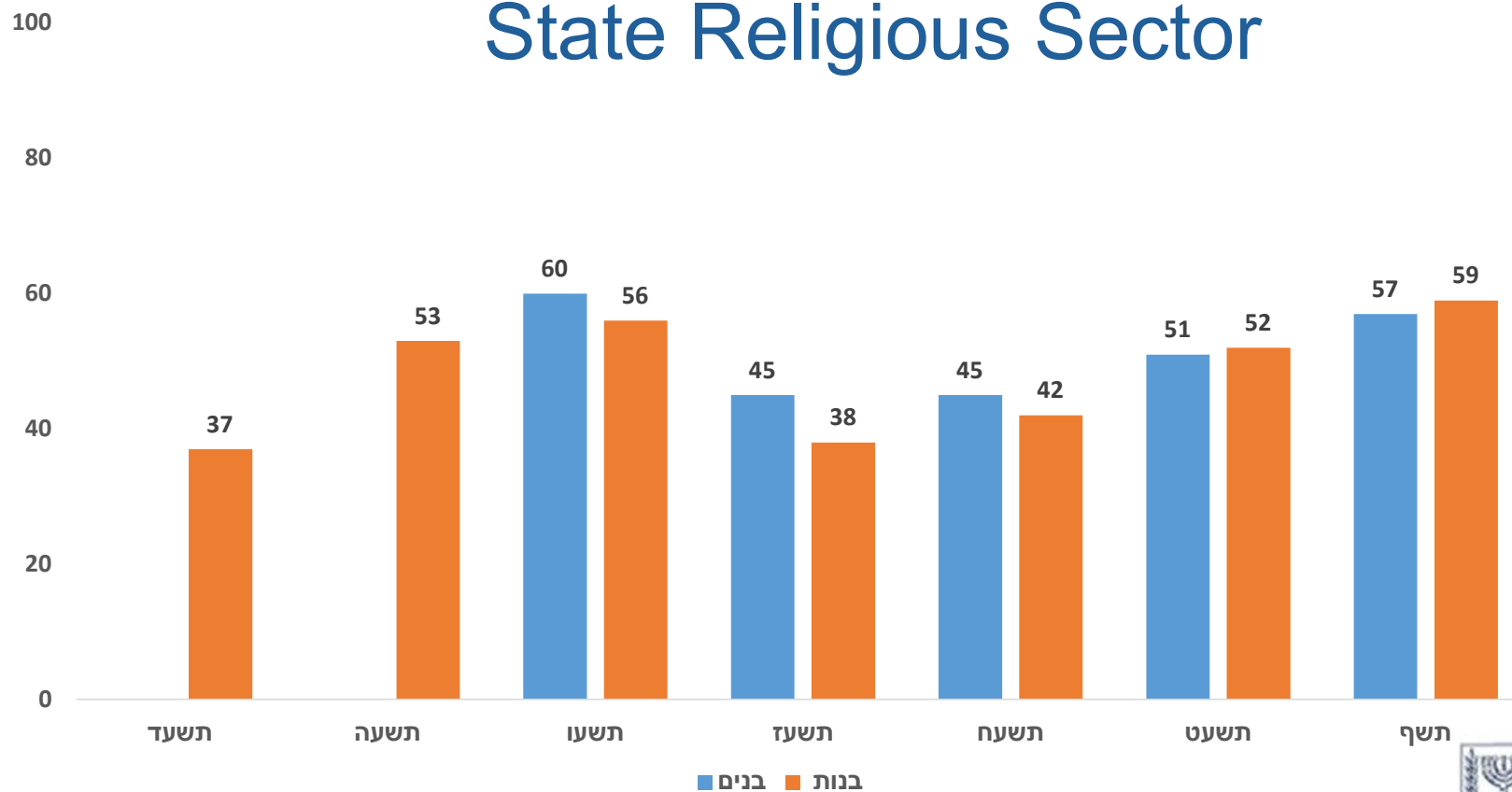
Taken from the report of students' health services 2022,
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Vaccination Compliance – 1st dose, Ultra-Orthodox Sector, School 8 grade



