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#### **HPV Global Action**

In partnership with the

#### **Consortium for Infectious Disease Control**

Presents



## The role of HPV Testing in the Acceleration of the Elimination of Cervical Cancer

**Presenters:** 



Dr. Susie Lau, MD, MSc, FRCS(C)

Associate Professor and Director of McGill Gynecologic Oncology



Dr. Samara Perez, PhD

- Clinical psychologist, McGill University Health Center
- Assistant professor, Department of Oncology, McGill University
- Research, Evaluation, and Policy Affairs, HPV Global Action

**Moderator:** 



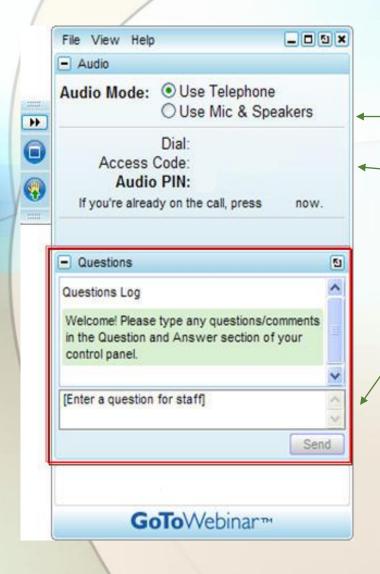
Dr. Marc Steben MD, CCFM, FCFM

- Co-President, HPV Global Action
- Chair, Canadian Network on HPV Prevention
- Board Member & Chair of Education Committee, International Papillomavirus Society

## **Webinar Objectives**

- 1-Explain the value of the HPV testing shift in cervical cancer screening
- 2-Communicate about the potential benefits and harms of HPV testing
- 3-Counsel efficiently about HPV testing

### **Administrative Information**



#### How to participate:

- You can hear the audio for today's webinar via your computer by selecting "Use Mic & Speakers"
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**Note:** A recording of the presentation will be made available at <a href="www.clDCgroup.org">www.clDCgroup.org</a> and <a href="www.hpvglobalaction.org">www.hpvglobalaction.org</a>

## Slides and Video Recording

The webinar **Slides and Recording** will be archived at:

www.hpvglobalaction.org and at www.CIDCgroup.org

#### **Evaluation Survey:**

https://www.surveymonkey.com/r/P3TJBN9

Completion of survey is requested – all registered participants will receive an email with this link

## Moderator



#### Dr. Marc Steben, MD, CCFM, FCFM

- Co-President, HPV Global Action
- Chair, Canadian Network on HPV Prevention
- Family Physician, Family Medicine Group La Cité du Parc Lafontaine, Montreal, QC
  - Board Member and Chair of the Education Committee, International Papillomavirus Society

#### Presenter



## Dr. Susie Lau, MD, MSc, FRCS(C)

 Associate Professor and Director of McGill Gynecologic Oncology

# THE VALUE OF THE HPV TESTING SHIFT IN CERVICAL SCREENING

NOVEMBER 3. 2021

SUSIE LAU

MCGILL UNIVERSITY, SMBD JEWISH
GENERAL HOSPITAL







#### **DISCLOSURES**



- GlaxoSmithKline GSK (remotely on advisory board)
- Merck Canada Inc. (remotely on advisory board)

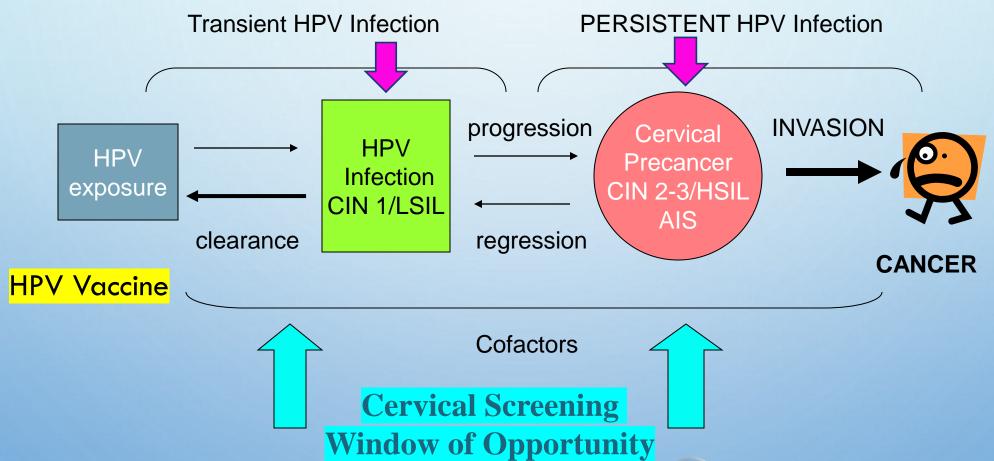


#### START WITH WHY...

- May 19, 2018 World Health Organization (WHO)
- Call to Action: Elimination of cervical cancer by 2030
- "Cervical cancer is one of the most preventable and treatable forms of cancer as long as it is prevented with HPV vaccination, detected early, and managed effectively."
- Challenge: Vaccinate 90% girls under 15 for HPV, screen with primary HPV testing 70% eligible women at ages 35 and 45, have appropriate follow up and treatment from screening for 90% of women

## Cervical Cancer Pathway



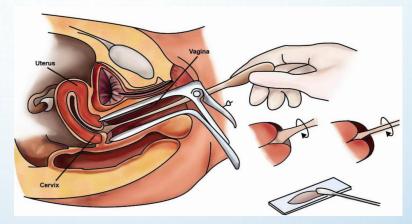


## SECONDARY SCREENING

SECONDARY PREVENTION STRATEGIES
ATTEMPT TO DIAGNOSE (PRECANCER)
AND TREAT AN EXISTING DISEASE IN ITS
EARLY STAGES BEFORE IT RESULTS IN
SIGNIFICANT MORBIDITY (CANCER).

