

*Quarterly Monitoring Report 26*

*National Cervical Screening Programme*

*January to March 2007*

*Independent Monitoring Group  
of the National Cervical Screening Programme*

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Massey University  
Wellington

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Technical terms are used throughout this report, and an understanding of these terms may be necessary to interpret some parts of this report.

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## 1. Executive Summary

This report provides data on performance indicators of the National Cervical Screening Programme (NCSP) for the period 1 January 2007 to 31 March 2007. In July 2005 the NCSP adopted the Revised Bethesda Coding Standard 2001 which meant that the cytology adequacy category of 'satisfactory but limited' ceased to be used. Therefore some of the tables and figures reported here are not the same as those in reports for periods prior to July 2005. Comparisons cannot be made between previous reports and the current report for these indicators. Where these changes have occurred, they are described in the text.

### *Follow-up of women with high grade cytology*

In total, 5,178 women had a high grade cytology result recorded on the NCSP Register between 1 April 2005 and 31 March 2006. Three-quarters (75.1%) of these women were recorded as having had a histology specimen taken within 12 weeks of their high grade cytology being taken. This was less than the target of 90%. The proportion of women who had a histological specimen taken within 52 weeks of the high grade cytology was also below the 99% target (90.5%). For 418 (8.1%) of the 5,178 women, a subsequent histology result was not recorded on the NCSP Register. This is similar to the proportions reported in the previous two quarters (8.0% and 8.5%). The proportions of women who had no histology recorded on the NCSP Register varied amongst the NCSP Regions.

### Ethnic disparities

When looking at the timeliness of histology reports following high grade cytology results there continue to be large differences between ethnic groups. For example, at 12 weeks, the proportion of non-Māori, non-Pacific women (77.8%) having reports of histological specimens is higher than those for Pacific (53.2%) and Māori women (65.2%). For women who had no histology results recorded on the NCSP Register following a high grade cytology, there are also differing patterns by ethnicity. The proportion of Māori women (36.9%) that did not have a subsequent cytology after their high grade cytology report was higher than those of non-Māori, non-Pacific (19.3%) and Pacific women (13.0%).

***Laboratory smear reporting***

Nine laboratories reported cervical cytology during this quarter. Overall, of the 98,467 satisfactory smears processed during the quarter, 8.0% were reported as abnormal, which was within the target of not more than 10%. Three laboratories reported abnormalities outside this target, with the highest reporting abnormalities in 18.8% of smears read. The overall proportion of smears reported as negative for dysplasia or malignancy was 92.0%, and all of the laboratories met the target of not more than 96%. The overall proportion of smears reported as high grade squamous intra-epithelial lesion (HSIL) was 0.8%, which met the target of not less than 0.6%. Two laboratories reported outside this target, with the lowest reporting 0.3% of the smears that they read as HSIL.

***Laboratory cytology turn around time***

Five of the nine laboratories reporting cervical cytology met the seven-day cytology turn around time target (90%) in this reporting quarter. Three laboratories met the 14-day turn around time target of 100%. The laboratory with the lowest reported proportion of smears read within 14 days had read 53.1% of their smears in that time.

**Ethnic disparities**

There continue to be differences in cytology turnaround times between ethnic groups. The proportion of Māori women (82.1%) who had smears reported within seven working days was less than those of Pacific (88.2%) and non-Māori, non-Pacific women (87.3%). The proportions of Māori (5.6%) and Pacific women (5.0%) who had a smear reported outside 14 working days were more than that of non-Māori, non-Pacific women (3.1%).

***Laboratory histology turn around time***

Twenty-two laboratories reported cervical histology during the quarter. Five laboratories did not meet the five-day histology turn around time target of 90%. Ten laboratories reported 100% of histology results within 10 working days of the specimen arriving at the laboratory.

**Ethnic disparities**

There continue to be differences in histology turnaround times between ethnic groups. The proportion of Māori women (91.4%) who had histology reported within five

working days was less than those of Pacific (92.3%) and non-Māori, non-Pacific women (92.2%).

### ***Unsatisfactory smears***

The targets for unsatisfactory smears are currently under review due to the introduction of the Revised Bethesda Coding System 2001. As the satisfactory but limited smear category is no longer in use, it is expected that both unsatisfactory and satisfactory rates will increase.

Overall, 4,582 (4.4%) of the 103,049 smears processed were reported as unsatisfactory for evaluation.

### ***Colposcopic assessment***

The colposcopy service indicators were unable to be calculated because the data required were not available. All colposcopy units provided data for this reporting period. For any colposcopy unit, the highest reported number of women with a high grade cytology abnormality waiting longer than four weeks at the end of each month for their first colposcopic assessment was 49. For any unit, the highest reported number of women with a low grade cytology abnormality waiting longer than 26 weeks at the end of each month was 121.

### ***Short interval re-screening***

The overall proportion of short interval re-screening was 11.1% for this reporting period, which is outside the target of not more than 10%. Women aged 20 to 24 years were most likely to be re-screened within a short interval (14.7%), while women aged 65 to 69 years were least likely to be re-screened within a short interval (8.0%). Short interval re-screening varied considerably among the DHBs, ranging from 5.6% to 16.7%. There was little variation by ethnic group, with Māori, Pacific, and non-Māori, non-Pacific women all falling outside the target of not more than 10%.

## 2. Background

The National Cervical Screening Programme (NCSP) was established in 1990. The aim of the NCSP is to reduce the incidence and mortality rate of cervical cancer amongst women in New Zealand.

The NCSP is co-ordinated by the National Screening Unit (NSU) of the Ministry of Health (MoH), and involves women, smear takers, cytology laboratories, histology laboratories, colposcopists and regional NCSP offices. The NCSP Register records the cervical cytology and histology results for women who have ever been enrolled in the Programme, unless they have formally withdrawn from the Programme. Information on the Register is used to help to ensure that women enrolled receive smears at the recommended intervals and that they are referred for assessment and treatment when necessary. Aggregate information is also used to monitor the performance of the overall NCSP against national indicators and targets.

The NSU, through a committee of experts and a consultation process, established national indicators for the NCSP in 2000. Where it was considered appropriate and feasible, the NSU set targets for some indicators. For other indicators, changes over time are assessed. Some indicators, targets, and reporting frequencies have been updated due to further information obtained through the monitoring process.

The Independent Monitoring Group (IMG) of the NCSP has been responsible for providing independent quantitative monitoring of the NCSP since 2001. Part of this responsibility is to produce quarterly and annual reports of the national indicators for the NCSP.

In 2005 the Centre for Public Health Research (CPHR), Massey University was appointed through an open tender process to carry out the independent monitoring. The raw data from which the indicators (with the exception of the colposcopy indicators) included in these reports are calculated were provided to the CPHR by the NSU, in the form of an anonymised extract from the NCSP Register. The data extract

was taken six weeks after the end of the period to which this report relates. The colposcopy data were provided by the NSU and reformatted by the CPHR.

### 3. Abbreviations

The following abbreviations are used in this report:

ASC-H:	Atypical squamous cells of undetermined significance, cannot exclude high grade
ASC-US:	Atypical squamous cells (ASC) of undetermined significance (ASC-US), excluding ASC cannot exclude high grade (ASC-H)
CIN:	Cervical intra-epithelial neoplasia; I: low grade; II, III: high grade
CPHR:	Centre for Public Health Research, Massey University
DHB:	District Health Board
HPV:	Human papilloma virus
HSIL:	High grade squamous intra-epithelial lesion
IMG:	Independent Monitoring Group
ISC:	Invasive squamous carcinoma
LSIL:	Low grade squamous intra-epithelial lesion
MoH:	Ministry of Health
NCSP:	National Cervical Screening Programme
NSU:	National Screening Unit of the Ministry of Health
SIR:	Short interval re-screening
SCL:	Southern Community Laboratories

## 4. Recommendations

### 4.1 Current recommendations

#### *Section 6.1 Follow-up of women with a high grade cytology*

1. The NSU is to investigate all women with a high grade smear and no subsequent histology result recorded on the NCSP Register individually. Priority is to be given to women with no subsequent smear, Māori women, Pacific women, and then by Region, starting with Manawatu/Whanganui, Wellington and Tairāwhiti.

#### *Section 6.2 Laboratory smear reporting*

2. The IMG notes the low ASC-US, ASC-H and total abnormalities rates for SCL Dunedin and SCL Christchurch and is awaiting responses from a previous recommendation in Quarterly Report 25 (published in August 2007).
3. The IMG notes the high total abnormalities rate for MedLab Bay of Plenty and will maintain watchful waiting until Quarterly Report 27 (to determine whether a trend is developing).

#### *Section 6.3 Laboratory cytology turn around time*

4. The IMG requests an explanation for the low proportion of smears reported on within seven days by Aotea Pathology, Auckland Hospital Laboratory, MedLab Central and SCL Christchurch.
5. The IMG requests an explanation for the high number of smears reported on after more than 14 days by Auckland Hospital Laboratory, Diagnostic MedLab Auckland, SCL Christchurch and SCL Dunedin.
6. The IMG notes with concern the continuing ethnic disparities in the timeliness of smear reporting (Quarterly Monitoring Report 23, published in 2006) and is awaiting further ongoing analyses by the NSU in response to a previous recommendation.

#### *Section 6.4 Laboratory histology turn around time*

7. The IMG is still awaiting a response to previous recommendations from Wellington Hospital for low histology turnaround times (Quarterly Reports 14, 15&16, 18&19, 22, 23, 24 and 25, published from 2005). The IMG notes with concern a worsening trend for Wellington Hospital and would like this matter flagged for NSU attention.

8. The IMG requests an explanation from Memorial Hospital Hastings and Waikato Hospital for low histology turnaround times.
9. The IMG has previously requested an explanation from the NSU for the differences in timeliness of reporting histology by ethnicity (Quarterly Report 24, published in 2007), and is awaiting the results of ongoing analyses.

*Sections 6.7 and 6.8 Waiting time for colposcopic assessment*

10. The IMG is concerned about the potential incompleteness of colposcopy data and requests the NSU to review the data provided to the IMG.
11. The IMG is also concerned by the continuing unavailability of data needed to report on both the targets for waiting times for colposcopic assessment, and ethnicity specific waiting times. The IMG requests that the NSU continues to seek solutions to these problems.

*Section 6.9 Short interval re-screening*

12. The IMG notes high rates of short interval re-screening and is awaiting a response from a previous recommendation in Quarterly Report 25 (published in August 2007).
13. The IMG request the NSU to clarify the meaning of the Unspecified DHB category and to review how it is used, with a view to decreasing the proportion of women in this category.

## **4.2 Previous recommendations**

Recommendations made at the 11 June 2007 meeting based on discussions about Report 25, October to December 2006:

General issues

- The IMG requested at the December 2006 meeting that the NSU produce a document relating to the historical and current collection of ethnicity data on the NCSP Register. This should cover how the ethnicity data were/are collected, by whom, what question was/is used and how multiple ethnicities were/are dealt with. This information will be included in future IMG reports.

Data issues

*Section 6.10 Positive predictive value for women with a high grade smear*

- The IMG request the results of the review of international ASC-H rates from the NSU's indicator review group.

## Service issues

### *Section 6.1 Follow-up of women with a high grade cytology*

- The NSU is to investigate all women with a high grade smear and no subsequent histology result recorded on the NCSP Register individually. Priority is to be given to women with no subsequent smear, Māori women, Pacific women, and then by Region, starting with Manawatu/Whanganui and Wellington.
- The IMG notes with concern that recommendations have been made regarding the timeliness of follow-up of high grade smears since 2004. As a way forward, the IMG requested that the NSU produce a flow diagram of the follow-up of women with high grade cytology and delayed (outside target) subsequent histology, which is a work in progress. The flow diagram should show the complete number of women where follow-up is unknown (including DNA, GNA, NRR, no contact). In addition there should be a parallel diagram produced for women who fall outside the Programme's target age range (i.e. for women younger than 20 and older than 69 years).
- The IMG request an explanation for the inappropriate practice of a subsequent smear being taken by a non-specialist following a high grade smear, for all women (specifically, is the non-specialist at a colposcopy unit or not?).
- The IMG request an explanation for persisting ethnic disparities among women with a high grade smear and a subsequent smear taken by a non-specialist or no subsequent smear.

### *Section 6.2 Laboratory smear reporting*

- The IMG notes the low HSIL rates reported by MedLab Wellington and Valley Diagnostic Laboratories. Due to the recent merger of these two laboratories, the IMG is not making a recommendation at this time but will maintain watchful waiting.
- The IMG notes the low ASC-US, ASC-H and total abnormalities rates for SCL Dunedin, and the low total abnormalities rate for SCL Christchurch. The IMG request 42-month look back statistics for 2005 and 2006 (four six-month periods) for SCL Dunedin and SCL Christchurch.
- The IMG notes the high total abnormalities rate for MedLab Bay of Plenty and will maintain watchful waiting until Quarterly Report 26 (to determine whether a trend is developing).

- The IMG requests the NSU to investigate whether it is possible to provide a percentage split breakdown of community-based and hospital-based smears for each laboratory. The IMG specifically want to see the breakdown for Canterbury Health Laboratories.

*Section 6.3 Laboratory cytology turn around time*

- The IMG is awaiting a response for the very low proportion of smears reported on within seven days by Canterbury Health Laboratories from Quarterly Report 24 (published in 2007), and notes that this is an ongoing quality issue which appears to be worsening.
- The IMG notes the high proportion of smears reported on after more than 14 days by SCL Christchurch. The IMG is awaiting a response from previous recommendations (beginning in Quarterly Monitoring Report 16, published in 2005).
- The IMG requests an explanation for the high proportion of smears reported on after more than 14 days by Auckland Hospital Laboratory and SCL Dunedin.
- The IMG notes the continuing ethnic disparities in the timeliness of smear reporting (Quarterly Monitoring Report 23, published in 2006) and is awaiting further ongoing analyses by the NSU in response to a previous recommendation.

*Section 6.4 Laboratory histology turn around time*

- The IMG is awaiting a response to previous recommendations from Auckland Hospital (Quarterly Report 24, published in 2007) and Wellington Hospital for low histology turnaround times (Quarterly Reports 14, 15&16, 18&19, 22, 23, and 24). The IMG notes with concern a worsening trend for Wellington Hospital.
- The IMG requests an explanation from Waikato Hospital for low histology turnaround times.
- The IMG has previously requested an explanation from the NSU for the differences in timeliness of reporting histology by ethnicity (Quarterly Report 24, published in 2007), and is awaiting the results of ongoing analyses.

*Section 6.9 Short interval re-screening*

- The IMG notes high rates of short interval re-screening and request the NSU to investigate the reasons for this.

## 5. Methods

Each indicator is described in the results section under separate headings that identify the specific indicators. The results for each indicator are discussed in relation to the set targets. For indicators with and without a target, changes over time are described.

