

# STATISTICAL REPORT 2008



Victorian Cervical Cytology  
Registry



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## EXECUTIVE SUMMARY

The Victorian Cervical Cytology Registry (VCCR) plays an important role as a safety net for Victorian women, by sending reminders for Pap tests and following up abnormal results. More than 565,500 Pap tests were registered by the VCCR in 2008, representing over 538,100 Victorian women. The VCCR sent almost 275,000 follow-up and reminder letters to women and practitioners and followed up more than 8,000 abnormal Pap tests in 2008.

VCCR data show that there has been a slight decline in participation in cervical screening with an estimated 62.3% two year participation in 2007 - 2008 for women in the target age range of 20 to 69 years compared with 63.1% in 2006 - 2007. The National HPV Vaccination Program commenced in April 2007, and the importance of continuing regular Pap tests for vaccinated women of screening age has been emphasised as part of the program. There was a slight decline in the 12 month participation in cervical screening for the 20 to 29 year age group, that includes women in the HPV vaccine catch-up program, 27.2% compared with 30.0% in 2007 and 29.3% in 2006 but this decline was also seen across all age groups.

Substantial variation exists in screening rates between different areas of Victoria as represented by Divisions of General Practice, with the lowest two year screening rate for 2007 - 2008 being estimated at 55% and the highest at 72%. The screening rate for Victorian regions of Department of Human Services (DHS) ranged from 56% to 65%. The estimated two year participation rate by Local Government Areas ranged from 45% to 77%.

Over the last decade there has been a gradual increase in the proportion of Pap tests collected by nurses with 3.8% of all Victorian Pap tests being collected by nurses in 2008. The proportion of Pap tests collected by nurses is higher in rural DHS regions than in the metropolitan regions.

Of Pap tests collected by general practitioners or nurses, 5.4% were reported as having a squamous cell abnormality. A definite high-grade abnormality was present in 0.5% of tests and a definite low-grade abnormality was identified in 2.1% of these Pap tests. Over the coming years, the Pap test registries will play a key role in monitoring abnormality rates in the cohort of young women commencing screening, following the introduction of the HPV vaccination program.

In 2008 the Registry recorded histology or colposcopy reports relevant to the cervix for approximately 16,000 women. For the 2,671 women with a high-grade cytology report, 2,175 were subsequently diagnosed with high-grade histology on biopsy within a 6 month period. This represents a positive predictive value of 81.4% and reflects the high quality of laboratory reporting in Victoria.

Rates of cervical cancer incidence and mortality for Victoria through to 2006 were provided by the Victorian Cancer Registry. Cervical cancer incidence has declined dramatically since the late 1980s when the organised screening program was introduced. Mortality from cervical cancer has continued to decline in Victoria and at 1.0 per 100,000 women is now among the lowest in the world. Of Victorian women diagnosed with invasive cervical cancer between 2004 and 2006, at least 85% had either no Pap tests or an inadequate screening history in the 10 years before diagnosis, reinforcing that encouraging regular Pap tests is central to the screening program.



# 1. INTRODUCTION

## 1.1 BACKGROUND

The Victorian Cervical Cytology Registry (VCCR) is one of eight such registries operating throughout Australia. Each State and Territory operates its own register. Victoria was the first State to establish such a register and commenced operation in late 1989 after amendments to the *Cancer Act 1958*.

The Pap test Registries, as they are commonly known, were introduced progressively across Australia throughout the 1990s. The Registries are an essential component of the National Cervical Screening Program and provide the infrastructure for organised cervical screening in each State and Territory.

The VCCR is a voluntary "opt-off" confidential database or register of Victorian women's Pap test results. Laboratories provide the Registry with data on all Pap tests taken in Victoria, unless a woman chooses not to participate.

The VCCR works closely with PapScreen Victoria which is responsible for the communications and recruitment program aimed at maintaining the high rate of participation of Victorian women in the National Cervical Screening Program.

## 1.2 FUNCTIONS OF THE PAP TEST REGISTRY

The Registry facilitates regular participation of women in the National Cervical Screening Program by sending reminder letters to women for Pap tests and by acting as a safety net for the follow-up of women with abnormal Pap tests.

The primary functions of the VCCR as specified in the *Cancer Act 1958* are:

- a) to follow-up positive results from cancer tests; and
- b) to send reminder notices when persons whose names appear in the register are due for cancer tests; and
- c) subject to and in accordance with the regulations, to give access to the register to persons studying cancer; and
- d) to compile statistics and, if the organisation considers it appropriate, to publish those statistics that do not identify the persons to whom they relate.

Secondary functions of the Registries have developed on a more regional basis. In Victoria, the role of the Registry includes:

- the provision of the known screening history of a woman to the laboratory that is reporting the current Pap test;
- the provision of quantitative data to laboratories to assist with their quality assurance programs;
- the provision of aggregate data to the Australian Institute of Health and Welfare so that the National Cervical Screening Program can be judged against an agreed set of performance indicators.

### 1.3 THE IMPLEMENTATION OF THE NHMRC GUIDELINES FOR THE MANAGEMENT OF ASYMPTOMATIC WOMEN WITH SCREEN DETECTED ABNORMALITIES

On 1 July 2006, the National Health and Medical Research Council (NHMRC) Guidelines for the Management of Asymptomatic Women with Screen Detected Abnormalities (2005)<sup>1</sup> were implemented around Australia. The main changes to the existing guidelines were:

- the change of terminology for cytology reports to the Australian Modified Bethesda System 2004
- repeat Pap tests for most women with low-grade squamous abnormalities
- not to treat biopsy proven low-grade or HPV lesions
- referral of all women with atypical glandular cells for colposcopy
- referral of all women with possible high-grade lesion for colposcopy
- use of HPV tests and cytology as a test of cure for women treated for CIN2 and CIN3.

The VCCR is presently participating in the national Safety Monitoring of the NHMRC guidelines.

### 1.4 THE NATIONAL HPV VACCINATION PROGRAM

The National HPV Vaccination Program commenced in April 2007 and will have a substantial impact on the cervical screening program in the years to come. As part of the National Immunisation Program, the Australian Government is providing the Human Papillomavirus (HPV) vaccine Gardasil® on an ongoing basis through schools for 12 and 13 year-old girls.

The government is also funding a 2 year catch-up program for 13 to 18 year-old girls in schools and 18 to 26 year-old women through general practice and community-based programs until the end of December 2009.

The Pap test registries around Australia will play an important role in monitoring the impact of the vaccination program on participation rates in cervical screening and on cervical abnormalities and cancer in the longer term. The importance of continuing regular Pap tests for vaccinated women was emphasised as part of the HPV vaccination program.

A National HPV Vaccination Program Register (the HPV Register), has been established to support, monitor and evaluate the National HPV Vaccination Program. The Victorian Cytology Service Inc, which has operated the Victorian Cervical Cytology Registry for almost 20 years, was engaged by the Department of Health and Ageing in February of 2008 to establish and manage the National HPV Vaccination Program Register.

The HVP Register receives data from all states and territories and from all types of vaccination providers including Local Councils (school vaccination program), general practitioners, nurses and other immunisation providers around Australia. The Register records basic demographic information and information about doses delivered in Australia.

The HVP Register supports the program by sending completion statements and reminder letters to eligible women, making incentive payments to general practitioners and providing reports and de-identified data to approved providers and researchers.

With the establishment of the HPV Register there is potential in the future for cross-referencing of vaccination data with information from cervical cytology (Pap smear) or cervical cancer registries for evaluation purposes<sup>2</sup>.

1 NHMRC (National Health and Medical Research Council) 2005. *Screening to prevent cervical cancer: guidelines for the management of asymptomatic women with screen detected abnormalities*. Canberra: NHMRC.

2 The National HPV Vaccination Program Register website. <http://www.hpregister.org.au>

## 1.5 DATA INCLUDED IN THIS REPORT

This statistical report is one in a series of annual reports that have been published since the inception of the VCCR. It provides timely information about screening in Victoria during 2008; in most areas, the data is additional to that published by the Australian Institute of Health and Welfare<sup>3</sup>. Wherever possible, the same methodology has been adopted in this report as is used in the Australian Institute of Health and Welfare report.

### Participation rates

This report includes information on participation rates for women aged 20 to 69 years in ten year age groups. Participation rates provided have been adjusted using the 2004-05 hysterectomy fraction.

The two year participation rates are also provided for Divisions of General Practice, Regions of the Department of Human Services and Local Government Areas.

### Cytology coding

Information is provided on the cytology report of Pap tests which are pre-coded by the pathology laboratory to the Registry's Cytology Code Schedule. Appendix 1 shows the Australia wide codes that were used from 1 July 2006 to correspond with the implementation of the NHMRC guidelines. The Cytology Code Schedule allows a Pap test report to be summarised to a six digit numeric code covering the type of test, site of test, the result for squamous cells, the endocervical component, other non-cervical cells, and the recommendation made by the laboratory in regards to further testing.

Prior to 1 July 2006, the Cytology Coding Schedule summarised results into a five digit numeric code for squamous cells, evidence of human papillomavirus infection, endocervical component, other non-cervical cells and the recommendation. During the change over to using the new coding schedule the old five digit code was mapped to the equivalent codes using the updated coding schedule. Data provided in this report uses the new coding.

### Histology/colposcopy reports

The 2008 histology and colposcopy registrations in this report are as notified by July 2009. The vast majority of histology reports are registered by this time, thus the data are reasonably complete. While reasonably comprehensive registration occurs for histology reports, a proportion of colposcopy results are also registered, most typically when a histology report is not available. For all the reports for 2008, 8.3% were obtained from colposcopy alone. These are not included in the histology/cytology correlation table.

### Follow-up protocol

The VCCR Registry Reminder and Follow-up Protocol is based on the *NHMRC Guidelines for the Management of Asymptomatic Women with Screen Detected Abnormalities*. The Reminder and Follow-up Protocol used by the Registry in 2008 is shown in Appendix 2.

Reminder letters are not sent to women whose Registry records indicate a past history of hysterectomy or of cervical or uterine malignancy, or to women who are over 70 years of age and whose last Pap test was normal.

### Cervical cancer incidence and mortality

Information on cervical cancer incidence and mortality is provided in this report courtesy of the Victorian Cancer Registry from the Victorian Cancer Council. Also included is an additional section examining the screening history of Victorian women diagnosed with invasive cervical cancer between the start of 2004 and end of 2006.

<sup>3</sup> Australian Institute of Health and Welfare 2009. *Cervical screening in Australia 2006-2007*. Cancer series no. 47. Cat. no. CAN 43. Canberra: AIHW.

## 2. PARTICIPATION IN SCREENING

### 2.1 PAP TEST NUMBERS AND WOMEN SCREENED

Table 2.1 shows data on the number of Pap tests registered and the number of women from whom these tests originated, for each year of the Registry's operation. During 2008, a total of 565,500 Pap tests were registered from 538,100 women. From the previous year, this is a decrease of approximately 20,000 Pap tests and almost 19,300 women. There was a modest decline in the number of Pap tests in 2008, the reasons for which are unclear.

**Table 2.1: Number of Pap tests registered and number of women screened in Victoria, 1990 to 2008.**

Year	Number of Pap Tests registered	Number of women screened
2008	565,500	538,100
2007	585,500	557,400
2006	572,800	540,700
2005	585,300	549,700
2004	588,000	550,000
2003	571,000	532,000
2002	579,000	540,000
2001	577,000	542,000
2000	572,000	532,000
1999	603,000	558,000
1998	619,000	571,000
1997	587,000	535,000
1996	616,000	560,000
1995	590,000	530,000
1994	622,000	562,000
1993	571,000	523,000
1992	542,000	497,000
1991	545,000	498,000
1990	436,000	402,000

The number of women screened in each of these years is probably a slight overestimate because of incomplete record linkage due to there being no unique identifying number for each woman. Where possible, the Medicare number of women is used to assist with accurate record linkage. Since August 1999, the Registry has used SSA-Name in the matching of incoming tests to pre-existing data on the database. This has resulted in more complete record-linkage of different episodes of care for women, compared with the previous approach to record-linkage.

In interpreting the information in Table 2.1, it is important to realise that a proportion of women in Victoria are screened on an annual basis. However, the number of women involved in the screening program over more than one year cannot be derived by adding the above counts for individual years.

