Starting in 2012, the OCSP is phasing in a correspondence program to:

• Mail women their screening test results, initially for abnormal and unsatisfactory tests, expanding to all results.
• Recall women when they are due for their next screening.
• Remind women when they are overdue for follow-up of their abnormal screening results.
• Send invitations for screening to women aged 30 to 69 years who have not been screened for cervical cancer in the prior three years.

For more information:
Visit: www.cancercare.on.ca/screenforlife
E-mail: cervicalscreen@cancercare.on.ca
Call: 1-866-662-9233
Launching in 2000, the Ontario Cervical Screening Program (OCSP) is a province-wide screening program with the goal of reducing cervical cancer incidence and mortality. The program is designed to increase the number of women who have regular screening in order to diagnose the precursors of cervical cancer early and prevent this disease from developing.

In 2012, the OCSP released updated cervical screening cytology guidelines. Starting in 2012, using a population-based registry, the OCSP will begin sending letters to women in Ontario to advise them of their Pap test results. The program will gradually expand to send invitation letters to women who have not been screened for cervical cancer in the prior three years, encouraging them to speak with their healthcare provider about cervical cancer screening. The OCSP will also send reminder letters when women are due for their next screening.

### What are the new clinical recommendations for screening women for cancer of the cervix?

- The updated cytology guidelines recommend cytology testing for women who are or have ever been sexually active starting at age 21 and repeated every three years. Screening may be discontinued at the age of 70 if there is an adequate negative cytology screening history in the previous 10 years (i.e. three or more negative cytology tests).

- Three consecutive negative annual Pap tests prior to extending the screening interval to every three years are no longer recommended.

“Sexually active” includes intercourse, as well as digital or oral sexual activity involving the genital area with a partner of either sex.

### What is the evidence for the current changes to the recommendations?

#### Age of screening initiation

- Cytology testing should begin at 21 years of age for women who are or have ever been sexually active.

The harms of screening women under 21 years of age significantly outweigh the benefits.

- Cervical cancer is rare in women less than 21 years of age. The incidence rate for women in Ontario aged 15 to 19 years from 2003 to 2007 was 0.34 per 100,000, which translates into seven women with cervical cancer. No deaths from cervical cancer occurred in this age group for the same time period.\(^1\) Evidence suggests that these cancers would not have been detected by screening.\(^2\)

- Early changes in the cervix precede cervical cancer, usually by many years, and can generally be detected by the Pap test long before invasive cancer develops.\(^3\)

- Young women have high rates of low-grade cytological abnormalities that are, in most cases, transient HPV infections,\(^4,5\) many of which are non-oncogenic. Approximately 90 percent of young women will clear an HPV infection within 24 months without consequence to their cervical health.\(^6\)

- Treating young women with cervical dysplasia is linked to a small but significant risk of adverse future pregnancy outcomes (e.g., preterm delivery or low birth weight).\(^7,8,9,10\) Research demonstrates that very few low-grade cervical intraepithelial neoplasia in women in their early 20s would progress to cancer within five years if left untreated.\(^11\)

- For the above reasons, many Canadian jurisdictions and professional organizations have increased the recommended age to initiate screening to age 21 in their screening guidelines.\(^12\)

#### Screening interval

- A cohort study published in 2005 did not find a benefit with annual screening.\(^13\) This corroborates evidence that showed that the excess cervical cancer risk when screening every three years compared to annually was approximately three in 100,000.\(^14\)

- To support healthcare providers to follow this recommendation, the OCSP will automatically recall women at three-year intervals using a population-based registry.

To view references for this document, go to www.cancercare.on.ca/screenforlife
Compared to the 2005 Ontario Cervical Cancer Screening Practice Guidelines, what recommendations will remain the same?

- The recommendations for follow-up of abnormal cytology have not changed (refer to 2012 Ontario Cervical Screening Cytology Guidelines Summary: www.cancercare.on.ca/screenforlife).
- Women who are immunocompromised should receive annual cervical cytology screening (e.g., women who are currently taking long-term immunosuppressants or those who are HIV-positive).
- Screening may be discontinued at the age of 70 if there is adequate negative screening history in the previous 10 years (i.e., three or more negative tests). Incidence of cervical cancer is low in older women who have been adequately screened.15,16 There is no evidence to suggest continued screening in women with new partners.
- Screening can be discontinued in women who have undergone total hysterectomy for benign causes and who have no history of cervical dysplasia or human papillomavirus (HPV) infection.
- Women who have undergone a subtotal hysterectomy and retained their cervix should continue screening according to the guidelines.
- Women who have sex with women should follow the same screening regimen as women who have sex with men.
- Pregnant women should be screened according to the guidelines; however, care should be taken not to over-screen. Only conduct Pap tests during pre-natal and post-natal visits if the woman is otherwise due for screening.

OCSP will also provide notices at intervals to healthcare providers regarding women in their practice who require cervical cancer screening or further follow-up of abnormal screening results.