## HOW TO DETECT EARLY?

PAP SMEAR
VS
HPV TESTING

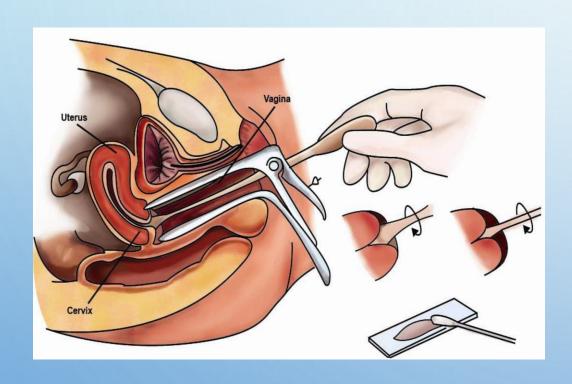






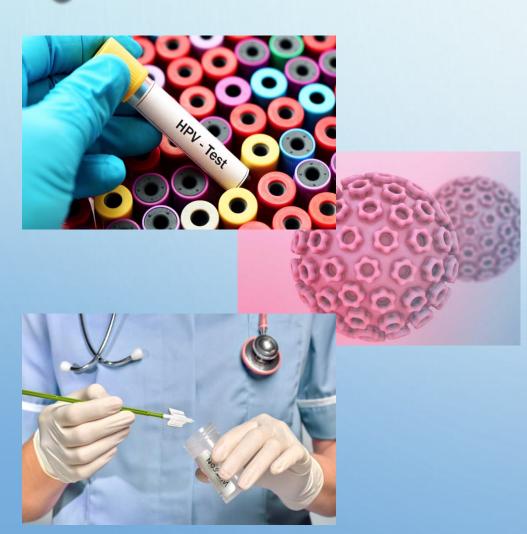






- George Papanicolaou 1941
- Requires sampling the cells of the transformation zone of the cervix
- Observing under the microscope to identify precancerous cells which if possibly left untreated, may eventually lead to cancer
- The Canadian Task Force on Preventive Health Care (CTFPHC) recommends routine screening for cervical cancer:
  - Every 2-3 years
  - For women aged 25-69





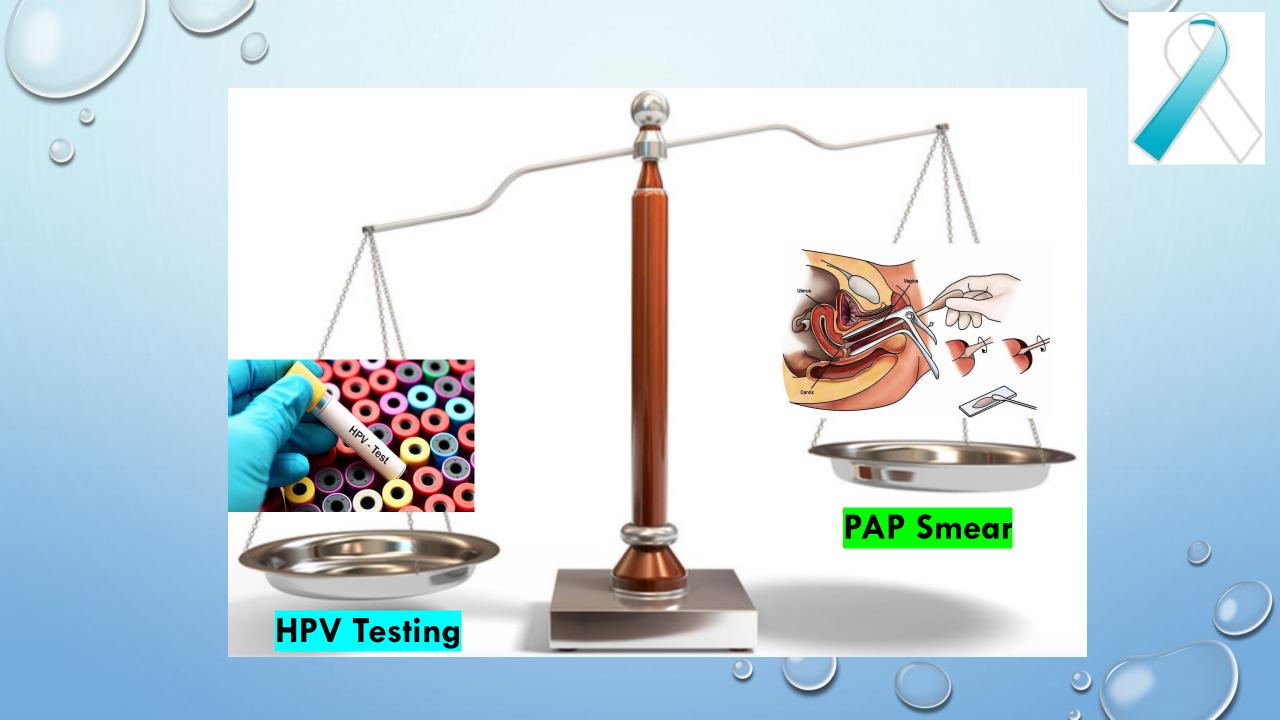
- German virologist Harold zur Hausen 1983
- By 1999, found that 99.7% of cervix cancers are caused by HPV
  - HPV 16 and 18 cause 71%