The Registry is a voluntary "opt-off" database; however, the proportion of women who are part of the screening program but decide to opt-off the Registry is estimated to be less than 1%. Where a woman objects to her Pap test being registered, the Registry holds no information about that test.

## 2.2 PARTICIPATION BY AGE GROUP

### Method of calculating participation

The participation of women in cervical screening by age group is expressed as a percentage. This calculation factors in women aged 20 to 69 years, the estimated proportion of women who have a cervix and women with a Victorian address.

- The denominator is the female Estimated Resident Population (ERP)<sup>4</sup> based on Australian Bureau of Statistics data for Victoria, after adjustment for the estimated proportion of women who have had a complete hysterectomy (using the 2004 - 05 National Health Survey which provides national hysterectomy estimates in the general population<sup>5</sup>).
- The numerator is estimated from the Registry database. It is the number of women resident in Victoria who had at least one Pap test in the time period of interest and who appear to have a cervix (that is, they have not had a hysterectomy according to information held by the Registry).

Table 2.2 shows the estimated percentage of eligible women with a cervix that had at least one Pap test in 2008 or during the calendar year periods of 2007 - 2008, 2006 - 2008 and 2004 - 2008.

### Limitations

Participation rates are necessarily imprecise and measurement error may affect both the denominator and the numerator. The biggest impact on denominator error comes from uncertainty about hysterectomy rates. Only women with a cervix are considered eligible for cervical screening and adjustment must be made for the proportion of women in the population who have had a hysterectomy.

Measurement error in Registry data comes from imperfect record-linkage between multiple Pap tests from the same woman (resulting in an overestimate of the number of women screened) and from inaccuracies in the Registry database in recording whether the Pap test was taken from a woman with or without a cervix.

**Table 2.2: Estimated proportion of women with a cervix who have had at least one Pap test for each time period, with the denominator adjusted for hysterectomy fraction.**

Age Group	% screened 2008 (1 year)	% screened 2007 - 2008 (2 years)	% screened 2006 - 2008 (3 years)	% screened 2004 - 2008 (5 years)
20 to 29 yrs	27.2%	51.2%	65.6%	86.7%
- 20 to 24 yrs	24.2%	46.1%	60.0%	82.4%
- 25 to 29 yrs	30.3%	56.3%	71.3%	91.0%
30 to 39 yrs	34.9%	64.5%	79.0%	94.1%
40 to 49 yrs	35.4%	65.9%	78.4%	87.9%
50 to 59 yrs	37.4%	69.3%	80.2%	86.0%
60 to 69 yrs	34.2%	64.1%	71.8%	74.4%
20 to 69 yrs	33.4%	62.3%	75.0%	87.5%

<sup>4</sup> Australian Bureau of Statistics. *Population by Age and Sex, Australian States and Territories*, June 2008.

<sup>5</sup> Australian Bureau of Statistics. *National Health Survey, 2004-05*.



### Participation rates

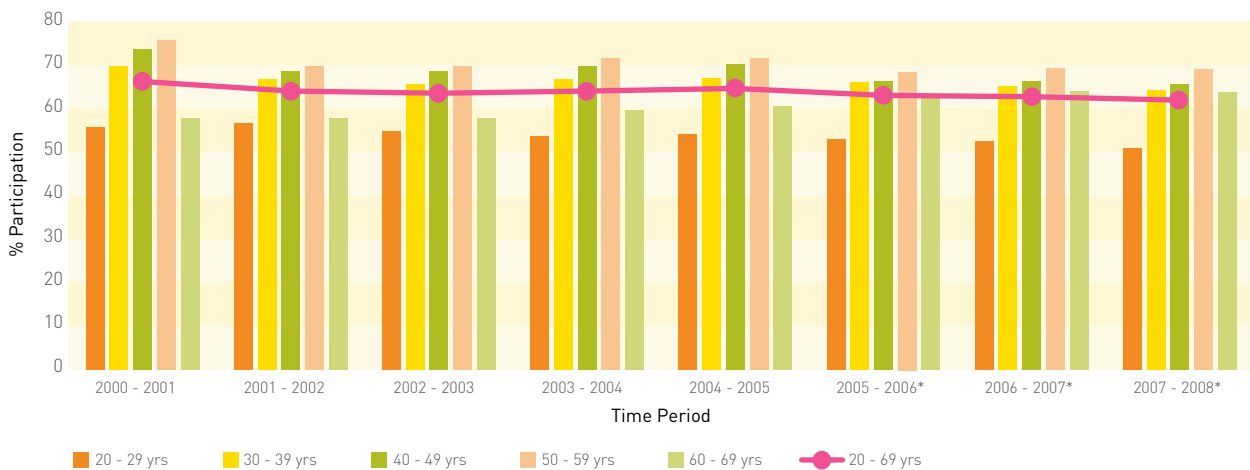
During 2008 the two year participation rate declined slightly to 62.3% compared with 63.1% as reported in the 2007 statistical report. Participation in the 20 to 29 year age group, that includes women in the HPV vaccination catch up program eligible for cervical screening, was 27.2% for 2008 compared with 30.0% for 2007 and 29.3% for 2006.

The biennial participation rates in Victoria continue to be higher than the national average. The most recently available national data showed that for 2006 - 2007 the two-yearly national participation rate for women aged 20 to 69 years was 61.5%<sup>6</sup>.

Over the three year period from 2006 - 2008, the participation rate of Victorian women aged between 20 to 69 years in the Pap test screening program was estimated to be 75.0%. Table 2.2 also shows the five year estimated participation rate from 2004 - 2008 of 87.5%.

The participation in cervical screening has remained relatively stable over time for each age group since 2000-2001. Women aged between 50 and 59 years continue to have the highest two year screening rate although some decline can be seen in recent years. Women aged 20 to 29 years have the lowest screening rate of the 10 year age groups. There has been a modest increase in the participation rate among women aged 60-69 years in recent years.

Figure 2.2: Estimated proportion of women with a cervix who have had at least one Pap test for two year periods from 2000, by age group.



\* Note that data from 2005-2006 onwards has been adjusted with the 2004-05 hysterectomy fraction which has reduced participation rates compared with the 2001 hysterectomy fraction used for previous years.

6 Australian Institute of Health and Welfare 2009. *Cervical Screening in Australia 2006-2007*. Cancer Series no. 47. Cat. no. CAN 43. Canberra: AIHW.

## 2.3 PARTICIPATION BY AREAS

### Method of calculating participation

The participation for Divisions of General Practice, Regions of the Department of Human Services and Local Government Areas are expressed as a percentage.

- The denominator is the estimated number of eligible women, resident in the postcodes of each area, adjusted for the proportion of women estimated to have had a hysterectomy (using the 2004-05 hysterectomy fraction)<sup>7</sup>. The average female population over the two year period is used as the denominator.
- The numerator is the number of women who had at least one Pap test in the two year time period and who have not had a hysterectomy according to the information held by the Registry.

It is important to note that there has been an increase in the population of eligible women across most areas, contributing to an increase in the denominator for calculation of participation rates, and this may explain the slight declines in observed participation.

### Limitations

This type of information, being small-area data, is subject to greater measurement error than the data in sections 2.1 and 2.2. The main source of inaccuracy in the following tables is derived from applying the national hysterectomy fractions to the relatively small female population resident in the postcodes.

Other additional (but probably lesser) sources of measurement error derive from:

- the use of the service provider's postcode of practice if the woman's residential postcode is not known to the Registry,

- the proportion of Victorian Pap tests reported by laboratories outside of Victoria who do not report to the Registry (this will mainly affect areas located on the Victoria/New South Wales and Victoria/South Australia borders); and
- the differences between the Australia Post postcode used to report screening numbers according to address data given by the woman (used as the numerator in calculating participation) and the ABS Postal Areas which population statistics are available for (used as the denominator). It is important to note that although there are commonality between postcodes and Postal Areas, they are not exact matches and their boundaries on the ground can differ. The underlying reason for the differences in these two boundaries are that the ABS Postal Areas are created specifically for Census purposes and disseminating statistics while postcodes are designed to distribute mail.

### 2.3.1 Participation by Division of General Practice<sup>8</sup>

The Commonwealth Department of Health and Ageing assigns almost all Victorian postcodes to a Division of General Practice. There are twenty nine Divisions of General Practice located solely within Victoria. Using methods discussed in the beginning of Section 2.3 with the allocation of postcodes to each division, the estimated two year participation rates have been calculated.

<sup>7</sup> Victorian Female Estimated Resident Population by Postal Area at 30 June 2007 revised data and Victorian Female Estimated Resident Population by Postal Area at 30 June 2008 preliminary data, Australian Bureau of Statistics. Data available on request.

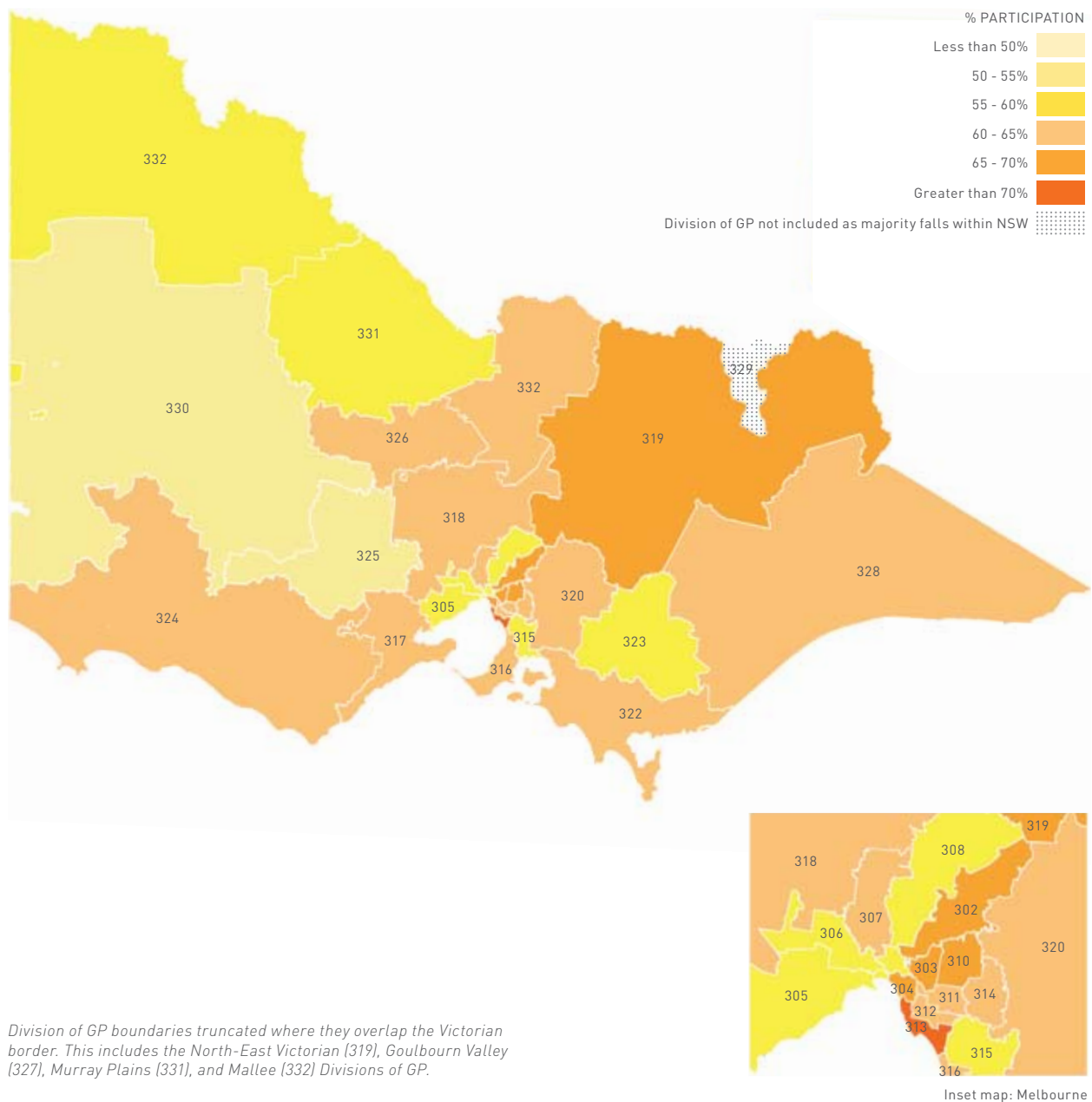
<sup>8</sup> Effective from 1 July 2008 the Division of GP boundaries have changed in order to align with the ABS 2006 Census Collection District boundaries. In addition a number of Divisions have amalgamated or renegotiated their boundaries. Please refer to [www.health.gov.au](http://www.health.gov.au) for more information. The new boundaries will be adopted within the VCCR Statistical Report 2009.