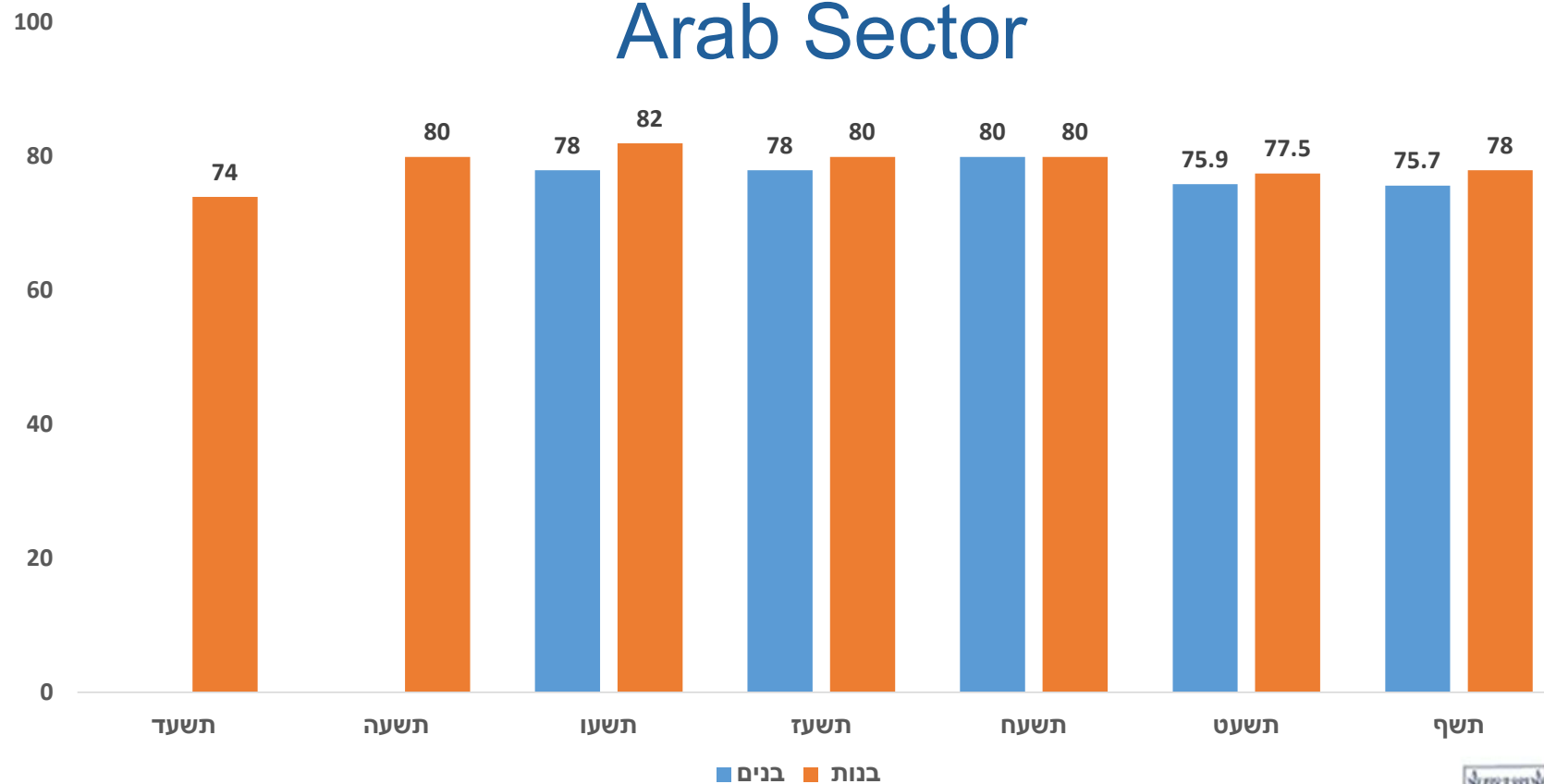
Taken from the report of students' health services 2022,
Nursing section, Public Health Department, Ministry of Health, Israel

