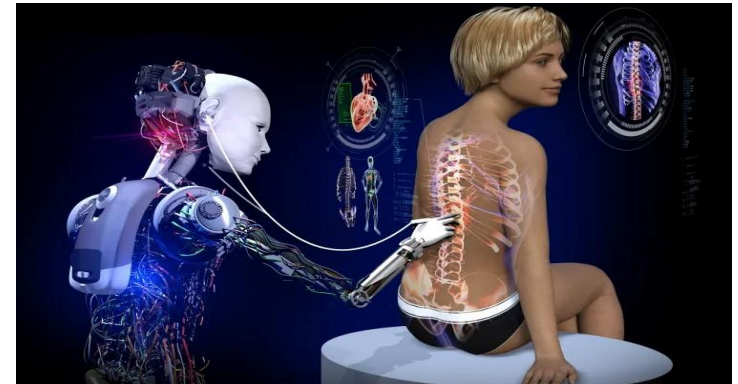
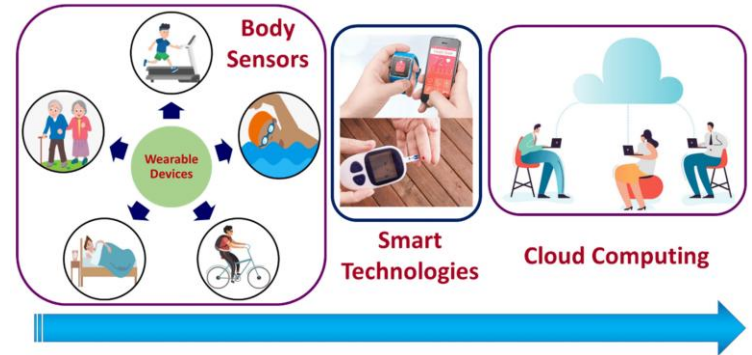
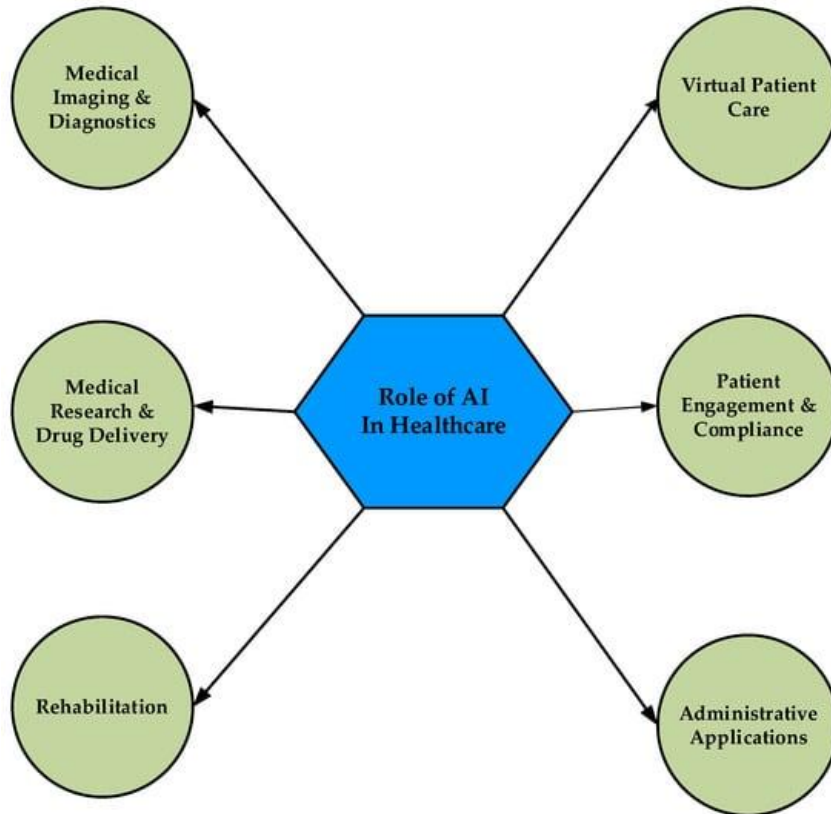


Bridging gaps in science, technology, and innovation

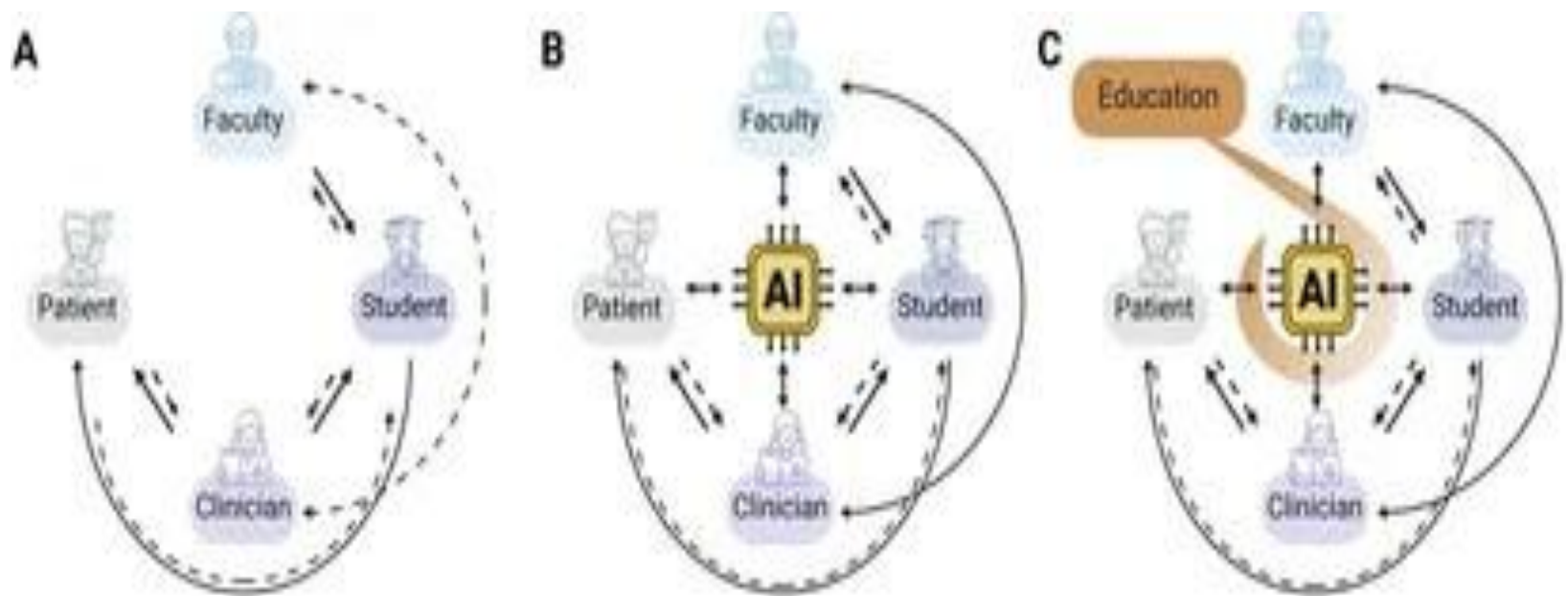
Sumaiya Adam

Vanessa Burch

What comes to mind when you hear AI in medicine?