• HPV 31, 33, 45, 52, 58 cause 19%

90%

- 15 High Risk (HR) HPV types considered:
  - A "necessary" cause of cervix cancer
- Specimen taken from cervicovaginal cells
  - Typical gynecologic examination
  - Self-sampling
- Human papillomavirus (HPV) with genotyping by polymerase chain reaction (PCR)

DOI: 10.1002/ijgo.12611



## The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812

OCTOBER 18, 2007

VOL. 357 NO. 16

#### Human Papillomavirus DNA versus Papanicolaou Screening Tests for Cervical Cancer

Marie-Hélène Mayrand, M.D., Eliane Duarte-Franco, M.D., Isabel Rodrigues, M.D., Stephen D. Walter, Ph.D., James Hanley, Ph.D., Alex Ferenczy, M.D., Sam Ratnam, Ph.D., François Coutlée, M.D., and Eduardo L. Franco, Dr.P.H., for the Canadian Cervical Cancer Screening Trial Study Group\*

#### **CCAST Randomized Control Trial**

- Women 30-69 years with abnormal Pap or positive HPV test underwent colposcopy and biopsy
- Outcome: Identify HSIL
- N=10 154



#### **HPV** testing:

- Sensitivity to detect CIN 2/3
   94.6% [95% CI 84.2-100]
- Specificity to detect CIN 2/3
   94.1% [95% CI 93.4-94.8]

#### Pap testing:

- Sensitivity to detect CIN 2/3
   55.4% [95%CI 33.6-77.2]
- Specificity to detect CIN 2/3 96.8% [95%CI 96.3-97.3]

As compared with Pap testing,
HPV testing has greater
sensitivity for the detection of





<u>JAMA.</u> 2018 Jul 3; 320(1): 43–52. Published online 2018 Jul 3. doi: 10.1001/jama.2018.7464 PMCID: PMC6583046 PMID: 29971397

## Effect of Screening With Primary Cervical HPV Testing vs Cytology Testing on High-grade Cervical Intraepithelial Neoplasia at 48 Months

The HPV FOCAL Randomized Clinical Trial

Gina Suzanne Ogilvie, MD, FCFP, DrPH, □1,2 Dirk van Niekerk, MB, ChB, Mmed, FFPath, LMCC, FRCPC, ³,4

Mel Krajden, MD, FRCPC, ¹,2 Laurie W. Smith, RN, BN, MPH, ⁴ Darrel Cook, MSc, ²,4 Lovedeep Gondara, MS, ⁴

Kathy Ceballos, MD, ⁴ David Quinlan, MD, FRCSC, ¹ Marette Lee, MD, FRCSC, MPH, ⁴ Ruth Elwood Martin, MD, FCFP,

MPH, ¹ Laura Gentile, MHA, ⁴ Stuart Peacock, DPhil, ⁵,6,7 Gavin C. E. Stuart, MD, FRCSC, ¹ Eduardo L. Franco, DrPH,

FRSC, FCAHS, OC, 8 and Andrew J. Coldman, PhD⁴

Cummulative colposcopy referral rates (per

1000) were similar between both groups.
HPV testing 106.2 (95% CI 100.2-112.5);
LBC 101.5 (95% CI 95.6-107.8)
Primary HPV testing resulted in significantly lower likelihood of CIN 3+ at 48 months compared with cytology (2.3/1000 vs 5.5/1000)

HPV FOCAL Randomized Control Trial Objective: To evaluate the confirmed cumulative incident CIN3 or worse (CIN3+) detected up to and including 48 months by primary HPV testing (n=9552) alone or liquid-based cytology (n=9457)

- If HPV testing negative, return for testing in 48 months
- If LBC negative, return for testing in 24 months and if negative return for testing at 48 months
- At 48 month exit exam, all had both HPV testing and LBC co-testing
- 224 collaborating clinicians in Metro Vancouver and Greater Victoria
   Accrual Jan 2008 to May 2012 with follow up through Dec 2016



#### NEW CERVICAL CANCER CASES

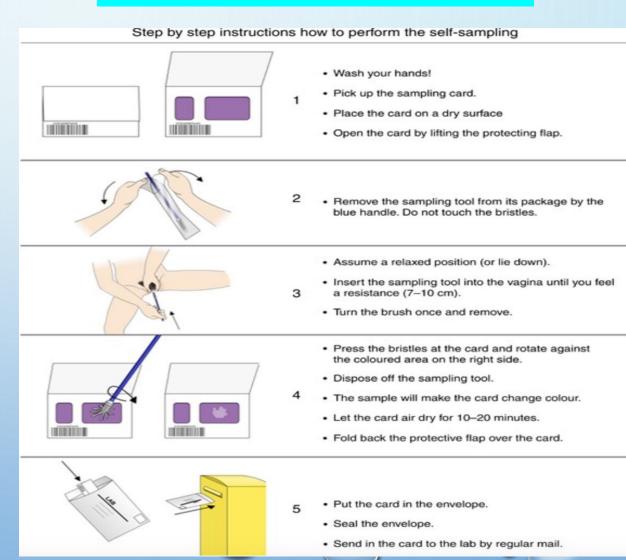
- 50% Never had pap smears
- 10% Not screened within 5 years
- 10% Inappropriate management/ noncompliant follow up
- 14-33% Failure of screening tests

