

*Quarterly Report 6*  
*National Cervical Screening*  
*Programme*

*January – March 2002*

**Volume I**

*Independent Monitoring Group*  
*of the National Cervical Screening Programme*

Technical Report No. 43  
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**NOVEMBER 2002**

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University of Otago  
PO Box 913  
Dunedin

November 2002

ISSN 1175-7094

## **The Independent Monitoring Group of the National Cervical Screening Programme (IMG-NCSP)**

The Independent Monitoring Group of the National Cervical Screening Programme (IMG-NCSP) was established by the University of Otago in 2000 as part of its contract with the Ministry of Health to provide independent quantitative monitoring of the National Cervical Screening Programme. The members of the IMG-NCSP are:

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The IMG-NCSP received data from the National Cervical Screening Programme Register for this report on 6 May 2002. This monitoring report was sent to the Ministry of Health on 29 November 2002.

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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## 1.0 Executive Summary

The Independent Monitoring Group of the National Cervical Screening Programme (IMG-NCSP) was established in November 2000 to provide independent quantitative monitoring of the National Cervical Screening Programme (NCSP). The IMG-NCSP first met in April 2001. The principle purpose of this monitoring is to assist the National Screening Unit (NSU) of the Ministry of Health (MoH) and providers of cervical screening services to improve the quality of the NCSP. Volume I of this quarterly report covers the period March to January 2002.

National indicators for the NCSP, established in 2000 by the NSU, provide the basis for monitoring reports produced by the IMG-NCSP. Indicators are reported quarterly, 6-monthly or annually. This report includes indicators reported quarterly.

To calculate the indicators for this report, anonymous data provided by the NSU for women enrolled on the NCSP-Register and women referred to colposcopy clinics were used. The way in which some indicators were calculated has changed since earlier reports. To enable comparisons of the results in this report with those of earlier reporting periods, many indicators reported in Reports 1-5 have been recalculated. These revised results are presented in Volume II of this report. Most results have changed very little. The revised results presented in Volume II are for the following indicators: short interval re-screening, delayed re-screening for women with high grade or more abnormality, follow-up of women with HSIL cytology, cytology abnormality reporting, histology abnormality reporting, laboratory smear reporting, cytology turn around time, histology turn around time, satisfactory but limited and unsatisfactory smears by laboratory, accuracy of cytology reports predicting HSIL (positive predictive value) and satisfactory but limited and unsatisfactory smears by smear taker.

Short interval re-screening, a measure of resource utilisation, was estimated to be 20.9% for women aged 20-69 years for the quarter March to January, 2002. This was much higher than the target of 10%. Short interval re-screening was highest among women aged 45-49 years (22.3%) and it was almost as high among women aged 20-44 and 50-59 years. The estimated level of short interval re-screening varied considerably among the DHB areas, ranging from 13.4% in the West Coast to 27.9% in Auckland. Because some normal smears considered to be satisfactory but limited generate a repeat smear after one year recommendation, short interval re-screening was also calculated using satisfactory smears only. When satisfactory but limited smears were excluded, the estimated level of short interval re-screening was 11.8%.

5,187 enrolled women had an ASCUS possible high grade or more serious cytology result between 1 April 2000 and 31 March 2001. About three-quarters (73.0%) of these women had a histology specimen taken within 12 weeks of their high grade smear being taken. This was less than the target of 90%. For 431 of the 5,173 women, a subsequent histology result was not recorded on the NCSP-Register. The proportion of women who had no histology recorded on the NCSP-Register varied noticeably amongst the NCSP regions and was particularly high for the Bay of Plenty.

Of the 102,382 satisfactory or satisfactory but limited smears reported during the quarter, 7.3% were reported as abnormal by laboratories, which was within the target of not more than 10%. The two hospital-based laboratories and two community-based laboratories reported more than 10% of the smears they processed as abnormal.

The cytology turn around time has markedly improved since the first quarterly monitoring report. The 7-day cytology turn around time for all laboratories combined was 97.5%. All but one of the thirteen laboratories processing smears met the 7-day cytology turn around time target and all laboratories either met or were very close to achieving the 14-day target.

The histology turn around time varied amongst the laboratories processing histology. For all laboratories combined, the 5-day histology turn around time was 91.1%, which was above the target of 90%. Eight of the fifteen hospital-based laboratories and fourteen of the fifteen community-based laboratories met the 5-day target.

The proportion of smears reported as satisfactory but limited varied considerably among the laboratories. Three of thirteen laboratories that processed smears during the quarter reported more than 20% of smears as satisfactory but limited. Four laboratories reported less than 0.5% of smears they processed as unsatisfactory.

The colposcopy service indicators were again unable to be calculated because the data required to do this were not available. A suitable process to collect these data is required urgently in order for the IMG-NCSP to monitor the colposcopy service indicators.

## **2.0 Recommendations**

The Independent Monitoring Group of the National Cervical Screening Programme makes the following recommendations in order to assist with improving the quality of the NCSP. The national indicator targets were considered when developing these recommendations. The recommendations were grouped into data related issues and service related issues.

### **2.1 Data Issues**

1. The IMG-NCSP considers including tabulation of the reporting time to the NCSP-Register of histology results from laboratories in future quarterly monitoring reports.
2. A suitable process to collect the data required for calculating the colposcopy waiting time indicators is required urgently in order for the IMG-NCSP to monitor colposcopy services as specified.
3. Efforts to collect some data from those DHB colposcopy units (Capital Coast Health, Hutt Valley Health, Lakeland Health, Pacific Health Tauranga, South Auckland Health, Tairāwhiti Healthcare, Wairarapa Health, Waitemata Health, Good Health Wanganui, Health South Canterbury, Northland Health and Pacific Health Whakatane) who did not provide any or incomplete data should continue.

### **2.2 Services Issues**

1. Efforts to reduce the high level of short interval re-screening in all 5-year age groups, particularly the 20-59 year old age groups, need to continue including efforts to educate smear takers and women about the nationally recommended intervals for cervical screening.
2. Efforts to examine the relatively high level of short interval re-screening need to continue, particularly in those areas with higher levels of short interval re-screening (Auckland, Waitemata, Capital Coast, Counties Manakau, Northland and Tairāwhiti).
3. Reasons why 1,501 women with a high grade abnormality recorded on the NCSP-Register had no follow up smear results recorded on the NCSP-Register need to be examined and follow up arrangements for these women checked.
4. Efforts to encourage women with a history of a high grade abnormality to have annual smears should continue.
5. Reasons why women with a history of a high grade abnormality have not had annual smears should be assessed.
6. The IMG-NCSP provides the coded numbers of the 431 women who had a high grade cytology report but no follow up histology result recorded on the NCSP-Register to the NSU so follow up arrangements for these women can be checked.