HPV Vaccine Coverage Rate, Dose 1 – State Religious Sector



**משרד
הבריאות**
כחיים בריאים יותר

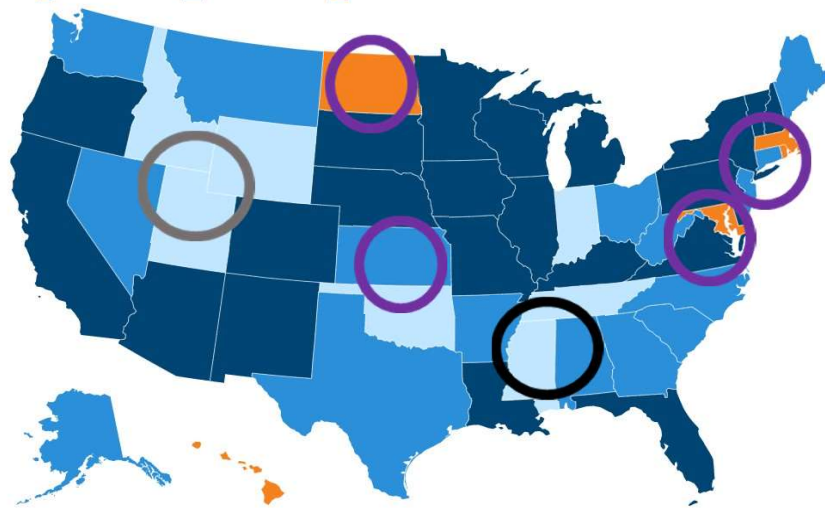
HPV Vaccine Coverage Rate, Dose 1 – Arab Sector



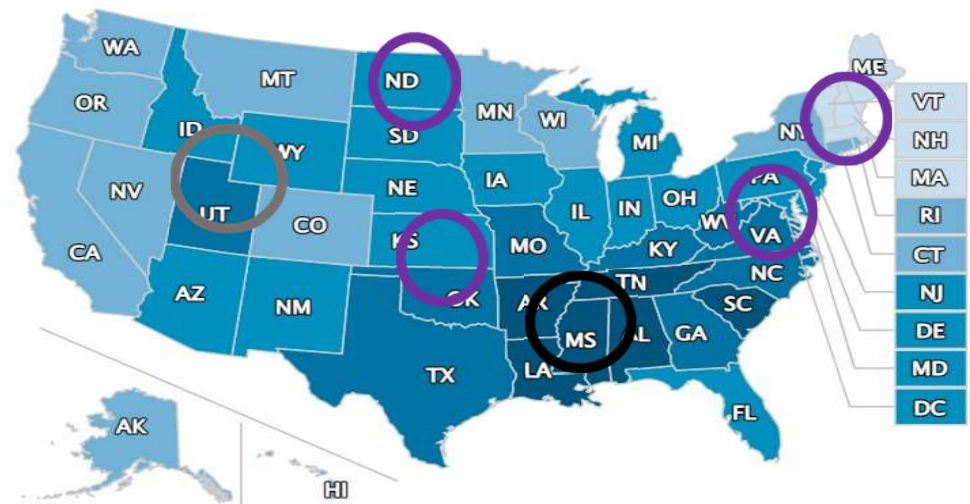
HPV Vaccination versus Adult Religiosity (USA)

Map of religiosity 2016

Estimated vaccine coverage for adolescents ages 13-17
 < 46.7% 46.7%–54.3% 54.3%–64.0% ≥ 64.0%



30–39% 40–49% 50–59% 60–69% 70–79%



NIS-Teen 2016

11-fold decrease in HPV vaccine completion rates among states with a higher percentage of religious adults.



<https://www.pewresearch.org/fact-tank/2016/02/29/how-religious-is-your-state>
 Franco et al. BMC Public Health (2019) 19:246. <https://doi.org/10.1186/s12889-019-6566-y>

Vaccine Equity and Health Equity

Michelle J. Khan, MD, MPH, FACOG

Clinical Associate Professor, Director of PEACH Program, Co-Director of DEI Committee

Department of Obstetrics and Gynecology
Stanford University School of Medicine
Palo Alto, CA, USA