#### BARRIERS TO CERVICAL SCREENING

#### **PROBLEM**

- Lack of access(physician/clinic)
- Fear or shame of abnormal result
- Geographical barriers
- Time limitations
- Cultural or religious considerations

#### **SELF-SAMPLING HPV TESTING**



#### CADTH

SUMMARY WITH CRITICAL APPRAISAL

**HPV Self-Sampling for Primary Cervical Cancer** Screening: A Review of Diagnostic Test Accuracy and Clinical Evidence - An Update

Rapid Response Service

#### Diagnostic test accuracy of self-sampled high-risk HPV tests

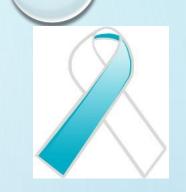
- In the updated meta-analysis by Arbyn et al., Selfsampled HPV tests based on PCR for the detection of CIN2+ did not have statistically different sensitivity or specificity compared with clinician-sampled tests.
- In the RCT by Polman et al., Self- and clinician-sampled PCR- based HPV tests were similarly accurate for the **detection** of CIN2+ or CIN3+.

#### Agreement of self- and clinician-sampled high-risk HPV tests

Based on available evidence, self-sampled HPV tests could provide similar accuracy to clinician-sampled tests, particularly for PCR-based HPV tests.



## Self-sampling for human papillomavirus (HPV) testing: a systematic review and meta-analysis



Ping Teresa Yeh, <sup>1</sup> Caitlin E Kennedy, Hugo de Vuyst, 2,3 Manjulaa Narasimhan 1

- 33 studies (29 RCT and 4 observational studies)
- Greater screening uptake among HPV self-sampling participants compared with control (RR: 2.13, 95%Cl 1.89-2.40)
- Effect size varied by HPV test kit dissemination method, whether mailed directly to home (RR: 2.27, 95% CI 1.89-2.71), offered door-to-door (RR 2.37, 95% CI 1.12-5.03), or requested on demand (RR: 1.28, 95% CI 0.90-1.82)
- Meta-analysis showed no statistically significant difference in linkage to clinical assessment/treatment between arms (RR: 1.12, 95% CI 0.80-1.57)

#### WHAT FREQUENCY OF TESTING IS NECESSARY?



#### Pap smear screening:

- For women aged 25 to 69 we recommend routine screening for cervical cancer every 3 years.
- For women aged ≥ 70 who have been adequately screened (i.e., 3 successive negative pap tests in the last 10 years), we recommend that routine screening may cease. For women aged 70 or over who have not been adequately screened we recommend continued screening until 3 negative test results have been obtained.



#### **Primary HPV testing:**

- Those aged 25 to 65 should have a primary HPV test every 5 years.
- Those over age 65 who have had regular screening in the past 10 years with normal results and no history of CIN2 or more serious diagnosis within the past 25 years should stop cervical cancer screening. Once stopped, it should not be started again.



## Action Plan for the Elimination of Cervical Cancer in Canada



Every year, more than 1,300 people in Canada are diagnosed with and 400 die from cervical cancer. Canada has set the goal of eliminating cervical cancer by 2040: an ambitious target, but an achievable one. Cervical cancer is highly preventable and curable. We have the proven HPV vaccine. We know which creening approaches are most effective in reaching those who are underserved. We have engaged partners from across Canada to design the way forward.

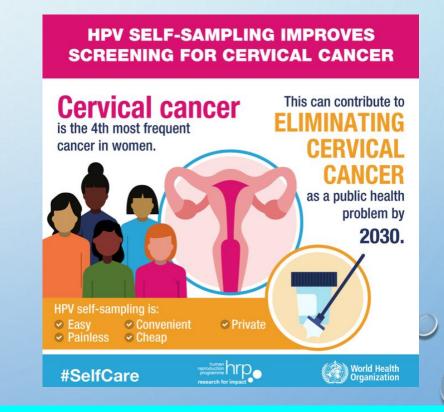


To Improve Detection:



**HPV** testing

#### To Improve Screening Uptake:



Self-sampling HPV testing

#### Presenter



#### Dr. Samara Perez, PhD

- Clinical psychologist, McGill University Health Center
- Assistant professor, Department of Oncology, McGIll University
- Research, Evaluation, and Policy Affairs, HPV Global Action



## The Role of HPV Testing in the Acceleration of the Elimination of Cervical Cancer

#### Samara Perez, PhD

McGill University Health Center

Lady Davis Institute for Medical Research, Jewish General Hospital McGill University

Montreal, Quebec, Canada







### No Conflicts of Interest to Declare

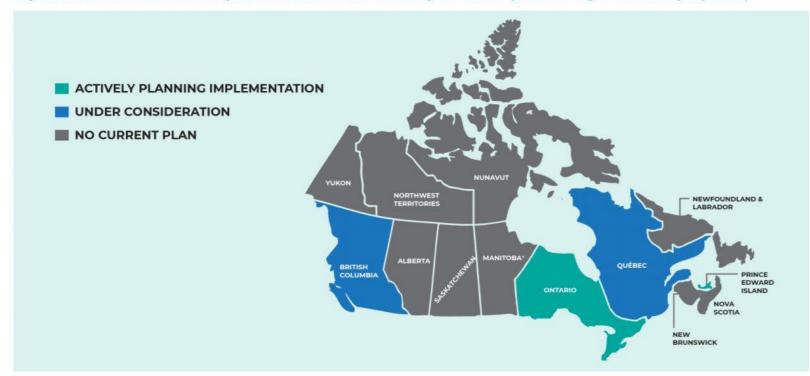
## Objectives

- Discuss the potential barriers and facilitators of HPV test acceptability
- 2) Communicate and Counsel efficiently about HPV testing