7. Reasons why an histology report was not recorded by the NCSP-Register within 12 weeks of a high grade cytology result for more than one-quarter of women, particularly Maori and Pacific women and women in the Bay of Plenty NCSP region, need to be examined.
8. An explanation for the relatively low proportion of HSIL reporting should be sought from Diagnostic Medlab Auckland.
9. Efforts to reduce the relatively high level of reporting of total abnormalities at Medlab Bay of Plenty and Pathlab Waikato should continue.
10. The IMG-NCSP should use the monitoring data set to investigate the outcome of women with ASCUS cytology results.
11. Medical Laboratory Wellington should continue to work towards achieving and maintaining the 7-day target.
12. The eight laboratories (Auckland Hospital Laboratory, Healthlab Otago, Nelson Hospital Laboratory, Southland Hospital Laboratory, Taranaki Base Hospital Laboratory, Wanganui Hospital Laboratory, Wellington Hospital Laboratory, and Northland Pathology Laboratory) that did not meet the 5-day histology turn around time target should work towards achieving this.
13. Reasons for the relatively high proportion of histology results reported after 10 working days should be sought from Auckland Hospital Laboratory, Healthlab Otago and Taranaki Base Hospital.
14. The reasons for laboratories reporting levels of unsatisfactory smears outside the target range should be sought, particularly those laboratories reporting levels below the target range.
15. Efforts to reduce the number of women with HSIL or ASCUS possible high grade cytology waiting more than 4 weeks for colposcopic assessment should continue.
16. Efforts to reduce the number of women with low grade cytology waiting more than 26 weeks for colposcopic assessment should continue.

### 3.0 Methods

The National Screening Unit (NSU) of the Ministry of Health (MoH), through a committee of experts and a consultation process, established national indicators for the National Cervical Screening Programme (NCSP) in 2000. Where it was considered appropriate and feasible, the NSU set targets for some indicators. For indicators with no target, changes over time will be assessed. With more information available through the monitoring process, some indicator targets and reporting frequencies have changed (see previous monitoring reports). National indicators are reported quarterly, 6-monthly or annually.

This report includes indicators that are reported quarterly. Each indicator is described in the results section under the separate headings that identify the specific indicators. Indicators that are calculated 6-monthly or annually are listed and defined in Appendix 1.

To calculate the indicators for this report, anonymous data provided by the NSU for women enrolled on the NCSP-Register and women referred to colposcopy units were used.

This report includes results for Maori and Pacific women. For this reporting quarter, 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 the Maori and Pacific ethnic groups, respectively, on the NCSP-Register. For the purposes of monitoring reports, women recorded on the NCSP-Register as being not Maori or Pacific were grouped together as 'Other'. This group included women whose ethnic group was unknown.<sup>1</sup>

Unless otherwise stated, women's ages at the end of the reporting quarter were used when calculating the indicators. The registration status of women at the time of the data download was used for all calculations. For a small number of women, their registration status changed during the reporting period or during the time from the end of the reporting period to the time of the data download. If during these time periods, a women's status had changed to 'deceased', 'gone overseas', 'hysterectomy', 'over 70 years', 'too sick to continue screening' or 'did not wish to have any more smears', then for most indicators these women were not included in the calculations. If women with any of these registration status categories were included in the calculation of an indicator, this is stated.

At NCSP-Register sites, each woman was allocated to both the NCSP region and District Health Board (DHB) area in which they lived at the time of having her smear, with two exceptions. Women whose address was unknown were allocated to the NCSP region according to their previously known address. 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 regions 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.

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<sup>1</sup> The National Screening Unit estimated that for 9% of women enrolled on the NCSP-Register, ethnicity was recorded as unknown.

## 4.0 Results

This reporting quarter ended on 31 March 2002. For each indicator, the indicator is defined, the target, if any, is stated and how the indicator was calculated is explained. The level of detail reported for each indicator varies.

For some indicators, results were calculated for NCSP regions or DHB areas. It is important to note that there are 14 NCSP regions and 21 DHB areas, and nine of these have identical boundaries (Hawkes Bay, Nelson/Marlborough, Northland, Otago, Tairāwhiti, Taranaki, Southland, Waikato and West Coast).

### 4.1 Short Interval Re-screening

#### Definition

Short interval re-screening is the proportion of enrolled women with a normal smear history who have had a smear earlier than the recommended 3-year interval. Excessive short interval re-screening represents an overuse of limited resources.

Three-yearly cervical screening is considered to reduce cervical cancer incidence by 91.4% compared with 93.4% if annual screening is done, while costs are much higher.<sup>2</sup> The European Guidelines for Quality Assurance in Cervical Cancer Screening state that 'optimal use of resources is achieved if the proportion of smears taken in accordance with the guidelines is close to 100%.'

#### Target

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

#### Calculation

To estimate short interval re-screening women who met all the following criteria were included:

1. They had a cytology result recorded on the NCSP-Register prior to the end of the reporting period.
2. They were aged 20-69 years at the end of the reporting period.
3. Their history at enrolment was recorded as normal on the NCSP-Register.
4. They had at least one satisfactory or satisfactory but limited smear during the 33-months prior to the end of the reporting period.
5. All cytological and histological results until the 33-months before the end of the reporting period were recorded on the NCSP-Register as negative for dysplasia or malignancy.
6. The first smear taken during the 33-months was not a woman's first ever smear.

Following a woman's first ever smear, a further smear in one year is recommended.<sup>3</sup>

Each smear is classified as satisfactory, satisfactory but limited or unsatisfactory for laboratory reading. Unsatisfactory smears reported during the 33-month period were excluded because these smears generate a 3-month recall.<sup>4</sup>

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<sup>2</sup> IARC Working Group. Screening for squamous cervical cancer: duration of low risk after negative results of cervical cytology and its implications for screening policies. *BMJ* 1986; 293: 659-64.

<sup>3</sup> Cervical Screening Working Party. Recommendations for cervical screening 1997. *NZ Med J* 1998; 111: 94-8.

<sup>4</sup> Revised Bethesda Coding Standard. Appendix 9. National Cervical Screening Programme Interim Operational Policy and Quality Standards. Health Funding Authority, October 2000.

The number of women who met the above criteria and who, during the time period, had two or more smears recorded minus those who had at least one smear recorded as abnormal<sup>5</sup> was expressed as a proportion of the number of women who had at least one smear recorded minus those who had at least one smear recorded as abnormal.

For women with a normal smear history, smears coded as satisfactory but limited generate either a 1-year or a 3-year recall depending on the reason for classifying a smear as satisfactory but limited.<sup>6</sup> To determine whether smears categorised as satisfactory but limited with a 1-year recall were contributing to the high level of short interval re-screening, separate analyses were done for satisfactory and satisfactory but limited smears combined and satisfactory smears only. The proportion of smears coded as satisfactory but limited varied amongst laboratories (see section 4.7).

## Results

Table 1 shows the estimated level of short interval re-screening for 20-69 year old women by 5-year age groups. The overall level of short interval re-screening was 20.9% when both satisfactory and satisfactory but limited smears were included and 11.8% when only satisfactory smears were included.