Changes in key health system players' interrelationships in the era of AI



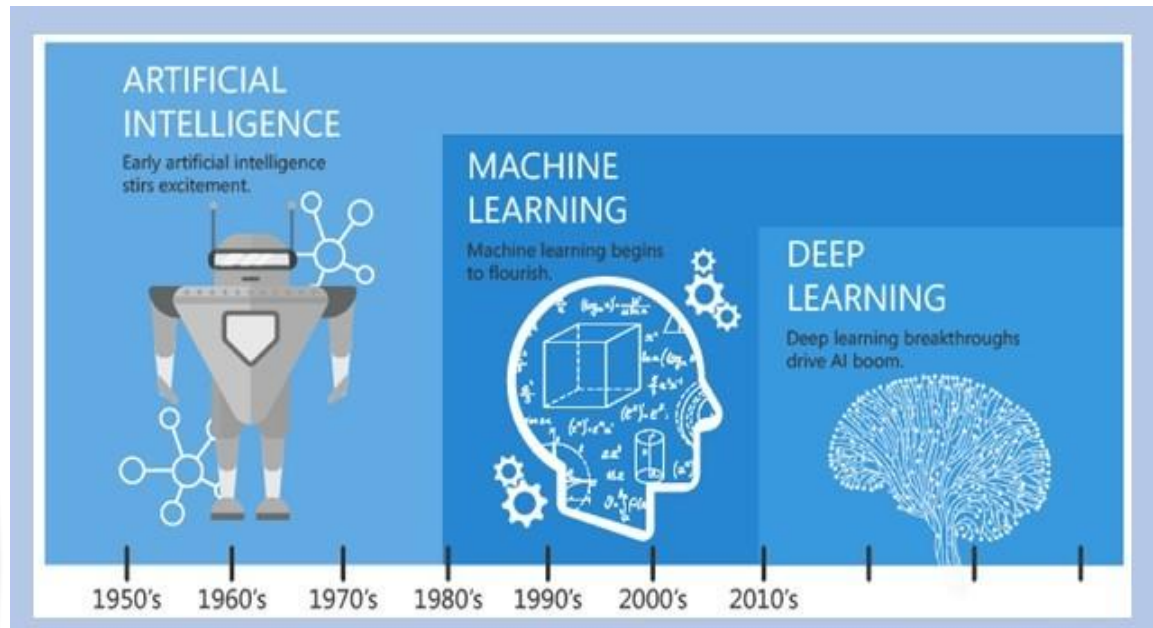
Reuben JS, Meiri H, Arien-Zakay H. AI's pivotal impact on redefining stakeholder roles and their interactions in medical education and health care. *Front Digit Health*. 2024 Nov 5;6:1458811. doi: 10.3389/fdgth.2024.1458811. PMID: 39564581; PMCID: PMC11573760.

Harnessing AI for teaching in postgraduate medical education

Why AI in medical education?

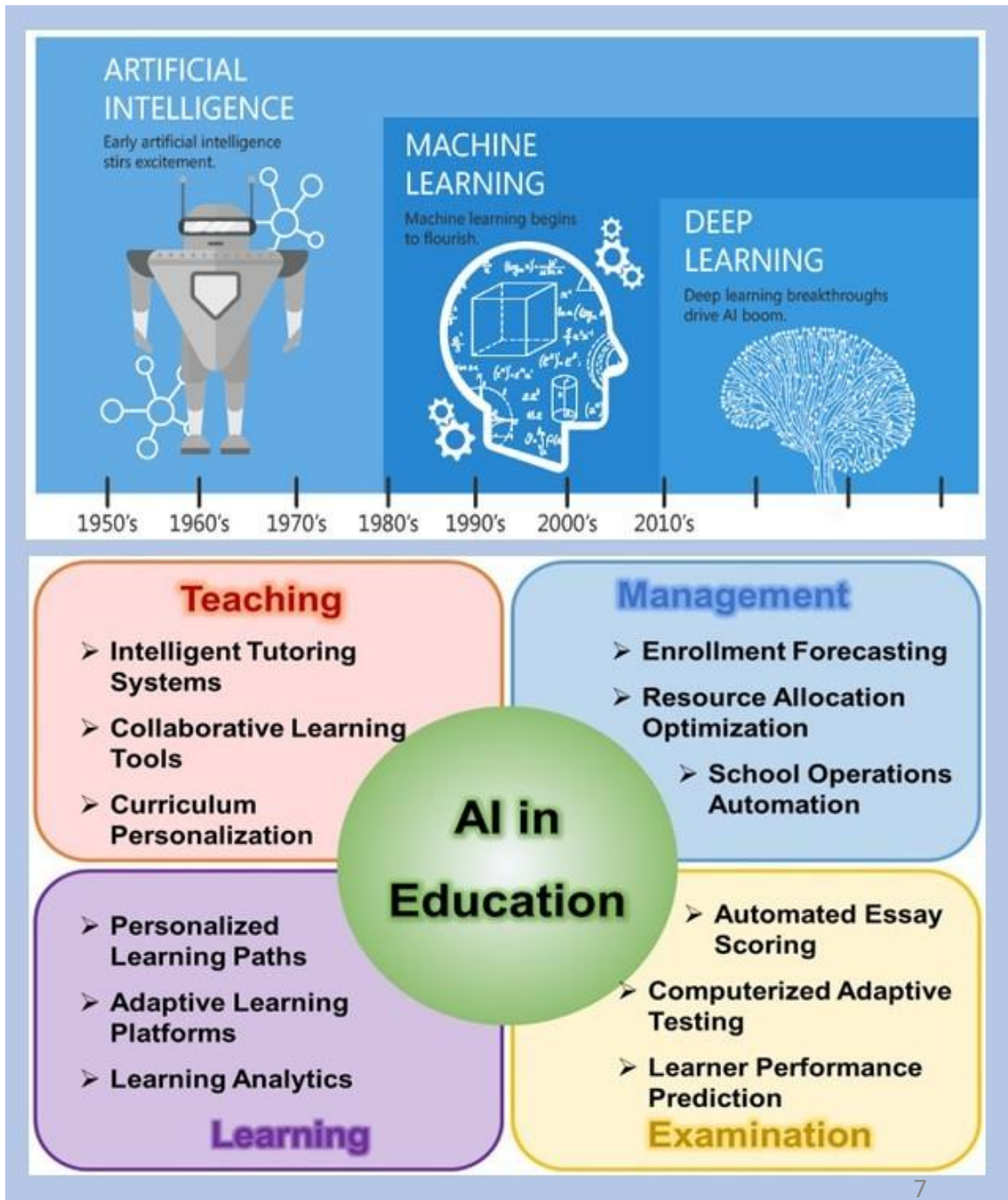
- AI is both a tool and a challenge for educators.
- Let's explore practical uses, supervision roles, and ethical concerns.

What comes to mind when you hear AI in medical education?



Sharifi, S. V., Boushehrinejad, A. G. Enhancing Medical Education through Artificial Intelligence: Opportunities, Challenges, and Future Directions. *Eurasian Journal of Chemical, Medicinal and Petroleum Research*, 2025; 4(3): 258-262. doi: 10.5281/zenodo.16414099

What comes to mind when you hear AI in medical education?

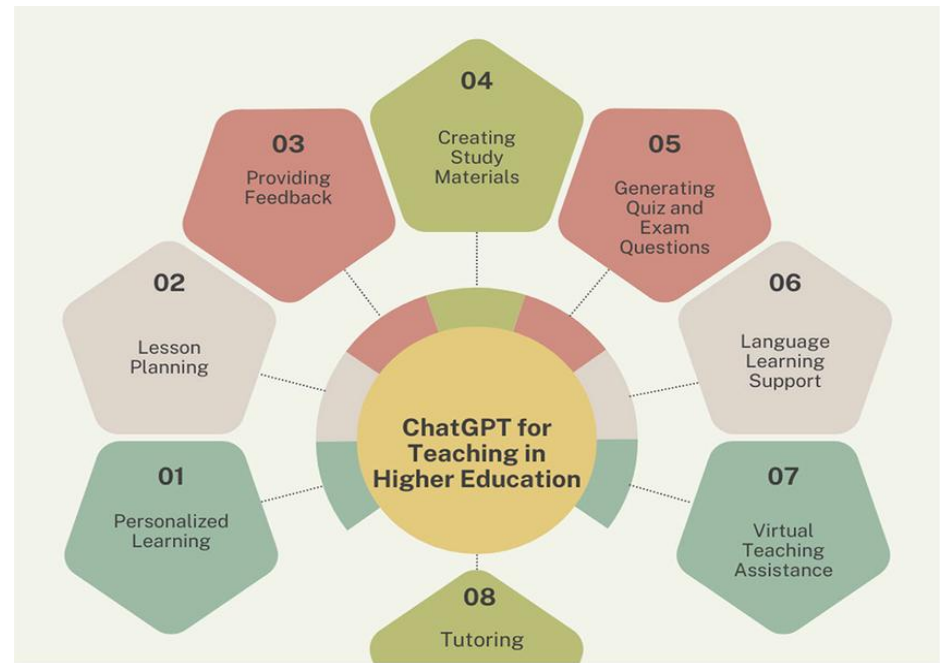


Sharifi, S. V., Boushehrinejad, A. G. Enhancing Medical Education through Artificial Intelligence: Opportunities, Challenges, and Future Directions. *Eurasian Journal of Chemical, Medicinal and Petroleum Research*, 2025; 4(3): 258-262. doi: 10.5281/zenodo.16414099

