A new era for cervical screening in Australia: watch this space!

The Australian National Cervical Screening Program (NCSP) in 1991, and resulted in a 50% reduction in the incidence and mortality of cervical cancer by the early years of this century. This outstanding achievement was due to an organised approach to screening by the coordinated efforts of the Australian, State and Territory Governments. The main impact of the program has been on the rate of squamous cancer in women aged 25 years and older, with no demonstrable reduction of rates of adenocarcinoma. Since 2002 there has been a plateau in cervical cancer incidence with little improvement since.

In November 2011, the Australian Government commenced an evidence based review (‘renewal’) of the NCSP, with the aim of ensuring that all Australian women, HPV vaccinated and non-vaccinated, have access to a cervical screening program based on current evidence and best practice. After a rigorous process involving an external evidence review and health outcome and economic modeling, the Australian Government Medical Services Advisory Committee (MSAC) recommended that the two yearly Pap test be replaced by a five yearly Cervical Screening Test (CST), a test for the presence of oncogenic HPV, with partial genotyping (allowing the separate identification of types 16 and 18) and reflex liquid based cytology (LBC)

This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: 10.1111/AJO.12669
also recommended that sexually active women commence screening at 25 years, exit screening at 70-74 years and women should be invited and reminded to participate in the program. They also recommended that self-collection of a vaginal sample for cervical screening be made available for women who are under-screened or never screened.

On December 1st 2017, Australia enters an exciting new era for cervical screening, with the implementation of the MSAC recommendations. Recent modeling has predicted that the renewed NCSP will induce further reductions of 31-36% in cervical cancer incidence and mortality in unvaccinated women, and of 24-28% in cohorts offered vaccination\(^6,7\). This prediction was based on synthesis of the worldwide evidence on HPV trials, including pooled analysis of four European trials showing increased protection of HPV screening against the development of invasive cervical cancer, compared to cytology\(^8\). Despite this compelling evidence, these major changes to a highly successful program have generated concern among some health professionals and women, especially regarding the later starting age for screening and the longer interval between screening tests. There are also concerns about reduced participation in younger women who have received HPV vaccine and in vulnerable populations, such as Indigenous women, culturally and linguistically diverse women and others, who may not have equitable access to cervical screening.

It is important to recognize that the ‘renewal’ has occurred in a changing cervical screening environment, and has been prompted by the impact of HPV vaccination and the advent of new technologies including HPV molecular testing and LBC. It is accepted that HPV is necessary for the development of the vast majority of cervical cancers. There are more than 40 anogenital HPV types, of which 15 are considered oncogenic; two of these, HPV 16 and 18, cause the large majority (70-80%) of invasive cervical cancers\(^9,10\). The National HPV Vaccination Program commenced in 2007 for girls; males were included in 2013. Quadrivalent HPV vaccine is routinely given at school to girls and boys aged 12-13 years, currently with a 3-dose schedule. HPV vaccine coverage is increasing in Australia, with coverage for girls aged 15 in 2015 being 86%, 83% and 78% for doses 1, 2 and 3, respectively, and further increases in coverage are likely\(^11\). The beneficial impact of HPV vaccine has recently
been reported, with previously documented reductions in the prevalence of cervical pre-cancerous lesions now extending to women in their late twenties\textsuperscript{12}.

The concept of a later starting age for cervical screening has been challenging for some. In 2005, the International Agency for Research in Cancer (IARC) recommended cervical screening begin at age 25\textsuperscript{13}. Most countries with an organised approach to cervical screening commence screening at age 25 or 30 years, and over the time that their screening programs have been established, have achieved cervical cancer incidence and mortality rates that are similar to Australia\textsuperscript{14}. The harms of screening younger women, mainly through overtreatment, outweigh any perceived benefits, particularly in regard to the potential for an adverse impact on reproductive outcomes in later life\textsuperscript{15}. A recent Australian study considered the effect of screening on the incidence of cervical cancer for different cohorts between 1983 and 2010, concluding that the starting age of 25 was safe for Australian women, and noted that HPV vaccination will continue to cause a significant fall in the number of high-grade abnormalities in young women\textsuperscript{2}.

Similarly, the longer screening interval is a difficult change for women who have been subject to 26 years of regular health promotion that a 2 yearly Pap test is essential for the prevention of cervical cancer. It is crucial that both women and their doctors have confidence that the 5-year interval is both effective and safe. Several studies have demonstrated the increased sensitivity of the HPV test and that the likelihood of developing CIN 3 precancer or cervical cancer within 5-6 years of a negative HPV test is low and less than the likelihood of developing cancer within 2 years of a negative Pap test\textsuperscript{16}. A five yearly Cervical Screening (HPV) Test is therefore safer, and more effective, than a two yearly Pap test. A recent meta-analysis of four randomised controlled European trials of primary HPV testing has demonstrated that HPV based screening provides greater protection against the development of invasive cervical cancers than cytology, with improved prevention of adenocarcinomas\textsuperscript{8}. Communicating this to women and their doctors is an essential part of implementing the new program.