To calculate the indicators for this report, anonymised data provided by the NSU of women enrolled on the NCSP Register were used. This report includes results for Māori and Pacific women. Both the National Kaitiaki Group and the Pacific Women's Data Advisory Group approved the use of data for enrolled women recorded as identifying with Māori and Pacific ethnic groups, respectively, on the NCSP Register. For the purposes of the monitoring reports, women recorded on the NCSP Register as being not Māori or Pacific were grouped together as the non-Māori, non-Pacific group. This group includes women whose ethnic group was unknown, estimated as 7% of the total number of women on the NCSP Register. Therefore, ethnic disparities shown in these monitoring reports are likely to be underestimated due to the probable underestimation of the number of Māori and Pacific women on the NCSP Register. Chi<sup>2</sup> tests were used to examine the statistical significance of the differences between ethnicities and Regions.

Following consultation with the National Kaitiaki Group and the Pacific Women's Data Advisory Group, values of fewer than 10 women will not be published when data is broken down by age group or Region for Māori or Pacific women's data in IMG Reports to avoid the possibility of these women being identifiable.

Unless otherwise stated, a woman's age at the end of the reporting quarter was used when calculating the indicators. The registration status and demographic details of each woman at the time of the data download were used for all calculations. Women were assigned to both a NCSP Region and a District Health Board (DHB) area by the NCSP Register. Each woman was allocated to the NCSP Region and DHB area in which they lived, with two exceptions. Women whose address was unknown were allocated to the NCSP Region according to their last known smear taker, or according to the NCSP regional service office if the smear taker has indicated that the woman is

no longer a patient there. Women who usually had their smears in a NCSP Region other than the one where they lived were allocated to the NCSP Region where they usually had their smears. For women in either of these situations, if the NCSP Region to which they were allocated had boundaries identical to a DHB area, then they were allocated to that DHB, otherwise the DHB area in which they lived was recorded as unspecified.

## 6. Results

### 6.1 Follow-up of women with high grade cytology

#### *Definition*

High grade cytology is defined as a cytology result of atypical squamous cells (ASC) of undetermined significance, cannot exclude high grade (ASC-H), HSIL or more serious abnormality according to the hierarchy of the Revised Bethesda Coding System (2001) (Appendix 1). The timeliness of the follow-up of women with a high grade cytology result is estimated using the time elapsed before a histology specimen is taken following the date that the high grade cytology was taken.

#### *Targets*

The targets for the follow-up of women with high grade cytology are as follows:

- 90% of women should have a histology specimen taken within 12 weeks of the smear being taken

and

- 99% of women should have a histology specimen taken within 52 weeks of the smear being taken.

#### *Calculation*

The number of enrolled women aged 20 to 69 years at 31 March 2007 who had a high grade cytology result recorded on the NCSP Register between 1 April 2005 and 31 March 2006 was calculated. For each of these women the time between the date that the smear was taken and the date that the subsequent histology specimen was taken (including specimens taken up to five days before the smear) was calculated. The numbers of women with a histology specimen taken within 12 weeks, between 13 and 26 weeks, between 27 and 52 weeks and more than 52 weeks after their ASC-H, HSIL or more serious cytology result were expressed as proportions of the total number of women with a high grade cytology taken between 1 April 2005 and 31 March 2006. The number and proportion of women with no histology result recorded on the NCSP Register following their high grade cytology were also calculated. Women without a subsequent histology recorded on the NCSP Register were also described in two

ways: whether they had been signed back into the Programme since their high grade smear and whether they had a subsequent smear taken by either a non-specialist or specialist. This indicator was calculated for women of all ethnic groups, and separately for Māori, Pacific and non-Māori, non-Pacific women. It was also calculated for each NCSP Region.

### **Results**

The timeliness with which a histology specimen was taken amongst women who had a high grade cytology result is shown in Table 1. Between 1 April 2005 and 31 March 2006, 5,178 women had a high grade cytology result. Of these, 3,890 (75.1%) had a histological specimen taken within 12 weeks of the abnormal cytology, below the target of 90%. This value is similar to that reported in the previous two quarters (75.0% and 75.0%). The proportion of women who had a histological specimen taken within 52 weeks of the high grade cytology was 90.5% (n=4,688). This value is similar to those reported in the previous two quarters (90.8% and 90.4%), and is below the target of 99%. There was no histology reported on the NCSP Register for 418 (8.1%) women who had a high grade cytological abnormality.

The timeliness of having a histological specimen taken following a high grade smear differed by ethnicity, as shown in Table 2. Compared to non-Māori, non-Pacific women, Māori and Pacific women were less likely to have a histological specimen taken within the recommended time periods. For example, at 12 weeks, 77.8% of non-Māori, non-Pacific women had a report of a histological specimen, compared to 65.2% of Māori and 53.2% of Pacific women. These proportions are similar to those reported in the last quarter (77.7%, 65.3% and 53.0%, respectively). Differences by ethnicity persisted for all time periods following a high grade smear. Statistical tests showed that the differences between the groups are very unlikely to be due to chance ( $P < 0.001$ ).

The timeliness of having a histological specimen taken following a high grade smear differed by NCSP Region, see Table 3. No Region achieved the target of 90% of women having a histological specimen taken within 12 weeks of the smear. The Region with the highest proportion of women who had a histological report within this time period was Waikato (83.6%, n=367). The poorest performer was Auckland

(69.2%, n=1,159. For all Regions combined the proportion of women who had histological reports within 12 weeks of the smear was 75.1%.

No Region reached the target of 99% of women having a histological specimen taken within 52 weeks of a high grade smear. The Region with the highest proportion of women who had a histological report within this time period was Nelson/Marlborough (97.5%, n=153). The poorest performer was Tairāwhiti (83.3%, n=60). For all Regions combined the proportion of women who had a high grade smear result with a subsequent histology taken within 52 weeks was 90.5%. Statistical tests showed that the differences between Regions are very unlikely to be due to chance ( $P < 0.001$ ).

To investigate whether the differences in timeliness of histology reporting are explained by differences in the proportion of women from each ethnic group across the Regions, the results from Table 3 are presented in Appendix 2 separately for Māori, Pacific and non-Māori, non-Pacific women. From these tables, it is clear that the differences across Regions are not explained by the different proportions of women from each ethnic group in each Region. This does not negate the importance of the disparities by ethnic group, which persist in each Region.

A relatively large number of women (n=418, 8.1%) had no histology report recorded on the NCSP Register following a high grade smear. The absence of such a report was more common in Māori (11.4%) and Pacific (12.2%) women compared to non-Māori, non-Pacific women (7.3%), see Table 2. There were also differences by Region in the absence of a histological report following a high grade smear, see Table 3. Such an absence was common (above 10%) in Manawatu/Whanganui, Tairāwhiti and Wellington.

Further details of the 418 women who had no histology result recorded on the NCSP Register following a high grade smear are shown in Table 4. Of these, 94 (22.5%) had no subsequent smear recorded and 156 (37.3%) had a follow-up smear taken by a non-specialist. Of these 250 women who had either no follow-up smear or a smear taken by a non-specialist, 105 (42.0%) were recorded on the register as having been 'signed in' following their high grade smear result, indicating that they had been recalled by the NCSP. The remaining 145 (58.0%) women did not appear to have

been signed in, indicating that their follow-up was less clear. Statistical tests showed that the differences between Register status are very unlikely to be due to chance ( $P=0.001$ ).

Possible reasons for these women not being signed in include having:

- had further investigations and treatment, but their histology reports were erroneously omitted from the NCSP Register
- moved overseas and had follow-up there
- no indications for biopsy at colposcopic examination.

### ***Ethnic disparities***

The breakdown of subsequent smears by ethnicity for women who had a high grade cytology result but no histology report is shown in Table 5. There is some evidence of ethnic disparities in the follow-up of women with high grade cytology reports. A higher proportion of Māori women (36.9%) had no subsequent smear recorded on the NCSP Register after their high grade cytology report compared to non-Māori, non-Pacific (19.3%) and Pacific women (13.0%). Fewer Māori (26.2%) and Pacific (26.1%) women had a subsequent smear taken by a specialist than non-Māori, non-Pacific women (45.0%). The proportions of Māori (36.9%) and non-Māori, non-Pacific women (35.7%) who had a subsequent smear taken by a non-specialist were less than those for Pacific women (60.9%), although the numbers were small in the latter group. These disparities between ethnic groups were statistically significant ( $P<0.001$ ).

***Recommendations***

1. The NSU is to investigate all women with a high grade smear and no subsequent histology result recorded on the NCSP Register individually. Priority is to be given to women with no subsequent smear, Māori women, Pacific women, and then by Region, starting with Manawatu/Whanganui, Wellington and Tairāwhiti.

**Table 1: Timeliness of a histological follow-up after a high grade cytology result recorded between 1 April 2005 and 31 March 2006 for 20 to 69 year old women**

<b>Time period</b>	<b>n</b>	<b>Proportion %</b>	<b>Cumulative Proportion %</b>
Within 12 weeks <sup>1</sup>	3,890	75.1	75.1
13 to 26 weeks	567	11.0	86.1
27 to 52 weeks <sup>2</sup>	231	4.5	90.5
More than 52 weeks	72	1.4	91.9
Subtotal	4,760		
No histology recorded on NCSP Register	418	8.1	100
<b>Total</b>	<b>5,178</b>		

Target: <sup>1</sup>90% with histology report within 12 weeks, <sup>2</sup>99% within 52 weeks of a high grade smear

**Table 2: Ethnic disparities in timeliness of a histological follow-up after a high grade cytology result recorded between 1 April 2005 and 31 March 2006 for 20 to 69 year old women**

Time Period	Māori women			Pacific women			Non-Māori, non-Pacific women		
	n	Proportion %	Cumulative Proportion %	n	Proportion %	Cumulative Proportion %	n	Proportion %	Cumulative Proportion %
Within 12 weeks <sup>1</sup>	479	65.2	65.2	100	53.2	53.2	3,311	77.8	77.8
13 to 26 weeks	103	14.0	79.2	34	18.1	71.3	430	10.1	87.9
27 to 52 weeks <sup>2</sup>	42	5.7	84.9	25	13.3	84.6	164	3.9	91.8
More than 52 weeks	27	3.7	88.6	6	3.2	87.8	39	0.9	92.7
<b>Subtotal</b>	<b>651</b>			<b>165</b>			<b>3,944</b>		
No histology recorded on NCSP Register	84	11.4	100.0	23	12.2	100.0	311	7.3	100.0
<b>Total</b>	<b>735</b>			<b>188</b>			<b>4,255</b>		

Difference between ethnic groups  $P < 0.001$

Target: <sup>1</sup> 90% with histology report within 12 weeks, <sup>2</sup> 99% within 52 weeks of a high grade smear

Note: the follow-up of the 418 women with no histology recorded on the NCSP Register is shown in Table 4

**Table 3: Timeliness of a histological follow-up after a high grade cytology result recorded between 1 April 2005 and 31 March 2006 for 20 to 69 year old women by NCSP Region**

NCSP Region	Time Periods										
	Within 12 weeks <sup>1</sup>		13 to 26 weeks		27 to 52 weeks		Within 52 weeks <sup>2</sup>		No Histology		Total
	n	%	n	%	n	%	n	%	n	%	
Auckland	1,159	69.2	223	13.3	104	6.2	1,486	88.7	162	9.7	1,675
Bay of Plenty	306	71.8	65	15.3	13	3.1	384	90.1	35	8.2	426
Canterbury	511	83.0	42	6.8	25	4.1	578	93.8	32	5.2	616
Hawke's Bay	148	78.7	19	10.1	6	3.2	173	92.0	11	5.9	188
Manawatu/Whanganui	250	72.9	19	5.5	19	5.5	288	84.0	47	13.7	343
Nelson/Marlborough	123	78.3	27	17.2	3	1.9	153	97.5	4	2.6	157
Northland	121	78.6	12	7.8	8	5.2	141	91.6	9	5.8	154
Otago/Southland	362	83.2	41	9.4	8	1.8	411	94.5	19	4.4	435
Tairāwhiti	51	70.8	6	8.3	3	4.2	60	83.3	10	13.9	72
Taranaki	98	76.6	13	10.2	6	4.7	117	91.4	9	7.0	128
Waikato	367	83.6	32	7.3	13	3.0	412	93.9	25	5.7	439
Wellington	377	72.4	63	12.1	22	4.2	462	88.7	54	10.4	521
West Coast	17	70.8	5	20.8	1	4.2	23	95.8	1	4.2	24
<b>Total</b>	<b>3,890</b>	<b>75.1</b>	<b>567</b>	<b>11.0</b>	<b>231</b>	<b>4.5</b>	<b>4,688</b>	<b>90.5</b>	<b>418</b>	<b>8.1</b>	<b>5,178</b>

Difference between NCSP Regions  $P < 0.001$

Target: <sup>1</sup> 90% with histology report within 12 weeks, <sup>2</sup> 99% within 52 weeks of a high grade smear

**Table 4: Women with a high grade cytology report recorded between 1 April 2005 and 31 March 2006 but no histological follow-up recorded, by NCSP Register status and source of any subsequent smear**

Subsequent smear	Women's status since high grade cytology result					
	Not signed in		Signed in		Total	
	n	%	n	%	n	%
No subsequent smear	46	21.2	48	23.9	94	22.5
Subsequent smear taken by non-specialist	99	45.6	57	28.4	156	37.3
Smear taken by specialist	72	33.2	96	47.8	168	40.2
<b>Total</b>	<b>217</b>		<b>201</b>		<b>418</b>	

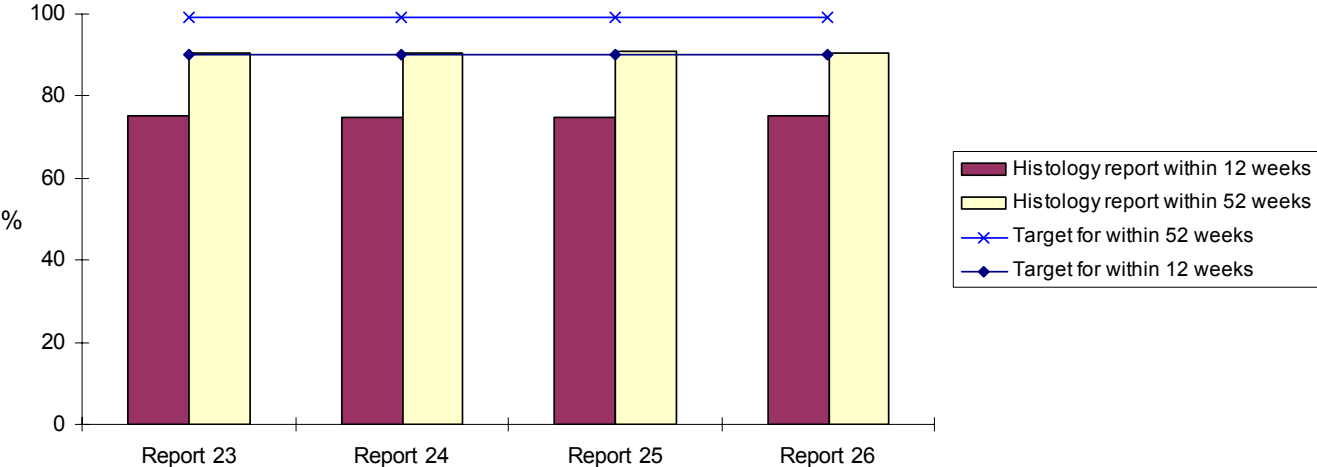
Difference between NCSP Register status P=0.001