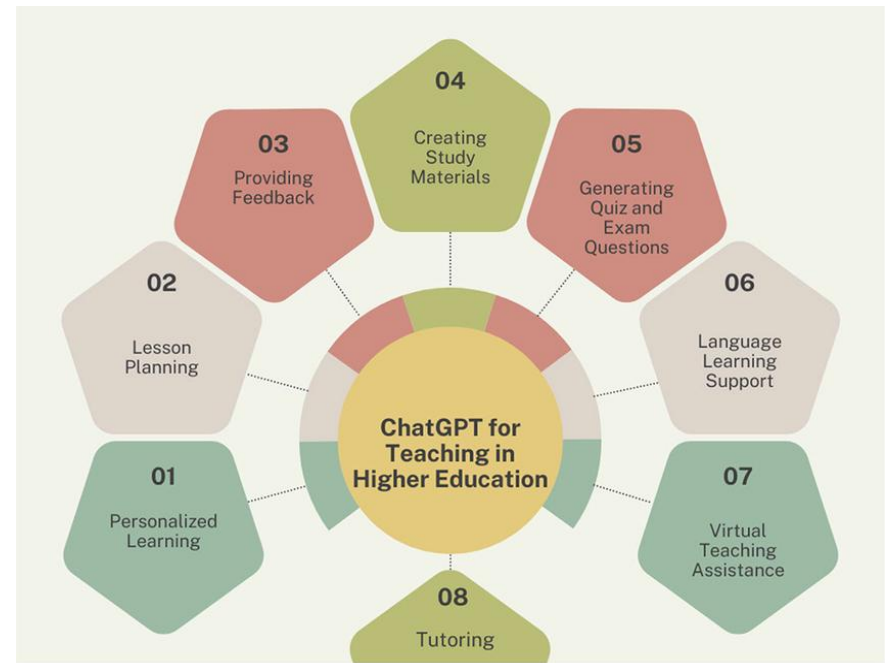
Creating a learning pack: Primary HPV screening in cervical cancer

1. Weinstock H, Berman S, Cates W Jr. Sexually transmitted diseases among American youth: incidence and prevalence estimates, 2000. *Perspect Sex Reprod Health*. 2004 Jan-Feb;36(1):6-10. doi: 10.1363/psrh.36.6.04. PMID: 14982671.
2. Saraiya M, Steben M, Watson M, Markowitz L. Evolution of cervical cancer screening and prevention in United States and Canada: implications for public health practitioners and clinicians. *Prev Med*. 2013 Nov;57(5):426-33. doi: 10.1016/j.ypmed.2013.01.020. Epub 2013 Feb 8. PMID: 23402963; PMCID: PMC4515308.
3. Bosch FX, Lorincz A, Muñoz N, Meijer CJ, Shah KV. The causal relation between human papillomavirus and cervical cancer. *J Clin Pathol*. 2002 Apr;55(4):244-65. doi: 10.1136/jcp.55.4.244. PMID: 11919208; PMCID: PMC1769629.
4. Schiffman, Mark MD, MPH; Wentzensen, Nicolas MD, PhD. From Human Papillomavirus to Cervical Cancer. *Obstetrics & Gynecology* 116(1):p 177-185, July 2010. | DOI: 10.1097/AOG.0b013e3181e4629f
5. Lycke, Kathrine & Steben, Marc & Garland, Suzanne & Woo, Yin & Cruickshank, Margaret & Perkins, Rebecca & Bhatla, Neerja & Ryser, Marc & Gravitt, Patti & Hammer, Anne & Brotherton, Julia & Chatzistamatiou, Kimon & Feldman, Sarah & Kaufmann, Andreas & Moscicki, Anna & Stanley, Margaret & Wentzensen, Nicolas. (2025). An updated understanding of the natural history of cervical human papillomavirus infection—clinical implications. *American Journal of Obstetrics and Gynecology*. 232. 10.1016/j.ajog.2025.02.029.