MSAC recommended the establishment of a National Cancer Screening Register (NCSR) that will replace the current cervical screening registers currently maintained.
by each State and Territory. The NCSR is essential to support the program and will allow each woman to have a record that is accessible no matter where she resides in Australia. Data collection will include all necessary pathology data (HPV, LBC and histopathology results) and will be extended to include both diagnostic and therapeutic colposcopy data. The register will, for the first time, be responsible for inviting women to participate in the program as well the current practice of providing a ‘safety net’ reminder to those who fail to attend for a screening or follow up test. It should be remembered that women are able to ‘opt off’ the register, but health professionals should emphasize the benefits of inclusion and the ‘safety net’ function. De-identified NCSR data is sent to the Australian Institute for Health and Welfare (AIHW) and is the basis for the annual national cervical screening report\(^1\). People who are concerned that the new program may not perform as expected should be reassured that it will be subject to rigorous scrutiny by the Quality and Safety Monitoring Committee, which will have access to all of the AIHW program performance data including the colposcopy data.

Quality assurance in colposcopy is a welcome new feature of the renewed program and will close the ‘quality loop’ ensuring that the performance of all aspects of the NCSP is monitored. It is crucial that women who are invited to participate in cervical screening should be confident that the entire screening pathway is of the highest quality. Submission of colposcopy data to the NCSR has been discussed extensively with the relevant stakeholders including the RANZCOG and the Australian Society of Colposcopy and Cervical Pathology, who have been involved in determining the scope of data to be collected and the performance standards with benchmarking where appropriate. There is agreement that legislated mandatory data submission is important for monitoring the quality of care in the colposcopic assessment and treatment components of the program.

The NCSR will provide every colposcopist with individual feedback benchmarked against their peers and the accepted performance standards. This informs a reflective approach to self-improvement and achievement of accepted standards where appropriate. It is expected that every colposcopist will have documented participation in a Cervical Quality Improvement Program (such as C-QuIP administered by the RANZCOG), in order to demonstrate commitment to self-improvement and best
practice in colposcopy. Guidance in colposcopic practice is available in the 2016 Guidelines and all colposcopists are advised to familiarize themselves with the relevant material that includes the general approach to colposcopy, new internationally accepted terminology, the management of low and high grade squamous intraepithelial lesions, management of glandular abnormalities and discordant colposcopy, LBC and histology. It is accepted that some recommendations in the 2017 Guidelines may not be appropriate for every individual patient, but when the colposcopist chooses an alternative approach to clinical management, the reasons for the choice should be clearly documented.

The 2017 Guidelines were developed by Cancer Council Australia Cervical Cancer Screening Working Party. The document contains detailed guidance on the management of abnormal cervical screening test results for both clinician and self-collected samples, and the investigation of abnormal vaginal bleeding. Screening in specific populations of women is addressed, including Aboriginal and Torres Strait Islander women, pregnant women, immune-deficient women, women who have experienced sexual activity at an early age, DES-exposed women and women who have had a hysterectomy. It is recommended that the Guidelines document be accessed from an internet browser in the wiki format as this is easily navigable with links, hyperlinks and access to a glossary and references. These 2017 Guidelines will be essential reading for all health professionals involved in the cervical screening pathway.

Implementation of the renewed program must ensure that every effort is made to maintain and, wherever possible, increase the level of participation in cervical screening. It is known that about 80% of cervical cancers in Australia arise in women who have never screened or are under-screened. At present 56% of eligible Australian women are screened every 2 years but this increases to 83% every 5 years. Aboriginal and Torres Strait Islander women have twice the incidence and four times the mortality from cervical cancer compared with non-Indigenous women. A recent report from Queensland on Indigenous Australian women’s participation in cervical screening, demonstrated that in 2010-2011, the 2-yearly participation was 55.7% for non-Indigenous women and 33.5% for Indigenous women.
The MSAC-recommended self-collection pathway is restricted to women over 30 years of age, who have never screened or are more than two years overdue for their test. It is hoped that self-collection of a vaginal sample for cervical screening, under supervision of a health professional, will improve screening rates in Indigenous, culturally and linguistically diverse and other under or never-screened women. There is some concern that self-collection may be a preferred option for many women who currently have clinician collected cervical samples and that some GPs may see this as an acceptable alternative to routine cervical screening using a speculum to obtain a cervical sample. However, practitioners should be aware that although the sensitivity of self-collected specimens for the detection of oncogenic HPV is very good, it is not quite as high as the sensitivity achieved with samples collected from the cervix by a healthcare practitioner.

Implementation of a complex change such as the renewal of NCSP has many challenges. Communication strategies and education for women and health professionals have been developed by the Department of Health and several other agencies, and will be of paramount importance in providing reassurance that the new era of cervical screening in Australia will bring very important health benefits to women.

References


This article is protected by copyright. All rights reserved


Minerva Access is the Institutional Repository of The University of Melbourne

Author/s:
Hammond, I; Canfell, K; Saville, M

Title:
A new era for cervical screening in Australia: Watch this space!

Date:
2017-10

Citation:

Persistent Link:
http://hdl.handle.net/11343/293276