Short interval re-screening was highest amongst women aged 45-49 years (22.3%). Short interval re-screening was relatively high among women aged 20-44 and 50-59 years and for these age groups ranged between 20.4% and 21.8% for these age groups. The lowest level of short interval re-screening (15.4%) occurred among women aged 65-69 years. A similar pattern was observed when only satisfactory smears were included with short interval re-screening lowest among women aged 65-69 years (8.3%) and highest among women aged 50-54 years (13.7%).

Table 2 shows the estimated level of short interval re-screening for 20-69 year old women by DHB area. Short interval re-screening varied considerably among DHB areas. It ranged from 13.4% in the West Coast to 27.9% in Auckland. High levels of short interval re-screening were also observed for Capital Coast (25.0%), Counties Manakau (24.7%), Waitemata (27.7%). Lower levels of short interval re-screening were also observed for Otago (14.7%) and Southland (13.5%). When satisfactory smears only were included, the estimated level of short interval re-screening for each DHB area was lower, ranging from 4.9% for the Nelson-Marlborough DHB area to 17.1% for the Auckland DHB area. The difference between the estimated level of short interval re-screening when both satisfactory and satisfactory but limited smears were included and that when satisfactory smears only were included varied amongst the DHBs. This difference ranged from 3.1% for Otago to 13.1% for Bay of Plenty.

It is likely that some women will have had smears more frequently than 3-yearly as part of investigations of symptoms, but this is unlikely to explain the continued high level of short interval re-screening observed.

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<sup>5</sup> An abnormal smear was defined as any smear with a diagnosis of ASCUS or more serious according to the hierarchy of cytological codes (Appendix 2).

<sup>6</sup> Revised Bethesda Coding Standard. Appendix 9. National Cervical Screening Programme Interim Operational Policy and Quality Standards. Health Funding Authority, October 2000.

## RECOMMENDATIONS

### Service Issues

The following recommendation was first stated in Report 2, Section 4.7 and is still applicable.

1. Efforts to reduce the high level of short interval re-screening in all 5-year age groups, particularly the 20-59 year old age groups, need to continue including efforts to educate smear takers and women about the nationally recommended intervals for cervical screening.

The following recommendation was first stated in Report 5, Section 4.1 and is still applicable.

2. Efforts to examine the relatively high level of short interval re-screening need to continue, particularly in those areas with higher levels of short interval re-screening (Auckland, Waitemata, Capital Coast, Counties Manakau, Northland and Tairāwhiti).

**Table 1. Short interval re-screening proportion (%) by 5-year age groups.** [target = less than 10%]

Age groups (years)	Number of women with a normal history and at least one A1† or A2‡ smear	Number of women with more than one A1† or A2‡ smear	Number of women with an abnormal A1† or A2‡ smear (ASCUS or more serious)	Proportion (%) with >1 A1† or A2‡ smear amongst women with a normal history*	Proportion (%) with >1 A1† smear amongst women with a normal history
20-24	28,624	9,595	4,460	21.3	9.1
25-29	48,254	13,535	4,645	20.4	9.5
30-34	59,692	16,195	4,036	21.8	11.9
35-39	65,014	16,656	3,502	21.4	12.5
40-44	63,442	15,831	3,143	21.0	12.2
45-49	52,309	13,594	2,507	22.3	13.4
50-54	43,630	10,782	1,715	21.6	13.7
55-59	32,987	7,558	1,039	20.4	12.1
60-64	26,503	5,333	668	18.1	10.4
65-69	19,531	3,350	409	15.4	8.3
Total 20-69	439,986	112,429	26,124	20.9	11.8

† A1 = satisfactory smear

‡ A2 = satisfactory but limited smear

\* = (column 3 – column 4) x 100/(column 2 – column 4)

**Table 2. Short-interval re-screening proportion (%) for 20-69 year old women for each DHB area. [target = less than 10%]**

District Health Board	Smear Adequacy	
	Satisfactory (A1) & satisfactory but limited (A2) smears	Satisfactory (A1) smears only
Auckland	27.9	17.1
Bay of Plenty	19.1	6.0
Canterbury	17.9	12.8
Capital Coast	25.0	12.7
Counties Manakau	24.7	12.7
Hawkes Bay	16.6	10.3
Hutt Valley	21.8	13.7
Lakes	19.4	8.5
MidCentral	17.2	9.9
Nelson-Marlborough	16.4	4.9
Northland	23.1	14.2
Otago	14.7	11.6
South Canterbury	18.1	12.5
Southland	13.5	10.3
Tairāwhiti	21.6	12.4
Taranaki	15.9	6.3
Waikato	15.7	5.4
Wairarapa	19.8	10.5
Waitemata	27.7	16.7
West Coast	13.4	10.0
Whanganui	18.0	10.6
DHB Unspecified	22.9	13.3
Total	20.9	11.8

## **4.2 Delayed re-screening for women with a high grade abnormality**

### **Definition**

Re-screening for women with a high grade abnormality is the proportion of women participating in the NCSP with a history of a high grade abnormality who have completed treatment and had a smear within specified time periods. For these women, if their last smear was more than 15 months previously it was considered delayed. It is recommended that women with a history of a high grade abnormality have annual smears until age 70 years.<sup>7</sup>

A high grade abnormality was defined as any cytology result recorded as HSIL or more serious, or any histology result recorded as CIN-not otherwise specified, HSIL or more serious (according to the hierarchy of Bethesda or SNOMED codes as shown in Appendix 2 and 3, respectively).

### **Targets**

The targets for delayed re-screening were reported in the National Cervical Screening Programme Interim Operational Policy and Quality Standards as 15% for the last smear being 15 months or more previously and 1% for the last smear being 18 months or more previously. To maintain consistency with the reporting of targets for other indicators and to assist with interpretation, the targets for re-screening for women with HSIL or more serious abnormality are 85% for a smear within the last 15 months and 99% within the last 18 months.

### **Calculation**

Participating women<sup>8</sup> aged 20-69 years at the end of the quarter who had a high grade result recorded on the NCSP-Register and were recorded as 'signed in'<sup>9</sup> following assessment and treatment prior to 1 January 2001 were included.<sup>10</sup> This date was chosen because it was 15 months before the end of the reporting quarter, allowing sufficient opportunity for recommended annual follow up smears to be taken and recorded on the NCSP-Register. The numbers of these women who had a smear recorded on the NCSP-Register within 15 months, between 15 and 18 months and more than 18 months prior to the end of the quarter were calculated. These were expressed as proportions of all participating women who had had a high grade abnormality recorded on the NCSP-Register and were recorded as 'signed in' following assessment and treatment before 1 January 2001.

### **Results**

Table 3 show the number and proportion of participating 20-69 year old women with a high grade abnormality recorded on the NCSP-Register who had completed treatment before 1 January 2001 and whose most recent smear was less than 15 months, between 15 and 18 months or more than 18 months prior to the end of the reporting quarter. 23,619 women with a high grade abnormality recorded on the NCSP-Register had

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<sup>7</sup> Cervical Screening. Guidelines for the Management of Women with Abnormal Cervical Smears. National Cervical Screening Programme, Health Funding Authority, 1999.