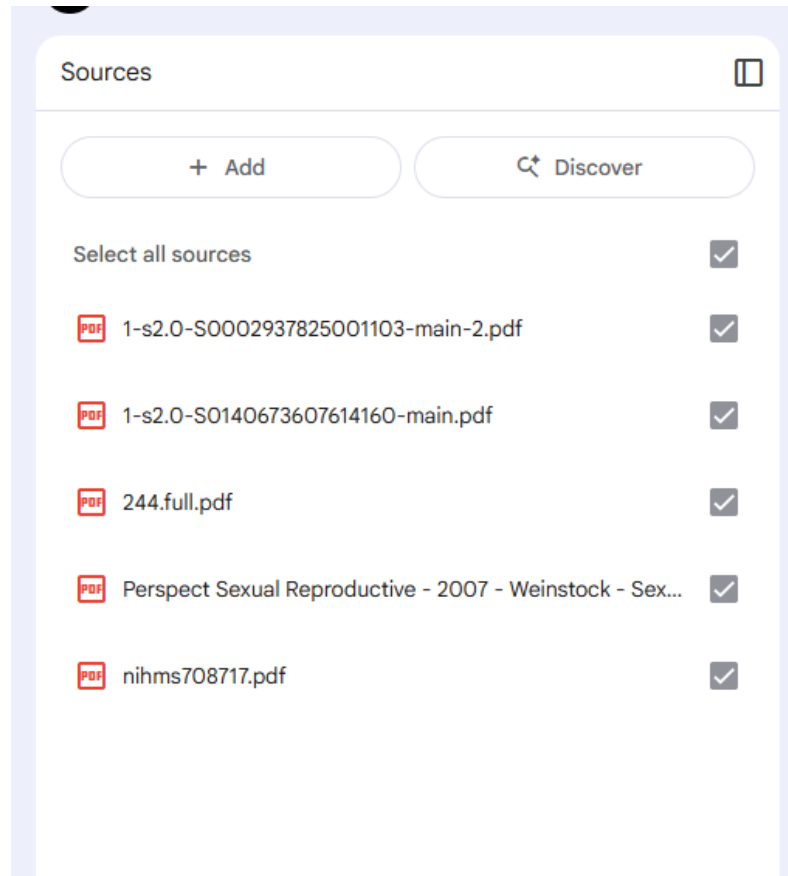
Practical Demonstration



Practical Demonstration: NotebookLM








<https://notebooklm.google.com/>



<https://notebooklm.google.com/>

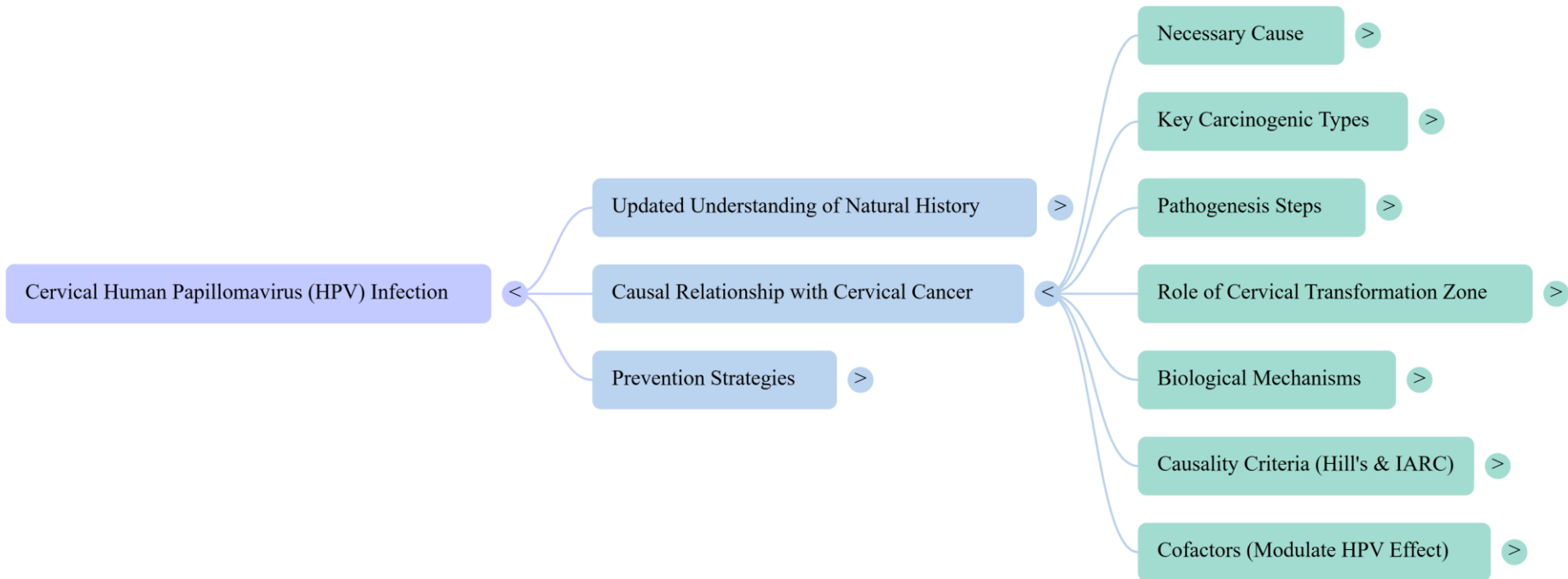
Sources ☰

Select all sources

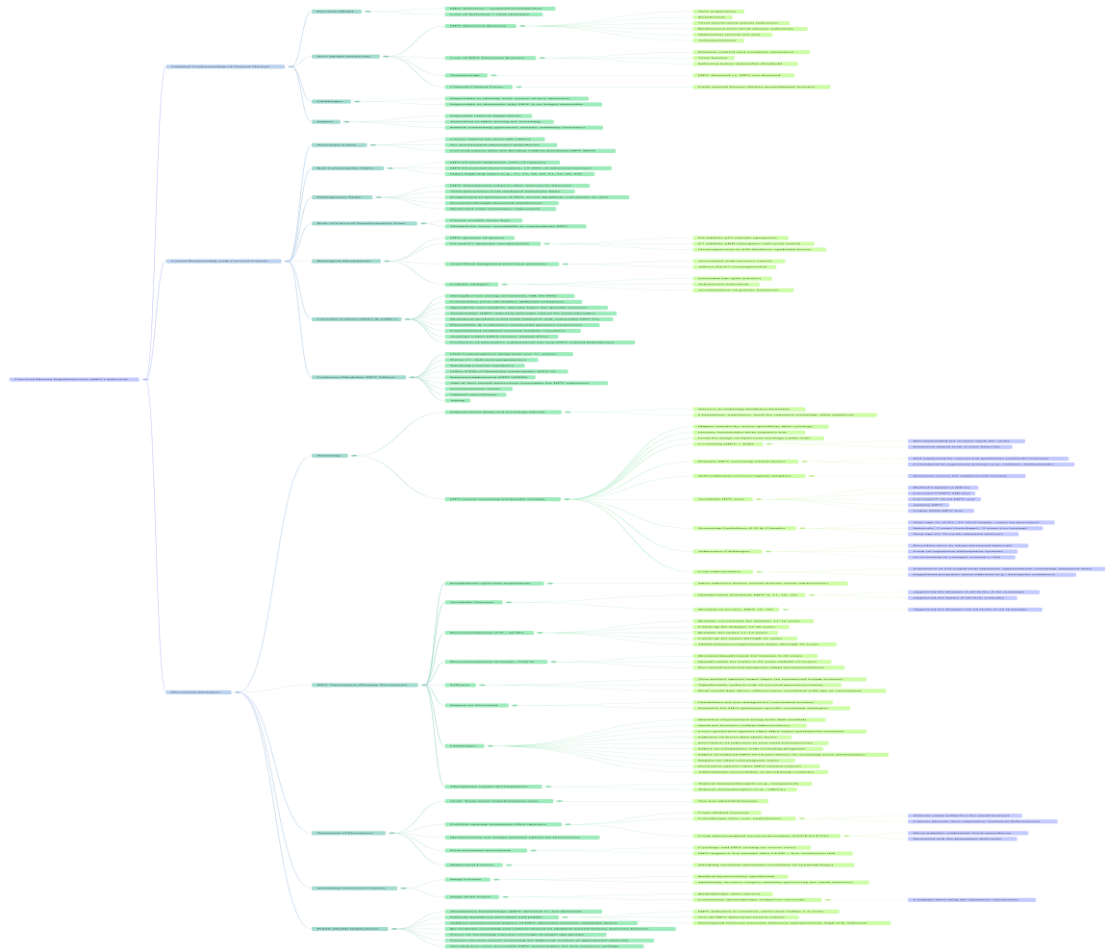
-  1-s2.0-S0002937825001103-main-2.pdf
-  1-s2.0-S0140673607614160-main.pdf
-  244.full.pdf
-  Perspect Sexual Reproductive - 2007 - Weinstock - Sex...
-  nihms708717.pdf



Case-based demo: mind map



Case-based demo: mind map



Case-based demo: notes

HPV and Cervical Cancer: Updated Understanding and Prevention Strategies



(Saved responses are view only)

Briefing Document: Human Papillomavirus (HPV) and Cervical Cancer

Date: 27 August 2025

Sources:

- Excerpts from "1-s2.0-S0002937825001103-main-2.pdf" (Lycke et al., 2025)
- Excerpts from "1-s2.0-S0140673607614160-main.pdf" (Schiffman et al., 2007)
- Excerpts from "244.full.pdf" (Bosch et al., 2002)
- Excerpts from "Perspect Sexual Reproductive - 2007 - Weinstock - Sexually Transmitted Diseases Among American Youth Incidence and.pdf" (Weinstock et al., 2004)
- Excerpts from "nihms708717.pdf" (Saraiya et al., 2013)

Executive Summary

This briefing document synthesises information from recent and foundational sources on Human Papillomavirus (HPV) and its causal link to cervical cancer, as well as advancements in screening, prevention, and public health implications. The central theme is the updated understanding of HPV natural history, moving beyond a simplified "acquisition and clearance" model to a more nuanced view encompassing latency and redetection. This updated understanding has significant implications for clinical counselling, screening recommendations, and HPV vaccination strategies. HPV is established as a "necessary cause" of cervical cancer, making prevention efforts highly effective. Current challenges include improving screening adherence, addressing disparities in access, and adapting screening programs in the context of increasing HPV vaccination rates.

1. Updated Understanding of HPV Natural History

The International Papillomavirus Society (IPVS) has updated the understanding of HPV natural history, moving away from a simplified model of acquisition and clearance.

- **Nuanced Detection:** HPV detection is not solely a result of new acquisition or reinfection. It can also occur due to "autoinoculation, deposition from a recent sex act, or as a redetection of a previously acquired infection." (Lycke et al., 2025).
- **Immune Control vs. Clearance:** Loss of HPV detection "likely reflects immune control rather than complete viral clearance." (Lycke et al., 2025). Even when undetectable, HPV can remain in the basal layers of the epithelium as a latent or low-level chronic infection, with subsequent risk of

Convert to source

HPV and Cervical Cancer: Updated Understanding and Prevention Strategies



(Saved responses are view only)

2007). Other high-risk types include 31, 33, 35, 45, 51, 52, 56, and 59. (Bosch et al., 2002).

- **Disease Progression:** Cervical cancer develops through four major steps: HPV transmission, viral persistence, progression to cervical precancer (CIN3), and invasion. (Schiffman et al., 2007). Most HPV infections clear within 1-2 years; however, persistent infections (lasting 2 years or more) are strongly linked to precancer.

3. HPV Transmission and Prevalence

HPV infection is extremely common, especially among young, sexually active individuals.

- **Ubiquitous Infection:** "Almost all sexually active persons will be infected with HPV at least once in their lifetime." (Saraiya et al., 2013).
- **Sexual Transmission:** Anogenital HPV infections are transmitted mainly by "skin-to-skin or mucosa-to-mucosa contact." (Schiffman et al., 2007).
- **High Prevalence in Youth:** In 2000, approximately 4.6 million new HPV infections occurred among Americans aged 15-24, accounting for 74% of all new HPV infections in the 15-44 age group. (Weinstock et al., 2004). This age group represented 25% of the sexually experienced population but acquired nearly half of all new STDs. (Weinstock et al., 2004).

4. Cervical Cancer Screening Strategies

Screening has significantly reduced cervical cancer incidence and mortality, but practices are evolving with new technologies and understanding.