**Table 5: Ethnic disparities in the follow-up of women with a high grade cytology report recorded between 1 April 2005 and 31 March 2006 but no histology result recorded, by NCSP Register status and source of any subsequent smear**

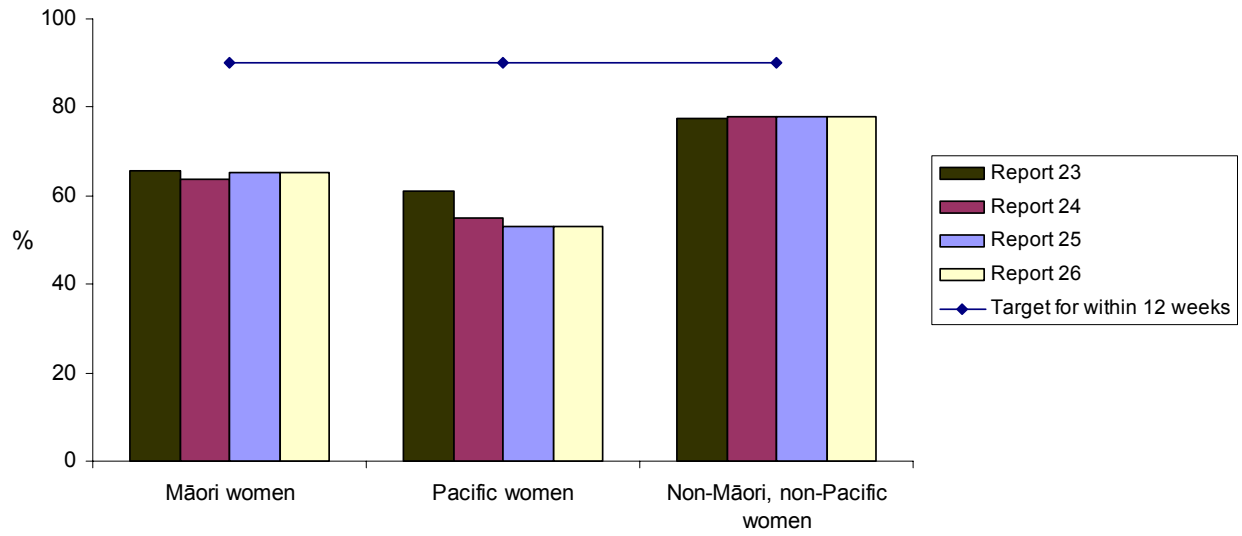
Subsequent smear	Women's status since high grade cytology result																	
	Not signed in						Signed in						Total					
	Māori women		Pacific women		Non-Māori, non-Pacific women		Māori women		Pacific women		Non-Māori, non-Pacific women		Māori women		Pacific women		Non-Māori, non-Pacific women	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
No subsequent smear	15	34.1	2	14.3	29	18.2	16	40.0	1	11.1	31	20.4	31	36.9	3	13.0	60	19.3
Smear by non-specialist	20	45.5	9	64.3	70	44.0	11	27.5	5	55.6	41	27.0	31	36.9	14	60.9	111	35.7
Smear taken by specialist	9	20.5	3	21.4	60	37.7	13	32.5	3	33.3	80	52.6	22	26.2	6	26.1	140	45.0
<b>Total</b>	<b>44</b>		<b>14</b>		<b>159</b>		<b>40</b>		<b>9</b>		<b>152</b>		<b>84</b>		<b>23</b>		<b>311</b>	

Difference between ethnic groups  $P < 0.001$

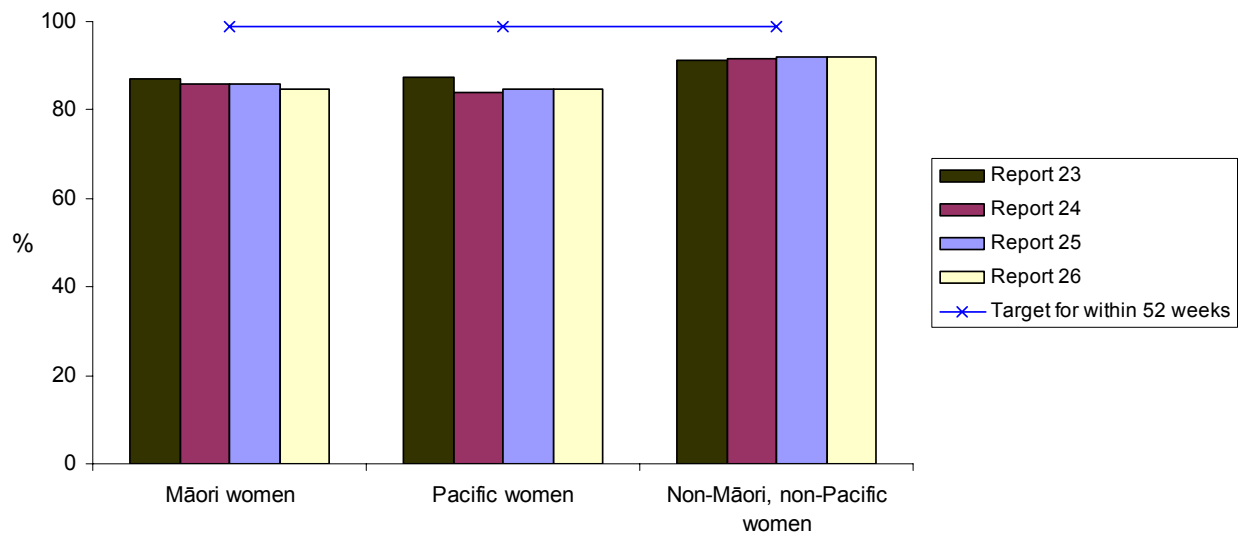
**Figure 1: Timeliness of a histology report after a high grade cytology result for enrolled 20 to 69 year old women**



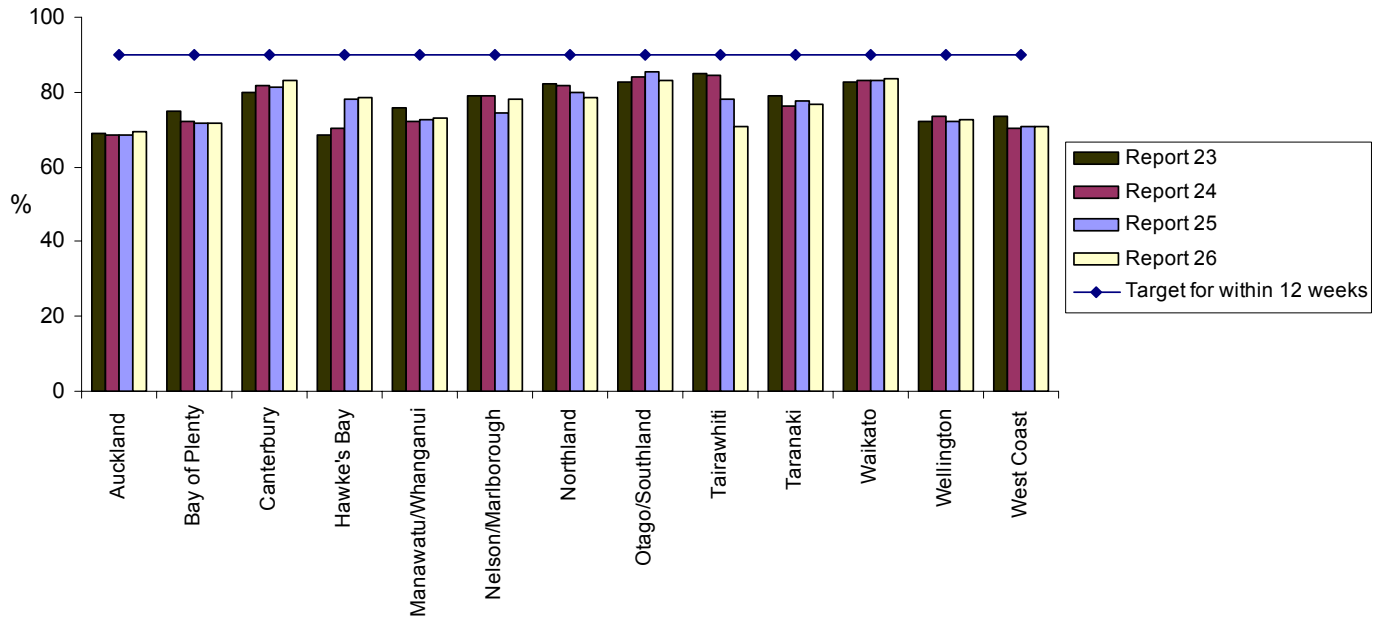
**Figure 2: Timeliness of a histology report within 12 weeks of a high grade cytology result for enrolled 20 to 69 year old women by ethnicity**



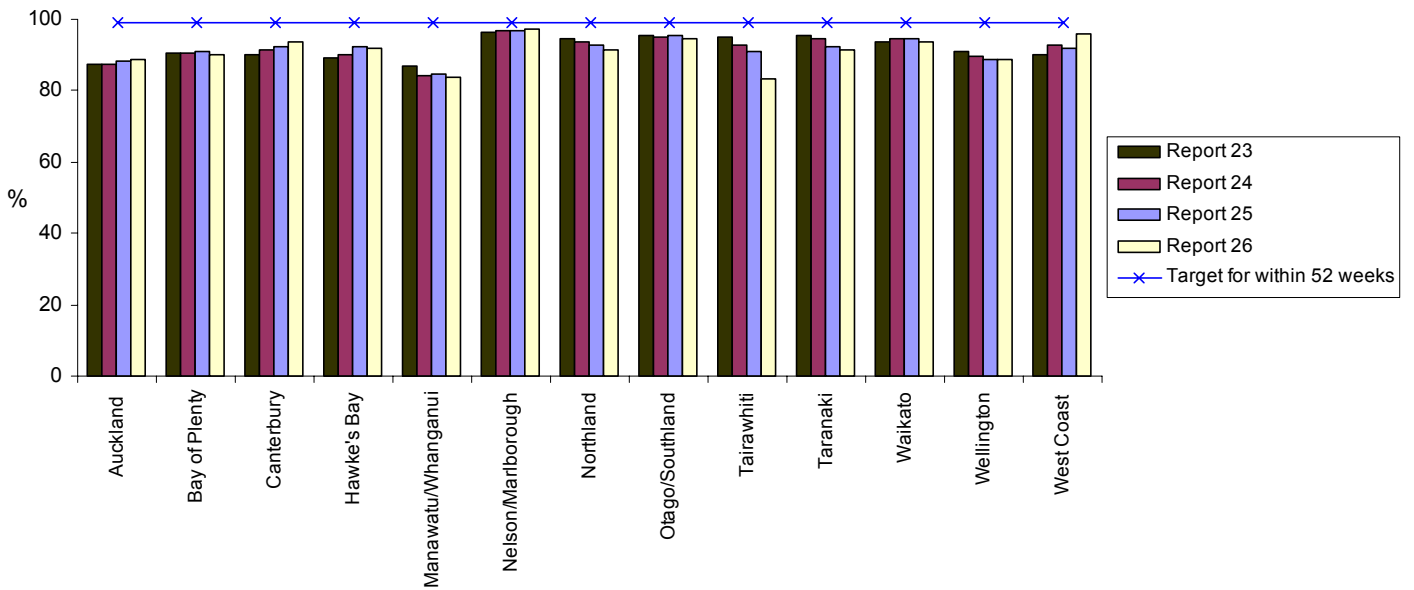
**Figure 3: Timeliness of a histology report within 52 weeks of a high grade cytology result for enrolled 20 to 69 year old women by ethnicity**



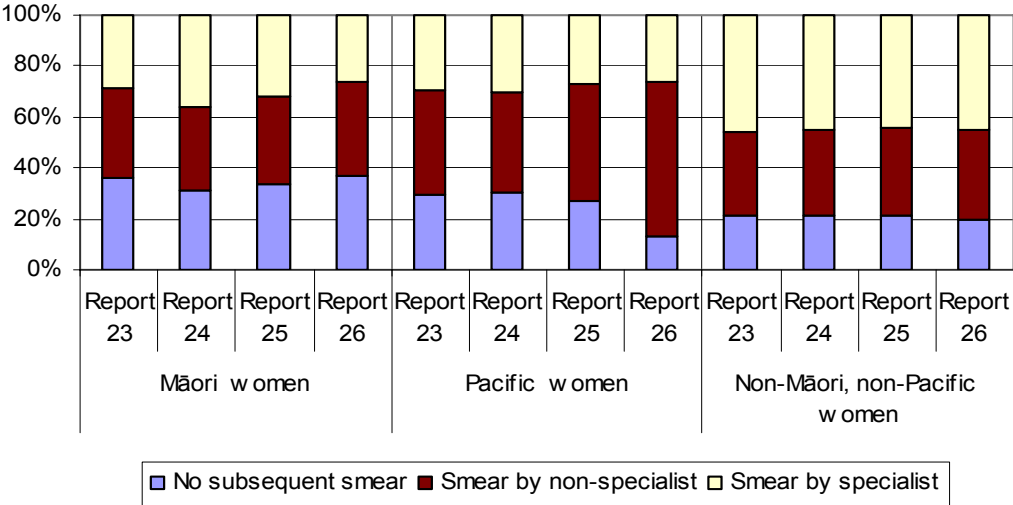
**Figure 4: Timeliness of a histology report within 12 weeks of a high grade cytology result for enrolled 20 to 69 year old women by NCSP Region**



**Figure 5: Timeliness of a histology report within 52 weeks of a high grade cytology result for enrolled 20 to 69 year old women by NCSP Region**



**Figure 6: Ethnic disparities in the follow-up of women with a high grade cytology report but no histology result recorded, by NCSF Register status and source of any subsequent smear**



## 6.2 Laboratory smear reporting

### *Definition*

Laboratory smear reporting is measured by the number and proportion of satisfactory smears in the following broad cytological categories:

1. Negative for dysplasia or malignancy
2. ASC-US
3. ASC-H
4. LSIL (CIN 1 and/or HPV)
5. HSIL
6. Total abnormalities (smears reported as ASC-US or more serious, including glandular abnormalities)

### *Targets*

There are targets for laboratory smear reporting for three of the broad categories:

1. Negative for dysplasia or malignancy: not more than 96%
2. HSIL: not less than 0.6%
3. Total abnormalities: not more than 10%

### *Calculation*

The Bethesda diagnosis codes, as recorded on the NCSP Register of satisfactory smears taken during the reporting quarter (1 January 2007 to 31 March 2007) were used to calculate the number of smears in each broad cytological category for each laboratory. These smears in each cytological category were expressed as proportions of the total number of satisfactory smears reported by each laboratory. Where a single smear had more than one diagnosis code, the most serious ranked code was used according to the hierarchy of codes (see Appendix 1). Total abnormalities included all smears with a diagnosis code of ASC of undetermined significance (ASC-US) - excluding ASC cannot exclude high grade (ASC-H), or more serious abnormality (including glandular abnormalities) according to the hierarchy of broad cytological categories. Smear results for women of all ages were included. Smears recorded as being unsatisfactory for evaluation were excluded.

