Primary HPV Screening - Current State of the Science Australia

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## **Cervical Cancer Prevention in Australia**

- National Cervical Screening Program (NCSP)
  - Based on conventional Pap smear screening and has been highly successful.
  - Organised National Screening Program since 1991
- Cervical Cytology Registries in Australia (1989 Vic)
- HPV Vaccination program in Australia (Girls 2007, Boys 2013)
- National HPV Vaccination Program Register (2007)
- Government regulated Laboratory Quality Assurance for cytopathology
- NHMRC screening guidelines (1994, 2005)
- Renewal of guidelines with significant changes (2015/16)
- Quality and Safety Monitoring Committee (DoHA)
- National Cancer Screening Registry (2017)
- Renewal: Primary HPV screening from 1<sup>st</sup> December 2017 http://wiki.cancer.org.au/australia/Guidelines:Cervical\_cancer/Screening





## The Rationale For Primary HPV Screening

**HPV** infection:

HPV infections can induce the development of either benign or malignant lesions. Over 100 types of HPV. 15 High risk subtypes identified.

There is overwhelming evidence that HPV infection is necessary for development of cancer of the cervix.

HPV vaccination:

Shown to be effective in preventing persistent infection and histologically confirmed HSIL

After the introduction of vaccination, Australia experienced rapid falls in rates of infections with vaccine-included oncogenic HPV types, in anogenital warts and in histologically confirmed HSIL.

- Several factors have combined to support a starting age of 25 years in the renewed NCSP
  The relatively lower rates of cervical cancer in women less than 25 years of age
  The lack of evidence for the effectiveness of cervical screening in this age group
  The impact of HPV vaccination on further substantially lowering the risks for both vaccinated and unvaccinated young women

Due to the relationship between persistent infection with oncogenic HPV types and the development of cervical cancer, testing for the presence of oncogenic HPV DNA in cervical cell specimens has the potential to identify women at increased risk of developing cervical cancer.





Cancer Council Victoria



#### Cancer trends, Victoria (Incidence)

#### Cancer: Cervix Population standard for rates: World Standard Population (Segi)



Cancer Council Victoria



#### **Cancer trends, Victoria (Mortality)**

Cancer: Cervix Population standard for rates: World Standard Population (Segi)



## Primary HPV Screening

- Five-yearly cervical screening using a primary HPV test with partial HPV genotyping and reflex liquid based cytology (LBC) triage, for HPV vaccinated and unvaccinated women aged 25–69 years.
- Exit testing of women up to age 74 years.
- Self-collection of an HPV sample for an underscreened or neverscreened woman, facilitated by a medical practitioner, nurse practitioner or other healthcare professional.
- System of invitations and reminders to be sent to women aged 25–69 years, and exit communications to be sent to women aged 70–74 years of age.





#### Cervical screening pathway for primary oncogenic HPV testing



http://wiki.cancer.org.au/australia/Guidelines:Cervical\_cancer/Screening





## Continued education of vaccinated women

- There has been an ongoing decline in two year participation among younger women (20 to 29 years of age) falling from 52.7% in 2006-2007 to 46.0% in 2013-2014.
- Whilst this is a continuation from an existing underlying trend, it may now reflect younger vaccinated women becoming complacent about the need for screening, as suggested by a recent publication of an analysis linking VCCR data with the National HPV Vaccination Program Register (NHVPR).
- Continued education of vaccinated women about screening is necessary to maximize protection from cervical cancer.





## Under-screened Women

- According to recent data (2014) from the Victorian Cancer Registry, mortality from cervical cancer in Victoria remains at very low levels, at 1.1 per 100,000 women.
- This is a tremendous achievement and reflects the success of the National Cervical Screening Program in Victoria, which is underpinned by the VCCR.
- Despite this success, further efforts are necessary to improve participation amongst under-screened women as 74% of Victorian women who were diagnosed with invasive squamous cervical cancer in 2013 had never had a Pap test, or were lapsed screeners, prior to their cancer diagnosis.





## Further Issues

# Estimated number of women screened in each year from 2015 to 2032











- The Victorian Cervical Cytology Registry (VCCR) is working closely with Victorian Cytology Service (VCS) to support the Compass trial, which is a randomized controlled trial that is comparing two and a half yearly cytology based cervical screening with five yearly primary HPV DNA testing.
- The Pilot trial commenced in October 2013 and the main trial commenced in January 2015. The trial is a sentinel experience of the Renewed program and offers eligible Victorian women and their healthcare practitioners an opportunity to be part of the new screening program at an early stage.
- The trial is being led by researchers from the VCS and the Cancer Council New South Wales. The VCCR is providing follow-up and reminders to women in the Compass trial and this will ensure the Registry is prepared for the forthcoming changes.