- **Evolution from Cytology to HPV Testing:** Many countries have transitioned from cytology-based (Pap tests) to HPV-based screening, or a combination. (Lycke et al., 2025).
- **HPV Testing Advantages:** HPV testing is "more sensitive but less specific than cytology-based methods for primary cervical cancer screening." (Schiffman et al., 2007). It offers greater reassurance against cervical precancer and cancer when negative, and better reproducibility. (Schiffman et al., 2007).
- **Co-testing (HPV + Pap):** In the US, co-testing is a national recommendation for women aged 30 and older, often at 5-year intervals, and is considered the preferred option by some major organizations. (Saraiya et al., 2013).
- **Primary HPV Testing:** Some Canadian provinces are considering primary HPV testing, with cytology triage before colposcopy, especially for women aged 30 and older, citing cost-effectiveness and concern about overtreatment with co-testing. (Saraiya et al., 2013).
- **Screening Intervals and Cessation:** Guidelines generally recommend starting screening at age 21,

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Case-based demo: FAQ

HPV: Cervical Cancer Prevention and Global Challenges



(Saved responses are view only)

1. What is Human Papillomavirus (HPV) and how does it relate to cervical cancer?

HPV is a common virus that is the necessary cause of almost all cases of cervical cancer. There are over 100 types of HPV, with about 30-40 being mucosatropic (affecting mucous membranes) and at least 15 clearly linked to cervical cancer. HPV infection is extremely common, especially in young women in their first decade of sexual activity, with most sexually active people acquiring at least one type of HPV in their lifetime.

While HPV infection is widespread, cervical cancer is a relatively rare outcome that develops slowly, often over decades. The key steps are:

1. **Infection** of the metaplastic epithelium at the cervical transformation zone (the area where different types of cervical cells meet).
2. **Viral persistence**: Most infections are cleared by the immune system within 1-2 years, but a small proportion (around 10% of carcinogenic infections) can persist for several years.
3. **Progression** of persistently infected cells to precancerous lesions (cervical intraepithelial neoplasia, particularly CIN3).
4. **Invasion** through the basement membrane, leading to invasive cancer.

The two most carcinogenic HPV types, HPV16 and HPV18, are responsible for about 70% of cervical cancers.

2. How has the understanding of HPV's natural history evolved, and what are the clinical implications of this updated knowledge?

The understanding of HPV's natural history has become more nuanced. Previously, HPV detection was largely seen as a new acquisition and its disappearance as complete viral clearance. However, the updated understanding from the International Papillomavirus Society (IPVS) acknowledges that:

- **HPV detection** can result from new acquisition, reinfection, viral reactivation of a latent infection, redetection of a low-level chronic infection, deposition from a recent sex act, or autoinoculation.
- **Loss of HPV detection** likely reflects immune control rather than complete viral clearance. The virus can remain in basal epithelial layers as a latent or low-level chronic infection, potentially reactivating during periods of immune suppression.

These updates have significant clinical implications, especially for counselling in HPV-based cervical cancer screening:

Case-based demo: SAQ and essay

(Saved responses are view only)

The Evolving Landscape of HPV and Cervical Cancer

Prevention: A Comprehensive Study Guide

This study guide is designed to help you review and solidify your understanding of Human Papillomavirus (HPV) infection, its role in cervical cancer, and the current and evolving strategies for prevention and management.

I. Quiz: Short-Answer Questions

Answer the following questions in 2-3 sentences each, based on the provided source material.

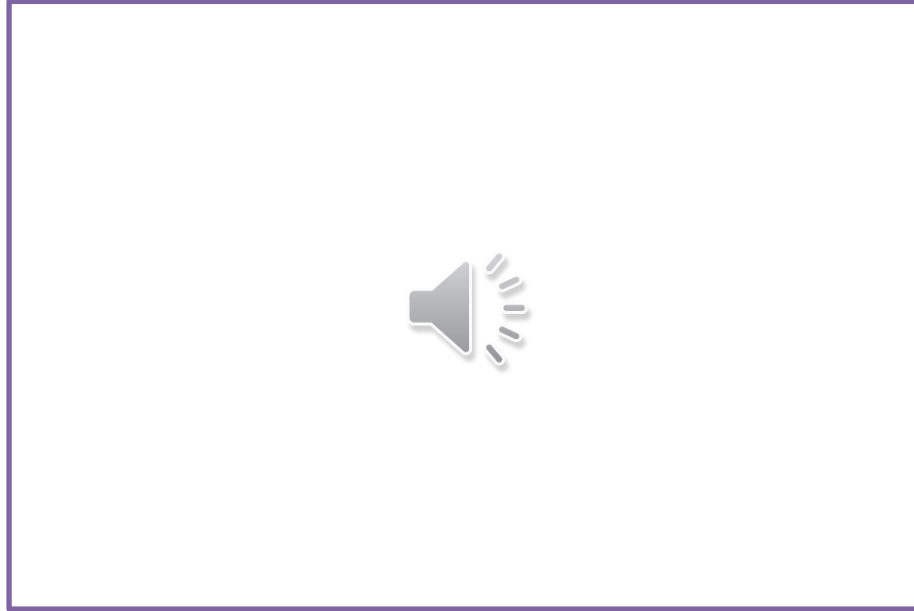
1. What is the "updated understanding" of HPV natural history, and how does it differ from the "previous simplified model" regarding HPV detection and clearance?
2. Why does the updated understanding of HPV natural history recommend using the terminology "HPV detected" vs. "HPV not detected" instead of "acquisition/reinfection" and "clearance"?
3. List at least three potential explanations for having HPV detected in cervical screening, according to the updated natural history model.
4. Explain the primary function of HPV-based cervical cancer screening tests, particularly regarding viral load.
5. What are the key distinctions between cytology-based and HPV-based cervical cancer screening in terms of what they detect?
6. According to the sources, why is it challenging to determine the "true" source of a new HPV detection in an individual woman?
7. Describe the purpose and efficacy of prophylactic HPV vaccines, especially concerning the age of administration.
8. How does the effectiveness of HPV vaccination differ between early adolescence and adulthood, according to real-world data?
9. Explain the "necessary cause" concept as applied to HPV and cervical cancer, and what it implies for prevention.
10. What are the four major steps in cervical cancer development, as outlined in the "Human

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III. Essay Format Questions

1. Discuss the evolution of the understanding of HPV natural history, highlighting the key differences between the "previous simplified model" and the "updated understanding." What are the clinical implications of this updated knowledge for patient counseling, particularly in the context of HPV-based cervical cancer screening?
2. Compare and contrast the different approaches to cervical cancer screening in the United States and Canada, as described in the sources. What factors contribute to the variations in screening guidelines and implementation between the two countries, and what are the observed outcomes regarding adherence and cost-effectiveness?
3. Evaluate the role of HPV vaccination in cervical cancer prevention. Discuss the types of vaccines available, their target populations, and the evidence regarding their efficacy, distinguishing between prophylactic and potential therapeutic effects. What are the ongoing controversies and challenges related to widespread HPV vaccination, particularly in adult women and resource-limited settings?
4. Explain the concept of HPV as a "necessary cause" of cervical cancer, drawing on the causality criteria discussed in the sources (e.g., strength, consistency, temporality, biological plausibility). How has molecular technology contributed to establishing this causal link, and what are the public health implications of this understanding?
5. Beyond HPV infection, what cofactors are discussed in the sources as potentially influencing the risk of cervical precancer and cancer? Analyze the evidence for these cofactors (e.g., smoking, oral contraceptives, parity, other STDs), considering their strength of association and whether they are considered independent risk factors or promoters in the context of HPV infection.