Please note that this indicator previously included smears that were either satisfactory but limited or satisfactory for evaluation. Since the adoption of the 2001 revision of the Bethesda Coding Standard the category of satisfactory but limited has ceased to be used. The targets for this indicator are therefore currently under evaluation.

### ***Results***

During the quarter 98,467 satisfactory smears were taken. The results of these, by laboratory, are shown in Table 6. The number of such smears reported by each laboratory ranged from 4,872 for MedLab Christchurch to 31,560 for Diagnostic MedLab Auckland. Overall, 90,623 (92.0%) smears were reported as negative for dysplasia or malignancy, which was similar to the proportion reported in the last two quarters (92.6% and 92.3%). None of the laboratories exceeded the target of not more than 96% of smears being negative for dysplasia or malignancy.

The proportion of smears reported with a HSIL abnormality was 0.8% for all laboratories combined. This figure met the target of not less than 0.6% and was similar to that reported for the previous two reporting quarters (0.8% and 0.9%). Two laboratories; Diagnostic MedLab Auckland (n=131, 0.4%), and Aotea Pathology (n=34, 0.3%) did not meet the target for smears reported with a HSIL abnormality.

For all laboratories combined, the target of not more than 10% of smears reported as abnormal was not exceeded. This proportion was 8.0%, similar to the previous two quarters (7.4% and 7.7%). Auckland Hospital Laboratory reported 1,075 (18.8%) smears processed as abnormal, and has reported high proportions for the previous two quarters (19.3% and 21.2%). MedLab Bay of Plenty (10.9%) and MedLab Central (10.7%) also exceeded the 10% total abnormalities target.

The proportion of smears reported as LSIL varied between laboratories, but was between 2.4% and 3.1% for all laboratories, with the exception of Auckland Hospital Laboratory (5.1%), Canterbury Health Laboratories (4.5%), MedLab Bay of Plenty (4.0%) and MedLab Central (5.0%). Note that no target is set for the proportion of smears reported as LSIL.

***Recommendations***

2. The IMG notes the low ASC-US, ASC-H and total abnormalities rates for SCL Dunedin and SCL Christchurch and is awaiting responses from a previous recommendation in Quarterly Report 25 (published in August 2007).
3. The IMG notes the high total abnormalities rate for MedLab Bay of Plenty and will maintain watchful waiting until Quarterly Report 27 (to determine whether a trend is developing).

**Table 6: The number and proportion of satisfactory smears in broad cytological categories for each laboratory between 1 January 2007 and 31 March 2007**

Laboratory	Negative for dysplasia or malignancy <sup>1</sup>		ASC-US		ASC-H		LSIL		HSIL <sup>2</sup>		Total Abnormalities <sup>3§</sup>		Total smears
	n	%	n	%	n	%	n	%	n	%	n	%	n
Auckland Hospital Lab.	4,651	81.2	436	7.6	196	3.4	293	5.1	139	2.4	1,075	18.8	5,726
Canterbury Health Lab.	8,694	91.9	156	1.6	57	0.6	424	4.5	113	1.2	762	8.1	9,456
Diagnostic MedLab Auckland	29,327	92.9	837	2.7	253	0.8	966	3.1	131	0.4	2,233	7.1	31,560
MedLab Bay of Plenty	8,139	89.1	414	4.5	102	1.1	364	4.0	76	0.8	996	10.9	9,135
MedLab Central	6,042	89.3	228	3.4	69	1.0	338	5.0	68	1.0	721	10.7	6,763
MedLab Christchurch	4,473	91.8	148	3.0	70	1.4	148	3.0	29	0.6	399	8.2	4,872
Aotea Pathology	9,724	93.1	296	2.8	57	0.5	326	3.1	34	0.3	726	6.9	10,450
SCL* Christchurch	4,962	95.0	81	1.6	20	0.4	127	2.4	33	0.6	261	5.0	5,223
SCL* Dunedin	14,611	95.6	63	0.4	42	0.3	403	2.6	145	0.9	671	4.4	15,282
<b>Total</b>	<b>90,623</b>	<b>92.0</b>	<b>2,659</b>	<b>2.7</b>	<b>866</b>	<b>0.9</b>	<b>3,389</b>	<b>3.4</b>	<b>768</b>	<b>0.8</b>	<b>7,844</b>	<b>8.0</b>	<b>98,467</b>

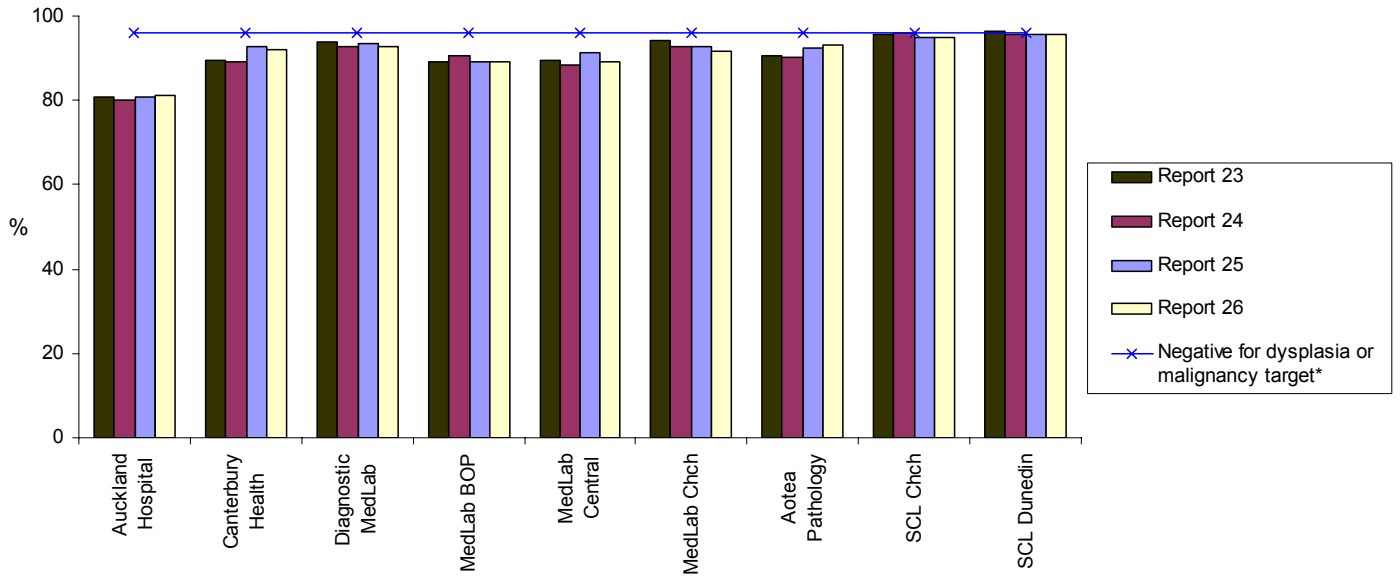
SCL\*: Southern Community Laboratories

§ Total abnormalities includes glandular abnormalities

Targets are: <sup>1</sup> not more than 96%, <sup>2</sup> not less than 0.6%, <sup>3</sup> not more than 10%

Note: MedLab Wellington merged with Valley Diagnostic Laboratory and became Aotea Pathology

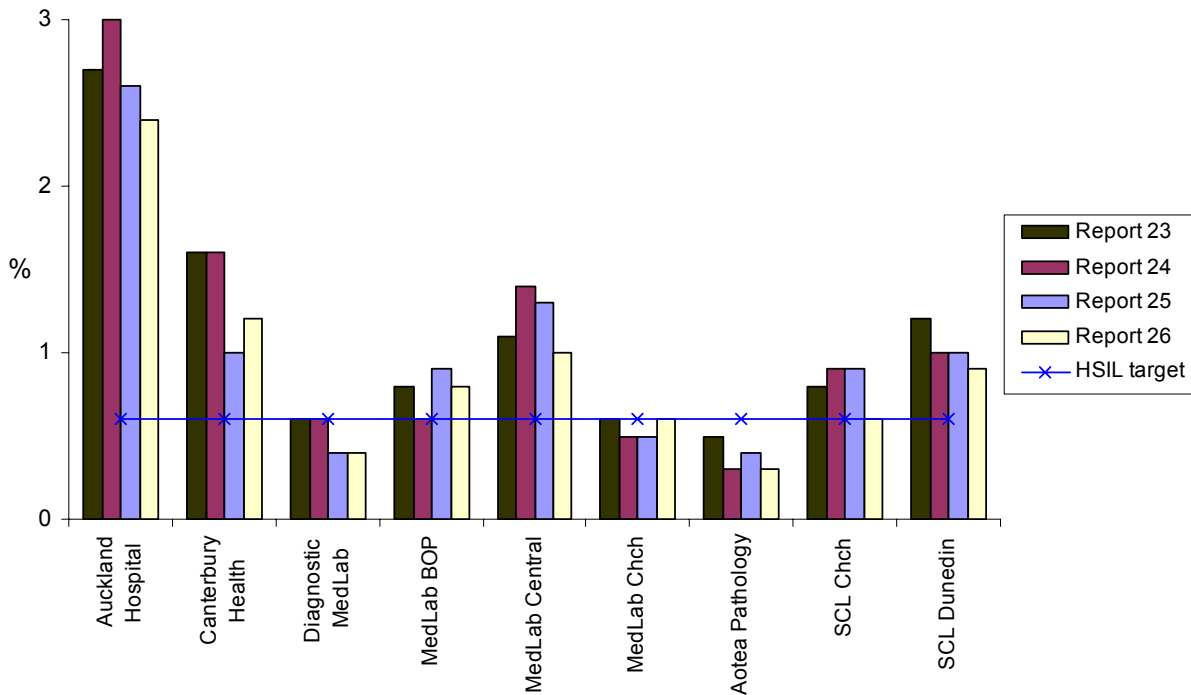
**Figure 7: The proportion of satisfactory smears reported as negative for dysplasia or malignancy for each laboratory**



\*Negative for dysplasia or malignancy target is not more than 96% so laboratories should be under the target line

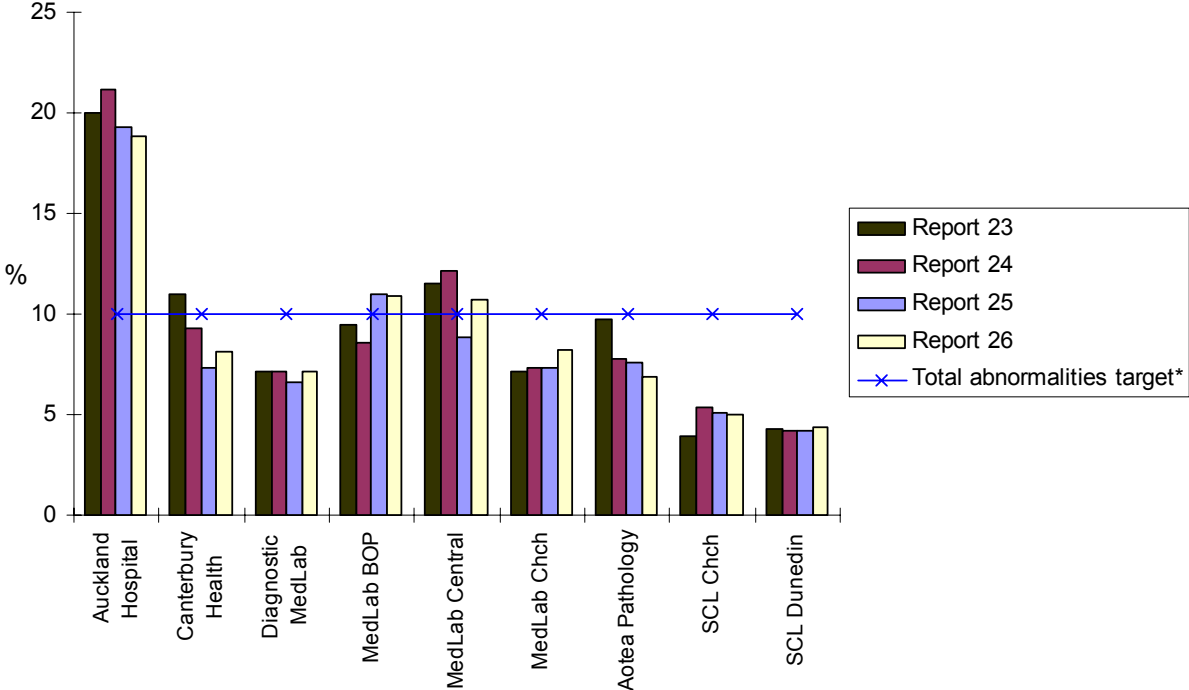
Note: MedLab Wellington merged with Valley Diagnostic Laboratory and became Aotea Pathology

**Figure 8: The proportion of satisfactory smears reported as HSIL for each laboratory**



Note: MedLab Wellington merged with Valley Diagnostic Laboratory and became Aotea Pathology

Figure 9: The proportion of satisfactory smears reported as total abnormalities for each laboratory



\* Total abnormalities target is not more than 10% so laboratories should be under the target line

Note: MedLab Wellington merged with Valley Diagnostic Laboratory and became Aotea Pathology

### 6.3 Laboratory cytology turn around time

#### *Definition*

Laboratory cytology turn around time is the period of time between a smear being received by the laboratory and the report being issued by the laboratory to the smear taker.

#### *Targets*

The targets for the laboratory cytology turn around time are:

- 90% of cytology reports issued to the smear taker within seven working days of the smear being received by the laboratory
- and
- 100% of cytology reports issued to the smear taker within 14 working days of the smear being received by the laboratory.

#### *Calculation*

The difference between the date that the smear was received and the date that the smear was reported by the laboratory to the smear taker, as recorded by the NCSP Register, was used to measure the laboratory turn around time. The numbers of smears reported within seven working days (Monday to Friday), between eight and 14 working days and more than 14 working days were expressed as a proportion of the total number of smears processed by the laboratory during the quarter. Smears taken from enrolled women of all ages during the reporting period as recorded on the NCSP Register were included.

#### *Results*

The proportion of smears received and reports issued within specified time periods during the period 1 January 2007 to 31 March 2007 for each laboratory processing cervical cytology are shown in Table 7. Overall, 86.8% of the 103,049 smears received by laboratories were reported within seven working days. This did not meet the target of 90%, and nor did the proportion reported in the last two quarters (87.1% and 85.9%). Five of the nine reporting laboratories achieved the seven-day target of

90%. Auckland Hospital Laboratory (17.2%), MedLab Central (58.7%), Aotea Pathology (78.4%), and SCL Christchurch (68.1%) did not meet this target.

Overall, the 14-day target of 100% was not achieved (96.6%). Three of the nine reporting laboratories achieved the 100% target, MedLab Bay of Plenty, MedLab Central, and MedLab Christchurch. Auckland Hospital Laboratory reported 2,785 smears outside 14 working days. The other laboratories to report smears outside this target were, Canterbury Health Laboratories (n=34), Diagnostic MedLab Auckland (n=363), MedLab Bay of Plenty (n=4), MedLab Central (n=1), Aotea Pathology (n=28), SCL Christchurch (n=64) and SCL Dunedin (n=193). The reporting time for the 3,472 smears that were outside the 14-day target, ranged from 15 to 76 days, with the median time being 18 days.