<sup>8</sup> The definition of participating women is included in Appendix 1.

<sup>9</sup> 'Women are "signed out" so that no letters are sent from the Register advising them of their results or recommended recall while under the care of a specialist or colposcopist. Once the period of colposcopy or treatment has finished women are "signed in" and the Register will send letters as appropriate to their test and smear history.' P6.24, NCSP Interim Operational Policy and Quality Standards. October 2000.

<sup>10</sup> Women who were recorded as having an abnormal history at enrolment were included only if they had had a high grade cytological or histological abnormality recorded on the NCSP-Register since enrolment.

completed assessment and treatment before 1 January 2001. Of these 23,619 women, 72.6% had a smear within 15 months of the end of this reporting quarter. This was similar to that reported last quarter (72.5%), but less than the target of 85%. Just over three-quarters (77.7%) of the 23,619 women had a smear within 18 months. This proportion was also similar to that reported last quarter (77.9%) and much less than the target of 99%.

For 15.9% of the 23,619 women, their last smear was more than 18 months prior to 31 March 2002 and 1,501 women had had no smear recorded. Some of these women may have moved to live overseas and the NCSP-Register did not have this information. Sometimes there are clinical reasons for follow up smears not being taken.

## RECOMMENDATIONS

### Service Issues

1. Reasons why 1,501 women with a high grade abnormality recorded on the NCSP-Register had no follow up smear results recorded on the NCSP-Register need to be examined and follow up arrangements for these women checked.

The following recommendations were first stated in Report 1, Section 4.8 and are still applicable.

2. Efforts to encourage women with a history of a high grade abnormality to have annual smears should continue.
3. Reasons why women with a history of a high grade abnormality have had smears less frequently than recommended should be assessed.

**Table 3. Timeliness of the most recent smear among women with a previous high grade or more serious abnormality.**  
[targets = 85% within 15 months and 99% within 18 months]

Time period	Number	Proportion (%)	Cumulative proportion (%)
Less than 15 months	17,143	72.6	72.6
15-18 months	1,209	5.1	77.7
More than 18 months	3,766	15.9	93.6
No smear recorded	1,501	6.4	100.0
Total	23,619		

### **4.3 Follow-up of women with HSIL cytology**

#### **Definition**

Follow-up of women with HSIL cytology is defined as the proportion of enrolled women with a high grade or more serious cytology result for whom a histology specimen has been taken within specified time periods from the time the smear was taken as recorded by the NCSP-Register. The time periods are within 12 weeks, between 13 and 26 weeks, between 27 and 52 weeks and more than 52 weeks.

#### **Targets**

The targets for the follow-up of women with HSIL cytology are 90% for a histology specimen being taken within 12 weeks of the smear being taken, and 99% for a histology specimen being taken within 52 weeks of the smear being taken.

#### **Calculation**

The number of enrolled women aged 20-69 years at 31 March 2002 who had a cytology result of ASCUS possible high grade, HSIL or more serious abnormality (according to the hierarchy of codes, Appendix 2) recorded on the NCSP-Register between 1 April 2000 and 31 March 2001 was calculated. For each of these women the time between the date that the smear was taken and the date that the first subsequent histology specimen was taken 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 ASCUS possible high grade, HSIL or more serious cytology result were expressed as proportions of the total number of women with ASCUS possible high grade, HSIL or more serious cytology between 1 April 2000 and 31 March 2001. The numbers and proportions of women with no histology result recorded on the NCSP-Register following their ASCUS possible high grade, HSIL or more serious cytology results were also calculated. Women without subsequent histology were also described in two ways: whether they had been signed back into the programme since their abnormal smear and whether they had a subsequent smear by a specialist or at a hospital treatment centre or private specialist clinic.

This indicator was calculated for women of all ethnic groups, and Maori, Pacific and 'Other' women separately. It was also calculated for each NCSP region.

#### **Results**

Table 4 shows the number and proportion of women aged 20-69 years at 31 March 2002 who had ASCUS possible high grade, HSIL or more serious cytology (according to the hierarchy of codes, Appendix 2) reported during the period 1 April 2000 to 31 March 2001 and had a histology specimen taken within 12 weeks, between 13 and 26 weeks, between 27 and 52 weeks, or after more than 52 weeks of the smear being taken. The number of women with an ASCUS possible high grade, HSIL or more serious cytology report for which there was no subsequent histology result recorded on the NCSP-Register is also shown. Between 1 April 2000 and 31 March 2001, 5,187 enrolled women had smear taken with an ASCUS possible high grade, HSIL or more serious cytology result recorded on the NCSP-Register. About three-quarters (73.0%) of these women had a histology specimen taken within 12 weeks of their high grade smear being taken. This was less than the target of 90%. Of the 5,187 women, 90.7% had a histology specimen taken within one year of their high grade smear. This was less than the target of 99%.

Tables 5, 6 and 7 show the number and proportion of Maori, 'Other' and Pacific women who had a high grade smear taken during the period 1 April 2000 to 31 March 2001 and had a histology specimen taken within 12 weeks, between 13 and 26 weeks, between 27 and 52 weeks, or after more than 52 weeks of the smear being taken. Among the three ethnic groups, neither of the two targets was reached. 'Other' women had the highest proportion of women (75.7%) who had a histology specimen taken

within 12 weeks of their high grade smear compared with Maori and Pacific women. This proportion was 61.4% for Maori women and 58.4% for Pacific women. Amongst the three ethnic groups differences in the proportions of women with high grade smears having subsequent histology within 13-26 weeks, 27-52 weeks or more than 52 weeks persisted. With each successive time period the size of the differences decreased.

Table 8 shows the number and proportion of women in each NCSP region with a high grade cytology result between 1 April 2000 and 31 March 2001 who had a histology specimen taken within 12 weeks, between 13 and 26 weeks, between 27 and 52 weeks, or after more than 52 weeks of the smear being taken. The proportion of women in each region who had a high grade smear result with a subsequent histology taken within 12 weeks as recorded on the NCSP-Register varied considerably amongst the regions. This proportion ranged from 44.1% for Bay of Plenty to 93.2% for Tairāwhiti. As well as Tairāwhiti, the West Coast (92.6%) also reached the 12-week target of 90%.

For 431 women with a high grade smear result, a subsequent histology result was not recorded on the NCSP-Register (Table 4). Amongst the ethnic groups, the proportions of women who had no histology recorded on the NCSP-Register differed. This proportion was 11.1% for Maori women (Table 5), 7.6% for 'Other' women (Table 6) and 13.6% for Pacific women (Table 7). Amongst the NCSP regions, Bay of Plenty clearly had the greatest number and proportion of women with no histology result recorded on the NCSP-Register following a high grade smear (Table 8). 164 of 742 (22.1%) women with a high grade smear result in Bay of Plenty did not have a subsequent histology recorded on the NCSP-Register.