What can I expect if my patient has an abnormal screening result?

You will be notified of test results by the laboratory, and will retain the responsibility for communicating test results to the patient and managing follow-up. As back-up communication, the OCSP will send a letter to the patient informing her of her Pap test results and recommend that she speak to her healthcare provider about an abnormal result. Patients who have opted out of program correspondence will not receive a result letter.

What type of reporting is available for my practice?

The program will provide a Screening Activity Report to all Patient Enrolment Model (PEM) family physicians. The Screening Activity Report provides screening status for enrolled patients, identifies patients requiring follow-up, and presents screening rates in comparison to peers.

Will provider incentives be changed to reflect the new guidelines?

OCSP is working with the Ministry of Health and Long-Term Care (MOHLTC) towards aligning provider incentives to reflect the Pap test intervals recommended in the updated cytology guidelines.

What quality assurance efforts will be established?

Beginning in 2012, through establishment of a population-based registry and information system, the OCSP will track all women who have abnormal and unsatisfactory screens to encourage the highest possible rate of appropriate follow-up. OCSP will monitor and evaluate screening outcomes and opportunities for program improvement. It will achieve and maintain high-quality assurance standards for all components of the program.

How will the OCSP assist you?

OCSP will mail letters to:

- Notify women of their cervical screening results beginning with abnormal and unsatisfactory screening results.
- Remind women at three-year intervals when they are due for their next cervical cancer screening.
- Remind women when they are overdue for follow-up of their abnormal screening results.
- Invite women starting at age 30 who have not been screened for cervical cancer in the prior three years to participate in screening.
What is the cause of cancer of the cervix?

The necessary cause of virtually all cervical cancers and their precursors is persistent infection with high-risk (oncogenic) human papillomavirus (HPV) types, especially types 16 and 18. Other co-factors, that are not well understood, are also involved. HPV is a common infection among sexually active males and females.

Risk factors for acquiring HPV infection include the following:

- High number of intimate partners
- Early age of first sexual activity
- Acquiring a new sexual partner
- Male sexual partners with a higher lifetime number of partners

Co-factors that have been associated with HPV infection include the following:

- Smoking tobacco and exposure to second-hand smoke
- Long-term (> five years) use of hormonal contraceptives
- More than five full-term pregnancies
- Other sexually transmitted infections, i.e., Chlamydia trachomatis or HSV-2
- Poor diet (especially low antioxidant intake)
- Immunosuppression, e.g., HIV, organ transplant, immunosuppressive drug therapy or chemotherapy

What are the potential harms of screening women for cervical cancer?

- False-positives
  Individuals with an abnormal screening result experience increased anxiety and fear. Diagnostic interventions need to be undertaken to determine whether or not the individual has the disease. Only a fraction of those with abnormal results will actually have the disease. False-positive results need to be minimized to reduce women’s anxiety and morbidity.
- False-negatives
  Individuals with a negative screening test result may mistakenly believe that they have no risk for cancer, which may lead them to ignore symptoms and not have them investigated. False-negative Pap test results also occur. Moreover, Pap testing is less effective in detecting pre-invasive glandular lesions of the cervix than squamous cell carcinoma, and has had limited impact in preventing adenocarcinoma.
- Overdiagnosis
  Overdiagnosis of pre-cancerous lesions that may not progress to cancer may occur. Treatment of lesions not destined to become cancer is a potential harm.
- Overtreatment
  Treating young women with cervical dysplasia is linked to a small but significant risk of adverse future pregnancy outcomes (e.g., preterm delivery or low birth weight). Research demonstrates that very few low-grade cervical intraepithelial neoplasia in women in their early 20s would progress to cancer within five years if left untreated.

What are the benefits of screening women for cervical cancer?

- Early changes in the cells of the cervix precede cervical cancer, usually by many years, and can generally be detected by the Pap test long before invasive cancer develops.
- Long-term declines in cervical cancer incidence and mortality in Ontario are related to regular screening. Other jurisdictions where cervical screening is available (including Japan, Australia, New Zealand and the developed countries of Europe and North America) have also experienced a marked reduction in cervical cancer incidence and mortality in the past five decades.
- Cervical cancer incidence has declined by as much as 80 percent where the cytology screening quality, coverage and follow-up of women are high.

What cervical cancer screening modalities are currently being evaluated for a future population-based cervical cancer screening program?

HPV testing is currently only recommended as an optional, additional test for women 30 years of age and older who have a cytology result of Atypical Squamous Cells of Undetermined Significance (ASCUS). HPV testing is not currently publicly insured by the MOHLTC. Several randomized, controlled trials have evaluated the efficacy of HPV testing as a primary screening modality. Emerging evidence has been evaluated and the implementation of primary HPV screening into a population-based screening program is being considered in partnership with the MOHLTC.

If you and your patient decide to proceed with HPV testing based on the above guidelines, please contact your local laboratory to determine how to order the test and the cost to the patient.