### ***Ethnic disparities***

The proportion of smears received and reports issued within specified time periods during the period 1 January 2007 to 31 March 2007 by ethnicity are shown in Table 8. The proportion of Māori women (82.1%) who had a smear reported within seven working days was less than that of Pacific (88.2%) and non-Māori, non-Pacific women (87.3%). These differences were statistically significant,  $P < 0.001$ . The proportions of Māori (5.6%, n=528) and Pacific women (5.0%, n=186) who had a smear reported outside 14 working days were more than that of non-Māori, non-Pacific women (3.1%, n=2,758). Statistical tests showed that the differences between the groups are unlikely to be due to chance ( $P < 0.001$ ).

***Recommendations***

4. The IMG requests an explanation for the low proportion of smears reported on within seven days by Aotea Pathology, Auckland Hospital Laboratory, MedLab Central and SCL Christchurch.
5. The IMG requests an explanation for the high number of smears reported on after more than 14 days by Auckland Hospital Laboratory, Diagnostic MedLab Auckland, SCL Christchurch and SCL Dunedin.
6. The IMG notes with concern the continuing ethnic disparities in the timeliness of smear reporting (Quarterly Monitoring Report 23, published in 2006) and is awaiting further ongoing analyses by the NSU in response to a previous recommendation.

**Table 7: Timeliness of the reporting of smears between 1 January 2007 and 31 March 2007 by laboratory**

Laboratory	Number of smears processed n	Within 7 working days <sup>1</sup>		From 8 to 14 working days		Within 14 working days <sup>2</sup> (cumulative %)		More than 14 working days	
		n	%	n	%	n	%	n	%
Auckland Hospital Lab.	5,935	1,021	17.2	2,129	35.9	3,150	53.1	2,785	46.9
Canterbury Health Lab.	9,604	9,067	94.4	503	5.2	9,570	99.6	34	0.4
Diagnostic MedLab Auckland	33,859	33,353	98.5	143	0.4	33,496	98.9	363	1.1
MedLab Bay of Plenty	9,613	9,484	98.7	125	1.3	9,609	100.0	4	0.0
MedLab Central	6,856	4,026	58.7	2,829	41.3	6,855	100.0	1	0.0
MedLab Christchurch	5,043	5,043	100.0	0	0.0	5,043	100.0	0	0.0
Aotea Pathology	11,170	8,757	78.4	2,385	21.4	11,142	99.7	28	0.3
SCL* Christchurch	5,296	3,606	68.1	1,626	30.7	5,232	98.8	64	1.2
SCL* Dunedin	15,673	15,110	96.4	370	2.4	15,480	98.8	193	1.2
<b>Total</b>	<b>103,049</b>	<b>89,467</b>	<b>86.8</b>	<b>10,110</b>	<b>9.8</b>	<b>99,577</b>	<b>96.6</b>	<b>3,472</b>	<b>3.4</b>

SCL\*: Southern Community Laboratories

Targets are: <sup>1</sup> 90% within seven working days, <sup>2</sup> 100% within 14 working days

Note: MedLab Wellington merged with Valley Diagnostic Laboratory and became Aotea Pathology

**Table 8: Timeliness of the reporting of smears between 1 January 2007 and 31 March 2007 by ethnicity**

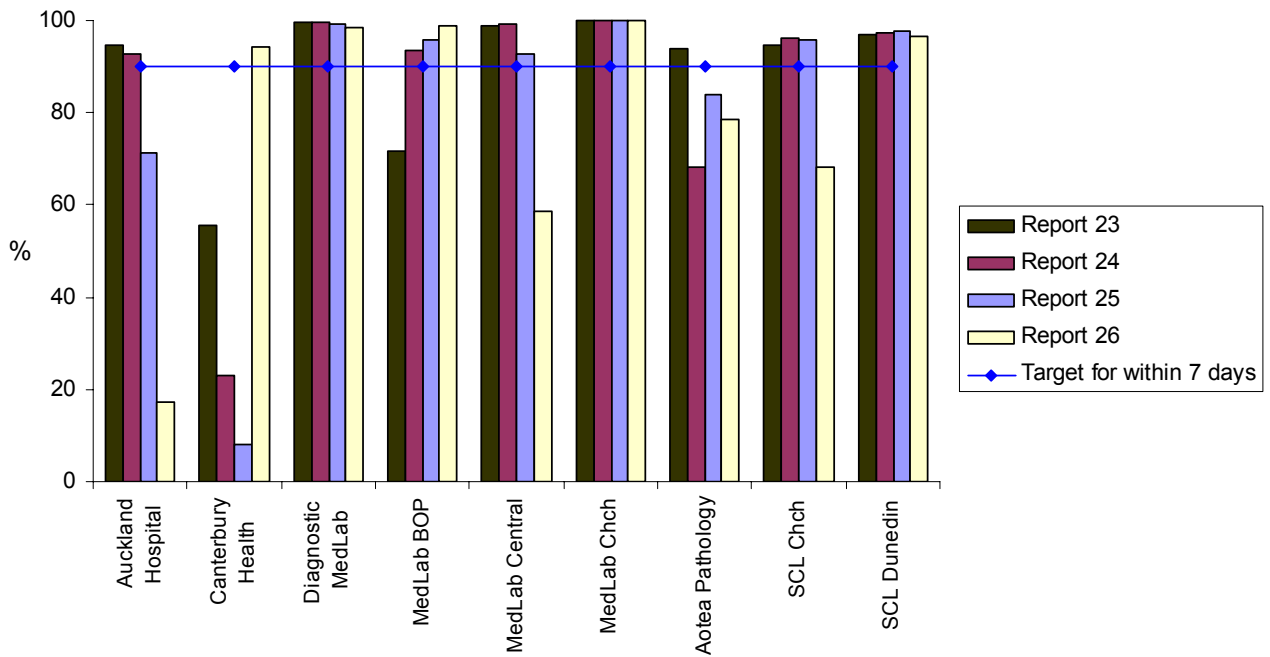
Ethnicity	Number of smears processed	Within 7 working days <sup>1</sup>		From 8 to 14 working days		Within 14 working days <sup>2</sup> (cumulative %)		More than 14 working days	
	n	n	%	n	%	n	%	n	%
Māori	9,436	7,748	82.1	1,160	12.3	8,908	94.4	528	5.6
Pacific	3,751	3,310	88.2	255	6.8	3,565	95.0	186	5.0
Non-Māori, non-Pacific	89,862	78,409	87.3	8,695	9.7	87,104	96.9	2,758	3.1
<b>Total</b>	<b>103,049</b>	<b>89,467</b>	<b>86.8</b>	<b>10,110</b>	<b>9.8</b>	<b>99,577</b>	<b>96.6</b>	<b>3,472</b>	<b>3.4</b>

Difference between ethnic groups for smears reported within seven working days P<0.001

Difference between ethnic groups for smears reported outside 14 working days P<0.001

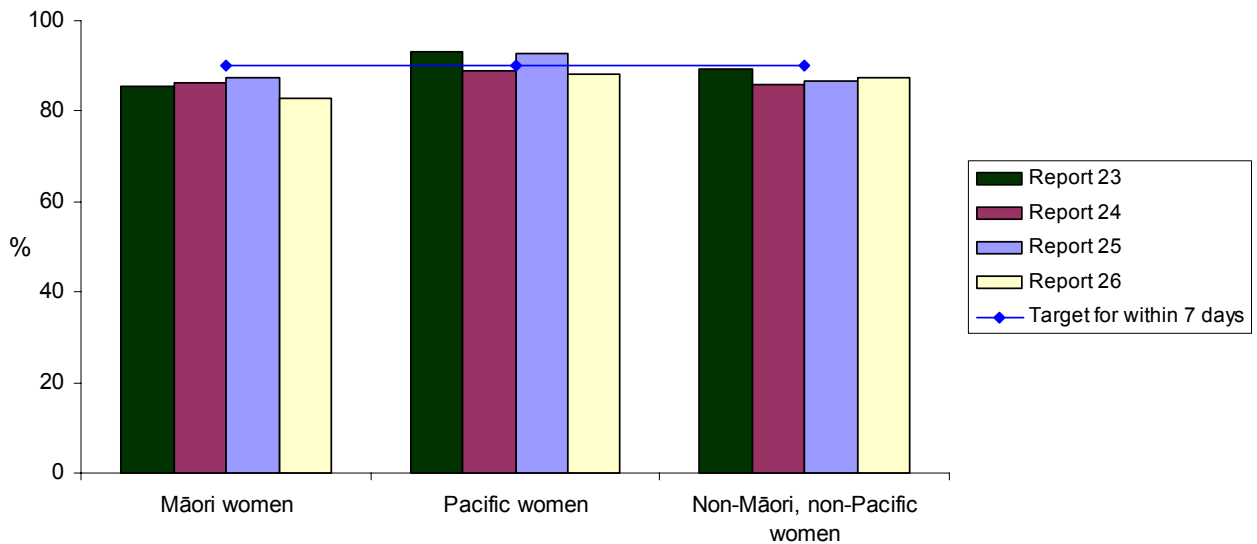
Targets are: <sup>1</sup> 90% within seven working days, <sup>2</sup> 100% within 14 working days

**Figure 10: Proportion of smears reported on within seven working days**

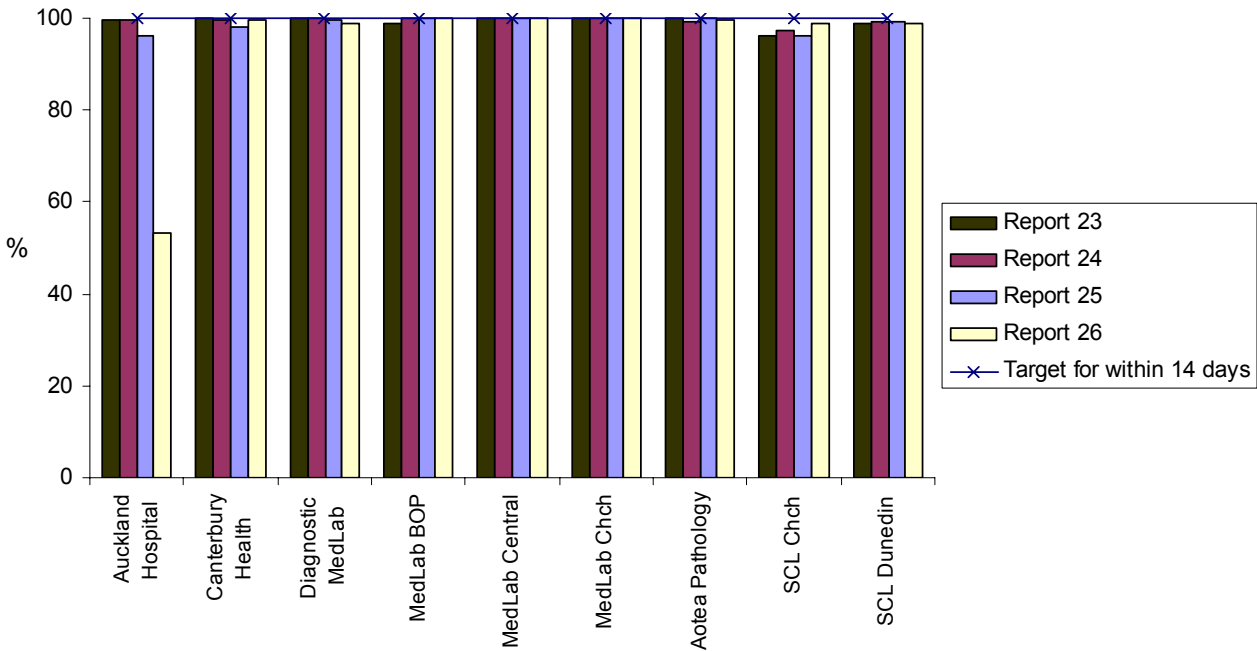


Note: MedLab Wellington merged with Valley Diagnostic Laboratory and became Aotea Pathology

**Figure 11: Proportion of smears reported on within seven working days by ethnicity**

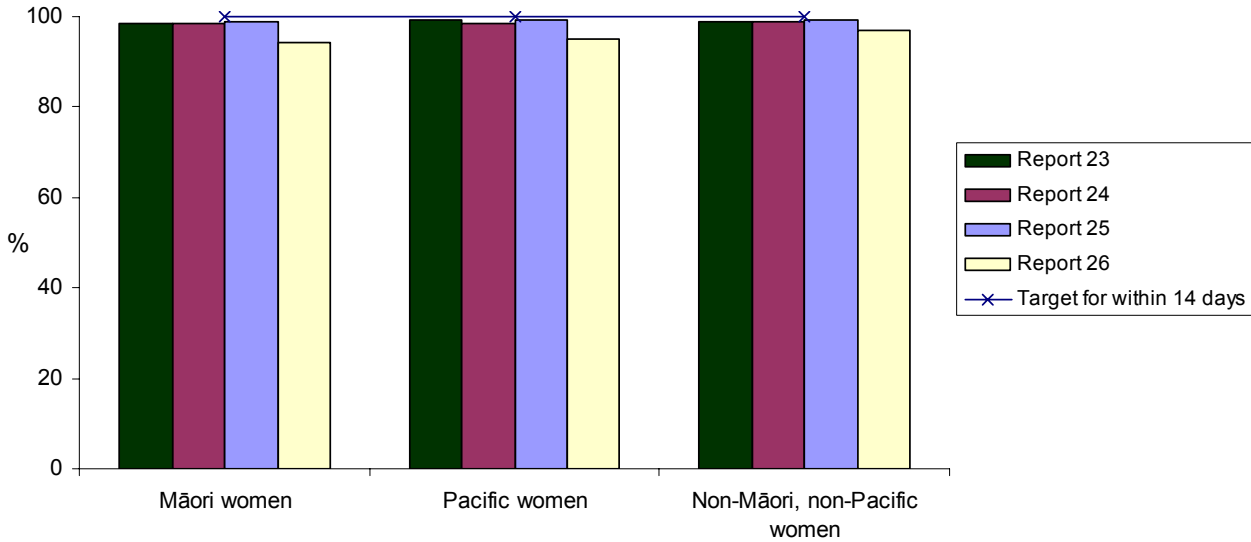


**Figure 12: Proportion of smears reported on within 14 working days**



Note: MedLab Wellington merged with Valley Diagnostic Laboratory and became Aotea Pathology

**Figure 13: Proportion of smears reported on within 14 working days by ethnicity**



## 6.4 Laboratory histology turn around time

### *Definition*

Laboratory histology turn around time is the period of time between a cervical or vaginal histology specimen being received in the laboratory and the report being issued by the laboratory to the clinician. Histology specimens include diagnostic biopsies, treatment biopsies, cervical polyps and cervical tissue of total hysterectomy specimens.

### *Targets*

The targets for the laboratory histology turn around time are 90% of final histology reports issued within five working days of the specimen being received by the laboratory, and 100% of final histology reports issued within “a reasonable time period” of the specimen being received by the laboratory. A reasonable time period is not defined, but the NCSP Interim Operational Policy and Quality Standards Manual (2000) states that “If it is likely to take more than 10 days for the result to be reported, the colposcopist should be informed”.