Table 9 summarises women with a high grade smear and no histology recorded on the NCSP-Register. Of the 431 women with no histology recorded, 123 had no further smear recorded following the initial high grade smear and 150 women had a follow-up smear taken by a non-specialist. Of these 273 women with either no follow-up smear or a follow-up smear taken by a non-specialist, 119 were recorded on the register as having been 'signed in' following their high grade smear result, suggesting that clinical management of an abnormality had been completed, but 45 women had no record on the NCSP-Register of a histology result or a follow-up smear result. For 154 of the 273 women, their follow-up was less clear. 78 of these women had no smear result recorded and 76 had had a smear taken by a non-specialist.

Some women with no histology recorded may have had further investigations and treatment, but their histology reports were not recorded on the NCSP-Register. Some women may have moved overseas and had follow-up there, some women may not have had indications for biopsy at colposcopic examination and some women may have opted to not allow their histology results to be recorded on the NCSP-Register.

## RECOMMENDATIONS

### Service Issues

1. The IMG-NCSP provides the coded numbers of the 431 women who had a high grade cytology report but no follow up histology result recorded on the NCSP-Register to the NSU so follow up arrangements for these women can be checked.

The following recommendation was first stated in Report 2, Section 4.9 and is still applicable.

2. Reasons why an histology report was not recorded by the NCSP-Register within 12 weeks of a high grade cytology result for more than one-quarter of women, particularly Maori and Pacific women and women in the Bay of Plenty NCSP region, need to be examined.

**Table 4. Timeliness of histology report after an ASCUS possible high grade or more serious cytology result for enrolled 20-69 year old women.** [targets = 90% within 12 weeks and 99% within 52 weeks]

Time period	Number	Proportion (%)	Cumulative proportion (%)
Within 12 weeks	3,786	73.0	73.0
13-26 weeks	657	12.7	85.7
27-52 weeks	259	5.0	90.7
More than 52 weeks	54	1.0	91.7
Subtotal	4,756	91.7	
No histology recorded on NCSP-Register	431	8.3	100.0
Total	5,187		

**Table 5. Timeliness of histology report after HSIL or ASCUS possible high grade cytology result for enrolled 20-69 year old Maori women.** [targets = 90% within 12 weeks and 99% within 52 weeks]

Time period	Number	Proportion (%)	Cumulative proportion (%)
Within 12 weeks	513	61.4	61.4
13-26 weeks	150	17.9	79.3
27-52 weeks	71	8.5	87.8
More than 52 weeks	9	1.1	88.9
Subtotal	743	88.9	
No histology recorded on NCSP-Register	93	11.1	100.0
Total	836		

**Table 6. Timeliness of histology report after HSIL or ASCUS possible high grade cytology result for enrolled 20-69 year old 'Other' women.** [targets = 90% within 12 weeks and 99% within 52 weeks]

Time period	Number	Proportion (%)	Cumulative proportion (%)
Within 12 weeks	3,200	75.7	75.7
13-26 weeks	485	11.5	87.2
27-52 weeks	177	4.2	91.4
More than 52 weeks	43	1.0	92.4
Subtotal	3,905	92.4	
No histology recorded on NCSP-Register	321	7.6	100.0
Total	4,226		

**Table 7. Timeliness of histology report after HSIL or ASCUS possible high grade cytology result for enrolled 20-69 year old Pacific women.** [targets = 90% within 12 weeks and 99% within 52 weeks]

Time period	Number	Proportion (%)	Cumulative proportion (%)
Within 12 weeks	73	58.4	58.4
13-26 weeks	22	17.6	76.0
27-52 weeks	11	8.8	84.8
More than 52 weeks	2	1.6	86.4
Subtotal	108	86.4	
No histology recorded on NCSP-Register	17	13.6	100.0
Total	125		

**Table 8. Timeliness of histology report after HSIL or ASCUS possible high grade cytology result for enrolled 20-69 year old women by NCSP region. [targets = 90% within 12 weeks and 99% within 52 weeks]**

NCSP region	Time periods										Total
	Within 12 weeks		13-26 weeks		27-52 weeks		More than 52 weeks		No histology		
	No.	%	No.	%	No.	%	No.	%	No.	%	
Auckland	1,126	75.9	161	10.9	78	5.3	15	1.0	103	6.9	1,483
Bay of Plenty	327	44.1	190	25.6	46	6.2	15	2.0	164	22.1	742
Canterbury	450	81.4	48	8.7	18	3.3	6	1.1	31	5.6	553
Hawkes Bay	139	74.7	23	12.4	13	7.0	1	0.5	10	5.4	186
Manawatu/ Wanganui	285	79.6	21	5.9	21	5.9	0	0.0	31	8.7	358
Nelson/ Marlborough	114	66.3	43	25.0	10	5.8	1	0.6	4	2.3	172
Northland	131	74.9	24	13.7	11	6.3	3	1.7	6	3.4	175
Otago	241	86.1	22	7.9	8	2.9	1	0.4	8	2.9	280
Southland	106	79.7	14	10.5	6	4.5	2	1.5	5	3.8	133
Tairāwhiti	69	93.2	2	2.7	2	2.7	0	0	1	1.4	74
Taranaki	132	78.6	19	11.3	7	4.2	0	0	10	6.0	168
Waikato	303	82.1	34	9.2	13	3.5	4	1.1	15	4.1	369
Wellington	338	72.4	56	12.0	25	5.4	6	1.3	42	9.0	467
West Coast	25	92.6	0	0.0	1	3.7	0	0.0	1	3.7	27
Total	3,804	73.3	645	12.4	253	4.9	54	1.0	431	8.3	5,187

**Table 9. The number of women with no histology result recorded by NCSP-Register status and source of any subsequent smear.**

Women's status	Subsequent smear			Total
	No smear	Smear taken by non-specialist	Smear taken by specialist	
Not signed in	78	76	93	247
Signed in since high grade cytology result	45	74	65	184
Total	123	150	158	431

## **Laboratory Indicators**

Several NCSP national indicators focus on laboratory performance. These are laboratory smear reporting rates, cytology and histology turn around times, satisfactory but limited and unsatisfactory smear reporting rates, positive predictive value of HSIL and accuracy of negative cytology reports. Table 10 summarises the laboratory performance indicators by laboratory for this quarterly report. These indicators are discussed in detail in sections 4.4 – 4.7

**Table 10. A summary of laboratory indicators reported.**

Laboratory	Total number of smears processed	Satisfactory but limited smears (target = not more than 20%)		Unsatisfactory smears (target = 0.5 – 2.0%)		Negative for dysplasia or malignancy* (target = not more than 96%)		HSIL* (target = not less than 0.6%)		Total abnormalities*† (target = not more than 10%)		Smear turn around time proportion (%) (target = 90%)
		No.	%	No.	%	No.	%	No.	%	No.	%	
<i>Hospital-based</i>	Number											Within 7 days
Auckland Hospital Laboratory	2,129	435	20.4	59	2.8	1,670	80.68	105	5.07	400	19.32	99.58
Canterbury Health Laboratories	1,297	222	17.1	13	1.0	1,099	85.59	38	2.96	185	14.41	99.92
Rest of table 10 continued on next page												

\* Unsatisfactory smears excluded

† Includes all smears with a diagnosis code of ASCUS or more serious according to the hierarchy of codes.