Table 2.3.1: Estimated biennial cervical screening rates by Division of General Practice, for the calendar years of 2006-2007 and 2007-2008.

Division Number	Division Name	2006 - 2007 % screened [95% CI]	2007 - 2008 % screened [95% CI]
301	Melbourne Division of GP	60.5% (60.2%-60.9%)	58.1% (57.7%-58.4%)
302	North East Valley Division of GP	69.3% (69.0%-69.7%)	68.6% (68.2%-68.9%)
303	Inner Eastern Melbourne Division of GP	70.8% (70.4%-71.2%)	69.3% (68.9%-69.7%)
304	Inner South East Melbourne Division of GP	67.9% (67.6%-68.3%)	67.4% (67.0%-67.8%)
305	Westgate Division of GP	58.3% (57.9%-58.7%)	57.1% (56.7%-57.4%)
306	Western Melbourne Division of GP	59.5% (59.1%-59.8%)	58.6% (58.3%-58.9%)
307	North West Melbourne Division of GP	61.3% (61.0%-61.6%)	60.8% (60.5%-61.2%)
308	The Northern Division of GP (Melbourne)	59.2% (58.9%-59.6%)	58.2% (57.8%-58.5%)
310	Whitehorse Division of GP	67.1% (66.7%-67.4%)	65.5% (65.2%-65.9%)
311	Greater South Eastern Division of GP	64.3% (63.9%-64.7%)	63.1% (62.7%-63.5%)
312	Monash Division of GP	64.3% (63.8%-64.7%)	63.5% (63.1%-64.0%)
313	Central Bayside Division of GP	73.7% (73.3%-74.1%)	72.0% (71.6%-72.4%)
314	Knox Division of GP	64.9% (64.6%-65.3%)	63.7% (63.3%-64.1%)
315	Dandenong & District Division of GP	60.7% (60.4%-61.0%)	59.0% (58.7%-59.3%)
316	Mornington Peninsula Division of GP	62.9% (62.6%-63.3%)	62.2% (61.8%-62.5%)
317	GP Association of Geelong	62.9% (62.5%-63.3%)	62.0% (61.7%-62.4%)
318	Central Highlands Division of GP	63.3% (62.9%-63.7%)	62.1% (61.6%-62.5%)
319	North-East Victorian Division of GP	68.0% (67.5%-68.5%)	65.8% (65.2%-66.3%)
320	Eastern Ranges Division of GP	65.1% (64.7%-65.5%)	64.2% (63.8%-64.6%)
322	South Gippsland Division of GP	61.3% (60.6%-62.1%)	61.1% (60.4%-61.8%)
323	Central-West Gippsland Division of GP	61.0% (60.4%-61.6%)	59.8% (59.2%-60.3%)
324	Otway Division of GP	64.2% (63.7%-64.7%)	62.2% (61.7%-62.8%)
325	Ballarat & District Division of GP	56.8% (56.2%-57.3%)	54.6% (54.0%-55.1%)
326	Bendigo & District Division of GP	61.9% (61.4%-62.5%)	60.3% (59.7%-60.9%)
327	Goulburn Valley Division of GP	62.8% (62.2%-63.3%)	60.2% (59.6%-60.8%)
328	East Gippsland Division of GP	64.1% (63.5%-64.8%)	62.5% (61.8%-63.2%)
330	Western Victorian Division of GP	56.3% (55.6%-57.0%)	54.9% (54.2%-55.6%)
331	Murray Plains Division of GP	62.1% (61.2%-63.0%)	59.9% (59.0%-60.8%)
332	Mallee Division of GP	59.8% (59.1%-60.5%)	56.7% (56.0%-57.4%)

Figure 2.3.1: Estimated biennial cervical screening rates by Division of General Practice, for the calendar years of 2007-2008.



### 2.3.2 Participation by Region of the Department of Human Services

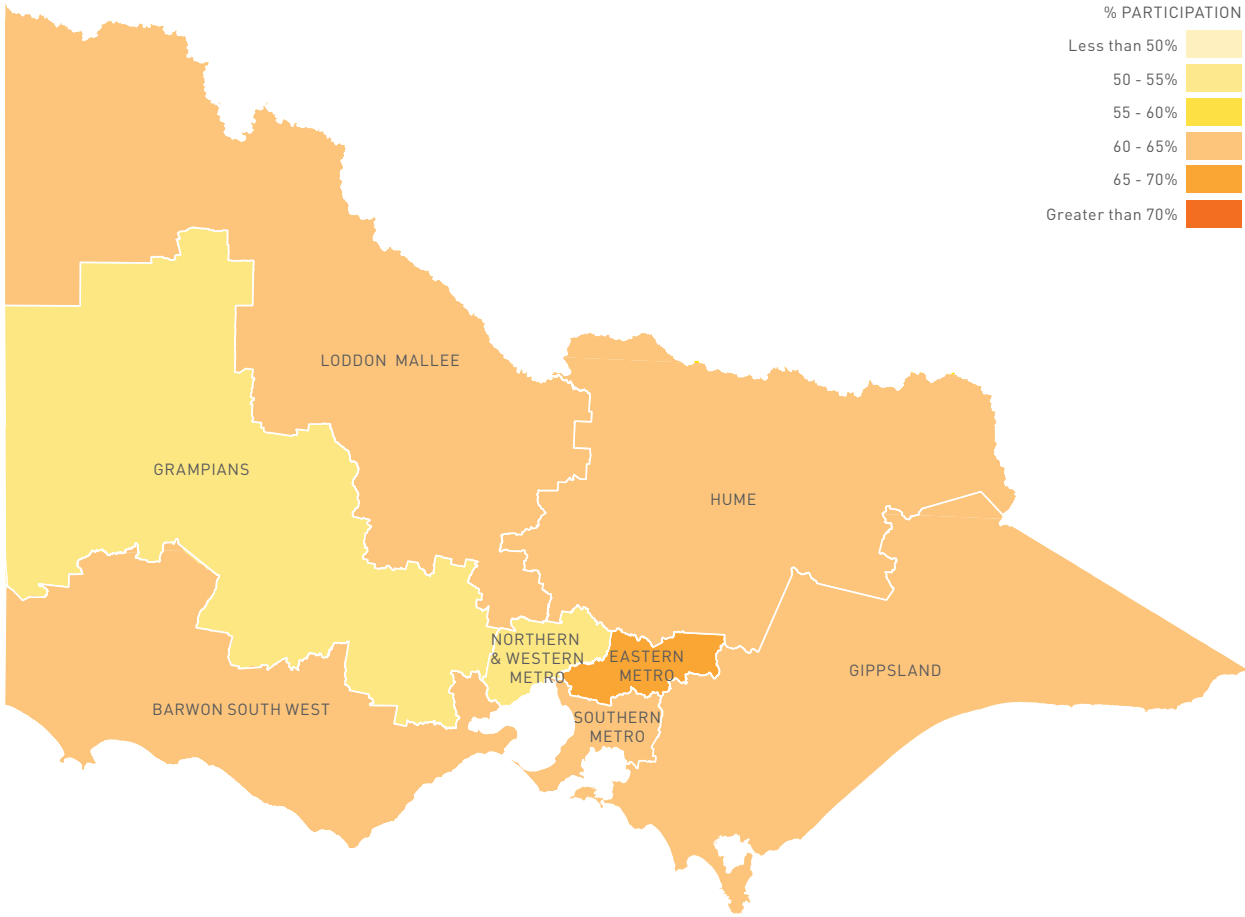
Most Victorian postcodes are assigned to a Region of the Department of Human Services. Victoria is divided into eight Regions, five in rural Victoria and three covering metropolitan Melbourne. Using methods discussed in the beginning of Section 2.3 with the allocation of postcodes to each region, the two year participation rates have been calculated.

**Table 2.3.2: Estimated biennial cervical screening rates by Region of the Department of Human Services, for the calendar years of 2006-2007 and 2007-2008.**

Region Name	2006 - 2007 % screened (95% CI)	2007 - 2008 % screened (95% CI)
Barwon South Western	63.3% (63.0%-63.6%)	62.1% (61.8%-62.4%)
Eastern Metropolitan	66.6% (66.4%-66.7%)	65.2% (65.0%-65.4%)
Gippsland	62.1% (61.7%-62.5%)	61.0% (60.7%-61.4%)
Grampians	58.3% (57.9%-58.7%)	56.3% (55.9%-56.8%)
Hume	64.9% (64.5%-65.2%)	63.0% (62.6%-63.3%)
Loddon Mallee	62.7% (62.3%-63.0%)	60.8% (60.5%-61.1%)
North West Metropolitan	61.0% (60.9%-61.2%)	60.0% (59.8%-60.1%)
Southern Metropolitan	65.2% (65.0%-65.3%)	63.9% (63.8%-64.1%)



Figure 2.3.2: Estimated biennial cervical screening rates by Region of the Department of Human Services, for the calendar years of 2007-2008.



### 2.3.3 Participation by Local Government Areas

Within Victoria there are 79 Local Government Areas (LGAs). Using methods discussed at the beginning of Section 2.3, and an algorithm to determine the allocation of postcodes to LGA the estimated two year participation rates by LGA are provided in Table 2.3.3.

**Table 2.3.3: Biennial cervical screening rates by Local Government Area, for the calendar years of 2006-2007 and 2007-2008.**

DHS region	Local Government Area	2006 - 2007 <sup>9</sup> % screened (95% CI)	2007 - 2008 <sup>10</sup> % screened (95% CI)
Barwon S/W	Colac-Otway	69.6% (68.3%-70.8%)	67.5% (66.2%-68.7%)
	Corangamite	61.6% (60.1%-63.1%)	59.5% (58.0%-61.0%)
	Glenelg	56.8% (55.5%-58.2%)	56.7% (55.4%-58.1%)
	Greater Geelong	62.2% (61.8%-62.6%)	61.0% (60.6%-61.4%)
	Moyne	63.9% (62.4%-65.3%)	58.3% (56.8%-59.8%)
	Queenscliffe	65.9% (62.6%-69.2%)	65.5% (62.2%-68.8%)
	Southern Grampians	64.3% (62.9%-65.7%)	64.7% (63.3%-66.1%)
	Surf Coast	70.8% (69.7%-72.0%)	69.2% (68.1%-70.3%)
	Warrnambool	68.0% (67.0%-69.0%)	65.3% (64.3%-66.3%)
Eastern Metro	Boroondara	71.0% (70.6%-71.4%)	69.4% (68.9%-69.8%)
	Knox	65.5% (65.0%-65.9%)	64.1% (63.7%-64.6%)
	Manningham	69.3% (68.8%-69.8%)	68.0% (67.5%-68.5%)
	Maroondah	64.6% (64.0%-65.1%)	63.3% (62.8%-63.9%)
	Monash	62.7% (62.3%-63.2%)	61.5% (61.1%-61.9%)
	Whitehorse	66.0% (65.6%-66.5%)	64.5% (64.1%-65.0%)
	Yarra Ranges	64.9% (64.5%-65.4%)	64.6% (64.2%-65.1%)
Gippsland	Bass Coast	61.2% (60.0%-62.3%)	60.3% (59.2%-61.4%)
	Baw Baw	65.9% (64.9%-66.8%)	64.4% (63.4%-65.3%)
	East Gippsland	65.6% (64.7%-66.5%)	63.5% (62.6%-64.4%)
	Latrobe	57.9% (57.2%-58.6%)	56.8% (56.1%-57.4%)
	South Gippsland	64.8% (63.7%-65.9%)	65.2% (64.1%-66.3%)
	Wellington	62.0% (61.1%-62.9%)	61.2% (60.3%-62.1%)

<sup>9</sup> 2004 Postcode to LGA converter algorithm supplied by Victorian Department of Human Services.