### *Calculation*

The difference between the date that the cervical histology specimen was received and the date that the histology result was reported by the laboratory to the clinician, as recorded on the NCSP Register, was calculated for each laboratory that processed cervical histology. For each laboratory, the numbers of cervical histology specimens received during the quarter and reported within five working days (Monday to Friday), six to 10 working days, or more than 10 working days were expressed as proportions of the total number of cervical histology specimens received by each laboratory during the quarter. Cervical histology specimens taken from enrolled women of all ages during the reporting period as recorded on the NCSP Register were included.

### *Results*

The timeliness of histology reporting by the 22 laboratories that provided results to the NCSP Register in this quarter is shown in Table 9. There were a total of 5,254

histology specimens recorded on the NCSP Register, compared to 6,003 in the previous quarter. The number of specimens reported by each laboratory varied considerably, ranging from two in SCL Hawke's Bay to 847 in Diagnostic MedLab Auckland. For all laboratories combined, the proportion of histological specimens reported on within five working days was 92.1%, which was above the target of 90%, and higher than the figure reported in the previous two quarters (89.3%, 91.0%).

Five laboratories did not meet the five-day 90% target. Wellington Hospital only issued reports within five days for 105 of the 186 (56.5%) histology specimens received. The other laboratories that did not meet the five-day 90% target this quarter were Auckland Hospital Laboratory (71.7%), Aotea Pathology (89.4%), Memorial Hospital Hastings (78.7%), and Waikato Hospital (69.0%). In the previous quarter, Auckland Hospital Laboratory (60.8%), Aotea Pathology (previously MedLab Wellington) (83.4%), Waikato Hospital (45.9%) and Wellington Hospital (54.5%) did not meet this target.

Auckland Hospital Laboratory (23.4%), Memorial Hospital Hastings (19.1%), Waikato Hospital (27.6%) and Wellington Hospital (32.8%) reported the greatest proportion of histology results six to 10 working days from the specimens being received. Overall, 73 (1.4%) specimens were reported more than 10 working days after the time that they were received by the laboratory. The reporting time for the 73 specimens ranged from 11 to 36 days, with the median time being 13 days.

### ***Ethnic disparities***

The timeliness of histology reporting by ethnicity is shown in Table 10. All three ethnic groups met the five-day 90% target. The proportion of Māori women (91.4%) who had histology reported within five working days was less than those of Pacific (92.3%) and non-Māori, non-Pacific women (92.2%), but these differences did not reach conventional levels of statistical significance ( $P=0.772$ ) and could therefore have arisen through chance. The proportions of Māori (1.6%) and Pacific (1.7%) women with histology reported outside 10 working days were more than that of non-Māori, non-Pacific women (1.4%). These differences did not reach conventional levels of statistical significance and also may be due to chance ( $P=0.869$ ).

***Recommendations***

7. The IMG is still awaiting a response to previous recommendations from Wellington Hospital for low histology turnaround times (Quarterly Reports 14, 15&16, 18&19, 22, 23, 24 and 25, published from 2005). The IMG notes with concern a worsening trend for Wellington Hospital and would like this matter flagged for NSU attention.
8. The IMG requests an explanation from Memorial Hospital Hastings and Waikato Hospital for low histology turnaround times.
9. The IMG has previously requested an explanation from the NSU for the differences in timeliness of reporting histology by ethnicity (Quarterly Report 24, published in 2007), and is awaiting the results of ongoing analyses.

**Table 9: Timeliness of the reporting of histology between 1 January 2007 and 31 March 2007 by laboratory**

Laboratory	Number of specimens processed n	Within 5 working days <sup>1</sup>		6 to 10 working days		11 or more working days	
		n	%	n	%	n	%
Auckland Hospital Lab.	547	392	71.7	128	23.4	27	4.9
Canterbury Health Lab.	555	546	98.4	9	1.6	0	0.0
Diagnostic MedLab Auckland	847	840	99.2	6	0.7	1	0.1
Hutt Hospital	133	122	91.7	10	7.5	1	0.8
MedLab Bay of Plenty	580	561	96.7	16	2.8	3	0.5
MedLab Central	386	383	99.2	1	0.3	2	0.5
MedLab Christchurch	31	31	100.0	0	0.0	0	0.0
MedLab Taranaki	125	124	99.2	1	0.8	0	0.0
MedLab Timaru	67	67	100.0	0	0.0	0	0.0
Aotea Pathology	216	193	89.4	21	9.7	2	0.9
Memorial Hospital Hastings	178	140	78.7	34	19.1	4	2.2
Middlemore Hospital	125	123	98.4	2	1.6	0	0.0
Northland Pathology	151	151	100.0	0	0.0	0	0.0
North Shore Hospital	432	403	93.3	22	5.1	7	1.6
Rotorua Hospital	83	78	94.0	2	2.4	3	3.6
SCL* Christchurch	165	162	98.2	3	1.8	0	0.0
SCL* Dunedin	313	297	94.9	14	4.5	2	0.6
SCL* Hawke's Bay	2	2	100.0	0	0.0	0	0.0
Southland Hospital	35	35	100.0	0	0.0	0	0.0
Waikato Hospital	29	20	69.0	8	27.6	1	3.4
Wanganui Hospital	68	66	97.1	2	2.9	0	0.0
Wellington Hospital	186	105	56.5	61	32.8	20	10.8
<b>Total</b>	<b>5,254</b>	<b>4,841</b>	<b>92.1</b>	<b>340</b>	<b>6.5</b>	<b>73</b>	<b>1.4</b>

SCL\*: Southern Community Laboratories

Targets: <sup>1</sup> 90% within five working days, and 100% within a reasonable period of time

Nelson Diagnostic, Pathlab Waikato, and Valley Diagnostic ceased reporting in the previous quarter. Southland Hospital ceased reporting in February of this quarter.

Note: MedLab Wellington merged with Valley Diagnostic Laboratory and became Aotea Pathology

**Table 10: Timeliness of the reporting of histology between 1 January 2007 and 31 March 2007 by ethnicity**

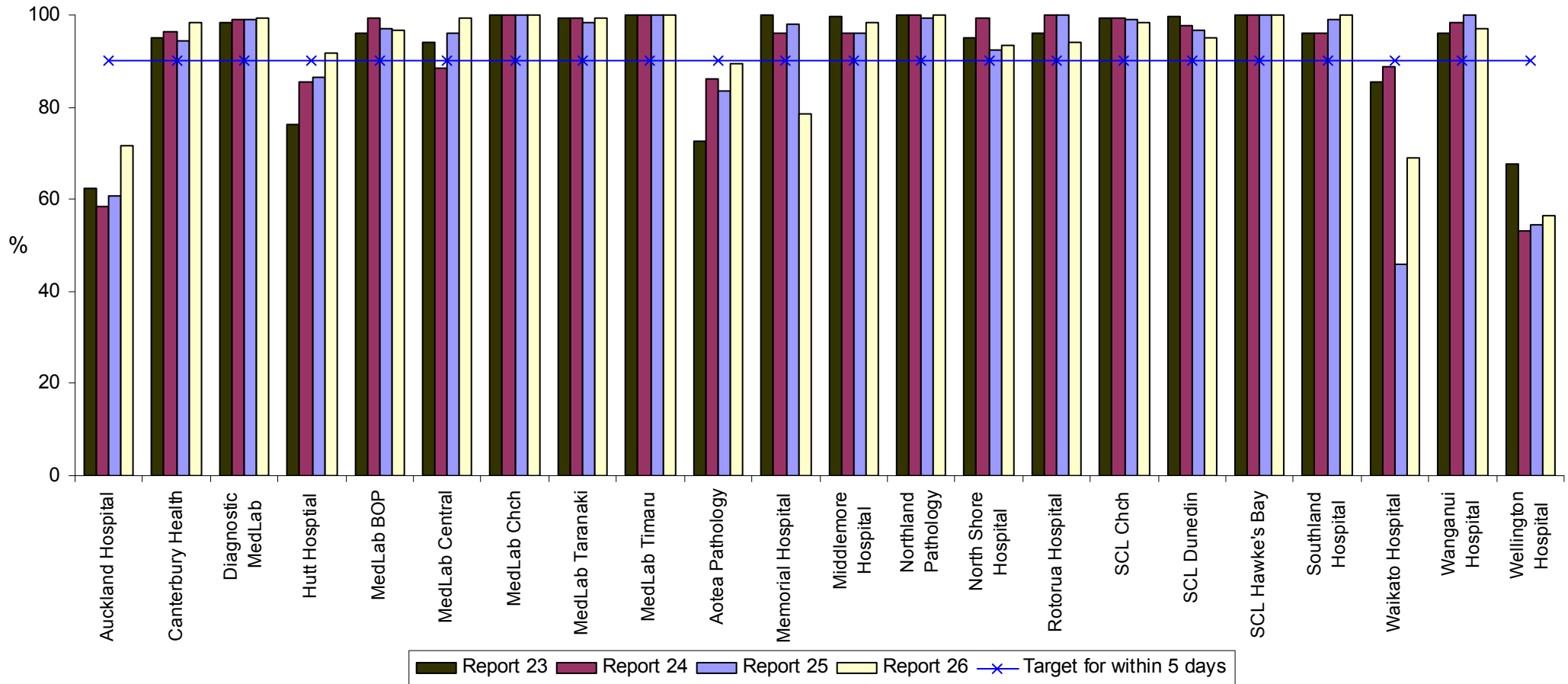
Ethnicity	Number of specimens processed n	Within 5 working days <sup>1</sup>		6 to 10 working days		11 or more working days	
		n	%	n	%	n	%
Māori	568	519	91.4	40	7.0	9	1.6
Pacific	117	108	92.3	7	6.0	2	1.7
Non-Māori, non-Pacific	4,569	4,214	92.2	293	6.4	62	1.4
<b>Total</b>	<b>5,254</b>	<b>4,841</b>	<b>92.1</b>	<b>340</b>	<b>6.5</b>	<b>73</b>	<b>1.4</b>

Difference between ethnic groups for histology reported within five working days P=0.772

Difference between ethnic groups for histology reported outside 10 working days P=0.869

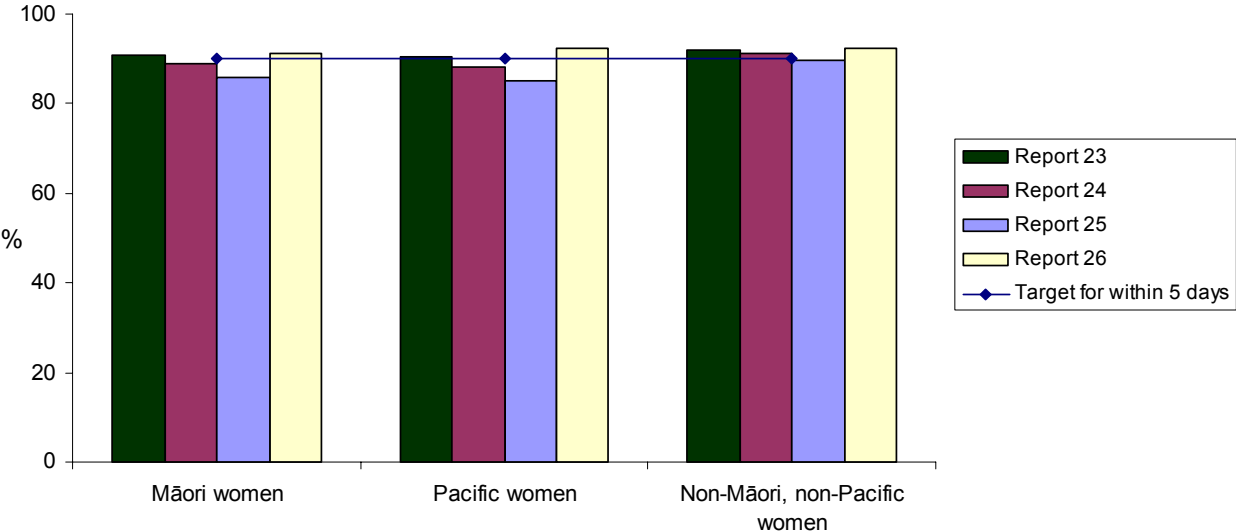
Targets: <sup>1</sup>90% within five working days, and 100% within a reasonable period of time

Figure 14: Laboratory histology five-day turn around time



Note: MedLab Wellington merged with Valley Diagnostic Laboratory and became Aotea Pathology

Figure 15: Histology five-day turn around time by ethnicity



## 6.5 Unsatisfactory smears by laboratory

### *Definition*

Unsatisfactory smears are those smears reported with a Bethesda adequacy of UA, UB, UC, UD, UE, UF, or UG (Revised Bethesda Coding System, 2001). It is important to note that the adequacy coding of a smear is influenced by both smear taking technique and laboratory reporting practice. The NCSP has adopted the revised Bethesda Coding System 2001 (from July 2005), and this no longer includes a satisfactory but limited category. It is expected that unsatisfactory and satisfactory rates will increase, and therefore these are not directly comparable with those from quarters prior to July 2005.

### *Targets*

The target for unsatisfactory smears was previously not less than 0.5% and not more than 2.0% of all smears reported for a given laboratory but this is now under review due to the introduction of the 2001 revision of the Bethesda Coding System.

### *Calculation*

All smears taken during the reporting quarter for which there was a result recorded on the NCSP Register were used to calculate these indicators. The number of unsatisfactory smears reported was expressed as a proportion of the total number of smears processed during the quarter by each cytology reporting laboratory.

### *Results*

The number and proportion of unsatisfactory smears taken during the quarter and reported by each cytology laboratory is shown in Table 11. Overall, 4,582 (4.4%) of the 103,049 smears processed were reported as unsatisfactory for evaluation. Diagnostic MedLab Auckland (6.8%), MedLab Bay of Plenty (5.0%), and Aotea Pathology (6.4%) reported the highest proportions of unsatisfactory smears. Diagnostic MedLab Auckland (7.0%), MedLab Bay of Plenty (4.9%) and Aotea Pathology (previously MedLab Wellington) (6.2%) also reported the highest proportions of unsatisfactory smears in the previous quarter.

Reasons for the 4,582 smears reported as unsatisfactory are shown by laboratory in Table 12. Overall, the highest proportion of unsatisfactory smears was as a result of insufficient squamous cells (64.8%, n=2,968). Diagnostic MedLab Auckland (8.0%, n=183) and Aotea Pathology (14.9%, n=107) had the greatest proportion of smears recorded as unsatisfactory for evaluation with free text.

***Recommendations***

No recommendations.