Table 10 continued

Laboratory	Total number of smears processed	Satisfactory but limited smears (target = not more than 20%)		Unsatisfactory smears (target = 0.5 – 2.0%)		Negative for dysplasia or malignancy* (target = not more than 96%)		HSIL* (target = not less than 0.6%)		Total abnormalities*† (target = not more than 10%)		Smear turn around time proportion (%) (target = 90%)
		No.	%	No.	%	No.	%	No.	%	No.	%	
<i>Community-based</i>	Number											Within 7 days
Diagnostic Medlab Auckland	30,875	6,616	21.4	124	0.4	29,379	95.54	182	0.59	1,372	4.46	99.99
Medical Laboratory Wellington	8,750	2,552	29.2	224	2.6	7,685	90.14	83	0.97	841	9.86	82.91
Medlab Bay of Plenty	7,330	1,289	17.6	34	0.5	6,382	87.47	82	1.12	914	12.53	99.25
Medlab Central, Palmerston North	7,468	1,220	16.3	43	0.6	6,846	92.20	67	0.90	579	7.80	96.59
Medlab Hamilton	7,221	1,123	15.6	25	0.3	6,486	90.13	69	0.96	710	9.87	99.85
Medlab South Christchurch	10,609	1,598	15.1	42	0.4	9,793	92.68	90	0.85	774	7.32	100.00
Pathlab Waikato	2,624	423	16.1	14	0.5	2,330	89.27	24	0.92	280	10.73	100.00
SCL‡ Christchurch	5,469	590	10.8	17	0.3	5,174	94.90	42	0.77	278	5.10	97.24
SCL‡ Dunedin	10,041	375	3.7	62	0.6	9,518	95.38	119	1.19	461	4.62	97.65
Taranaki Medlab	5,543	1,053	19.0	109	2.0	4,920	90.54	82	1.51	514	9.46	95.42
Valley Diagnostic Laboratory	3,849	748	19.4	57	1.5	3,590	94.67	37	0.98	202	5.33	96.41
Total	103,205	18,244	17.7	823	0.8	94,872	92.66	1,020	1.00	7,510	7.34	97.47

\* Unsatisfactory smears excluded

† Includes all smears with a diagnosis code of ASCUS or more serious according to the hierarchy of codes.

‡ SCL = Southern Community Laboratory

## 4.4 Laboratory smear reporting

Levels of cytology abnormalities detected by laboratories depend on numerous factors including the prevalence of abnormalities, the case mix and laboratory reporting practice.<sup>11</sup>

The Bethesda System is used by the NCSP to record the cytological result of each smear. Laboratories can assign more than one Bethesda diagnosis code to each smear. Therefore, a hierarchy of the codes is used by the NCSP for the recommended follow-up and tabulation of results. Similarly, for the purposes of this report the most serious diagnosis code for each smear according to the hierarchy of codes is used. The hierarchy of codes by broad cytological category, with increasing severity from (a) to (l) were:

- (a) negative for dysplasia or malignancy
- (b) abnormal not otherwise specified
- (c) atypical squamous cells of undetermined significance (ASCUS), excluding ASCUS possible high grade
- (d) low grade squamous intraepithelial lesion (LSIL)
- (e) atypical glandular cells of undetermined significance favouring a reactive process (AGUS favour reactive)
- (f) atypical glandular cells of undetermined significance favouring a dysplastic or neoplastic process (AGUS favour dysplasia)
- (g) ASCUS possible high grade
- (h) high grade squamous intraepithelial lesion (HSIL)
- (i) adenocarcinoma-in-situ (AIS)
- (j) adenocarcinoma<sup>12</sup>
- (k) cancer not otherwise specified
- (l) squamous carcinoma of the cervix

The Bethesda diagnosis codes assigned to each broad cytological category are shown in Appendix 2.

### Definition

Laboratory smear reporting is measured by the number and proportion of satisfactory or satisfactory but limited smears in the specified broad cytological categories (negative for dysplasia or malignancy, total ASCUS, AGUS favour reactive, AGUS favour dysplasia, LSIL, ASCUS possible high grade and HSIL).

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<sup>11</sup> The prevalence of the abnormalities in the population of women whose smears are read at a laboratory is an important determinant of the pattern of reporting from the laboratory. Hence, the case mix can vary considerably among laboratories. Hospital laboratories read smears from women referred to colposcopy clinics after the initial report of a cytological abnormality. Many hospital laboratories also read smears from women attending sexual health clinics. The prevalence of cytological abnormalities is higher amongst these two groups of women. Consequently, the prevalence of abnormalities reported by hospital laboratories is much greater than those laboratories (community laboratories) for whom the great majority of smears come from women with normal smear histories. However, some community laboratories also provide cytology reporting for hospital or private gynaecology colposcopy clinics.

<sup>12</sup> Adeocarcinoma includes adenocarcinoma not otherwise specified, adenocarcinoma probably of endocervical origin, adenocarcinoma probably of endometrial origin and adenocarcinoma probably of extrauterine origin.

## **Target**

The targets for laboratory smear reporting are:

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 smears taken during the reporting quarter were used to calculate the number of smears in each broad cytological category for each laboratory. These were expressed as proportions of the total number of smears reported by each laboratory. Where a single smear had more than one diagnosis code, only the most serious ranked code was used according to the hierarchy of codes. Total abnormalities included all smears with a diagnosis code of ASCUS or more serious abnormality. Smear results for women of all ages were included. Smears recorded as being unsatisfactory for evaluation were excluded.

## **Results**

Table 11 shows the number and proportion of satisfactory or satisfactory but limited smears in the specified cytological categories for smears taken in the quarter for each of the laboratories that process smears. The results are grouped into the two laboratories reporting smears predominantly for hospital clinics and the eleven laboratories reporting smears predominantly from the community.

During the quarter, 102,382 satisfactory or satisfactory but limited smears were taken, and the number of smears processed by each laboratory ranged from 1,284 at Canterbury Health Laboratories to 30,751 at Diagnostic Medlab Auckland.

Overall, of the 102,382 smears 92.7% were reported as negative for dysplasia or malignancy. This was similar to that reported last quarter (92.5%) and within the target of not more than 96% of smears being negative for dysplasia or malignancy. Although each laboratory met the target, there was variation amongst the laboratories. The two hospital-based laboratories reported lower proportions of the smears they processed as negative for dysplasia or malignancy compared with the community-based laboratories.

The proportion of smears reported as HSIL was 1.0% for all laboratories combined. This was slightly less than that reported for each of the last two quarters (1.1%), and met the target of not less than 0.6%. As expected, the two hospital-based laboratories reported higher proportions of smears as HSIL compared with the community-based laboratories. Amongst the community-based laboratories, Taranaki Medlab reported the highest proportion of smears as HSIL (1.5%). Except for Diagnostic Medlab Auckland, all laboratories met the target of not less than 0.60%. The proportion of smears reported as HSIL by Diagnostic Medlab Auckland was 0.59%. This laboratory reported 0.62% of smears as HSIL in the previous reporting quarter.