## The shift to HPV testing

- In theory, HPV testing was adopted as primary screening in Quebec, Ontario, and BC, but it's not on the calendar.
- In reality: Ontario has technically been "ready" since 2013, yet still no HPV testing
- Recommendations of major health organizations in the US, Europe, and Australia currently include HPV testing for primary cervical cancer screening
- National HPV test-based organized cervical cancer screening programs already implemented in: Australia, England, Wales, Scotland, Netherlands

Figure 8. Current Status of Implementation of HPV Testing for Primary Screening in Canada (July 2019)



<sup>1.</sup> Canadian Partnership Against Cancer, 2021; ; 2. Ronco et al., 2014; 3. Crosbie et al., 2013

## Psychosocial barriers of HPV test acceptability

## May 1st Changes to Pap Smears





#### Pétition fermée

Cette pétition avait 70 999 signataires









<u>Isabella Rossi</u> a lancé cette pétition adressée à <u>Malcolm Turnbull</u>

(Former Prime Minister of Australia) et à 3 autres



Envoyer un e-mail aux ami.e.s



Contents lists available at ScienceDirect

#### Preventive Medicine

journal homepage: www.elsevier.com/locate/ypmec



Review Article

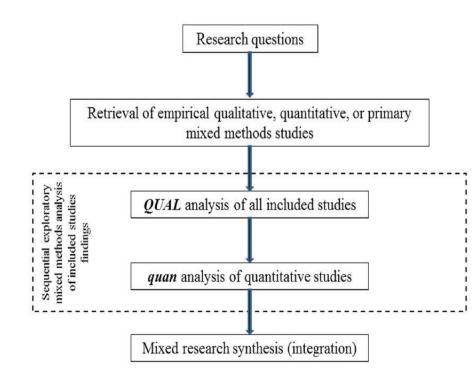
Factors associated with human papillomavirus (HPV) test acceptability in primary screening for cervical cancer: A mixed methods research synthesis



Ovidiu Tatar<sup>a,\*</sup>, Erika Thompson<sup>b</sup>, Anila Naz<sup>a</sup>, Samara Perez<sup>a,c</sup>, Gilla K. Shapiro<sup>a,c</sup>, Kristina Wade<sup>a</sup>, Gregory Zimet<sup>d</sup>, Vladimir Gilca<sup>e</sup>, Monika Janda<sup>f</sup>, Jessica Kahn<sup>g</sup>, Ellen Daley<sup>h</sup>, Zeev Rosberger<sup>a,c</sup>

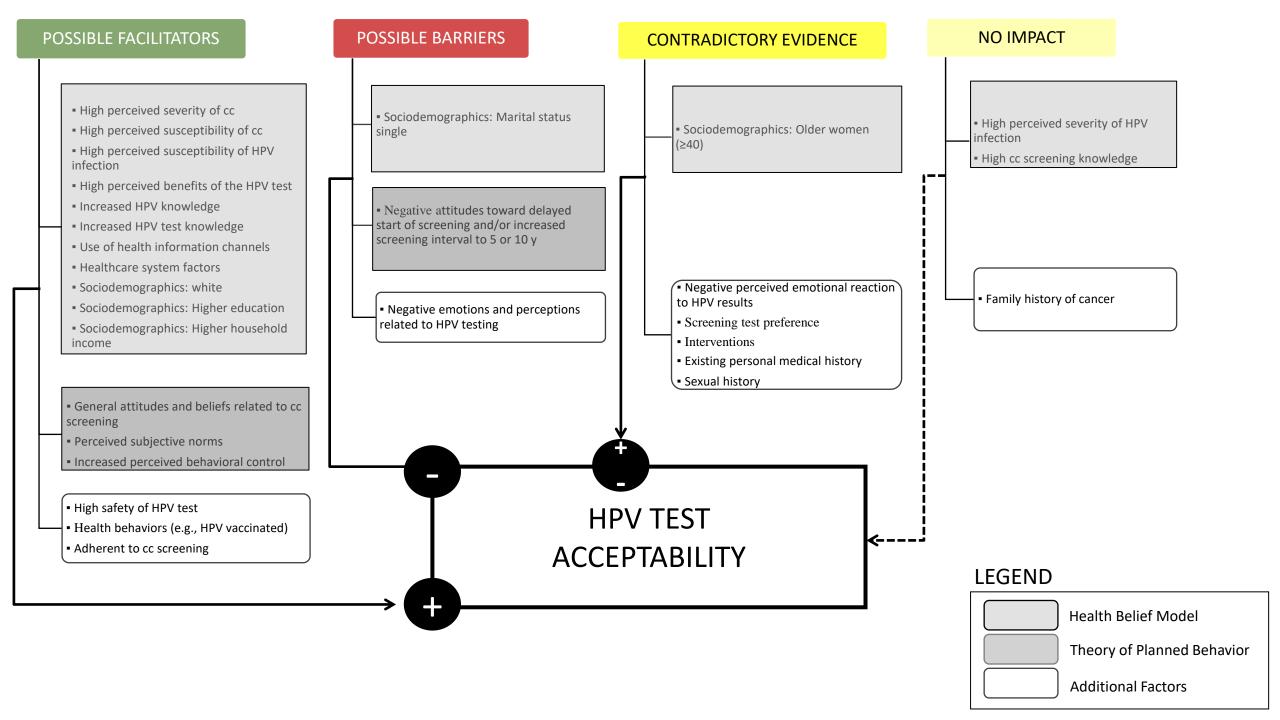
#### Research questions:

- What are the psychosocial factors related to HPV testing in primary screening for cervical cancer?
- What is the influence of these factors on women's acceptability of HPV testing in primary screening for cervical cancer?
- ➤ Eligibility: Psychosocial factors related to women's acceptability of HPV testing in primary screening for cervical cancer
- Methodology: Systematic review-PRISMA; 7945 articles screened;
   22 articles retained
- ➤ Qualitative: Deductive-Inductive Thematic Analysis informed by the Health Belief Model and Theory of Planned Behavior



Adapted from Sandelowski et al. (2006) and Heyvaert et al. (2013)

Qual indicates qualitative dominant method of analysis; quan indicates non-dominant quantitative method of analysis

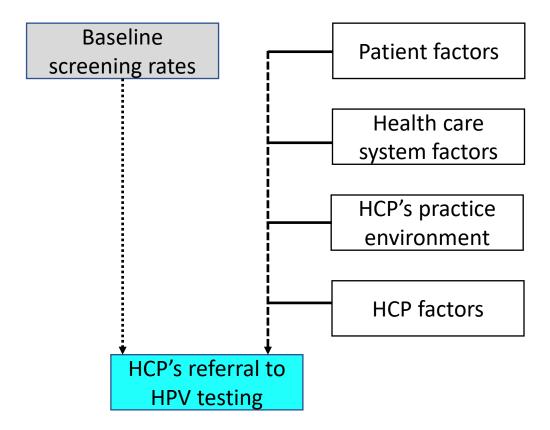


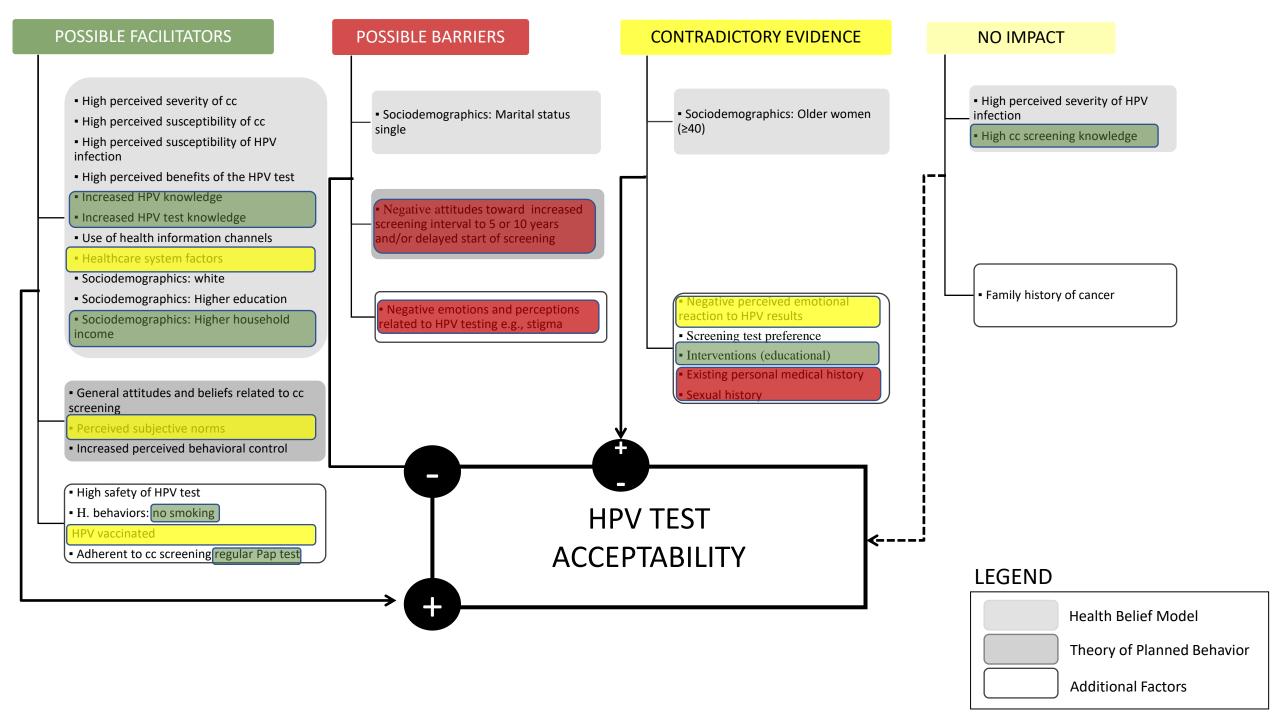
Are Health Care Professionals Prepared to Implement Human Papillomavirus Testing? A Review of Psychosocial Determinants of Human Papillomavirus Test Acceptability in Primary Cervical Cancer Screening