<sup>10</sup> 2007 Postcode to LGA converter algorithm supplied by Victorian Department of Human Services.

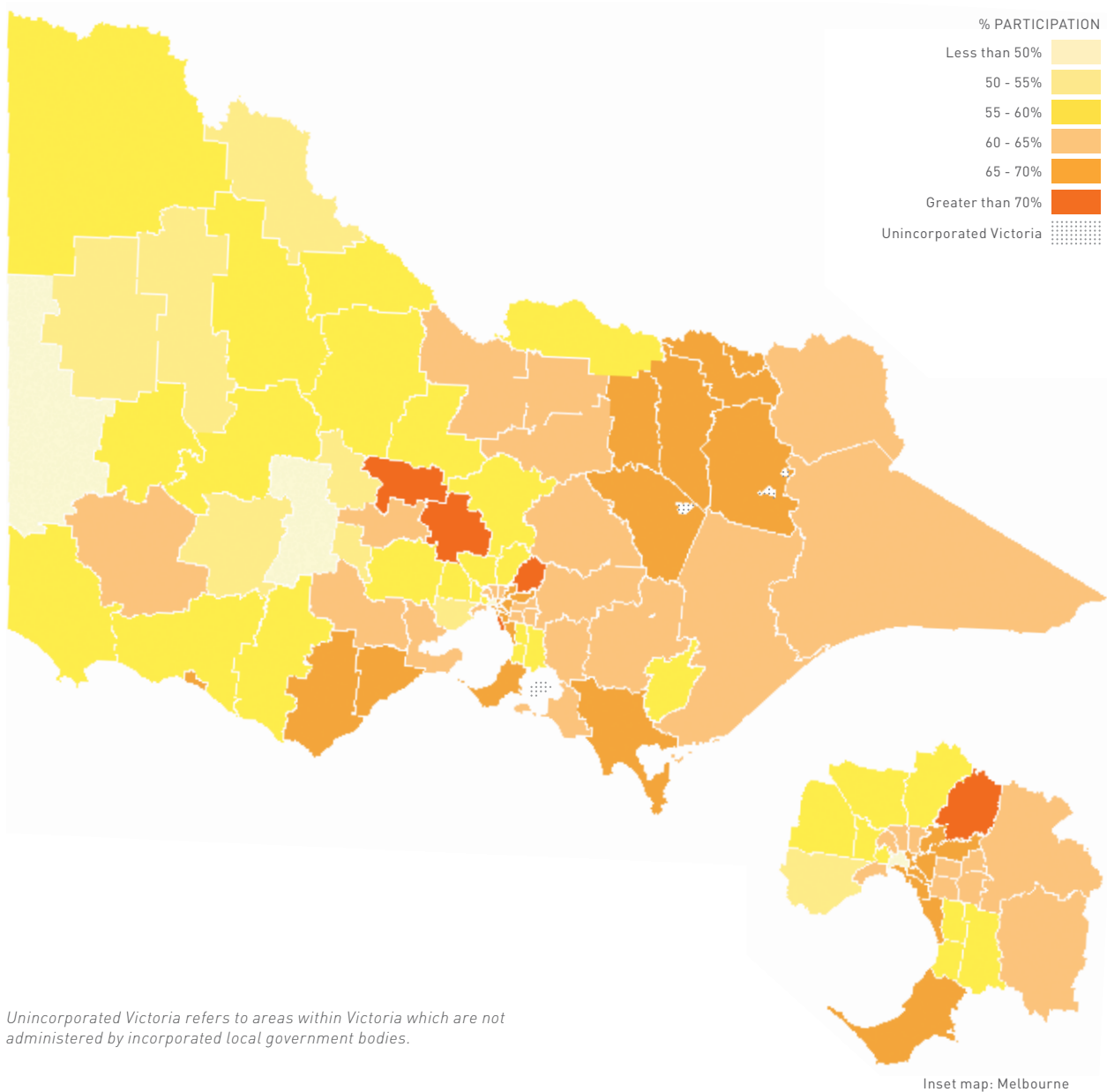
DHS region	Local Government Area	2006 - 2007 <sup>9</sup> % screened (95% CI)	2007 - 2008 <sup>10</sup> % screened (95% CI)
Grampians	Ararat	53.8% (52.0%-55.7%)	50.7% (48.9%-52.5%)
	Ballarat	56.4% (55.8%-57.0%)	54.8% (54.2%-55.4%)
	Golden Plains	62.1% (60.6%-63.5%)	60.8% (59.4%-62.2%)
	Hepburn	66.3% (64.8%-67.8%)	65.0% (63.5%-66.5%)
	Hindmarsh	54.4% (51.9%-56.9%)	53.9% (51.3%-56.4%)
	Horsham	61.2% (59.8%-62.5%)	58.9% (57.6%-60.2%)
	Moorabool	61.1% (60.0%-62.2%)	59.3% (58.2%-60.4%)
	Northern Grampians	57.8% (56.1%-59.5%)	55.7% (53.9%-57.4%)
	Pyrenees	50.5% (48.1%-52.9%)	49.1% (46.8%-51.5%)
	West Wimmera	44.9% (42.0%-47.7%)	44.5% (41.6%-47.4%)
	Yarriambiack	56.6% (54.3%-58.9%)	55.0% (52.7%-57.2%)
Hume	Alpine	69.3% (67.7%-70.9%)	69.0% (67.4%-70.6%)
	Benalla	70.0% (68.5%-71.6%)	68.8% (67.3%-70.3%)
	Greater Shepparton	62.7% (62.0%-63.5%)	62.1% (61.3%-62.8%)
	Indigo	70.2% (68.7%-71.6%)	67.4% (66.0%-68.9%)
	Mansfield	68.2% (66.1%-70.3%)	66.2% (64.1%-68.3%)
	Mitchell	58.5% (57.5%-59.5%)	57.2% (56.2%-58.2%)
	Moira	62.2% (61.1%-63.3%)	56.4% (55.3%-57.6%)
	Murrindindi	63.4% (61.8%-64.9%)	61.8% (60.2%-63.4%)
	Strathbogie	62.5% (60.6%-64.4%)	61.9% (60.0%-63.8%)
	Towong	63.6% (61.1%-66.2%)	64.3% (61.9%-66.7%)
	Wangaratta	66.8% (65.7%-67.9%)	65.2% (64.1%-66.3%)
	Wodonga	66.5% (65.6%-67.5%)	67.3% (66.4%-68.2%)
Loddon-Mallee	Buloke	60.8% (58.4%-63.2%)	59.6% (57.3%-62.0%)
	Campaspe	64.0% (63.1%-65.0%)	60.9% (59.9%-61.9%)
	Central Goldfields	50.6% (48.9%-52.4%)	50.6% (48.9%-52.4%)
	Gannawarra	59.2% (57.4%-61.0%)	58.5% (56.7%-60.4%)
	Greater Bendigo	60.9% (60.3%-61.5%)	59.8% (59.2%-60.4%)
	Loddon	60.6% (58.4%-62.7%)	57.5% (55.3%-59.7%)
	Macedon Ranges	71.6% (70.8%-72.5%)	70.9% (70.0%-71.7%)
	Mildura	55.4% (54.6%-56.2%)	58.3% (57.5%-59.1%)
	Mount Alexander	72.2% (70.9%-73.5%)	71.5% (70.2%-72.8%)
	Swan Hill	59.4% (58.1%-60.8%)	52.3% (51.0%-53.6%)

DHS region	Local Government Area	2006 - 2007 <sup>9</sup> % screened (95% CI)	2007 - 2008 <sup>10</sup> % screened (95% CI)
North-West Metro	Banyule	68.1% (67.6%-68.6%)	67.3% (66.8%-67.8%)
	Brimbank	59.1% (58.7%-59.5%)	58.5% (58.1%-59.0%)
	Darebin	60.9% (60.4%-61.4%)	60.3% (59.8%-60.8%)
	Hobsons Bay	62.0% (61.4%-62.6%)	61.7% (61.1%-62.3%)
	Hume	58.6% (58.2%-59.1%)	57.0% (56.5%-57.4%)
	Maribyrnong	60.3% (59.6%-61.0%)	59.6% (59.0%-60.3%)
	Melbourne	51.9% (51.4%-52.5%)	47.6% (47.1%-48.2%)
	Melton	57.3% (56.6%-58.0%)	56.8% (56.2%-57.4%)
	Moonee Valley	64.3% (63.8%-64.9%)	63.7% (63.2%-64.3%)
	Moreland	60.8% (60.3%-61.3%)	60.5% (60.1%-61.0%)
	Nillumbik	75.3% (74.7%-75.9%)	74.1% (73.4%-74.7%)
	Whittlesea	60.4% (59.9%-60.9%)	58.9% (58.4%-59.3%)
	Wyndham	55.8% (55.3%-56.3%)	54.1% (53.6%-54.6%)
	Yarra	67.7% (67.1%-68.2%)	66.2% (65.6%-66.7%)
Southern Metro	Bayside	78.3% (77.8%-78.8%)	76.5% (76.0%-77.0%)
	Cardinia	65.0% (64.2%-65.7%)	63.0% (62.2%-63.7%)
	Casey	62.0% (61.6%-62.3%)	59.9% (59.5%-60.2%)
	Frankston	59.9% (59.4%-60.4%)	58.5% (58.0%-59.0%)
	Glen Eira	67.1% (66.6%-67.5%)	66.4% (65.9%-66.8%)
	Greater Dandenong	59.9% (59.4%-60.4%)	59.3% (58.8%-59.8%)
	Kingston	66.4% (65.9%-66.8%)	65.1% (64.6%-65.6%)
	Mornington Peninsula	65.8% (65.3%-66.3%)	65.2% (64.7%-65.7%)
	Port Phillip	65.9% (65.4%-66.5%)	65.3% (64.8%-65.9%)
	Stonnington	69.2% (68.7%-69.7%)	68.3% (67.8%-68.8%)

9 2004 Postcode to LGA converter algorithm supplied by Victorian Department of Human Services.  
10 2007 Postcode to LGA converter algorithm supplied by Victorian Department of Human Services.



Figure 2.3.3: Estimated biennial cervical screening rates by Local Government Areas, for the calendar years of 2007-2008.



## 2.4 PAP TESTS TAKEN BY NURSES

During 2008, a total of 21,668 Pap tests were collected by 285 nurses. This number represents 3.8% of all Pap tests collected in Victoria during 2008. As shown in Table 2.4, the number of Pap tests collected by nurses has more than doubled over the last ten years.

**Table 2.4: Proportion of Pap tests collected by nurses, 1999 to 2008.**

Year	Number of Pap tests collected by nurses	% of all Victorian Pap tests
2008	21,668	3.8%
2007	18,651	3.2%
2006	16,035	2.8%
2005	14,375	2.5%
2004	13,100	2.2%
2003	11,494	2.0%
2002	10,635	1.8%
2001	11,017	1.9%
2000	9,628	1.7%
1999	9,922	1.6%

Nurse Pap test data highlights the increasingly important role that nurses have in the Victorian Cervical Screening Program, particularly in relation to the increasing number of Pap tests collected by nurses in recent years and the high quality of smears. As observed in recent years Pap tests collected by nurses compared with other provider types are more likely to have an endocervical component<sup>11</sup> which is considered to be a reflection of smear quality. General Practice and Community Health settings remain the main types of practice where nurses collect Pap tests. During 2008, 38.2% of the Pap tests collected by nurses were from women over 50 years of age compared with 29.9% for all Pap tests collected in Victoria during this period<sup>12</sup> ( $p < 0.001$ ).

<sup>11</sup> See Section 3.2 [Cytology reports].

<sup>12</sup> Victorian Cervical Cytology Registry, *Evaluation of Pap tests collected by Nurses in Victoria during 2008* report.