**Table 11: The number and proportion of unsatisfactory smears between 1 January 2007 and 31 March 2007 by laboratory**

Laboratory	Smears processed	Unsatisfactory smears							
		Unsatisfactory smears <sup>1</sup>		Combination (conventional & liquid based)		Conventional pap smear		Liquid based cytology	
		n	%	n	%	n	%	n	%
Auckland Hospital Lab.	5,935	209	3.5	4	2.5	162	3.4	43	4.4
Canterbury Health Lab.	9,604	148	1.5	0	0.0	20	6.2	128	1.4
Diagnostic MedLab Auckland	33,859	2,299	6.8	15	4.1	1,647	7.9	637	5.0
MedLab Bay of Plenty	9,613	478	5.0	2	5.1	421	6.1	55	2.1
MedLab Central	6,856	93	1.4	0	0.0	93	1.4	0	0.0
MedLab Christchurch	5,043	171	3.4	2	9.5	160	3.4	9	3.5
Aotea Pathology	11,170	720	6.4	2	1.4	671	7.3	47	2.6
SCL* Christchurch	5,296	73	1.4	0	0.0	73	1.4	0	0.0
SCL* Dunedin	15,673	391	2.5	0	0.0	367	2.5	24	2.5
<b>Total</b>	<b>103,049</b>	<b>4,582</b>	<b>4.4</b>	<b>25</b>	<b>2.7</b>	<b>3,614</b>	<b>4.9</b>	<b>943</b>	<b>3.3</b>

SCL\*: Southern Community Laboratories

Target: <sup>1</sup>under review, but previously 0.5 to 2.0%

Note: MedLab Wellington merged with Valley Diagnostic Laboratory and became Aotea Pathology

**Table 12: The number and proportion of unsatisfactory smears between 1 January 2007 and 31 March 2007 by reason**

Laboratory	Reason for smear being unsatisfactory														Total
	Insufficient squamous cell		Poor fixation/preservation		Foreign material obscures cells		Inflammation obscures cells		Blood obscures cells		Cytolysis/autolysis		Free text		
Auckland Hospital Lab.	133	63.6	6	2.9	9	4.3	32	15.3	20	9.6	8	3.8	1	0.5	209
Canterbury Health Lab.	141	95.3	0	0.0	0	0.0	0	0.0	4	2.7	3	2.0	0	0.0	148
Diagnostic MedLab Auckland	1,667	72.5	18	0.8	1	0.0	207	9.0	73	3.2	150	6.5	183	8.0	2,299
MedLab Bay of Plenty	305	63.8	7	1.5	3	0.6	103	21.5	45	9.4	14	2.9	1	0.2	478
MedLab Central	42	45.2	3	3.2	0	0.0	12	12.9	7	7.5	28	30.1	1	1.1	93
MedLab Christchurch	108	63.2	3	1.8	1	0.6	27	15.8	11	6.4	20	11.7	1	0.6	171
Aotea Pathology	232	32.2	5	0.7	13	1.8	190	26.4	57	7.9	116	16.1	107	14.9	720
SCL* Christchurch	51	69.9	1	1.4	1	1.4	10	13.7	9	12.3	1	1.4	0	0.0	73
SCL* Dunedin	289	73.9	14	3.6	0	0.0	43	11.0	34	8.7	11	2.8	0	0.0	391
<b>Total</b>	<b>2,968</b>	<b>64.8</b>	<b>57</b>	<b>1.2</b>	<b>28</b>	<b>0.6</b>	<b>624</b>	<b>13.6</b>	<b>260</b>	<b>5.7</b>	<b>351</b>	<b>7.7</b>	<b>294</b>	<b>6.4</b>	<b>4,582</b>

SCL\*: Southern Community Laboratories

Note: MedLab Wellington merged with Valley Diagnostic Laboratory and became Aotea Pathology

## 6.6 Unsatisfactory smears by smear taker

### *Definition*

Definitions and a description of the issues surrounding unsatisfactory smears are given on Page 52.

### *Targets*

The target for unsatisfactory smears was previously not less than 0.5% and not more than 2.0% of all smears reported for a given laboratory but this is now under review due to the introduction of the revised Bethesda Coding System (2001).

Please note that this indicator previously included smears that were satisfactory, satisfactory but limited or unsatisfactory for evaluation. Since the adoption of the 2001 revision of the Bethesda Coding Standard the category of satisfactory but limited has ceased to be used. The targets for this indicator are therefore currently under evaluation.

### *Calculation*

Smears taken from enrolled women of all ages during the reporting quarter for which there was a result recorded on the NCSP Register were used to calculate this indicator. The total number of smears recorded by each smear taker group for the 12 months prior to the end of the reporting quarter was used to calculate the annual volume of smears taken by each smear taker group. For each group, the number of unsatisfactory smears was expressed as a proportion of the total number of smears taken by that group.

### *Results*

The numbers and proportions of satisfactory and unsatisfactory smears taken in this quarter by annual volume of smears taken by each smear taker group are shown in Table 13. Overall, 103,049 smears were taken during the reporting quarter, of which 19 (<1%) were taken by lay smear takers, 59,149 (57%) by medical smear takers, 35,591 (35%) by nurses, 7,842 (8%) by specialists and 448 (<1%) by midwives. These proportions are similar to those reported in the last quarter.

The proportions of unsatisfactory smears were greatest for medical and specialist smear takers. None of the smears taken by lay smear takers were reported as unsatisfactory for assessment.

***Recommendations***

No recommendations.

**Table 13: The number and proportion of unsatisfactory smears for each smear taker group between 1 January 2007 and 31 March 2007**

	Annual volume of smears	Total number of smears	Satisfactory smears		Unsatisfactory smears <sup>1</sup>	
	n	n	n	%	n	%
Lay	<30	0	0	0.0	0	0.0
	30-100	19	19	100.0	0	0.0
	>100	0	0	0.0	0	0.0
	<b>Total</b>	<b>19</b>	<b>19</b>	<b>100.0</b>	<b>0</b>	<b>0.0</b>
Medical	<30	5,152	4,851	94.2	301	5.8
	30-100	17,127	16,182	94.5	945	5.5
	>100	36,870	34,927	94.7	1,943	5.3
	<b>Total</b>	<b>59,149</b>	<b>55,960</b>	<b>94.6</b>	<b>3,189</b>	<b>5.4</b>
Nurse	<30	2,085	2,019	96.8	66	3.2
	30-100	13,320	12,887	96.7	433	3.3
	>100	20,186	19,625	97.2	561	2.8
	<b>Total</b>	<b>35,591</b>	<b>34,531</b>	<b>97.0</b>	<b>1,060</b>	<b>3.0</b>
Specialist	<30	187	178	95.2	9	4.8
	30-100	743	705	94.9	38	5.1
	>100	6,912	6,641	96.1	271	3.9
	<b>Total</b>	<b>7,842</b>	<b>7,524</b>	<b>95.9</b>	<b>318</b>	<b>4.1</b>
Midwife	<30	80	79	98.8	1	1.3
	30-100	104	97	93.3	7	6.7
	>100	264	257	97.3	7	2.7
	<b>Total</b>	<b>448</b>	<b>433</b>	<b>96.7</b>	<b>15</b>	<b>3.3</b>
<b>Total</b>	<b>103,049</b>	<b>98,467</b>	<b>95.6</b>	<b>4,582</b>	<b>4.4</b>	

Target: <sup>1</sup>under review, but previously 0.5 to 2.0%

## 6.7 Waiting time for colposcopic assessment for HSIL or ASC-H

### *Definition*

The waiting time for colposcopic assessment for HSIL or ASC-H is the time from the receipt of a referral to a DHB colposcopy service for women with a high grade cytology result to the time of the first colposcopic assessment.

### *Targets*

The target for colposcopic assessment of women with a high grade cytology result is 95% of women having assessment within four weeks of referral.

### *Calculation*

The data required for the calculation of the waiting time for the assessment of the HSIL or ASC-H indicator are supposed to be collected by DHB colposcopy clinics and reported to the NSU. The indicator was unable to be calculated with the available data.

Nevertheless, the number of women with HSIL or ASC-H cytology results who were referred to DHB colposcopy clinics each month, and the number of women with HSIL or ASC-H cytology results who were waiting longer than four weeks for colposcopic assessment at the end of each month, reported by DHB colposcopy services were provided by the NSU.

### *Results*

The reported number of women with a HSIL or ASC-H cytology result referred each month for colposcopic assessment to each DHB colposcopy service, and the reported number of women referred for colposcopic assessment of a HSIL or ASC-H cytology result waiting longer than four weeks at the end of each month is shown in Table 14. All colposcopy units provided data for this reporting quarter.

The reported number of women referred for an assessment of a HSIL or ASC-H cytology abnormality waiting longer than four weeks at the end of each month was highest for Waitemata colposcopy unit (49 women at the end of January, 24 woman at the end of February, and 40 women at the end of March). The number of colposcopy units which

reported that no women waited longer than four weeks in any month was five, compared with four in the previous quarter.

***Recommendations***

10. The IMG is concerned about the potential incompleteness of colposcopy data and requests the NSU to review the data provided to the IMG.
11. The IMG is also concerned by the continuing unavailability of data needed to report on both the targets for waiting times for colposcopic assessment, and ethnicity specific waiting times. The IMG requests that the NSU continues to seek solutions to these problems.

Table 14: Waiting time for colposcopic assessment of HSIL or ASC-H between 1 January 2007 and 31 March 2007 by DHB colposcopy service

DHB Colposcopy Reporting Unit	Number of women referred for assessment of HSIL or ASC-H			Number of women referred waiting longer than 4 weeks at the end of each month		
	January	February	March	January	February	March
Auckland	0	0	44	33	12	3
Bay of Plenty	33	28	34	31	22	24
Canterbury	34	21	14	26	22	1
Capital Coast	6	7	0	1	0	0
Counties Manukau	36	56	60	13	3	3
Hawke's Bay	20	11	14	0	2	2
Hutt	3	1	2	1	0	0
Lakes	10	8	14	3	0	1
MidCentral	10	14	25	3	8	1
Nelson/Marlborough	2	3	2	1	1	1
Northland	12	12	13	8	5	4
Otago	10	23	31	0	0	0
South Canterbury	1	0	1	0	0	0
Southland	16	4	2	4	6	3
Tairāwhiti	0	0	0	0	0	1
Taranaki	8	8	8	0	0	0
Waikato	18	24	30	0	4	8
Wairarapa	1	0	5	0	0	0
Waitemata	41	27	61	49	24	40
West Coast	0	0	0	0	0	1
Whanganui	8	7	6	0	0	0
<b>Total</b>	<b>269</b>	<b>254</b>	<b>366</b>	<b>173</b>	<b>109</b>	<b>92</b>

## 6.8 Waiting time for colposcopic assessment for LSIL or ASC-US

### *Definition*

The waiting time for colposcopic assessment for LSIL is the time from the receipt of a referral to a DHB colposcopy service for women with a low grade (LSIL or ASC-US) cytology result to the time of the first colposcopic assessment.

### *Targets*

The target for colposcopic assessment of women with a low grade cytology result is 95% of women having assessment within 26 weeks of referral.

### *Calculation*

The data required for the calculation of the waiting time for the assessment of the LSIL or ASC-US indicator are supposed to be collected by DHB colposcopy clinics and reported to the NSU. The indicator was unable to be calculated with the available data. Nevertheless, the number of women with low grade cytology results who were referred to DHB colposcopy clinics each month, and the number of women with low grade cytology results who were waiting longer than 26 weeks for colposcopic assessment at the end of each month, reported by DHB colposcopy services were provided by the NSU.

### *Results*

The reported number of women with low grade cytology results referred each month for colposcopic assessment to each DHB colposcopy service, and the reported number of women referred for colposcopic assessment of a low grade cytology result waiting longer than 26 weeks at the end of each month is shown in Table 15. All colposcopy units provided data for this reporting quarter.

The reported number of women referred for an assessment of a LSIL or ASC-US cytology abnormality waiting longer than 26 weeks at the end of each month was highest for Auckland colposcopy unit (121 women at the end of January, 115 women at the end of February, and 90 women at the end of March). Seven of the colposcopy units reported that no women waited longer than 26 weeks in any month, compared with eight in the previous quarter.

***Recommendations***

10. The IMG is concerned about the potential incompleteness of colposcopy data and requests the NSU to review the data provided to the IMG.
11. The IMG is also concerned by the continuing unavailability of data needed to report on both the targets for waiting times for colposcopic assessment, and ethnicity specific waiting times. The IMG requests that the NSU continues to seek solutions to these problems.

Table 15: Waiting time for colposcopic assessment of LSIL or ASC-US between 1 January 2007 and 31 March 2007 by DHB colposcopy service

DHB Colposcopy Reporting Unit	Number of women referred for assessment of LSIL or ASC-US			Number of women referred waiting longer than 26 weeks at the end of each month		
	January	February	March	January	February	March
Auckland	0	0	63	121	115	90
Bay of Plenty	38	36	61	0	0	0
Canterbury	62	20	47	1	0	1
Capital Coast	24	25	0	0	0	0
Counties Manukau	25	44	50	0	0	1
Hawke's Bay	7	12	13	0	3	2
Hutt	19	34	37	1	2	0
Lakes	26	15	27	4	1	3
MidCentral	23	34	26	25	31	3
Nelson/Marlborough	2	1	0	2	2	2
Northland	10	14	13	4	7	7
Otago	18	14	19	0	0	0
South Canterbury	0	0	0	0	1	1
Southland	5	2	7	37	48	59
Tairāwhiti	0	0	0	0	0	0
Taranaki	3	10	14	0	0	0
Waikato	21	18	27	78	64	61
Wairarapa	1	11	7	0	1	1
Waitemata	25	23	50	7	12	9
West Coast	0	0	0	0	0	0
Whanganui	15	15	22	0	0	0
<b>Total</b>	<b>323</b>	<b>328</b>	<b>483</b>	<b>280</b>	<b>287</b>	<b>240</b>

## 6.9 Short interval re-screening

### *Definition*

Short interval re-screening is the proportion of enrolled women with a normal smear history who have had a further smear earlier than the recommended 3-year interval.

### *Target*

The target for short interval re-screening is less than 10%.

### *Calculation*

To estimate the proportion of women that were re-screened earlier than recommended (short interval re-screening), women who were aged 20 to 69 years at 31 March 2007 were identified. These women were further included in the calculation if: they had a normal smear history when they enrolled on the NCSP Register; all of their cytological and histological results prior to 1 July 2004 were recorded as negative for dysplasia or malignancy; they had at least one satisfactory smear taken between 1 July 2004 and 31 March 2007 (33 months; to allow a three month margin); their first smear taken between 1 July 2004 and 31 March 2007 was not the woman's first ever smear and it was not the first smear that the woman had had in more than five years.

The reason that the women must have had a normal cytology and histology history, not have had their first smear in the period 1 July 2004 to 31 March 2007 and not have had their first smear in more than five years during that period, is that for women for whom this is not the case they will have been recommended to have a further smear in less than three years.

Every smear was classified as satisfactory, satisfactory but limited or unsatisfactory for laboratory reading according to the revised Bethesda Coding System 1998, until July 2005. Since the adoption of the 2001 revision of the Bethesda Coding System (in July 2005) the 'satisfactory but limited' category has ceased to exist. Both unsatisfactory and satisfactory but limited smears were excluded from the calculation because women with these results are recommended to have a further smear in a shorter period of time than the usual three year interval.

The calculation of the proportion of women who were re-screened before the recommended three years excluded women who had had an abnormal smear between 1 July 2004 and 31 March 2007. The number of women who had had two or more smears in the time period was expressed as a proportion of the number of women who had had at least one smear.

There has been a change in the calculation methodology for short interval re-screening and therefore no comparison should be made between the levels given in this report and those given in reports prior to Quarterly Monitoring Report 22 (January to March 2006). This change includes the exclusion of all satisfactory but limited and all unsatisfactory cytology results.