Case-based demo: podcast



Case-based demo: video

NotebookLM

The Virus That Causes Cancer



Case-based demo: what about lesson planning

what would be relevant teaching points on this topic - family medicine postgraduate students in south africa, differentiate what would be needed for obgyn postgraduate students in south africa

General Introduction for Both Specialties	For Family Medicine Postgraduate Students in South Africa	For Obstetrics & Gynaecology Postgraduate Students in South Africa
<ul style="list-style-type: none">• Understanding of HPV's natural history• South African Context Considerations	<ul style="list-style-type: none">• Understanding HPV Detection and Non-Detection• Counselling Women in Routine HPV-Based Cervical Screening• HPV Vaccination	<ul style="list-style-type: none">• Advanced Understanding of HPV Natural History and Carcinogenesis• Advanced Screening Strategies and Clinical Management• HPV Vaccination Implications• Cofactors for Progression

Case-based demo 3: clinical case 1

write a short clinical case to test students understanding of application of this topic. level of PG student. Make case nuanced for south african context

Patient Presentation:

Ms. Zandile Nkosi, a 32-year-old married woman, presents to her local primary healthcare clinic in rural KwaZulu-Natal, South Africa. She is a mother of three (G3P3), all vaginal deliveries. She has been using combined oral contraceptives (COCs) for the past 7 years and occasionally smokes socially. She recently had her first cervical cancer screening, prompted by a community health worker's outreach program. The Pap test result is "**Atypical Squamous Cells of Undetermined Significance (ASC-US)**". The clinic, participating in a pilot program, now offers HPV testing, and her result is "**High-Risk HPV Detected**". Her HIV test, conducted as part of routine care, is **negative**.

- How would you counsel Ms. Nkosi about her "High-Risk HPV Detected" result, considering the updated understanding of HPV natural history and her South African context?
- Explain the clinical significance of a "High-Risk HPV Detected" result in the context of her ASC-US cytology.
- Discuss the lifestyle factors Ms. Nkosi reports (smoking, long-term COC use, multiparity) and their relevance to her HPV status and future risk of cervical disease.
- What would be the immediate next step in her clinical management based on these results, considering the typical resource constraints in a rural South African setting?
- Briefly advise Ms. Nkosi on HPV vaccination.

Case-based demo 3: clinical case

write a short clinical case to test students understanding of application of this topic. level of PG student. Make case nuanced for south african context

Patient Presentation:

Mrs. Thandiwe Dlamini, a 48-year-old HIV-positive woman from a peri-urban township in South Africa, presents to the gynaecology outpatient department. She is P4G4, has used a progesterone-only injectable contraceptive for 10 years, and is a current smoker. Six months ago, she underwent an HPV-based cervical screening, which showed High-Risk HPV (genotype not specified) detected with "Low-Grade Squamous Intraepithelial Lesion (LSIL)" cytology. She was referred for colposcopy, but due to transport and financial issues, she could only attend now. This is her first colposcopic assessment.

- Interpret Mrs. Dlamini's screening results (High-Risk HPV detected, LSIL cytology) and explain the potential implications for her risk of cervical precancer and cancer, specifically considering her age and HIV status.
- How do her cofactors (HIV positivity, smoking, multiparity, long-term contraceptive use) modify her risk profile for progression to cervical precancer/cancer?
- Describe your approach to colposcopy and biopsy for Mrs. Dlamini. What are the known limitations of colposcopy, and how might you address them to ensure an accurate diagnosis in this case, especially considering potential resource constraints in a South African peri-urban setting?
- Suppose her colposcopy and subsequent biopsies confirm a CIN2 lesion. Discuss the management options, considering her age, HIV status, and the context of care in South Africa. How would you counsel her about treatment efficacy and post-treatment follow-up?
- If Mrs. Dlamini had received HPV vaccination in early adolescence (e.g., at age 12), how might this have altered her current clinical picture and future screening recommendations in South Africa?

Case-based demo 4: SBA

write 10 single best answer type questions with answers and explanation for what is the correct answer. make questions clinically applicable to south africa. postgraduate level

2. HPV Vaccination for Adult Women A sexually active adult woman in her late 20s, residing in a setting like South Africa, inquires about HPV vaccination to prevent cervical cancer. Based on the provided sources, what is the **MOST ACCURATE** information regarding the effectiveness of currently available prophylactic HPV vaccines for this age group? A. They are highly effective in treating any existing HPV infections or precancerous lesions she may have. B. Real-world data shows they are clearly efficient in preventing cervical precancer and cancer, regardless of prior HPV exposure. C. Their primary benefit is to prevent new acquisition of HPV types included in the vaccine, particularly if administered before sexual debut. D. Widespread adult vaccination programs are now the main method for cervical cancer prevention, replacing the need for screening. E. The effectiveness in adult women is consistently superior to that achieved in sexually naive adolescents.

• **Correct Answer: C**

• **Explanation:** The sources clearly state that "the currently available HPV vaccines are prophylactic, that is, they prevent HPV acquisition" ³ ... They are "clearly efficient" when administered to sexually naive women (e.g., <16/17 years) ⁶ . However, "real-world data... suggest a limited impact of adult HPV vaccination on the burden of HPV-related cancer as loss of HPV detection does not confer that there is no cervical infection" ⁷ . Vaccines do not treat existing infections or lesions

⁵ ⁸ .

7. Counseling Patients with "HPV Detected" Results A healthcare provider in South Africa is counseling a patient who has just received an "HPV detected" result from a cervical screening test. A **MAJOR CHALLENGE** in this counseling, according to the sources, is: A. Convincing the patient that the HPV detection automatically means she will develop cancer. B. Accurately determining the precise source of the HPV detection (e.g., new sexual partner vs. viral reactivation). C. Prescribing an effective antiviral treatment to eliminate the detected HPV infection immediately. D. Reassuring the patient that HPV is a rare infection with no long-term health implications. E. Explaining that routine follow-up is not necessary once HPV is detected.

• **Correct Answer: B**

• **Explanation:** The sources explicitly state that "it is practically impossible to identify the 'true' source of a new human papillomavirus detection" ¹ ... This ambiguity regarding whether it's a new acquisition, redetection of a latent infection, or deposition from a recent sex act is a significant counseling challenge ¹ ... Healthcare providers are advised to use the terminology "HPV detected" vs. "HPV not detected" due to this difficulty ¹ ² . HPV is a common infection, not rare ³⁵ , and indicates an increased risk of precancer/cancer, not an automatic diagnosis ³⁶ ³⁷ .

Referencing?

The screenshot displays a digital workspace with three main panels: Sources, Chat, and Studio.

- Sources Panel:** Shows a document titled "1-s2.0-S0002937825001103-main-2.pdf". A "Source guide" dropdown is visible. The document content includes:
 - FIGURE 1 The simplified and updated understanding of the HPV natural history
 - The simplified (A) and the updated model of the natural history of HPV (B). The figure is a modified version of the updated understanding of the natural history of the IPVS working group. The observed state of the HPV test is marked with bold in Figure 1B.
 - HPV, human papillomavirus; IPVS, International Papillomavirus Society.
 - individual case. It is important to inform women that knowing the "why" does not change how we manage her HPV detection to prevent progression to cancer. Women who have HPV detected need to be informed that HPV is commonly redetected, even in sexually inactive and monogamous women, and that it may reflect intermittent loss of immune control. In fact, the risk of having HPV redetected after previously controlling it increases over time and is about 15% after 5 years, with differences by HPV genotypes with the highest risk for HPV16,19,20 This is supported by other studies reporting that 30% to 72% of HPV detections may be attributed to previously acquired HPV infections and not recent acquisition.^{9,21}
 - We have summarized some suggested phrases that may be used in clinical counseling of women attending cervical screening in Table 2. Furthermore, Figure 3 illustrates an example of a woman's HPV testing pattern over a lifetime and the corresponding possible explanations for the HPV test result.
 - Risk of cervical precancer and cancer It is well-established that women who have HPV detected in a screening sample have a significantly increased risk of cervical precancer and cancer within the next 5 to 10 years compared to women who do not have HPV detected.^{22,23} The risk is highest in women who continue to have HPV detected in screening (ie, persistent HPV infection), particularly if the same oncogenic genotype is detected.^{22,23} Similarly, the risk of cervical precancer and cancer declines with increasing number of consecutive tests without any HPV detection.²⁴ Thus, what matters in terms of a woman's risk of cervical precancer and cancer is that she gains immune control, resulting in loss of HPV detection.¹⁵