### 2.4.1 Proportion of Pap Tests Collected by Nurses by Region of Department of Human Services

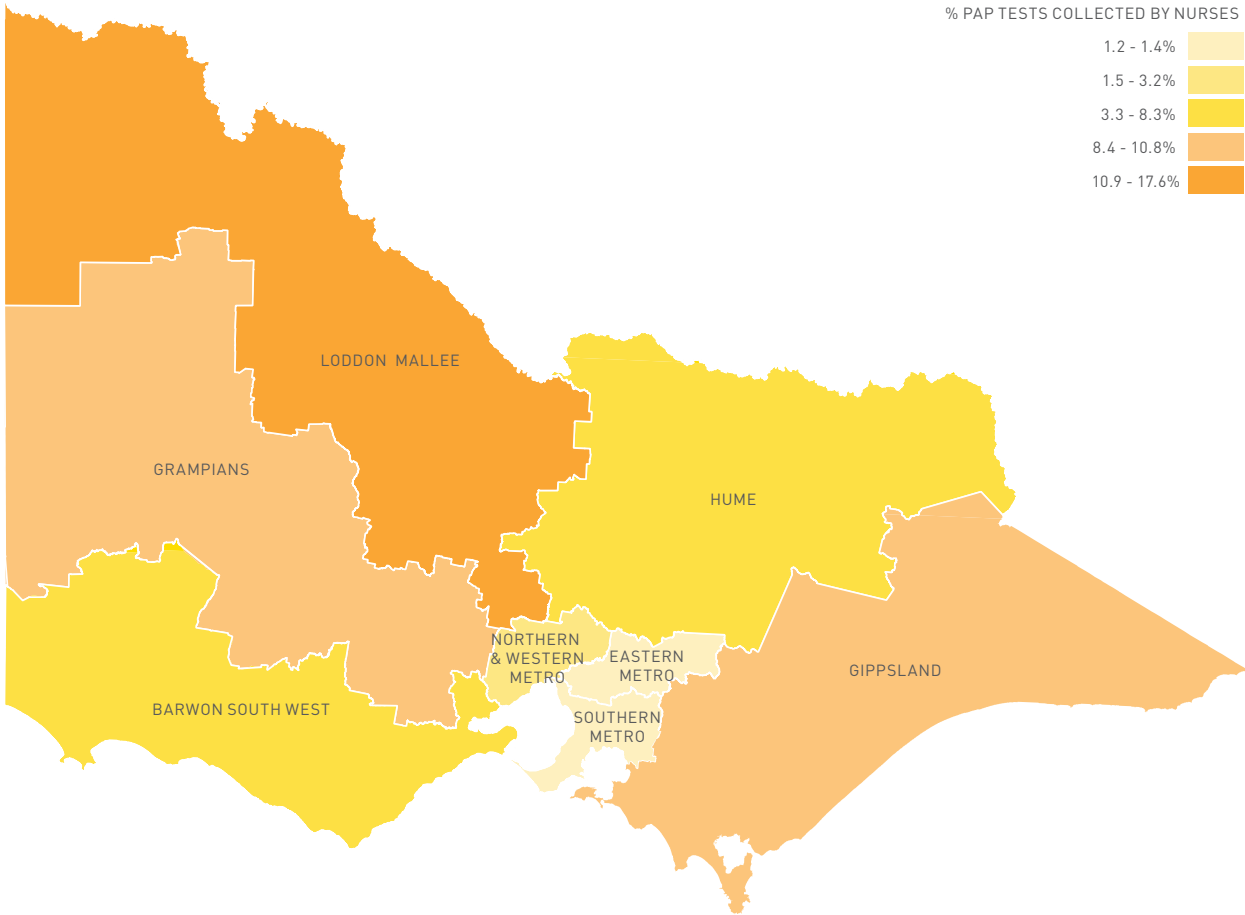
Most Victorian postcodes are assigned to a Region of the Victorian Department of Human Services (DHS). Victoria is divided into eight regions, five in rural Victoria and three covering metropolitan Melbourne. The following table and image show that the rural DHS regions had a higher proportion of tests collected by nurses, for women with a cervix, than those within metropolitan Melbourne. Between 2007 and 2008 an increase in the proportion of Pap tests collected by nurses was seen for all DHS regions (2007 data not shown). This increase was greatest in rural DHS regions with the greatest increase seen in the Grampians region<sup>12</sup>.

**Table 2.4.1: Pap tests for women with a cervix collected by nurses in 2008 by Region of Department of Human Services.**

Region name	Number of Pap tests collected by nurses <sup>1</sup>	Number of nurses in each region	% Pap tests in region collected by nurses
Barwon South Western	2,036	27	6.1%
Eastern Metropolitan	1,247	19	1.2%
Gippsland	2,231	29	9.9%
Grampians	1,930	28	10.8%
Hume	2,026	34	8.3%
Loddon Mallee	4,937	41	17.6%
North West Metropolitan	5,117	83	3.2%
Southern Metropolitan	1,833	22	1.4%

<sup>1</sup> Excludes 251 post-hysterectomy Pap tests and 60 where woman postcode was missing or not able to be matched.

Figure 2.4.1: Proportion of Pap tests collected by nurses in 2008 by Region of the Department of Human Services



## 2.5 FREQUENCY OF EARLY RE-SCREENING

While the Australian screening policy is for repeated testing every two years after a negative Pap test report, a proportion of women are screened more frequently. A small level of early re-screening can be justified on the basis of a past history of abnormality. It is reported that early re-screening of women whose last Pap test result was normal is high with an estimated 23.1% of Australian women in the program undergoing early re-screening<sup>13</sup>. The evidence is that early re-screening does not just occur in the months immediately prior to the two year anniversary, but rather is a steady continuum throughout the two year period after a negative Pap test report.

In late 2000, the National Cervical Screening Program adopted the following definition of early re-screening:

*Early re-screening is the repeating of a Pap test within 21 months of a negative Pap test report, except for women who are being followed up in accordance with the NHMRC guidelines for the management of cervical abnormalities.*

This definition recognises that some re-screening may occur opportunistically between 21 and 24 months after a negative Pap test report and this may be cost-effective.

The following table shows the number of further tests over a 21 month period for women who received a negative Pap test report in the February of each year. The data shows that 78% of women aged 20 to 69 years who were screened in February 2007 had no further tests within the next 21 months.

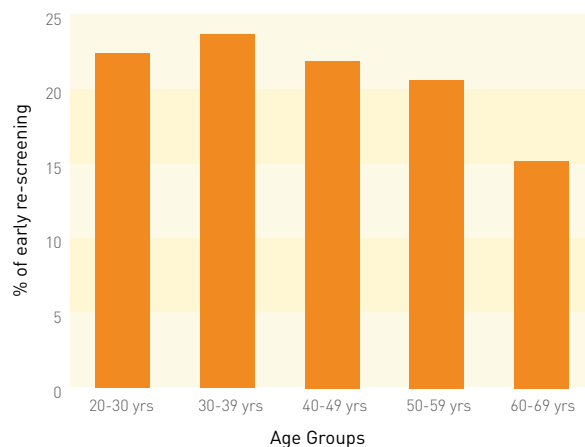
Table 2.5: Subsequent Pap tests over a 21 month period for women with a negative report in February of each year.

Number of subsequent Pap tests	Feb 1998	Feb 1999	Feb 2000	Feb 2001	Feb 2002	Feb 2003	Feb 2004	Feb 2005	Feb 2006	Feb 2007
No further tests	63%	66%	65%	68%	69%	73%	74%	75%	76%	78%
1	31%	28%	29%	27%	26%	23%	22%	22%	21%	19%
2	5%	4%	4%	4%	3%	3%	3%	3%	2%	2%
3	1%	1%	1%	1%	1%	1%	1%	< 1%	< 1%	< 1%
4	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%
5 or more	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%

The data in Table 2.5 shows a substantial improvement in early re-screening between 1998 and 2007. Among women screened in 1998, 37% had one or more Pap tests within 21 months. By 2007, this figure had fallen to just under 22%.

As seen in Figure 2.5 some variation in early re-screening occurs by age group. The graph shows the proportion of women, by age group, who had early re-screening after a negative Pap test report in February 2007. As seen in previous years, early re-screening is highest in women under 40 years of age and is least evident in the age group 60 to 69 years.

Figure 2.5: Early re-screening after a negative Pap test report in February 2007 by age.



13 Australian Institute of Health and Welfare 2009. *Cervical screening in Australia 2006–2007*. Cancer series no. 47. Cat. no. CAN 43. Canberra: AIHW.

## 3. CYTOLOGY REPORTS

Cytology reports received by the Registry are coded numerically according to the following categories of information which comprise the main aspects of a Pap test report.

- Squamous cell code
- Endocervical component code
- Other (non-cervical) cell code
- Recommendation code

The following analyses relate only to the 469,432 Pap tests collected from women of all ages by general practitioners and nurses in 2008. Pap tests collected by obstetricians, gynaecologists or at hospital outpatient clinics have been excluded from the analyses in Section 3 as these are more likely to be reported as abnormal. These selection criteria thus approximate 'community based Pap tests' from the general female population.

In the following tables, 'Average' refers to the frequency of use of the report codes across all Pap tests collected by general practitioners and nurses in 2008. 'Range' is the highest and lowest proportion for individual laboratories registering a minimum of 500 Pap tests during 2008; nine laboratories fulfilled these criteria. Six laboratories were excluded from this measurement because they reported fewer than 500 Pap tests to the Victorian Cervical Cytology Registry in 2008; 4 of these laboratories were either located on the border of Victoria and New South Wales or were located interstate.

The information on the distribution of cytology reports for squamous cells, endocervical component, other cells and the recommendation code are based on women with a cervix.

### 3.1 REPORTING OF SQUAMOUS CELLS

The following table shows the distribution of cytology reports for the eight squamous cell codes used during 2008.

**Table 3.1: Squamous cell categories for Pap tests taken by general practitioners and nurses, 2008.**

Squamous Cell Code	Average	Range <sup>1</sup>
Unsatisfactory	1.9%	0.1% - 6.4%
Negative for intraepithelial lesion or malignancy <sup>2</sup>	92.7%	88.9% - 95.0%
Possible low-grade squamous intraepithelial lesion	2.3%	1.3% - 7.3%
Low-grade squamous intraepithelial lesion	2.0%	0.9% - 2.6%
Possible high-grade squamous intraepithelial lesion	0.6%	0.2% - 1.2%
High-grade squamous intraepithelial lesion	0.5%	0.2% - 0.9%
High-grade squamous intraepithelial lesion with possible micro-invasion/ invasion	< 0.1%	0.0% - < 0.1%
Squamous carcinoma	< 0.1%	0.0% - < 0.1%

- 1 Excludes laboratories reporting fewer than 500 Pap tests.  
 2 May include reactive changes.

The proportion of abnormal Pap tests (with an abnormality of possible low-grade lesion or worse) in 2008 was 5.4% which is the same as the previous year.

A definite high-grade abnormality (i.e. high-grade lesion with or without possible micro-invasion or invasion, invasive squamous cell carcinoma) was reported in 0.5% of Pap tests for 2008.



### 3.2 REPORTING OF ENDOCERVICAL COMPONENT

The presence of endocervical cells within a Pap test specimen may be a reflection of smear quality and is necessary in the detection and reporting of glandular abnormalities including atypical cells, possible high-grade lesion, endocervical adenocarcinoma-in-situ and adenocarcinoma. The following table shows the distribution of cytology reports for technically satisfactory Pap tests, for the codes relating to the endocervical component. Pap tests which are known to have been collected post-hysterectomy are excluded.

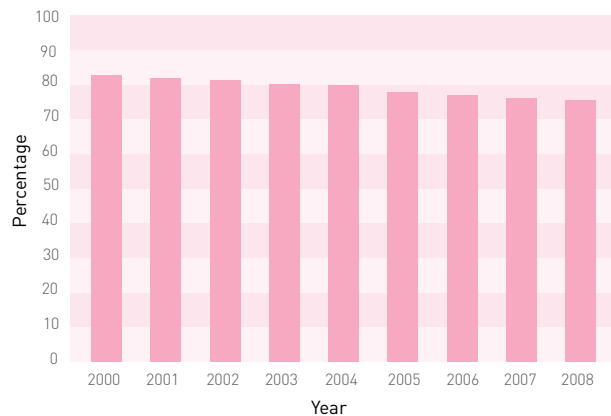
**Table 3.2: Endocervical component for Pap tests taken by general practitioners and nurses, 2008.**

Endocervical Component Code	Average	Range <sup>1</sup>
No endocervical component present	24.5%	20.8% - 38.2%
No abnormality or only reactive changes	75.4%	61.8% - 77.7%
Atypical endocervical cells of uncertain significance	< 0.1%	< 0.1% - < 0.1%
Possible high-grade endocervical glandular lesion	< 0.1%	< 0.1% - 0.1%
Adenocarcinoma-in-situ	< 0.1%	< 0.1% - < 0.1%
Adenocarcinoma-in-situ with possible micro-invasion/invasion	0.0%	0.0% - < 0.1%
Adenocarcinoma	0.0%	0.0% - < 0.1%

<sup>1</sup> Excludes laboratories reporting fewer than 500 Pap tests.