Ovidiu Tatar, MD, MSc,<sup>1,2</sup> Kristina Wade, BSc,<sup>2</sup> Emily McBride, MSc,<sup>3</sup> Erika Thompson, PhD,<sup>4</sup> Katharine J. Head, PhD,<sup>5</sup> Samara Perez, PhD,<sup>6</sup> Gilla K. Shapiro, MPA/MPP, PhD,<sup>7</sup> Jo Waller, PhD,<sup>8</sup> Gregory Zimet, PhD,<sup>9</sup> and Zeev Rosberger, PhD<sup>2,10</sup>

#### > Research question:

- How do psychosocial factors influence HCPs' acceptability of HPV testing in primary screening for cervical cancer?
- Eligibility: HCPs knowledge, attitudes, beliefs, and acceptability related to using HPV testing in primary cervical cancer screening
- Methodology: Comprehensive review; 8837 references screened; 32 articles retained
- ➤ Organization of factors based on the Patient Pathway framework: possible barriers; possible facilitators and contradictory evidence



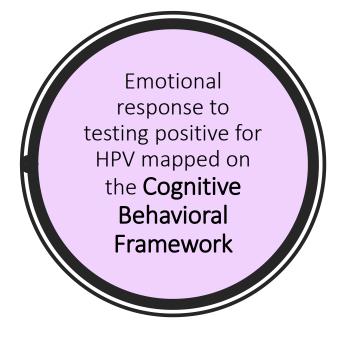


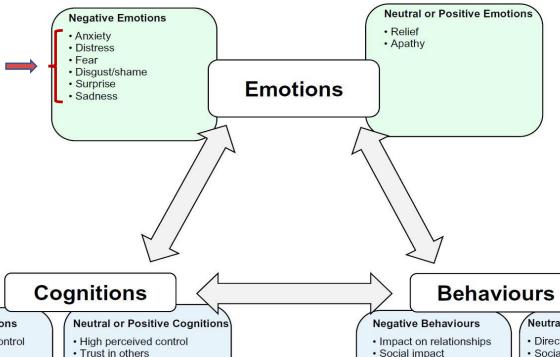




Emotional response to testing positive for human papillomavirus at cervical cancer screening: a mixed method systematic review with meta-analysis

Emily McBride <sup>©</sup> <sup>a</sup>, Ovidiu Tatar <sup>©</sup> <sup>b,c</sup>, Zeev Rosberger <sup>©</sup> <sup>c,d</sup>, Lauren Rockliffe<sup>e</sup>, Laura M. Marlow <sup>©</sup> <sup>f</sup>, Rona Moss-Morris <sup>©</sup> <sup>g</sup>, Navdeep Kaur<sup>b,c</sup>, Kristina Wade<sup>c,d</sup> and Jo Waller <sup>©</sup> <sup>f</sup>





#### **Negative Cognitions**

- · Low perceived control
- Confusion
- Stigma
- · Relationship concerns
- Sexual concerns
- · Cancer concerns
- · Lack of trust in others
- Uncertainty

- Trust in others
- Acceptance
- Indifference

- Non-disclosure of results
- Idiosyncratic prevention
- · Indirect clinical interaction
- Sexual behaviours

#### Neutral or Positive Behaviours

- Direct clinical interactions
- Social support
- Positive behaviour of others
- Future screening attendance

## Communicating with women on the test itself and those who are HPV +

#### Remember the facilitators

- Explain the benefits of HPV testing in simple, clear language
  - ✓ HPV testing is better... More sensitive
  - ✓ HPV test can prevent more high-grade cervical cancer lesions
  - ✓ Uses modern technology to look for HPV <u>DNA</u>
  - ✓ HPV test is safe
  - ✓ Its easier... less intrusive
  - ✓ You can do it in the privacy of your home or in the doctor's office,
  - ✓ You can do it your self (HPV self sampling test)

## Communicating with women on the test itself and those who are HPV +

#### Remember the facilitators

- Provide knowledge/information about HPV (general) and HPV testing
  - ✓ HPV is normal and common 7 in 10 Canadians will have HPV at any given point in time
  - ✓ Highlight the asymptomatic nature of HPV, while encouraging women to monitor for specific cervical cancer symptoms (e.g., unusual bleeding, pain from sex).
  - ✓ Strong research evidence that the HPV tests outperforms the pap test
  - ✓ Acknowledge that might be new to them, but speak to other countries, the science, major organizations who support the shift from Primary Pap to Primary HPV
  - ✓ Communicate the rational for the interval change to help reassure women
    - ✓ Research shows that if HPV DNA is not found, women are at very low risk for cervical cancer and do not need to screen for cervical cancer as often as with the Pap test (e.g. every 5 years)

## Communicating with women on the test itself and those who are HPV +

- Remember the barriers
  - Low SES, non-white, non-HPV vaccinated are less likely to accept
  - Single women
  - Recognize the emotional impact the fear, the embarrassment,
    - ✓ Normal cytology means no cancer . Highlight that HPV is NOT direct precursor to advanced cervical cancer
    - ✓ Cervical cancer is a disease of latency highly likely you did not acquire HPV from your current partner
    - ✓ Remain open to engage in validating and normalizing their emotional experience
    - ✓ Some women do feel embarrassed, and that's okay.
    - ✓ Encouraging individuals high in intolerance of uncertainty to bring a supportive relative or friend to appointments