For all laboratories combined, the target of not more than 10% of smears reported as abnormal was not exceeded. This proportion was 7.3%, which is lower than that reported for previous quarters; 7.6% for October-December 2001, 8.2% for July-September 2001 and 8.2% for April-June 2001. Both hospital-based laboratories reported more than 10% of smears they processed to be abnormal: Auckland Hospital Laboratory (19.3%) and Canterbury Health Laboratories (14.4%). Two community-based laboratories also reported more than 10% of the smears they processed as abnormal: Medlab Bay of Plenty (12.5%) and Pathlab Waikato (10.7%). Both these laboratories reported relatively higher proportions of smears as ASCUS compared with other community-based laboratories. While both Medlab Bay of Plenty and Pathlab Waikato continued to report relatively high proportions of abnormal smears compared with other community-based laboratories, these proportions have decreased with successive reporting quarters since the April-June 2001 reporting period. The

proportion of smears reported as abnormal was 20.6% for Medlab Bay of Plenty and 20.4% for Pathlab Waikato for the April-June 2001 quarter.

## RECOMMENDATIONS

### Service Issues

1. An explanation for the relatively low proportion of HSIL reporting should be sought from Diagnostic Medlab Auckland.

The following recommendations were previously stated in Report 5, Section 4.4, and are still applicable.

2. Efforts to reduce the relatively high level of reporting of total abnormalities at Medlab Bay of Plenty and Pathlab Waikato should continue.
3. The IMG-NCSP should use the monitoring data set to investigate the outcome of women with ASCUS cytology results.

**Table 11. The number and proportion of satisfactory or satisfactory but limited smears in broad cytological categories for each laboratory.**

Laboratory	Negative for dysplasia or malignancy (target - not more than 96%)		Total ASCUS (including ASCUS possible HSIL)		LSIL		AGUS favour reactive		AGUS favour dysplasia		ASCUS possible HSIL		HSIL (target - not less than 0.6%)		Total abnormalities† (target - not more than 10%)		Total smears
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
<i>Hospital-based</i>																	
Auckland Hospital Laboratory	1,670	80.68	117	5.65	167	8.07	6	0.29	0	0.00	21	1.01	105	5.07	400	19.32	2,070
Canterbury Health Laboratories	1,099	85.59	73	5.69	69	5.37	2	0.16	1	0.08	3	0.23	38	2.96	185	14.41	1,284
Rest of table 11 continued on next page																	

† Includes all smears with a diagnosis code of ASCUS or more serious according to the hierarchy of codes.

Table 11 continued

Laboratory	Negative for dysplasia or malignancy (target = not more than 96%)		Total ASCUS (including ASCUS possible high grade)		LSIL		AGUS favour reactive		AGUS favour dysplasia		ASCUS possible high grade		HSIL (target = not less than 0.6%)		Total abnormalities† (target = not more than 10%)		Total smears
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
<i>Community-based</i>																	
Diagnostic Medlab Auckland	29,379	95.54	542	1.76	627	2.04	8	0.03	0	0.00	27	0.09	182	0.59	1,372	4.46	30,751
Medical Laboratory Wellington	7,685	90.14	463	5.43	282	3.31	8	0.09	3	0.04	25	0.29	83	0.97	841	9.86	8,526
Medlab Bay of Plenty	6,382	87.47	556	7.62	257	3.52	14	0.19	2	0.03	11	0.15	82	1.12	914	12.53	7,296
Medlab Central, Palmerston North	6,846	92.20	271	3.65	221	2.98	10	0.13	5	0.07	56	0.75	67	0.90	579	7.80	7,425
Medlab Hamilton	6,486	90.13	279	3.88	346	4.81	10	0.14	1	0.01	5	0.07	69	0.96	710	9.87	7,196
Medlab South Christchurch	9,793	92.68	373	3.53	277	2.62	19	0.18	7	0.07	29	0.27	90	0.85	774	7.32	10,567
Pathlab Waikato	2,330	89.27	190	7.28	59	2.26	3	0.11	2	0.08	8	0.31	24	0.92	280	10.73	2,610
SCL* Christchurch	5,174	94.90	134	2.46	100	1.83	0	0.00	0	0.00	8	0.15	42	0.77	278	5.10	5,452
SCL* Dunedin	9,518	95.38	43	0.43	289	2.90	5	0.05	1	0.01	18	0.18	119	1.19	461	4.62	9,979
Taranaki Medlab	4,920	90.54	222	4.09	205	3.77	4	0.07	0	0.00	9	0.17	82	1.51	514	9.46	5,434
Valley Diagnostic Laboratory	3,590	94.67	58	1.53	102	2.69	4	0.11	0	0.00	2	0.05	37	0.98	202	5.33	3,792
<b>Total</b>	<b>94,872</b>	<b>92.66</b>	<b>3,321</b>	<b>3.24</b>	<b>3,001</b>	<b>2.93</b>	<b>93</b>	<b>0.09</b>	<b>22</b>	<b>0.02</b>	<b>222</b>	<b>0.22</b>	<b>1,020</b>	<b>1.00</b>	<b>7,510</b>	<b>7.34</b>	<b>102,382</b>

† Includes all smears with a diagnosis code of ASCUS or more serious according to the hierarchy of codes.

\* SCL = Southern Community Laboratory.

## **4.5 Laboratory cytology turn around time**

### **Definition**

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

### **Target**

The targets for the laboratory cytology turn around time are 90% of smear reports issued to the smear taker within 7 working days of the smear being received by the laboratory, and 100% of smear reports issued to the smear taker within 14 days of the smear being received by the laboratory.

### **Calculation**

The difference between the date that a smear was received and the date that it was reported by the laboratory, as recorded by the NCSP-Register, was used to measure the laboratory turn around time. The numbers of smears reported within 7 working days, between 8 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. Smear results for all women on the NCSP-Register who had a smear taken during the reporting quarter were included.

### **Results**

Table 12 shows the proportion of smears received and reports issued within specified time periods during the period 1 January to 31 March 2002 for each laboratory processing cervical cytology. Overall, 97.5% of smears received by laboratories were reported within 7 working days. This was more than the target of 90% and it represents a small increase from 96.9% for the previous reporting quarter.

Overall, the 14-day target of 100% was almost achieved. For all smears taken from women enrolled on the register between 1 January and 31 March 2002, 99.98% were reported within 14 working days of being received by the laboratory.

Only one of the thirteen laboratories did not achieve the 7-day target. This was Medical Laboratory Wellington for whom the 7-day cytology turn around time was 82.9%. A similar result (81.8%) was reported last quarter. However, Medical Laboratory Wellington did achieve the 14-day target.

Three laboratories, compared with five in last reporting quarter, did not meet the 14-day target, but they were very close to achieving it. Overall, 18 of 103,205 smears were not reported within 14 working days.