As illustrated in Figure 3.2, the proportion of Pap tests with an endocervical component has gradually decreased from 82.7% in 2000 to 74.5% for 2008 ( $p < 0.001$ ). This decrease has also been seen at a national level. The reason for the decline in Pap tests with an endocervical component is unclear.

**Figure 3.2: Proportion of Pap tests collected by GPs and nurses with an endocervical component over time.**



### 3.3 REPORTING OF OTHER CELLS (NON-CERVICAL)

Of Pap tests collected in 2008 by general practitioners and nurses 99.9% of the cytology reports indicated no other (non-cervical) abnormal cells were present.

Among the Pap tests collected by general practitioners and nurses during 2008 reported with abnormal cells, there were:

- 131 reports of atypical endometrial cells of uncertain significance
- 61 reports of atypical glandular cells of uncertain significance
- 67 reports of possible endometrial adenocarcinoma
- 7 reports of possible high-grade lesion which was non-cervical
- 17 reports of malignant cells of the uterus; and
- 17 reports of other malignant cells (such as metastatic malignancy).

### 3.4 USE OF RECOMMENDATION CODES

Most cytology reports now include a recommendation by the laboratory about the next stage of care for the woman. During 2008, 4,308 cytology reports (0.9%) issued to general practitioners and nurses did not include a recommendation.

The following table shows statistics for the recommendation codes. 'Average' uses data relating to Pap tests with a recommendation from all laboratories. The statistics listed under 'Range' are confined to the nine laboratories that attached recommendations to more than 80% of their general practitioner/nurse Pap tests and where a minimum of 500 such reports were made. In calculating these percentages, the number of tests with recommendations was used as the denominator.

Among Pap tests receiving a recommendation in 2008, the proportion recommending a repeat Pap test in two years was 82.9%. This is comparable to 82.5% for 2007. The proportion of Pap tests with a recommendation of a repeat smear in one year for 2008 was 9.9% which is slightly less than that for 2007 (10.3%).

Of interest is the change in the proportion of recommendations for a repeat smear within 6 months comparing before and after the implementation of the NHMRC Guidelines in the second half of 2006. The 2006 Guidelines recommend cytologic monitoring of most low-grade abnormalities in 12 months, rather than immediate colposcopy. As expected the proportion of recommendations for a repeat test in 6 months dropped from 3.3 in 2005 to 0.4% for both 2007 and 2008 (excluding repeat smears in 6 to 12 weeks which is the recommendation for unsatisfactory smears).

Table 3.4 also shows that laboratories used the symptomatic code for 2.4% of Pap tests from general practitioners and nurses during 2008. The use of the symptomatic code by all laboratories became an option after the new Cytology Coding Schedule was implemented in 2006.

Table 3.4: Recommendation codes for Pap tests taken by general practitioners and nurses, 2008.

Recommendation Code	Average	Range <sup>1</sup>
Repeat smear in 2 years	82.9%	74.6% - 85.9%
Repeat smear in 1 year	9.9%	6.7% - 12.6%
Repeat smear in 6 months	0.4%	0.2% - 1.5%
Repeat smear in 6 to 12 weeks	1.8%	1.2% - 6.3%
Colposcopy/biopsy recommended	2.1 %	1.0% - 4.3%
Already under gynecological management	0.2%	< 0.1% - 2.7%
Referral for specialist opinion	0.1%	0.0% - 4.5%
Other	0.2%	< 0.1% - 1.0%
Symptomatic- clinical management required	2.4%	0.3% - 3.3%

<sup>1</sup> Excludes laboratories reporting fewer than 500 Pap tests or where less than 80% of tests had an attached recommendation.

### 3.5 TYPE OF PAP TESTS

In July 2006, the Registry began recording the type of Pap test taken i.e. conventional cytology, liquid-based specimen or combination.

During 2008 the proportion of liquid-based Pap tests was 3.5% of all tests collected by general practitioners and nurses. Most of these tests are "split samples" where the conventional smear is accompanied by the liquid-based specimen. Very small numbers were liquid-based specimens only (0.05%).

## 4. HISTOLOGY AND COLPOSCOPY REPORTS

This section describes the histology and colposcopy reports that were notified to the Registry during 2008. The majority of all relevant cervical biopsies are reported to the Registry; however, as reporting is voluntary there are fluctuations in numbers from year to year and reporting is therefore not complete. All cancers are notified by laboratories, hospitals and the VCCR to the Victorian Cancer Registry.

In 2008, there were 16,004 reports relating to the cervix, with each woman being counted only once on the basis of her most serious report for the year. In ascertaining the most significant report for each woman, histology results took precedence over colposcopy results. The following table shows the distribution of the findings on further investigation for 2008.

Table 4: Histology and/or colposcopy findings reported to the Registry in 2008<sup>1</sup>.

Histology and colposcopy findings	Number	(%)
Cancer- invasive glandular <sup>2</sup>	27	(0.2%)
Micro-invasive glandular	10	(0.1%)
High-grade- glandular	97	(0.6%)
Glandular atypia	1	(< 0.1%)
Cancer- invasive other <sup>3</sup>	7	(< 0.1%)
Cancer- invasive squamous	45	(0.3%)
Micro-invasive squamous	35	(0.2%)
CIN3 with questionable micro-invasion	12	(0.1%)
CIN3	1,628	(10.2%)
CIN2/3	396	(2.5%)
CIN2	1,574	(9.8%)
High-grade - not otherwise defined	126	(0.8%)
CIN- not otherwise defined	34	(0.2%)
CIN1	1,521	(9.5%)
HPV effect	815	(5.1%)
Low grade- not otherwise defined	720	(4.5%)
Benign changes/normal	8,846	(55.3%)
Unsatisfactory	110	(0.7%)
<b>TOTAL</b>	<b>16,004</b>	<b>(100%)</b>

1 Includes findings from 1,327 colposcopy reports.

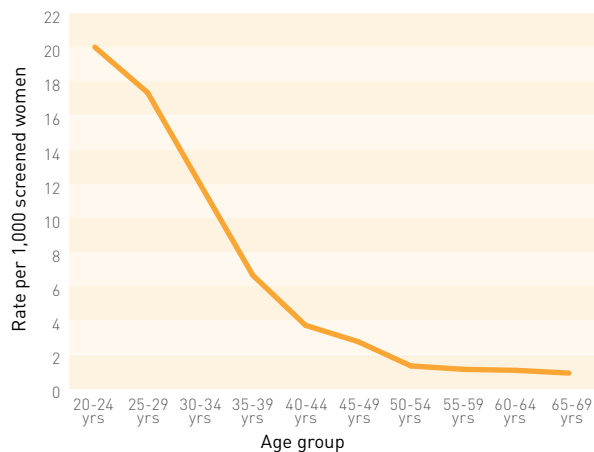
2 Cancer- invasive glandular includes adenocarcinoma and mixed adenosquamous carcinoma.

3 Cancer- invasive other includes small cell carcinoma, embryonal/clear cell carcinoma or other malignant lesion.

## 5. HIGH-GRADE ABNORMALITY DETECTION RATE

For 2008 the overall detection rate for high-grade abnormalities as detected by histology in Victoria for women aged 20-69 years was 7.22 per 1,000 women screened. Figure 5 below illustrates the detection rate of high-grade intraepithelial abnormalities as detected by histology as a proportion of 1,000 screened women for 2008 by age group. The graph clearly illustrates that younger women have a much higher rate of high-grade abnormalities compared with older women. Colposcopy reports are excluded from the data below.

Figure 5: Detection rate of high-grade intraepithelial abnormalities detected by histology per 1,000 screened women



## 6. CORRELATION BETWEEN CYTOLOGY AND HISTOLOGY REPORTS

Table 6 shows the correlation between the histology findings and the prediction made on cytology prior to the histology report. Colposcopy reports have been excluded from this analysis as laboratory performance measures are based solely on histology. This correlation is important to laboratories in assisting with quality control and performance measures required by the National Pathology Accreditation Advisory Council (NPAAC)<sup>14</sup>.

The correlation is restricted to cases where the cytology was reported as abnormal in a six month period preceding the histology report. In cases where the histology report followed a negative cytology report, up to 30 months has been allowed between the cytology and the histology.

In interpreting this information, it is important to remember that only a minority of low-grade cytology (atypia and CIN1) is further investigated by colposcopy or biopsy, and an even smaller percentage of negative cytology reports are followed by colposcopy or biopsy. Women who have a biopsy are likely to be an atypical subset of the whole group of women with negative or low-grade cytology reports.

The correlation data presented uses the Cytology Coding Schedule implemented in July 2006 and the Australian Modified Bethesda System of 2004. Each Pap test is assigned a summary code (of negative, low-grade, glandular, possible high-grade, high-grade or cancer) which is based on specific criteria of the squamous, endocervical and other/non-cervical codes. The correlation uses this classification for cytology as well as a classification based on the histology reports.

Of women with a definite high-grade squamous cytology report, 81.4% (2,175/2,671) were subsequently diagnosed with high-grade histology (high-grade not otherwise defined, CIN2, CIN2/3, CIN3 and micro-invasive and invasive squamous carcinoma) at biopsy. This figure represents the positive predictive value of a high-grade cytology report for high-grade histology and is higher than the positive predictive value for 2007 (78.3%). The NPAAC performance standards require that not less than 65% of cytology specimens with a definite high-grade epithelial abnormality are confirmed on histology within 6 months as having a high-grade abnormality or cancer.

Although the significance of atypical endocervical or glandular cells of undetermined significance is undetermined, the NHMRC Guidelines<sup>15</sup> recommend colposcopy as an initial evaluation because of the risk of invasive cancer. Of the 57 women with cytology reports of atypical endocervical or glandular cells of undetermined significance where histology was available within 6 months, 1 woman was diagnosed with invasive glandular cancer.

Again in 2008, there were no frankly invasive cancers in women with low-grade cytology in the six month period preceding histology.

<sup>14</sup> National Pathology Accreditation Advisory Council. *Performance Measures for Australian Laboratories reporting Cervical Cytology*, 2006.

<sup>15</sup> NHMRC (National Health and Medical Research Council) 2005. *Screening to prevent cervical cancer: guidelines for the management of asymptomatic women with screen detected abnormalities*. Canberra: NHMRC.



Table 6: Histology findings following a cytology report, 2008<sup>1</sup>.