May 3, 2024



Definitions

- Health equity = the state in which everyone has a fair and just opportunity to attain their highest level of health
 - Achieving this requires focused and ongoing societal efforts to address historical and contemporary injustices; overcome economic, social, and other obstacles to health and healthcare; and eliminate preventable health disparities.
- Vaccine equity = the state in which all people can access vaccination to help prevent cancers caused by HPV



≡ Diversity, equity, and inclusion

[Article](#) [Talk](#)

From Wikipedia, the free encyclopedia

בסייד **פנויה** - פוריות ורפואה עפ"י ההלכה.
Puah Institute - Fertility and Medicine in Accordance with Halacha
רח' עזריאל 19, ג. שאול, ירושלים 95477, טל' 02-6515050, פקס, 02-6517501
19, Azriel St. Givat Shaul, Jerusalem 95477, Tel: 02-6515050 Fax: 02-6517501
דואר אלקטרוני: E-mail: info@puah.org.il אתר: Site: www.puah.org.il

Position Paper: HPV Vaccine

In consultation with leading rabbis and senior physicians, recommends:

- Administering the vaccine in the **fourth grade**



Initiating the HPV vaccine series at age 9 is advocated by organizations other than the ultra-orthodox



hpvroundtable.org | [@HPVRoundtable](https://twitter.com/HPVRoundtable)

[Banner] Start recommending HPV vaccination at age 9

Dear Colleague,

The undersigned organizations are asking you to begin recommending HPV vaccination starting at age 9. HPV vaccination has been routinely recommended for U.S. adolescents for nearly two decades, with overwhelming evidence for safety and effectiveness. Data show that on-time HPV vaccination greatly reduces the risk of HPV infection, cervical precancer, and several studies have now demonstrated

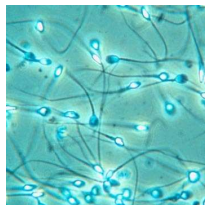
Initiating the HPV vaccine series at age 9 offers many benefits, including:

- More adolescents start and finish the vaccine series on time
- Strong immune response to the HPV vaccine
- Increased likelihood of vaccinating prior to first HPV exposure
- Fewer questions about sexual activity by parents and guardians
- Fewer shots per visit
- Highly acceptable to systems, providers, and parents

*Approved by the Israeli Advisory
Committee on Immunization Practices*

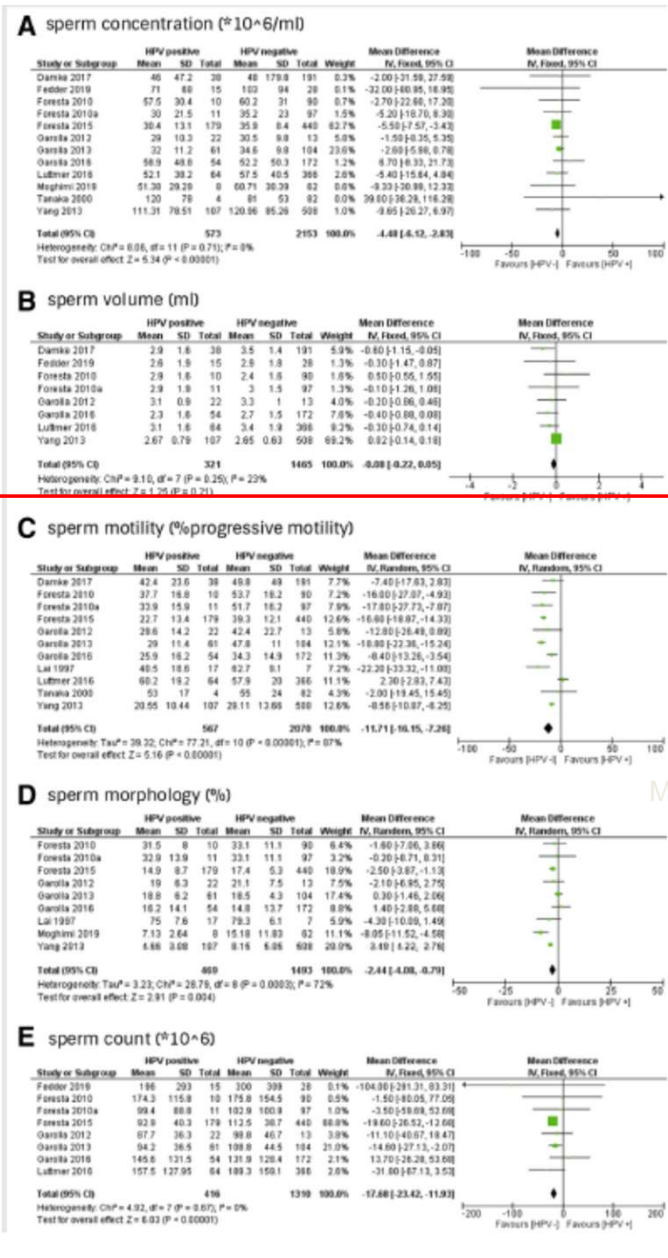
<https://publications.aap.org/aapnews/news/14942/Why-AAP-recommends-initiating-HPV-vaccination-as?autologincheck=redirected>