### ***Results***

The estimated level of short interval re-screening for 20 to 69 year old women by five-year age groups is shown in Table 16. The overall level of short interval re-screening for 20 to 69 year old women was 11.1%. This level is above the target of less than 10%, and similar to the figure reported in the previous quarter (11.0%).

The proportion of women who were re-screened with a short interval varied by age. Women who were aged 20 to 24 years were most likely to be re-screened with a short interval (14.7%), while women who were aged 65 to 69 years were least likely to be re-screened with a short interval (8.0%). The target of less than 10% was only met for women that were aged between 60 and 69 years.

Table 17 shows the estimated level of short interval re-screening for 20 to 69 year old women by DHB. Short interval re-screening varied considerably among DHBs, ranging from 5.6% in Taranaki to 16.7% in Waitemata. Levels of short interval re-screening above 12% were also observed for Auckland (15.9%), Counties Manakau (12.8%), Lakes (13.0%), Northland (12.9%), and for the group of women where their DHB was unspecified (14.6%).

Table 18 shows the estimated level of short interval re-screening by ethnicity. The level of short interval re-screening was similar amongst the three groups: Māori (10.6%), Pacific (10.3%) and non-Māori, non-Pacific women (11.2%). The large numbers of women in each group, mean that these small differences were statistically significantly different from each other,  $P=0.003$ . The target of less than 10% was not met for any ethnic group.

### ***Recommendations***

12. The IMG notes high rates of short interval re-screening and is awaiting a response from a previous recommendation in Quarterly Report 25 (published in August 2007).
13. The IMG request the NSU to clarify the meaning of the Unspecified DHB category and to review how it is used, with a view to decreasing the proportion of women in this category.

**Table 16: Proportion of women aged 20 to 69 years unnecessarily re-screened between 1 July 2004 and 31 March 2007 by 5-year age group**

Age group	Total number of women	Women with abnormal smear in previous 33 months	Women with only normal smears in previous 33 months		Proportion with short interval re-screening (%)
			At least one smear	More than one smear	
20-24	18,225	2,867	15,358	2,265	14.7
25-29	31,730	3,118	28,612	3,228	11.3
30-34	36,623	2,147	34,476	3,941	11.4
35-39	46,407	2,036	44,371	4,892	11.0
40-44	50,814	1,900	48,914	5,575	11.4
45-49	49,115	1,596	47,519	5,562	11.7
50-54	40,938	1,113	39,825	4,734	11.9
55-59	35,283	647	34,636	3,613	10.4
60-64	26,995	359	26,636	2,388	9.0
65-69	21,447	224	21,223	1,693	8.0
<b>Total</b>	<b>357,577</b>	<b>16,007</b>	<b>341,570</b>	<b>37,891</b>	<b>11.1</b>

Target: short interval re-screening of less than 10%

**Table 17: Proportion of women aged 20 to 69 years unnecessarily re-screened between 1 July 2004 and 31 March 2007 by District Health Board**

DHB	Total number of women	Women with abnormal smear in previous 33 months	Women with only normal smears in previous 33 months		Proportion with short interval re-screening (%)
			At least one smear	More than one smear	
Auckland	34,508	1,715	32,793	5,215	15.9
Bay of Plenty	16,148	1,052	15,096	1,781	11.8
Canterbury	45,057	1,793	43,264	4,610	10.7
Capital Coast	27,726	1,413	26,313	2,724	10.4
Counties Manakau	30,266	1,298	28,968	3,700	12.8
Hawke's Bay	12,899	630	12,269	1,271	10.4
Hutt Valley	12,285	468	11,817	1,015	8.6
Lakes	8,837	483	8,354	1,090	13.0
MidCentral	12,539	892	11,647	974	8.4
Nelson/Marlborough	13,338	594	12,744	722	5.7
Northland	13,135	425	12,710	1,638	12.9
Otago	19,784	532	19,252	1,549	8.0
South Canterbury	4,854	196	4,658	444	9.5
Southland	10,154	376	9,778	730	7.5
Tairāwhiti	3,492	131	3,361	323	9.6
Taranaki	10,514	267	10,247	577	5.6
Waikato	28,510	1,194	27,316	1,856	6.8
Wairarapa	3,317	180	3,137	288	9.2
Waitemata	40,716	1,778	38,938	6,506	16.7
West Coast	2,873	123	2,750	207	7.5
Whanganui	4,913	362	4,551	436	9.6
Unspecified	1,712	105	1,607	235	14.6
<b>Total</b>	<b>357,577</b>	<b>16,007</b>	<b>341,570</b>	<b>37,891</b>	<b>11.1</b>

Target: short interval re-screening of less than 10%

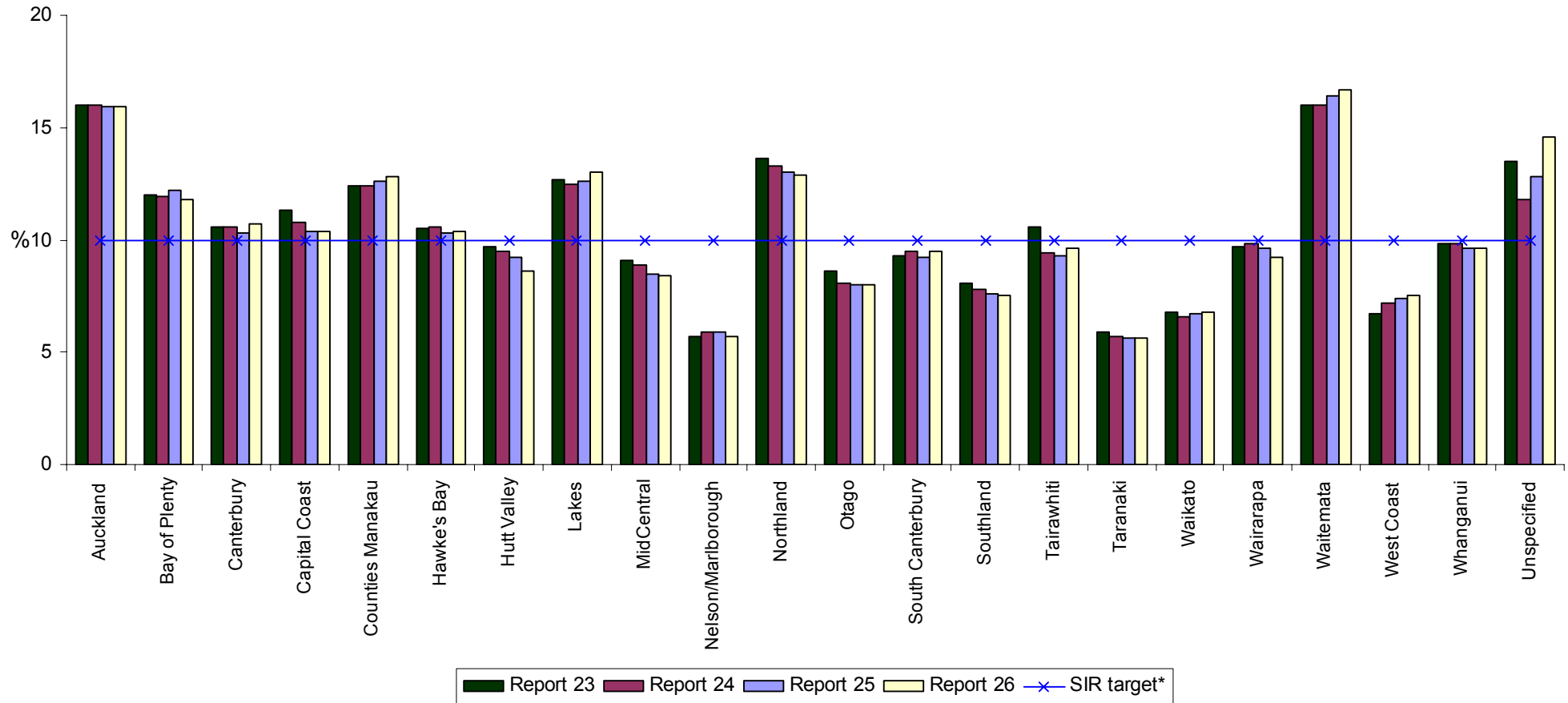
**Table 18: Proportion of women aged 20 to 69 years unnecessarily re-screened between 1 July 2004 and 31 March 2007 by ethnicity**

Ethnicity	Total number of women	Women with abnormal smear in previous 33 months	Women with only normal smears in previous 33 months		Proportion with short interval re-screening (%)
			At least one smear	More than one smear	
Māori	26,269	1,711	24,558	2,615	10.6
Pacific	9,740	464	9,276	958	10.3
Non-Māori, non-Pacific	321,568	13,832	307,736	34,318	11.2
<b>Total</b>	<b>357,577</b>	<b>16,007</b>	<b>341,570</b>	<b>37,891</b>	<b>11.1</b>

Difference between ethnic groups P=0.003

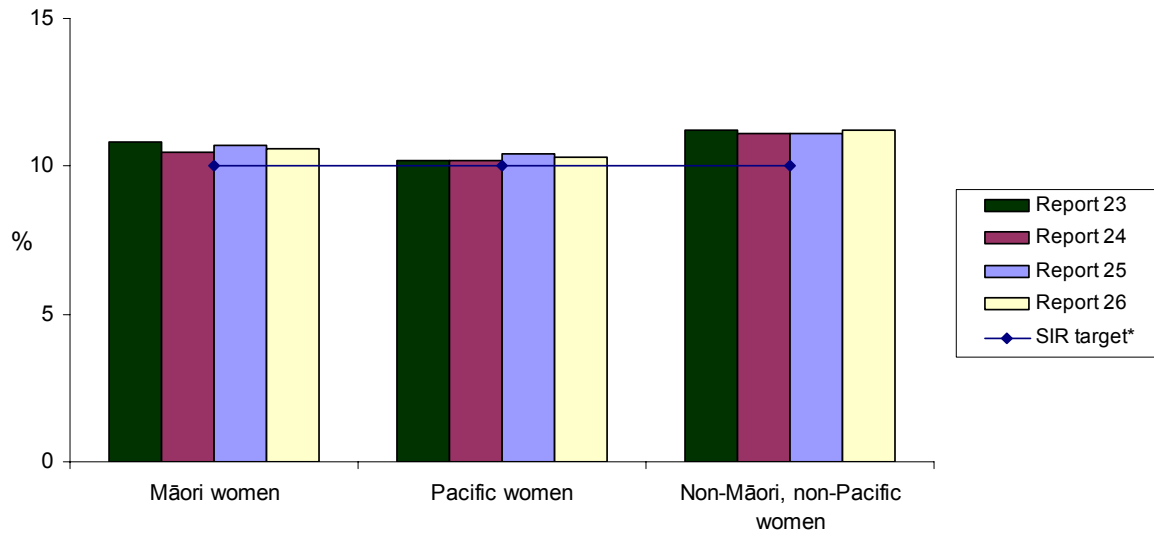
Target: short interval re-screening of less than 10%

Figure 16: Proportion of women aged 20 to 69 years unnecessarily re-screened by District Health Board



\* SIR target is not more than 10% so DHBs should be under the target line

**Figure 17: Proportion of women aged 20 to 69 years unnecessarily re-screened by ethnicity**



\* SIR target is not more than 10% so women should be under the target line

## **Appendix 1: Summary of the Revised Bethesda Coding Standard (2001)**

The hierarchy of broad cytological categories is:

- (a) Negative for dysplasia or malignancy
- (b) Abnormal not otherwise specified
- (c) Atypical squamous cells (ASC) of undetermined significance (ASC-US), excluding ASC cannot exclude high grade (ASC-H)
- (d) Low grade squamous intra-epithelial lesion (LSIL)
- (e) Atypical glandular/endocervical/endometrial cells (AGC)
- (f) Atypical glandular/endocervical cells (AGC) favouring a neoplastic process
- (g) ASC cannot exclude high grade (ASC-H)
- (h) High grade squamous intra-epithelial lesion (HSIL)
- (i) Adenocarcinoma-in-situ (AIS)
- (j) Adenocarcinoma
- (k) Cancer not otherwise specified
- (l) Invasive squamous carcinoma of the cervix

## Appendix 2: Ethnicity breakdown tables

**Appendix Table i: Ethnicity breakdown by NCSP Region for histology reports within 12 weeks after a high grade cytology result recorded between 1 April 2005 and 31 March 2006 on the NCSP Register**

NCSP Region	Histology report within 12 weeks after a high grade cytology result						Total number of women with high grade cytology results		
	Māori		Pacific		Non-Māori, non-Pacific		Māori	Pacific	Non-Māori, non-Pacific
	n	%	n	%	n	%	n	n	n
Auckland	102	57.3	66	48.9	991	72.8	178	135	1,362
Bay of Plenty	67	67.0	<10	*	235	73.4	100	<10	320
Canterbury	28	73.7	<10	*	478	83.9	38	<10	570
Hawke's Bay	31	77.5	<10	*	115	79.3	40	<10	145
Manawatu/Whanganui	42	70.0	<10	*	208	74.0	60	<10	281
Nelson/Marlborough	10	62.5	<10	*	112	80.6	16	<10	139
Northland	36	65.5	<10	*	84	85.7	55	<10	98
Otago/Southland	14	50.0	<10	*	343	85.8	28	<10	400
Tairāwhiti	24	55.8	-	-	27	93.1	43	-	29
Taranaki	20	90.9	-	-	78	73.6	22	-	106
Waikato	71	77.2	<10	*	292	85.9	92	<10	340
Wellington	33	53.2	11	68.8	333	75.2	62	16	443
West Coast	<10	*	<10	*	15	68.2	<10	<10	22

- indicates no women with a high grade cytology result

\* indicates that no percentage was calculated because of the small number of women

**Appendix Table ii: Ethnicity breakdown by NCSP Region for histology reports within 52 weeks after a high grade cytology result recorded between 1 April 2005 and 31 March 2006 on the NCSP Register**

NCSP Region	Histology report within 52 weeks after a high grade cytology result						Total number of women with high grade cytology results		
	Māori		Pacific		Non-Māori, non-Pacific		Māori	Pacific	Non-Māori, non-Pacific
	n	%	n	%	n	%	n	n	n
Auckland	146	82.0	113	83.7	1,227	90.1	178	135	1,362
Bay of Plenty	85	85.0	<10	*	294	91.9	100	<10	320
Canterbury	34	89.5	<10	*	537	94.2	38	<10	570
Hawke's Bay	37	92.5	<10	*	134	92.4	40	<10	145
Manawatu/Whanganui	52	86.7	<10	*	235	83.6	60	<10	281
Nelson/Marlborough	16	100.0	<10	*	135	97.1	16	<10	139
Northland	47	85.5	<10	*	93	94.9	55	<10	98
Otago/Southland	22	78.6	<10	*	382	95.5	28	<10	400
Tairāwhiti	31	72.1	-	-	29	100.0	43	-	29
Taranaki	21	95.5	-	-	96	90.6	22	-	106
Waikato	82	89.1	<10	*	324	95.3	92	<10	340
Wellington	50	80.6	14	87.5	398	89.8	62	16	443
West Coast	<10	*	<10	*	21	95.5	<10	<10	22

- indicates no women with a high grade cytology result

\* indicates that no percentage was calculated because of the small number of women