Histology findings	Cytology Prediction											
	Negative <sup>4</sup> Number (%)		Glandular atypia <sup>5</sup> Number (%)		Low-grade <sup>6</sup> Number (%)		Possible high-grade <sup>7</sup> Number (%)		High-grade <sup>8</sup> Number (%)		Cancer <sup>9</sup> Number (%)	
Cancer- invasive glandular <sup>2</sup>	7	(0.1%)	1	(1.8%)	0	(0.0%)	4	(0.3%)	3	(0.1%)	11	(13.9%)
Micro-invasive glandular	2	(0.0%)	0	(0.0%)	0	(0.0%)	1	(0.1%)	7	(0.3%)	0	(0.0%)
High-grade- glandular	4	(0.1%)	6	(10.5%)	5	(0.2%)	27	(1.8%)	50	(1.9%)	2	(2.5%)
Glandular atypia	1	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
Cancer- invasive other <sup>3</sup>	4	(0.1%)	0	(0.0%)	0	(0.0%)	1	(0.1%)	0	(0.0%)	0	(0.0%)
Cancer- invasive squamous	2	(0.0%)	0	(0.0%)	0	(0.0%)	2	(0.1%)	13	(0.5%)	26	(32.9%)
Micro-invasive squamous	1	(0.0%)	1	(1.8%)	1	(0.0%)	3	(0.2%)	23	(0.9%)	6	(7.6%)
CIN3 with questionable micro-invasion	0	(0.0%)	0	(0.0%)	0	(0.0%)	1	(0.1%)	8	(0.3%)	3	(3.8%)
CIN3	49	(0.8%)	3	(5.3%)	132	(4.1%)	300	(19.9%)	1,074	(40.2%)	28	(35.4%)
CIN2/3	22	(0.3%)	0	(0.0%)	46	(1.4%)	89	(5.9%)	227	(8.5%)	0	(0.0%)
CIN2	76	(1.2%)	1	(1.8%)	375	(11.5%)	351	(23.3%)	727	(27.2%)	1	(1.3%)
High-grade - not otherwise defined	13	(0.2%)	0	(0.0%)	25	(0.8%)	24	(1.6%)	43	(1.6%)	0	(0.0%)
CIN- not otherwise defined	5	(0.1%)	0	(0.0%)	5	(0.2%)	3	(0.2%)	7	(0.3%)	0	(0.0%)
CIN1	193	(3.0%)	0	(0.0%)	851	(26.1%)	181	(12.0%)	184	(6.9%)	0	(0.0%)
HPV effect	167	(2.6%)	2	(3.5%)	378	(11.6%)	73	(4.9%)	65	(2.4%)	0	(0.0%)
Possible low-grade	163	(2.6%)	2	(3.5%)	226	(6.9%)	41	(2.7%)	42	(1.6%)	1	(1.3%)
Benign changes/normal	5,676	(88.9%)	41	(71.9%)	1,215	(37.3%)	404	(26.8%)	198	(7.4%)	1	(1.3%)
<b>Total</b>	<b>6,385</b>	<b>(100%)</b>	<b>57</b>	<b>(100%)</b>	<b>3,259</b>	<b>(100%)</b>	<b>1,505</b>	<b>(100%)</b>	<b>2,671</b>	<b>(100%)</b>	<b>79</b>	<b>(100%)</b>

1 The above correlation table excludes colposcopy findings.

2 Cancer- invasive glandular: includes adenocarcinoma and mixed adenosquamous carcinoma.

3 Cancer- invasive other: includes small cell carcinoma, embryonal/clear cell carcinoma or other malignant lesion.

4 Negative cytology.

5 Glandular cytology: includes atypical glandular cells of uncertain significance and atypical endocervical cells of uncertain significance.

6 Low-grade cytology: includes possible low grade and low-grade squamous intraepithelial lesion.

7 Possible high-grade cytology: includes possible high-grade squamous intraepithelial lesion and possible high-grade endocervical glandular lesion.

8 High-grade cytology: includes high grade squamous intraepithelial lesion and AIS.

9 Cancer cytology: includes high-grade squamous intraepithelial lesion with possible microinvasion/ invasion, squamous carcinoma, adenocarcinoma-in-situ with possible microinvasion/ invasion and adenocarcinoma.

## 7. FOLLOW-UP AND REMINDER PROGRAM

Throughout 2008 VCCR followed the Reminder and Follow-up Protocol (refer to Appendix 2) which was modified after the introduction of the new NHMRC Guidelines in 2006. As part of the follow-up service provided by VCCR a total of 274,459 follow-up and reminder letters were mailed to women and practitioners in 2008. The following is a summary of the VCCR follow-up activities during 2008.

### Reminders

Between 1 January 2008 and 31 December 2008, 248,406 reminder letters were sent to women in the categories shown in Table 7.

Of the 210,793 reminders sent after a negative Pap test, 70,028 (33%) women had a subsequent Pap test within three months of the date of the reminder. By early September 2009, 126,807 (60%) women had a repeat Pap test.

**Table 7: Number of reminder letters sent to women by the VCCR in 2008.**

Pap test report category	Number sent
High-grade with subsequent biopsy	969
High-grade no subsequent Pap test by 12/12	141
Low-grade with subsequent biopsy or colposcopy	1,443
Low-grade - previous test abnormal or fluctuating abnormality	1,098
Low-grade – over 30 with no negative cytology in previous 3 years	456
Low-grade – all other women	5,106
Negative with previous abnormal	26,009
Negative	210,793
Unsatisfactory with previous abnormal	40
Unsatisfactory	2,351

### Follow-up

During 2008, VCCR sent out 2,327 questionnaires to practitioners seeking further information after a high-grade abnormality on Pap test and 5,744 after a low-grade abnormality. These questionnaires are part of the follow-up of abnormal smears and seek information on colposcopy or biopsy to alter the follow-up interval accordingly.

During the year, 1,122 women with a high-grade abnormality required further follow-up by the Registry. Nothing further had been received at the Registry by 5.5 months after their Pap test. For these women, at least one phone call to the practitioner was made to ascertain follow-up, with many requiring additional calls. As the Registry was unable to ascertain whether the woman was aware of her abnormal result in 281 cases, letters were sent, mostly by Registered mail, to these women.

### Practitioner Lists

During 2008, Practice Based Reminder lists were sent every four months to over 900 practitioners who had requested to receive them. Practice Based Reminder Lists detail women who are between 21 and 27 months since their last negative Pap test and are about to receive reminders from the Registry. The lists enable practices to send the Registry address updates and other information relevant to follow-up and can help establish for them if a woman has had a test elsewhere.

Over 1,300 clinics/practices were sent PIP (Practice Incentive Program) lists in each quarter of 2008. The lists contain women who have not had a Pap test for at least 4 years and are therefore considered to be 'high risk'. The lists are sent to the clinic where the woman's last Pap test was taken and practitioners receive an incentive payment if these women have a subsequent Pap test.

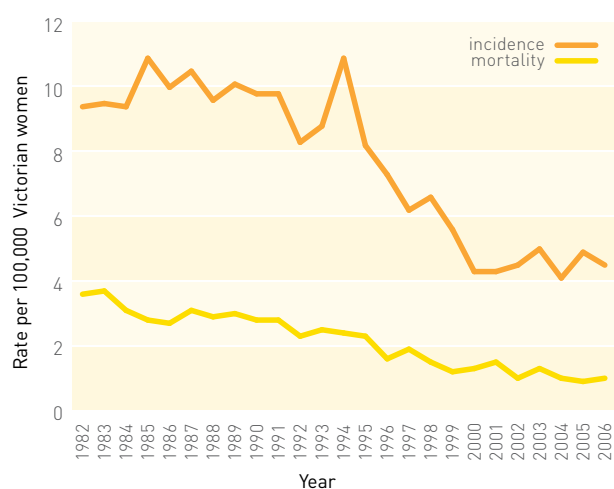
## 8. CERVICAL CANCER INCIDENCE AND MORTALITY IN VICTORIA

The aim of the cervical cancer screening program is to reduce the incidence and mortality from cervical cancer. Data on cancer incidence and mortality are collected by the Victorian Cancer Registry and notifications are required from laboratories, hospitals and the VCCR.

Figure 8.1 shows the incidence and mortality rates from cervical cancer in Victoria from 1982 to 2006. The incidence of cervical cancer has declined dramatically since the 1980s with a considerable decline from the mid 1990s. There was a plateau in incidence in 2000 and the rate has remained relatively stable since that time at between 4 and 5 per 100,000 women.

The mortality from cervical cancer in Victoria has declined gradually over time and since 2002 has been around 1.0 per 100,000 women, which is among the lowest in the world<sup>16</sup>. The reported mortality rate for all types of cervical cancer in 2006 is 1.0 per 100,000 Victorian women.

Figure 8.1: Age-standardised incidence and mortality rates for all types of cervical cancer in Victoria, 1982 to 2006.

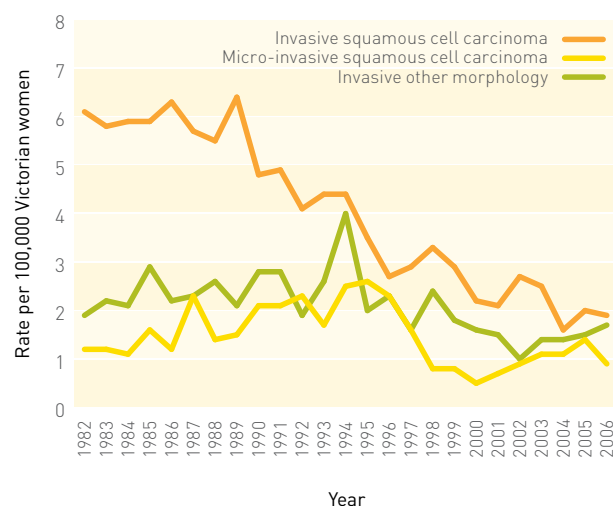


ASR is the age-standardised incidence rate.  
Source: Thursfield V, Farrugia H, Giles G. Cancer in Victoria 2006. Canstat No 46. The Cancer Council Victoria, Melbourne 2009.

Figure 8.2 shows the age-standardised incidence rates for cervical cancer by histological type over time. The greatest impact of the cervical screening program is on squamous cell carcinoma of the cervix, with age-standardised incidence rates declining from 6.5 per 100,000 women in 1989 to 1.9 per 100,000 in 2006.

Incidence rates for micro-invasive cancer have declined slightly over time. Rates for other cancers, comprising predominantly cervical adenocarcinomas, are slightly lower than in the early 1990s although it is recognised that cervical screening is less effective for the detection of adenocarcinomas<sup>17</sup>.

Figure 8.2: Age-standardised incidence rates (ASR) for cervical cancer by histological subtype in Victoria, from 1982 to 2006.



Other cancers are comprised of cervical adenocarcinomas, mixed adenosquamous carcinomas and small cell carcinomas.  
ASR is the age-standardised incidence rate.

Source: Unpublished data, Victorian Cancer Registry, Cancer Council Victoria.

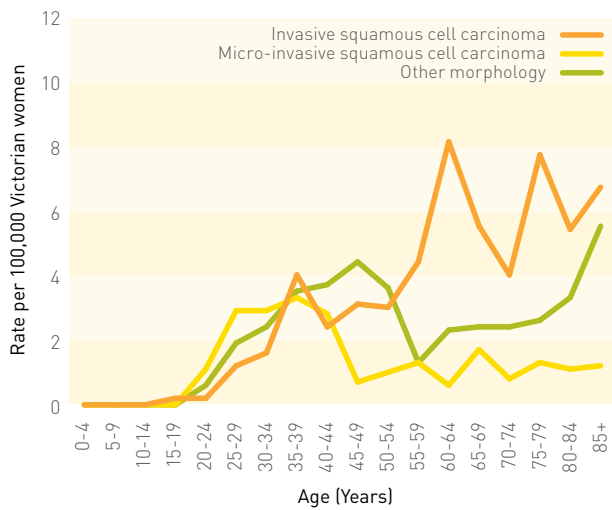
16 Ashford L, Collymore Y, Boyd A, Herdman C, Sherris J. *Preventing Cervical Cancer Worldwide*. Washington, DC: Population Reference Bureau; 2004.

17 NHMRC (National Health and Medical Research Council) 2005. *Screening to prevent cervical cancer: guidelines for the management of asymptomatic women with screen detected abnormalities*. Canberra: NHMRC.



Figure 8.3 shows the age-specific incidence rates of cervical cancer by histology and age, grouped over the period 2004 to 2006. The age-specific incidence of invasive squamous cervical cancer increases steadily after the age of 35 years with a peak in the mid-60s and another in the mid-70s. Micro-invasive cervical cancer peaks at around 35 years of age and declines steadily thereafter. The incidence of other types of cervical cancer, predominantly adenocarcinomas, peaks in the mid-40s followed by a rise for women 85 years or older.

**Figure 8.3: Age-specific incidence rates of cervical cancer in Victoria, by histology, 2004 to 2006.**



Other cancers are comprised of cervical adenocarcinomas, mixed adenosquamous carcinomas and small cell carcinomas.  
 Source: Unpublished data, Victorian Cancer Registry, Cancer Council Victoria.

## 9. SCREENING HISTORY OF WOMEN DIAGNOSED WITH CERVICAL CANCER

The total number of Victorian women diagnosed with invasive cervical cancer between the 1 January 2004 and 31 December 2006 was 364. This includes 199 women with a diagnosis of squamous cell carcinoma and 165 women with other types of invasive cervical cancer (including small cell carcinoma, mixed adenosquamous and adenocarcinoma)<sup>18</sup>.