The screenshot shows the AAP News page. The main article is titled "Why AAP recommends initiating HPV vaccination as early as age 9" by Sean T. O'Leary, M.D., M.P.H., FAAP, and Ann-Christine Nyquist, M.D., M.S.P.H., FRID, FAAP, dated October 4, 2019. To the right, there is a sidebar with a section titled "ACS Updates HPV Vaccination Recommendations to Start at Age 9", published on July 6, 2019, by Sarah M. Howell, Director, Digital Research Center. The sidebar also lists various cancer types: Anal Cancer, Cervical Cancer, Oral Cavity and Oropharyngeal Cancer, Prostate Cancer, Prevention, Risk Factors, Vaccinations, Vaginal Cancer, and Vulvar Cancer.



HPV affecting fertility

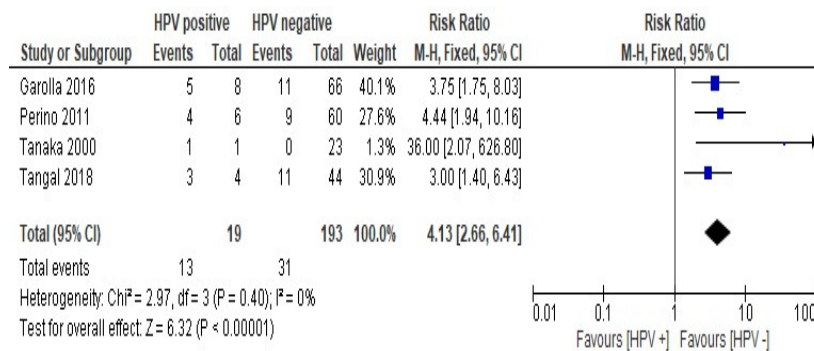
Evaluation of human papilloma virus in semen as a risk factor for low sperm quality and poor in vitro fertilization outcomes: a systematic review and meta-analysis



The prevalence of HPV sperm infection was estimated at 16% in the population of infertile patients