## Communicating with women on the test itself and those who are HPV +

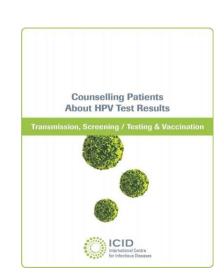
- Remember the facilitators and barriers for HCPs
  - Stay informed with provincial guidelines and increase your own HPV and HPV testing knowledge
  - Know your own biases
  - Acknowledge and accept your own discomfort/uncertainty regarding the change in start age and screening intervals. The science is there to back it up!
  - As an HCP, support the shift from Primary Pap to Primary HPV
  - I am getting an HPV test... If you were my daughter/sister/friend, I
    would recommend she get the HPV test
  - If you are comfortable talking about sex/sexual infections, patients much less likely to feel uncomfortable

### Case Example

- 35-year-old woman, few partners before marriage, smoker since high school, married for 12 years, two children
- Avoided screening and health care visits throughout her life, fearful of receiving 'bad news'
- Attends her first screening at the urging of her husband and receives a
  positive result for HR-HPV but her follow-up Pap is negative

#### Relevant information to share with the patient

- Complex responses require sensitive interventions
- Mechanisms of transmission of HPV, risk factors, and need for surveillance
- Importance of follow-up
- Be aware-more health information may increase anxiety and communication avoidance, if patient experiences high intolerance of uncertainty
- Patient should be reassured about their information-seeking style
- If patient desires, then provide brief pamphlet
- With patient permission her partner could be invited to receive the detailed information and assist patient in health seeking behavior



https://static1.squarespace.com/static/5b855e9a75f9ee482638631e/t/5d2b4e13ea35d400015d1839/1563119126672/CIDC+Booklet\_HPV+Counselling\_2019July14\_Final+Version.pdf

### Case Example

- 30 years old, single woman;
- Previous pap smears at age 17 and 20 were negative
- Now HPV test positive with subsequent Pap smear indication a high-grade intra-epithelial lesion (HSIL)
- Delay in appointment for colposcopy
- Anxious, diminished appetite and sleep disturbance

#### Relevant information to share with the patient

- ✓ Provide disease specific information
- ✓ Provide strong reassurance and emotional support
- ✓ At initial discussion, rapid psychosocial screening by standard brief psychometrically valid questionnaire (e.g., GAD-7 or PHQ-9)
- ✓ Specific mental status questions regarding sleep, appetite, excessive worry/fear, attention, change in activities of daily living
- ✓ Provide information about link b/w HPV, CIN, and Cancer
- ✓ Emphasize since HPV test is more specific, led to earlier intervention and closer follow-up
- ✓ Reassure about prognosis
- ✓ If persistent distress, consider referral to an experienced psychosocial-sexual-oncology health professional

### Conclusions

- Embarrassment and other psychosocial barriers may initially be problematic towards HPV testing, but over time as education and knowledge increase, these diminish, as social norms around screening evolve
  - Women talk!
- The negative emotional impact of a positive HPV test result could be attenuated by HCPs and women's support systems
- Use your influence as a heath care provider to increase facilitators and overcome barriers
  - Stay updated to increase own confidence in delayed start age and screening intervals.
- You KNOW your patients best.
  - Try to match health messages to individual differences reduce negative psychological outcomes
  - Tailored messages increase positive and reduce negative outcomes by making information more personally relevant

#### We will know much more VERY soon!

• We are conducting a national survey of Canadian women (n = 4650) designed to understand Canadian women's knowledge, attitudes, beliefs, and preferences (134 items) regarding the changes in cervical cancer screening

For each of the following nine questions, use the same strategy as in the example above to select **one** situation that you prefer <u>least</u> AND **one** situation that you prefer <u>most.</u> The questions may seem repetitive, but the last part of each sentence is different (where it says "every X <u>years</u>"). [SELECT ONE "LEAST PREFERRED" AND ONE "MOST PREFERRED" OPTION] [DISPLAY "every X <u>years</u>" IN BLUE]

Question 1		
LEAST preferred	Options	MOST preferred
	Cervical cancer screening with the <b>Pap test</b> every 3 years	
	Cervical cancer screening with the HPV test every 3 years	
	Cervical cancer screening with the HPV test using HPV self-sampling every 3 years	
	Cervical cancer screening with both the Pap test and the HPV test every 3 years	



#### We will know much more VERY soon!

The results are critical to inform us how, to whom and in what way HPV screening programs might be presented to women optimally

- It will tell us what Canadian women worry about, care about, prefer...
- Ultimately, will be very useful and helpful for the content of letters (explaining the change, HPV-positive results letters) and in training/interventions for sample-takers or HCPs who discuss HPV results with women

Rosberger et al (2019). Ensuring a Successful Transition from Pap to HPV DNA Testing in Primary Cervical Cancer Screening: Exploring and Listening to Canadian Women's Needs is Critical for Effective Public Policy Change. Funded by CIHR



## Thank you for your attention

Samara Perez samara.perez@muhc.mcgill.ca



## **Question & Answer Period**

On a computer, submit your text question using the Questions pane

NOTE: On a mobile device, tap on the "?" to open the questions pane







# The role of HPV Testing in the Acceleration of the Elimination of Cervical Cancer

- Evaluation: <a href="https://www.surveymonkey.com/r/P3TJBN9">https://www.surveymonkey.com/r/P3TJBN9</a>
- Slide Set, Video recording, HPV documents at: www.hpvglobalaction.org & www.CIDCgroup.org

Next webinar: Wednesday, November 10, 2021

HPV head and neck cancers: We need a control strategy now!

### Thank you for participating!

This educational program is made possible through the support of of Roche Diagnostics Canada.

The opinions expressed in this webinar are those of the presenters and do not necessarily reflect the views of CIDC, HPV Global Action or their partners