Of these 364 women, 113 were recorded on the Victorian Cancer Registry and not on the VCCR, suggesting that these women have no history of Pap test screening. For the remaining 251 women with invasive cervical cancer who are listed on the VCCR, their screening history for ten years prior to diagnosis was reviewed to determine if their screening history was adequate.

**Table 9: Screening history of Victorian women diagnosed with an invasive cervical cancer for the period 1 January 2004 and 31 December 2006.**

Screening History	Squamous cell carcinoma Number (%)	Other invasive cervical cancer <sup>1</sup> Number (%)	Total Number (%)
A. Women never screened	40 (20%)	73 (44%)	113 (31%)
B. Women with inadequate screening	140 (70%)	57 (35%)	197 (54%)
C. Women with some screening history <sup>2</sup>	19 (10%)	35 (21%)	54 (15%)
<b>Total</b>	<b>199 (100%)</b>	<b>165 (100%)</b>	<b>364 (100%)</b>

<sup>1</sup> Other cervical cancers include small cell carcinoma, mixed adenosquamous and adenocarcinoma.

<sup>2</sup> Requires further review to determine if the woman complied with the follow-up protocol used at that time.

As shown in Table 9, the screening history of the 364 women diagnosed with invasive cervical cancer in the three year time period can be classified into the following three groups.

### A. Women with no previous screening

113 women (31%) with cancer recorded on the Victorian Cancer Register were not known to the VCCR and most likely had no Pap test screening history. A small proportion of these women may have been screened interstate or overseas, or have opted-off the Registry.

### B. Women with inadequate screening history

According to the VCCR records, 197 of the women (54%) had an inadequate screening history. This is defined as women with no record of a Pap test in the previous ten years, or those with only 1 or 2 Pap tests or less than 3 negative tests in the ten years prior to their cancer diagnosis.

### C. Women with some screening history

Of the women diagnosed with an invasive cervical cancer, 54 (15%) had additional Pap test screening in the 10 years prior to their diagnosis with between 3 and 16 Pap tests per woman. While the smear quality of these 54 women has already been addressed by the NPAAC laboratory performance measures, the records of these women will be further reviewed and categorised to determine if they appear to have had adequate screening and follow-up which complied with the guidelines during that time period. Two thirds of these women were diagnosed with glandular cervical cancers, which are harder to detect through cervical screening.

Table 9 shows that at least 85% of the women diagnosed with invasive cervical cancer probably had no Pap test screening or inadequate screening in the ten years before their diagnosis (groups A and B). For squamous invasive cancers, 90% of the women were never or inadequately screened, whereas for glandular cancers this was 79%. This does not necessarily reflect a failure of cervical screening but rather recognises that Pap test screening is aimed primarily at preventing squamous cervical cancers.

<sup>18</sup> Unpublished data, Victorian Cancer Registry, Cancer Council Victoria.

# ACKNOWLEDGEMENTS

The production of this report would not be possible without the cooperation of the staff of the pathology laboratories of Victoria, the staff of the Registry, and the support of the VCCR Advisory Committee. Very sincere thanks are extended to the members of all these groups. Associate Professor Marion Saville, Director of VCS Inc, provided valuable clinical input into aspects of this report.

The figures on incidence and mortality from cervical cancer were kindly provided by the Victorian Cancer Registry at the Cancer Council Victoria. We would like to thank Vicky Thursfield and Professor Graham Giles for their assistance in providing these data.

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## LIST OF ABBREVIATIONS

- ABS:** Australian Bureau of Statistics
- ASR:** The Victorian Age Standardised Rates (ASR) are based on the World Standard Population. (Cancer Incidence in Five Continents, Volume IV, 1982, IARC).
- CIN:** Cervical Intraepithelial Neoplasia
- ERP:** Estimated Resident Population
- HPV:** Human Papillomavirus
- NHMRC:** National Health and Medical Research Council
- NPAAC:** National Pathology Accreditation Advisory Council
- VCCR:** Victorian Cervical Cytology Registry

## GLOSSARY REFERENCES<sup>19</sup>

**Adenocarcinoma** – A rare cancer affecting the cervix, but involving the columnar cells rather than the squamous cells. The columnar cells are involved in glandular activity. Adenocarcinoma has a different type and rate of progression and is not so often picked up in Pap tests

**Atypia** – Slight changes in the cells of the cervix

**Biopsy of the Cervix** – Removal of a small piece of the cervix for examination under a microscope

**Carcinoma in Situ** – Cancer cells that are restricted to the surface epithelium. The abnormal cells are evident throughout each of the layers of the epithelium but they have not extended into other, deeper tissue or surrounding areas

**Cervix** – The neck of the uterus (womb), located at the top of the vagina

**Colposcopy** – Examination of the cervix and vagina with a magnifying instrument called a colposcope to check for abnormalities

**Cytology** – The study of cells taken as samples during procedures such as Pap tests

**Endocervix** – The inside of the uterine cervix or the mucous membrane lining of the cervix

**Glandular Lesion** – Lesion involving the columnar cells of the cervix, which produce mucus and have both a different appearance and a different function from the squamous cells

**Histology** – A branch of anatomy that deals with the minute structure of animal and plant tissues as discernible with the microscope (*Merriam-Webster's Online Medical Dictionary*, (<http://www.merriam-webster.com/medical/>))

**Human Papillomavirus** – Group of viruses that can cause infection in the skin surface of different areas of the body, including the genital area. The virus can cause visible warts of the skin or may only cause microscopic changes in the cells of the skin

**Hysterectomy** – Refers to the surgical procedure whereby all or part of the uterus is removed

**Hysterectomy Fraction** – The proportion of women who have not had their uterus removed by hysterectomy

**Immunisation** – inducing immunity against infection by the use of an antigen to stimulate the body to produce its own antibodies (*AIHW (2008) Australia's Health 2008, Cat. No. AUS 99. AIHW, Canberra*)

**Incidence** – The number of new cases (for example, of an illness or event) occurring during a given period (*AIHW (2008) Australia's Health 2008, Cat. No. AUS 99. AIHW, Canberra*)

**Intraepithelial lesion** – lesion confined to the surface layer of the cervix


**Invasive Cancer** – A tumour whose cells have a tendency to invade healthy or normal tissue

**Lesion** – Alteration of surface tissue, caused by injury or disease

**Malignant** – abnormal changes consistent with cancer

**Micro-invasive squamous cell carcinoma (micro-invasive cancer)** – a lesion in which the cancer cells have invaded just below the surface of the cervix, but have not developed any potential to spread to other tissues

<sup>19</sup> Unless otherwise indicated, all definitions have been source from the following publications:  
Australian Institute of Health and Welfare 2009. *Cervical screening in Australia 2006–2007*. Cancer series no. 47. Cat. no. CAN 43. Canberra: AIHW.  
NHMRC (National Health and Medical Research Council) 2005. *Screening to prevent cervical cancer: guidelines for the management of asymptomatic women with screen detected abnormalities*. NHMRC, Canberra.



**National Cervical Screening Program** – Australia-wide systematic approach to cervical screening based on sound international scientific evidence, the aim of which is to reduce the incidence and mortality rates for cervical cancer

**Opportunistic screening** – Taking Pap smears when a woman visits her GP for another reason

**Pap Tests (or Smear)** – Simple procedure in which a number of cells are collected from the cervix, smeared onto a microscope slide and sent to a laboratory for cytological examination to look for changes that might lead to cervical cancer. Up to 90% accurate and the best way to prevent squamous cervical cancer. Named after the test's inventor, Dr Papanicolaou

**Pathology** – Laboratory-based study of disease, as opposed to clinical examination of systems

**Screening** – Testing of all people at risk of developing a certain disease, even if they have no symptoms. Screening tests can predict the likelihood of someone having or developing a particular disease

**Squamous cells** – thin and flat cells, shaped like soft fish scales. They line the outer surface of the cervix (ectocervix). They meet with columnar cells in the squamo-columnar junction. Between 80% and 85% of cancers of the cervix arise from the squamous cells. Abnormalities associated with squamous cells are most likely abnormalities to be picked up by Pap tests

**Squamous cell carcinoma** – a carcinoma arising from the squamous cells of the cervix

# APPENDIX 1. CYTOLOGY CODE SCHEDULE

SPECIMEN	Type	AØ Not stated	A1 Conventional smear	A2 Liquid based specimen	A3 Conventional <i>and</i> liquid based specimen
	Site	BØ Not stated	B1 Cervical	B2 Vaginal	B3 Other gynaecological site

CYTOLOGY	S	Squamous Cell	E	Endocervical	0	Other/Non-cervical
	SU	Unsatisfactory for evaluation e.g. poor cellularity, poor preservation, cell detail obscured by inflammation/ blood/ degenerate cells	EU	Due to the unsatisfactory nature of the smear, no assessment has been made	0U	Due to the unsatisfactory nature of the smear, no assessment has been made
	S1	Cell numbers and preservation satisfactory. No abnormality or only reactive changes	E-	Not applicable: vault smear/ previous hysterectomy	01	No other abnormal cells
	S2	Possible low-grade squamous intraepithelial lesion (LSIL)	EØ	No endocervical component	02	Atypical endometrial cells of uncertain significance
	S3	Low-grade LSIL (HPV and/ or CIN I)	E1	Endocervical component present. No abnormality or only reactive changes	03	Atypical glandular cells of uncertain significance – site unknown
	S4	Possible high-grade squamous intraepithelial lesion (HSIL)	E2	Atypical endocervical cells of uncertain significance	04	Possible endometrial adenocarcinoma
	S5	High-grade squamous intraepithelial lesion (HSIL) (CIN II/ CIN III)	E3	Possible high-grade endocervical glandular lesion	05	Possible high-grade lesion – non-cervical
	S6	High-grade squamous intraepithelial lesion (HSIL) with possible microinvasion/ invasion	E4	Adenocarcinoma – in-situ	06	Malignant cells – uterine body
	S7	Squamous carcinoma	E5	Adenocarcinoma – in-situ with possible microinvasion/invasion	07	Malignant cells – vagina
			E6	Adenocarcinoma	08	Malignant cells – ovary
				09	Malignant cells – other	

RECOMMEND	RØ	No recommendation	R4	Repeat smear 6 months	R8	Referral to specialist
	R1	Repeat smear 3 years	R5	Repeat smear 6 – 12 weeks	R9	Other management recommended
	R2	Repeat smear 2 years	R6	Colposcopy/biopsy recommended	RS	Symptomatic-clinical management required
	R3	Repeat smear 12 months	R7	Already under gynaecological management		



## APPENDIX 2. REMINDER AND FOLLOW-UP PROTOCOL USED IN 2008

### Victorian Cervical Cytology Registry Summary of Follow-up and Reminder Protocol

Cytology Report	Subsequent Biopsy or Colposcopy	Other Circumstances	Time	Action by Registry
High-grade squamous abnormality or any glandular abnormality	Yes		12 mths	Reminder to woman
	No		4 mths	Questionnaire to practitioner
			5.5 mths	Telephone call to practitioner
			6 mths	Letter to woman
		12 mths	Reminder to woman	
Low-grade squamous abnormality	Yes		15 mths	Reminder to woman
	No	Previous smear also abnormal or fluctuating low-grade abnormality	4 mths	Questionnaire to practitioner
			6 mths	Letter to woman
			12 mths	Reminder to woman
		Woman aged 30+ years and no negative cytology in preceding 36 mths	7 mths	Questionnaire to practitioner
			8.5 mths	Letter to woman
		15 mths	Reminder to woman	
Negative		Previous smear abnormal or past history of biopsy proven CIN 2 or CIN 3 without HPV 'test of cure'	15 mths	Reminder to woman
		All other women	27 mths	Reminder to woman
Unsatisfactory	Yes		12 mths	Reminder to woman
	No		6 mths	Reminder to practitioner
			9 mths	Reminder to woman

This protocol is adjusted in some unusual clinical circumstances (eg post-hysterectomy, after a diagnosis of cervical or endometrial malignancy, women aged 70+ years). Details of the full protocol can be obtained by contacting the Registry on (03) 9250 0399.

August 2007 (V8)

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