HPV infection lowers sperm count, motility and morphology,

And increases the spontaneous miscarriage rate

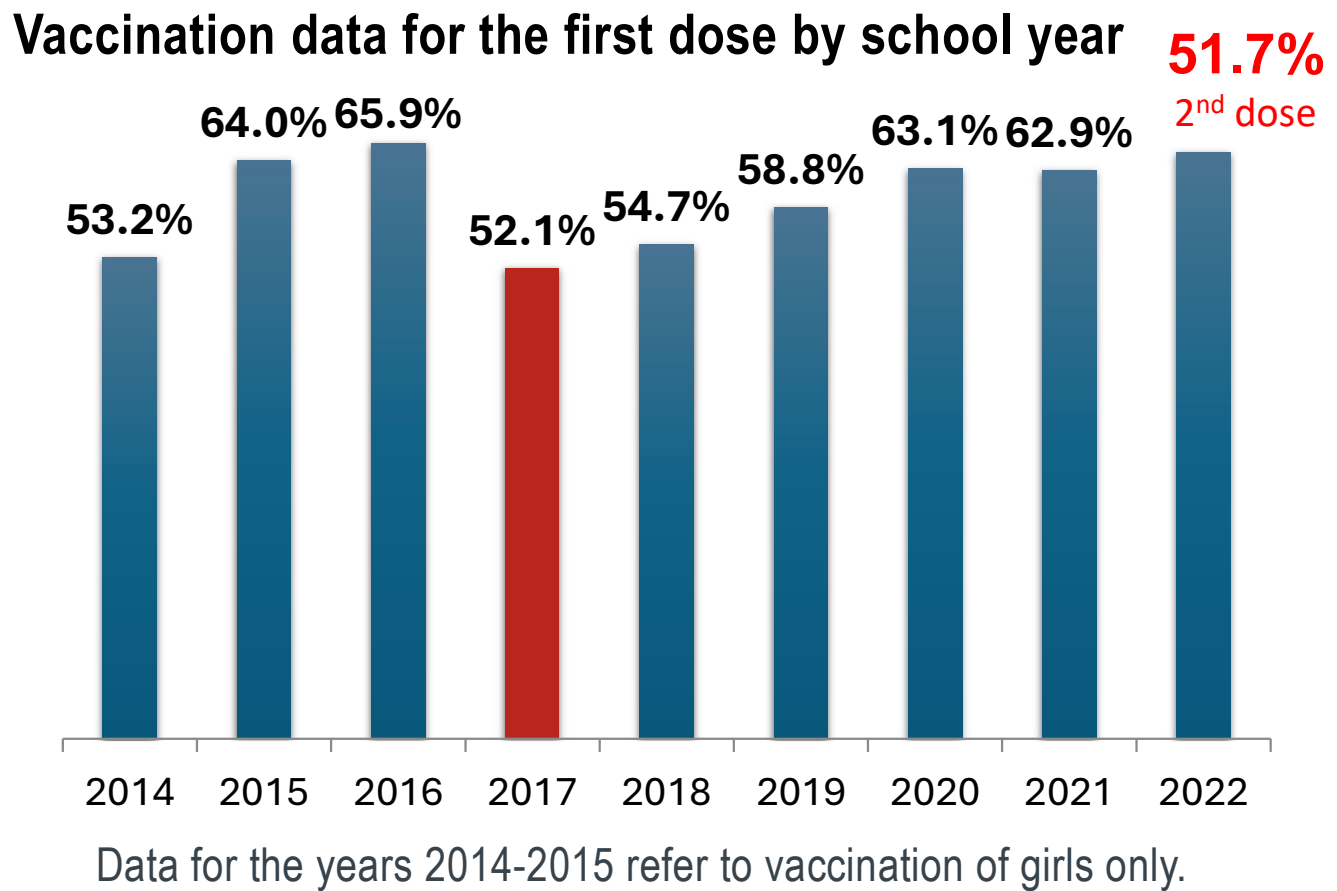


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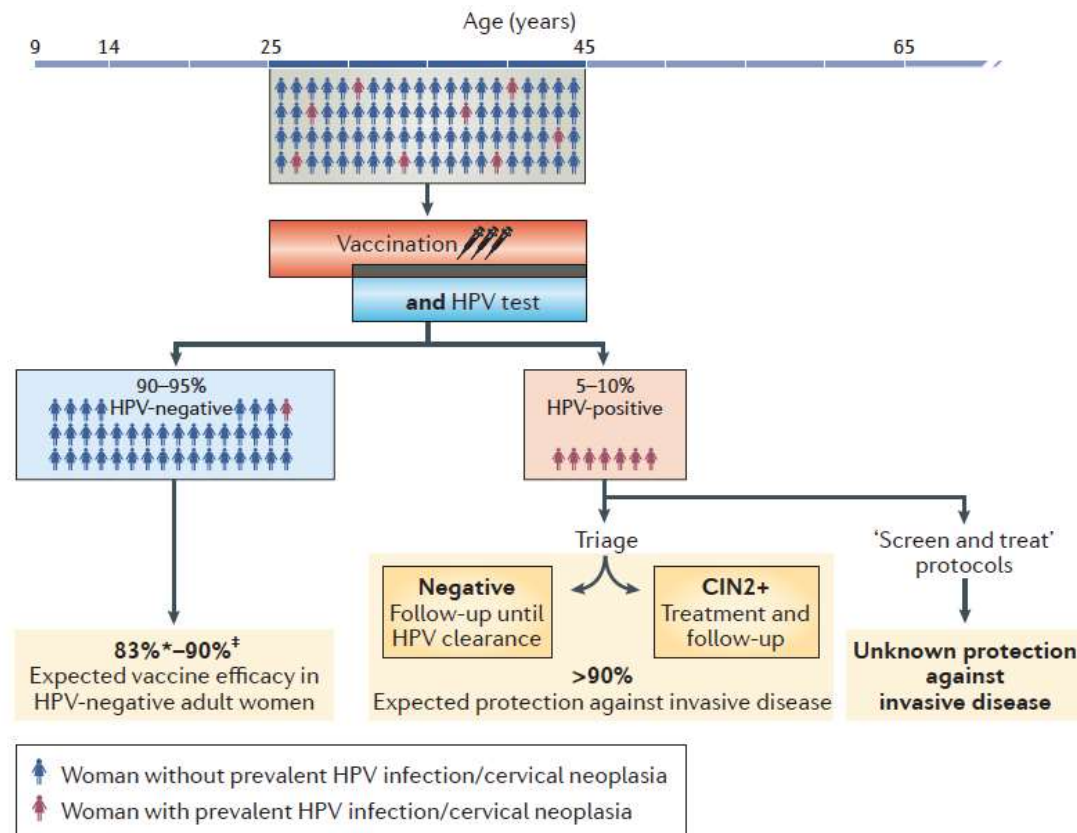