- Chat Panel:** Contains a "Refresh" button and a text input field. The chat content includes:
- 7. Counseling Patients with "HPV Detected" Results** A healthcare provider in Africa is counseling a patient who has just received an "HPV detected" result on a cervical screening test. A MAJOR CHALLENGE in this counseling, according to the sources, is: A. Convincing the patient that the HPV detection automatically means they will develop cancer. B. Accurately determining the precise source of the HPV infection (e.g., new sexual partner vs. viral reactivation). C. Prescribing an effective treatment to eliminate the detected HPV infection immediately. D. Reassuring the patient that HPV is a rare infection with no long-term health implications. E. Determining that routine follow-up is not necessary once HPV is detected.
- Correct Answer: B**
- Explanation:** The sources explicitly state that "it is practically impossible to determine the 'true' source of a new human papillomavirus detection" (1). This ambiguity regarding whether it's a new acquisition, redetection of a latent infection, or deposition from a recent sex act is a significant counseling challenge (1). Healthcare providers are advised to use the terminology "HPV detected" vs. "HPV detected" due to this difficulty (1, 2). HPV is a common infection, not rare (2). This indicates an increased risk of precancer/cancer, not an automatic diagnosis (36, 37).
- 8. Impact of Vaccination on Future Screening Protocols** With increasing HPV vaccination coverage in South Africa and globally, what is a PREDICTED IMPACT on future cervical cancer screening guidelines and the performance of screening tests, according to the sources? A. HPV vaccination will completely eliminate the need for cervical cancer screening in future generations. B. The sensitivity of cytology-based screening will significantly improve due to reduced HPV prevalence. C. The positive predictive value of cytology-based testing may decrease as the prevalence of vaccine-targeted high-risk HPV types decreases. D. The number of vaccinated women are expected to become shorter to compensate for vaccine-resistant HPV.
- Studio Panel:** Features a "Video Overview" button, a "Reports" dropdown, and a list of sources:
- HPV: Cervical Cancer Prevention and Global... (FAQ - 5 sources - 4h ago)
- HPV and Cervical Cancer: A Comprehensive Study... (Study guide - 5 sources - 4h ago)
- HPV and Cervical Cancer: Updated Understanding... (Briefing doc - 5 sources - 4h ago)

CASE-BASED DEMO

Would you trust this?

CASE-BASED DEMO

Would you trust this?

Where could it be useful?

Where risky?

AI and assessment

Automated question generation

Creates MCQs, short-answer, and case-based questions

Builds diverse and adaptive test banks

Simulation & virtual patients

Dynamic clinical scenarios for OSCE-style assessment

Tests reasoning, teamwork, and decision-making

Chatbots as assessment tools

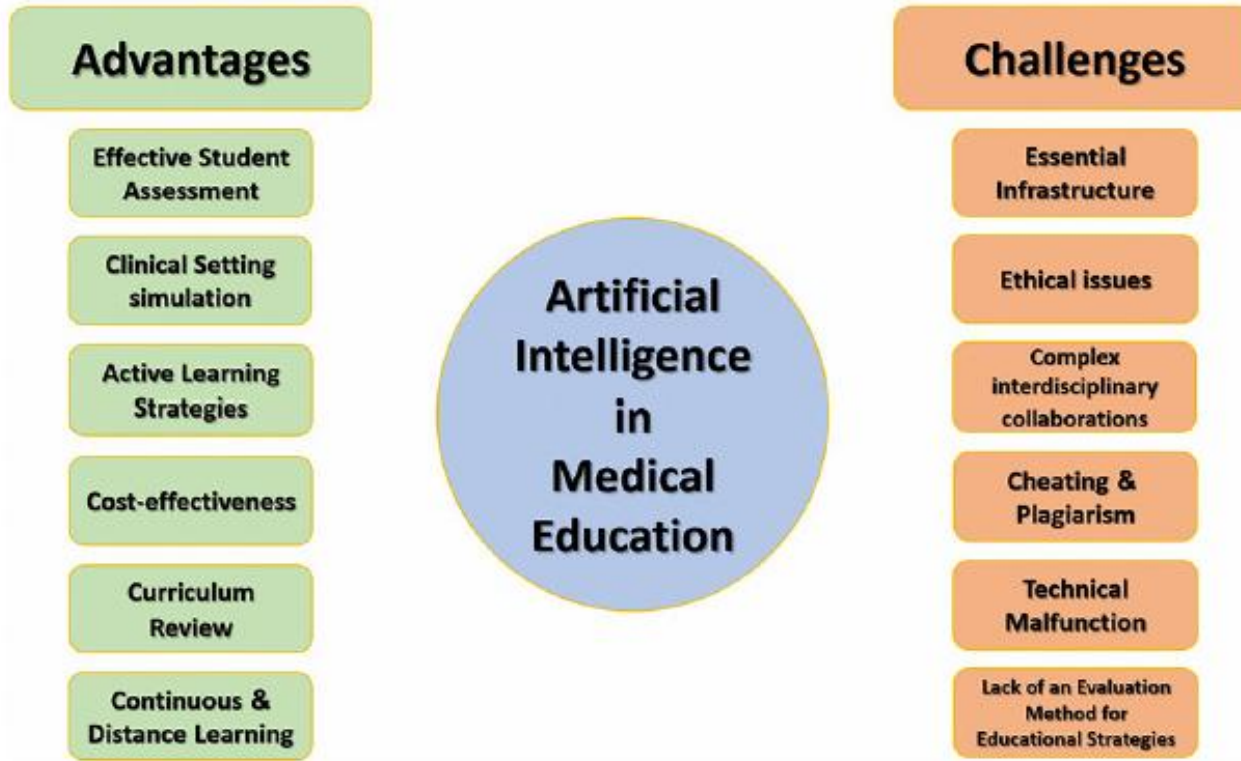
Interactive case discussions and viva-style Q&A

Evaluates communication, professionalism, and clinical judgment

Grading & feedback

NLP for essays/short answers

AI and assessment: opportunities & challenges



Zarei, Mahdi & Mamaghani, Hamid & Abbasi, Amin & Hosseini, Mohammad-Salar. (2024). Application of artificial intelligence in medical education: A review of benefits, challenges, and solutions. *Medicina Clínica Práctica*. 7. 10.1016/j.mcsp.2023.100422.

Shifting roles of educators



Shifting roles of educators

What new skills do clinical teachers need in the AI era?

AI COMPETENCY FRAMEWORK FOR TEACHERS

GUIDING TEACHERS ON AI USE AND MISUSE IN EDUCATION



I understand that AI is human-led and impacts human rights & agency.



I ensure AI supports & never replaces human judgment in education.



I advocate for inclusive, ethical & just uses of AI in education.



I use AI to reflect on & personalize my own professional learning.



I use AI to support peer learning & share insights with others.



I design AI tools & strategies to shape meaningful teacher growth.



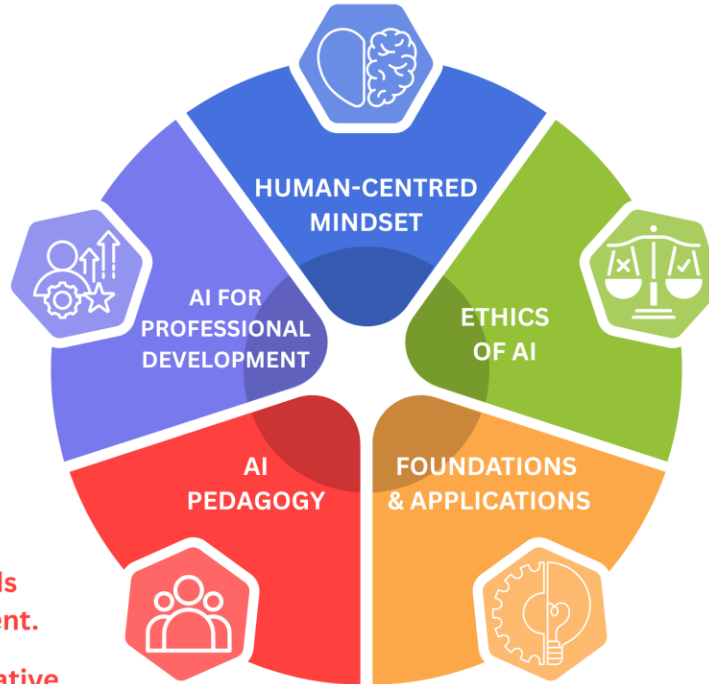
I can spot where AI supports my teaching & assess basic risks.



I integrate AI into learning that builds student voice, empathy & engagement.



I lead AI-infused learning that is creative, student-driven & future-ready.



I recognize core AI ethics like fairness, inclusion & sustainability.



I follow ethical & legal guidelines when using AI tools & data.



I co-create AI ethics through advocacy, feedback & collaboration.



I know how AI works & can identify appropriate tools for teaching.



I use AI tools with skill, awareness of bias & relevance to my context.