HPV Vaccination Coverage in Israel

Taken from the Health Services for Students Summary Report for the 2021-2022 school year, Public Health Nursing Department, December 2022

HPV Faster: Offering HPV vaccination to those coming for a cervical screening



OPINION

HPV-FASTER: broadening the scope for prevention of HPV-related cancer

F. Xavier Bosch, Claudia Robles, Mireia Díaz, Marc Arbyn, Jacopo Baussano, Christine Clavel, Guglielmo Ronco, Joakim Dillner, Matti Lehtinen, Karl-Ulrich Petry, Mario Poljak, Susanne K. Kjaer, Chris J. L. M. Meijer, Suzanne M. Garland, Jorge Salmerón, Xavier Castellsagué, Laia Bruni, Silvia de Sanjosé and Jack Cuzick

HPV Vaccine Catch-up in Israel

Indication	Generic Name	Commercial name
The HPV vaccine is recommended for women and men aged 18-26 who have not been vaccinated in school.	HPV vaccine, nonavalent (types 6, 11,16,18, 31, 33, 45, 52, 58)	Gardasil 9

Taken from the Director-General's circular, expansion of the health services basket for the year 2023, February 2023

חוזר המנהל הכללי



משרד הבריאות

Catch-up practice

Vaccinated aged 18-26 (Extrapolating from 2 HMOs data):

2021 - Approximately 9,000 vaccinated

2022 - Approximately 11,300 vaccinated

2023 - Approximately 20,000 vaccinated

84% - 87% of the vaccinated are women

Issues along the route to vaccination:

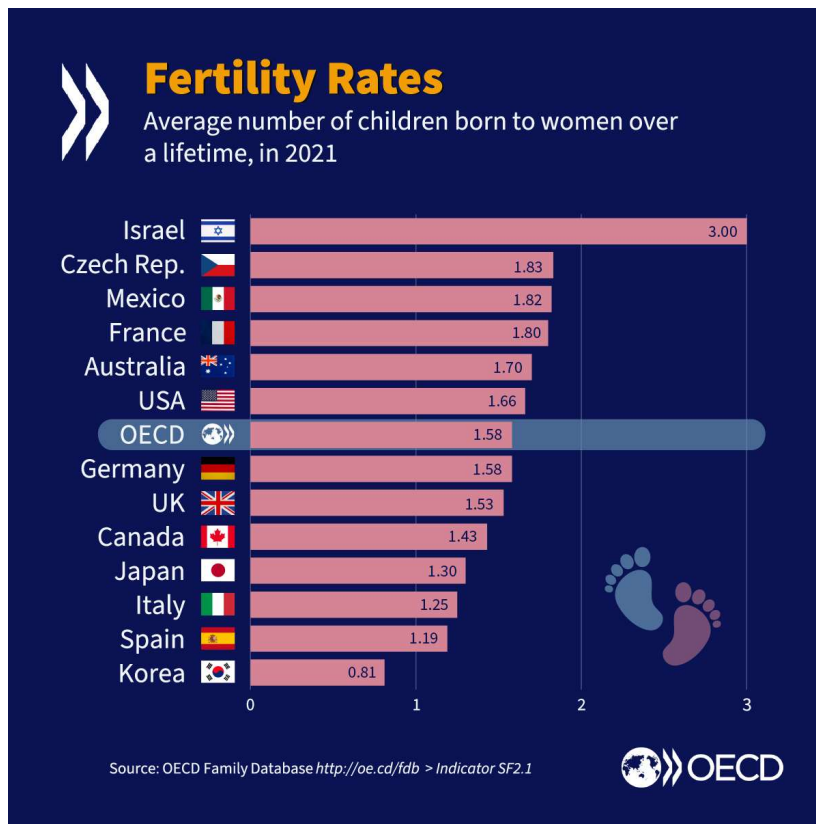
40% of prescriptions were not redeemed

A drop of 20% between the 1st and 2nd vaccine dose

An additional drop of 20% between the 2nd and 3rd dose



How can we break the glass ceiling? Post partum Vaccination?



CDC Breastfeeding

Breastfeeding

Data & Statistics

Facts

Breastfeeding Report Card

Vaccinations

[Print](#)

Vaccination Safety for Breastfeeding Mothers

Safe for Use in Lactation

- Anthrax
- Hepatitis A
- Human Papillomavirus (HPV)
- Influenza
- Japanese Encephalitis
- Polio (IPV)
- Rabies



How can we break the glass ceiling?

Post partum Vaccination?

Original Research

Human Papillomavirus Inpatient Postpartum Vaccination


Clinical Guideline Implementation

(Obstet Gynecol 2023;142:108–16)

DOI: 10.1097/AOG.0000000000005220



Ellen C. Murphy, MD, Stephanie Alimena, MD, Andrea Pelletier, MS, MPH, Nicole Sczekan, MSN, CNM, Nicole A. Smith, MD, MPH, Julianna Schantz-Dunn, MD, MPH, Khady Diouf, MD, and Sarah Feldman, MD, MPH

... about one quarter of vaccine-eligible patients received 9vHPV vaccination postpartum. Inpatient postpartum 9vHPV vaccination may help narrow disparities in vaccination.



Vaccine Equity and Health Equity

Michelle J. Khan, MD, MPH, FACOG
Clinical Associate Professor, Director of PEACH Program, Co-Director of DEI Committee
Department of Obstetrics and Gynecology
Stanford University School of Medicine
Palo Alto, CA, USA
May 3, 2024



Public Statement – Elimination of HPV Tumors

Table of Contents	
Background	3
Opening statements	3
Key recommendation	3
Synopsis	3
<i>We therefore recommend:</i>	4
Recommended HPV vaccination targets	4
Recommended HPV cancer tumor early detection program targets	5
Recommended HPV pre-cancer and cancer treatment	6
Recommended HPV public and professional awareness promotion	6
Specifications	7
<i>HPV infection implications</i>	7
<i>Pillar No. 1: HPV prevention via vaccination</i>	8
Vaccination in boys, in addition to girls. Gender-neutral VACCINATION	8
Vaccination compliance	10
Catch-up vaccine	11
<i>Pillar No. 2: HPV-scan early detection</i>	12
<i>Pillar No. 3: Treatment</i>	14
Cervical cancer	14
<i>Pillar No. 4: Raising awareness and education</i>	14
References	16

Summary:

Enhancing HPV elimination efforts in Israel

- School vaccination
- Analyzing weaknesses in the vaccination program
- Forming a coalition of medical societies
- Preparing an elimination roadmap
- Submitting the document to the Ministry of Health and HMOs
- Implementing the elimination



החברה לחקר ומניעת מחלות המועברות במגע מיני
The Israeli Society for the Study and
Prevention of Sexually Transmitted Infections

Enhancing HPV elimination efforts in Israel

Thank you for your attention