I design or adapt AI tools to meet learning needs & local challenges.



ACQUIRE



DEEPEN



CREATE

unesco

AI competency framework
for teachers



Adapted from UNESCO's AI COMPETENCY FRAMEWORK FOR TEACHERS (2024)

Poster by Stephen Taylor (@sjtylr).

Source: <https://unesdoc.unesco.org/ark:/48223/pf0000391104>



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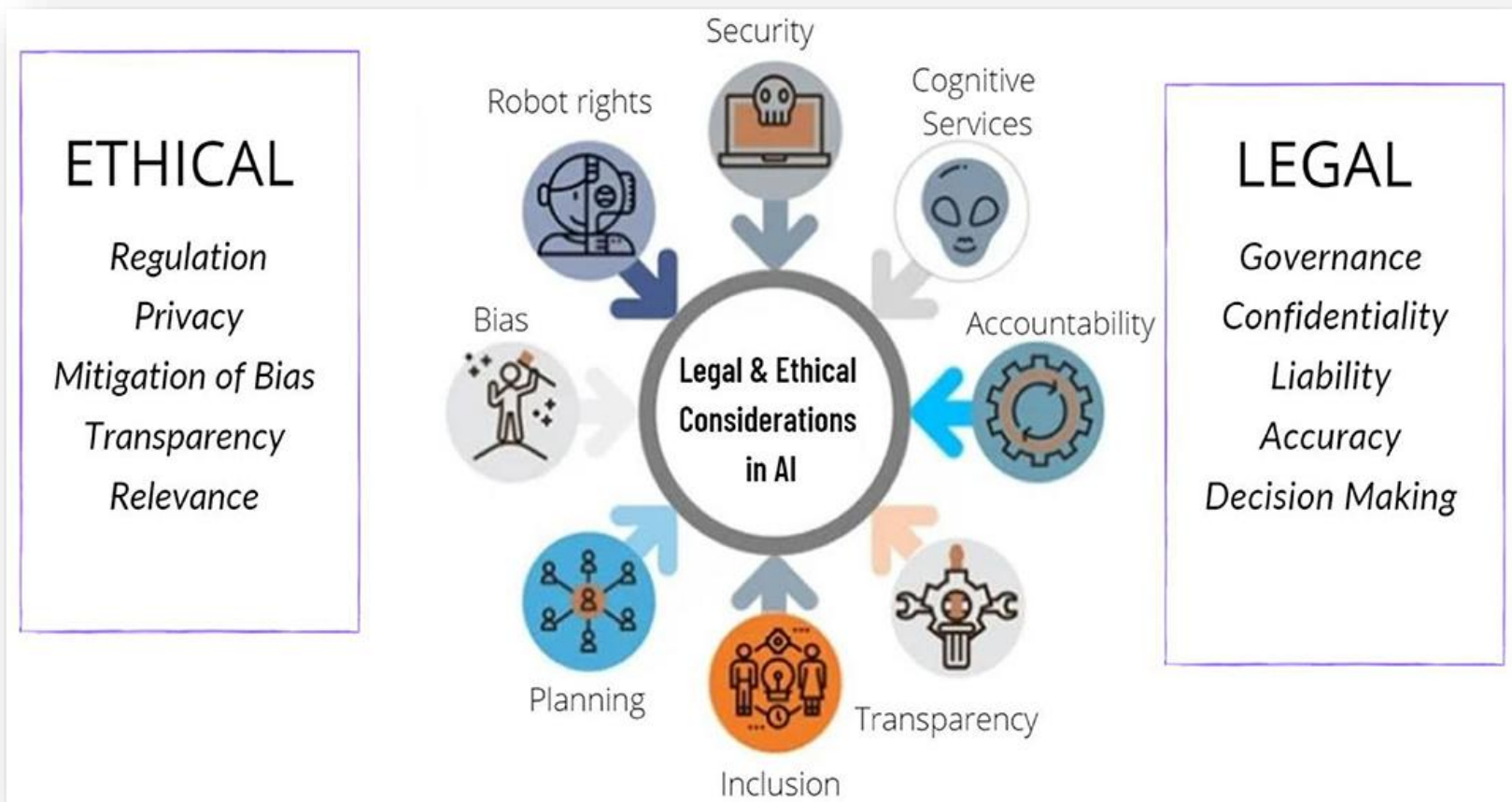
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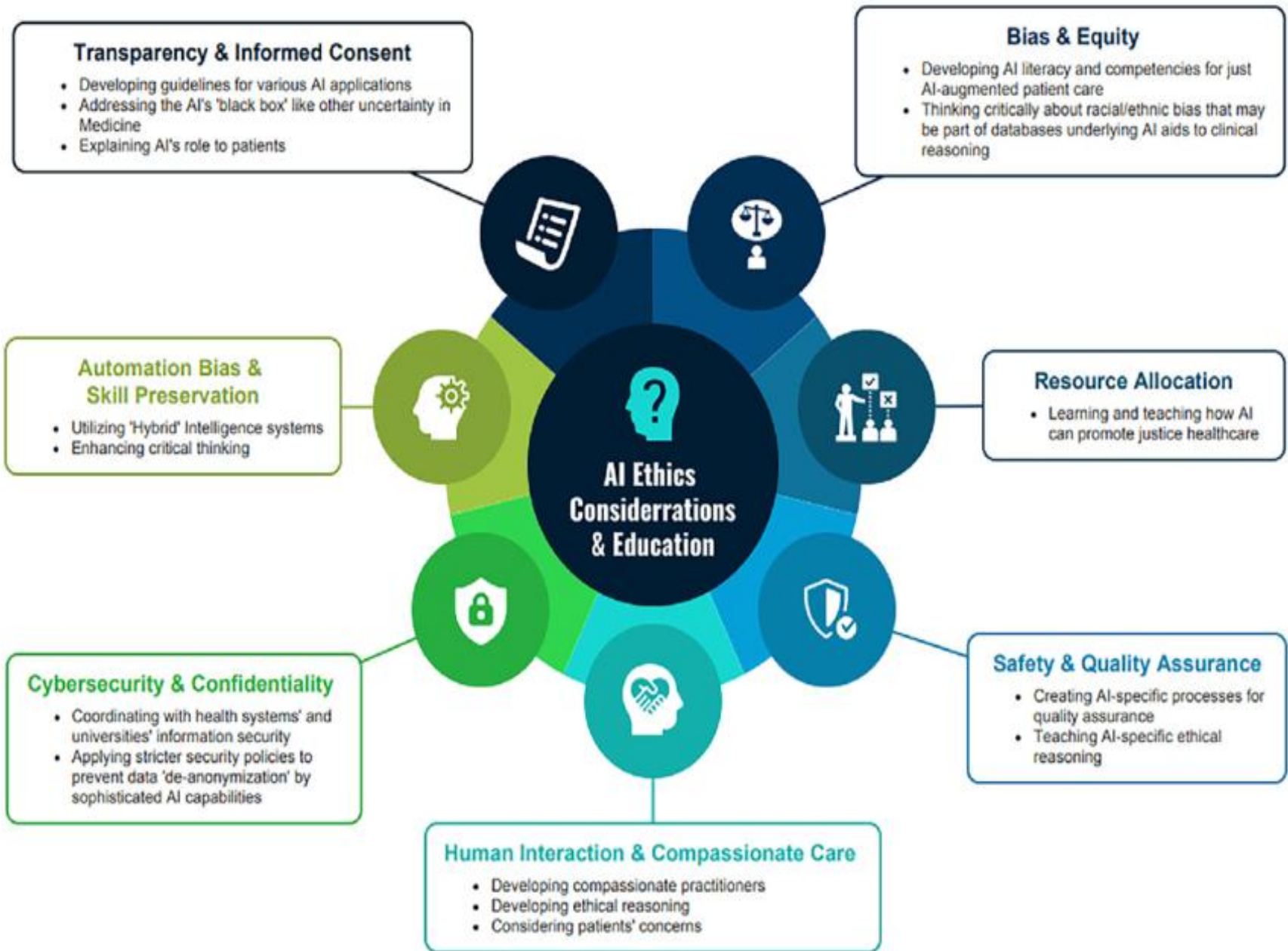
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Shaping the future of supervision



Considerations when using AI





**If you had to integrate AI *in*
your teaching tomorrow,
where would you start?**