Since the first reporting quarter (October-December 2000), there has been a marked improvement in the cytology turn around time for several laboratories.

## **RECOMMENDATIONS**

### **Service Issues**

1. Medical Laboratory Wellington should continue to work towards achieving and maintaining the 7-day target.

**Table 12. Timeliness of the reporting of smears by laboratory.** [targets = 90% within 7 working days and 100% within 14 working days]

Laboratory	Within 7 working days	From 8 to14 working days	Within 14 working days	More than 14 working days
	Proportion (%)	Proportion (%)	Proportion (%)	Proportion (%)
<i>Hospital-based</i>				
Auckland Hospital Laboratory	99.58	0.42	100.00	0.00
Canterbury Health Laboratories	99.92	0.08	100.00	0.00
<i>Community-based</i>				
Diagnostic Medlab Auckland	99.99	0.01	100.00	0.00
Medical Laboratory Wellington	82.91	17.09	100.00	0.00
Medlab Bay of Plenty	99.25	0.75	100.00	0.00
Medlab Central, Palmerston North	96.59	3.39	99.97	0.03
Medlab Hamilton	99.85	0.15	100.00	0.00
Medlab South Christchurch	100.00	0.00	100.00	0.00
Pathlab Waikato	100.00	0.00	100.00	0.00
Southern Community Laboratory Christchurch	97.24	2.76	100.00	0.00
Southern Community Laboratory Dunedin	97.65	2.24	99.89	0.11
Taranaki Medlab	95.42	4.58	100.00	0.00
Valley Diagnostic Laboratory	96.41	3.46	99.87	0.13
Total	97.47	2.51	99.98	0.02

## 4.6 Laboratory histology turn around time

### Definition

Laboratory histology turn around time is the period of time between the cervical or vaginal histology specimen being received in the laboratory and the report being issued by the laboratory to the colposcopist.

### Target

The targets for the laboratory histology turn around time are 90% of final histology reports issued within 5 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.<sup>13</sup> If it is likely to take more than 10 days for the result to be reported, the colposcopist should be informed.<sup>14</sup>

### Calculation

The difference between the date that a cervical histology specimen was received and the date that it was reported by the laboratory, as recorded on the NCSP-Register, was calculated for each laboratory that processed cervical histology. For each laboratory the number of cervical histology specimens reported within 5 working days was expressed as a proportion of the total number of cervical histology specimens processed by each laboratory during the quarter. Cervical histology results for all women on the NCSP-Register who had a histology specimen taken during the reporting quarter were included.

### Results

Table 13 shows the number of histology specimens reported and the timeliness of histology results reported by laboratories. Thirty laboratories were reporting cervical histology results during the period January-March 2002. The number of histology specimens reported by each laboratory varied considerably. The number of histology specimens reported as recorded on the NCSP-Register was lowest for Medical Laboratory Southland (1) and highest for Diagnostic Medlab Auckland (984). The number of histology specimens reported by Medical Laboratory Southland and recorded on the NCSP-Register was lower than expected.

For all laboratories combined, the 5-day histology turn around time was 91.1%. Amongst the laboratories, eight of the fifteen hospital-based laboratories and fourteen of the fifteen community-based laboratories met the 5-day target. Auckland Hospital Laboratory (64.4%), Healthlab Otago (63.6%), Nelson Hospital Laboratory (87.0%), Southland Hospital Laboratory (88.4%), Taranaki Base Hospital Laboratory (63.2%), Wanganui Hospital Laboratory (74.0%), Wellington Hospital Laboratory (69.4%), and Northland Pathology Laboratory (83.5%) did not meet the 5-day target of 90%.

Most laboratories had reported all or almost all histology results within 10 working days of the specimen arriving at the laboratory. Overall, 113 of 6,112 (1.8%) histology specimens received during the quarter were reported more than 10 working days after the specimen arrived at the laboratory. Auckland Hospital Laboratory (10.9%), Healthlab Otago (6.8%), and Taranaki Base Hospital (19.7%) had higher proportions of histology specimens reported after 10 working days compared with the other laboratories.

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<sup>13</sup> P 5.21 National Cervical Screening Programme Interim Operational Policy and Quality Standards. Health Funding Authority, October 2000.

<sup>14</sup> Ibid.

## RECOMMENDATIONS

### Data Issues

The following recommendation was previously stated in Report 5, Section 4.6, and is still applicable.

1. The IMG-NCSP considers including tabulation of the reporting time to the NCSP-Register of histology results from laboratories in future quarterly monitoring reports.

### Service Issues

1. The eight laboratories (Auckland Hospital Laboratory, Healthlab Otago, Nelson Hospital Laboratory, Southland Hospital Laboratory, Taranaki Base Hospital Laboratory, Wanganui Hospital Laboratory, Wellington Hospital Laboratory, and Northland Pathology Laboratory) that did not meet the 5-day histology turn around time target should work towards achieving this.
2. Reasons for the relatively high proportion of histology results reported after 10 working days should be sought from Auckland Hospital Laboratory, Healthlab Otago and Taranaki Base Hospital.

**Table 13. Timeliness of the reporting of histology by laboratory.** [targets = 90% within 5 working days and 100% within a reasonable period of time]

Laboratory	Number of histology specimens	Within 5 working days	6-10 working days	11 or more working days
		Proportion (%)	Proportion (%)	Proportion (%)
<i>Hospital-based</i>				
Auckland Hospital Laboratory	348	64.4	24.7	10.9
Canterbury Health Laboratories	470	96.2	3.6	0.2
Healthlab Otago	206	63.6	29.6	6.8
Hutt Hospital Laboratory	29	93.1	6.9	0.0
Memorial Hospital Hastings Lab	119	91.6	6.7	1.7
Middlemore Hospital Laboratory	183	99.5	0.5	0.0
Nelson Hospital Laboratory	123	87.0	11.4	1.6
North Shore Hospital Laboratory	361	98.6	1.1	0.3
Rotorua Hospital Laboratory	92	92.4	4.3	3.3
Southland Hospital Laboratory	147	88.4	10.2	1.4
Taranaki Base Hospital Laboratory	152	63.2	17.1	19.7
Waikato Hospital Laboratory	454	94.3	5.7	0.0
Wanganui Hospital Laboratory	50	74.0	22.0	4.0
Wellington Hospital Laboratory	229	69.4	29.3	1.3
Whangarei Hospital Laboratory	159	94.3	4.4	1.3
<i>Community-based</i>				
Diagnostic Medlab Auckland	984	98.7	1.0	0.3
Medical Laboratory Southland	1	100.0	0.0	0.0
Medical Laboratory Wellington	192	92.7	5.2	2.1
Medlab Bay of Plenty	293	98.3	1.0	0.7
Medlab Central, Palmerston North	516	93.4	6.4	0.2
Medlab Hamilton	83	98.8	1.2	0.0
Medlab South Christchurch	56	100.0	0.0	0.0
Medlab South working for Timaru	55	100.0	0.0	0.0
Nelson Diagnostic Laboratory	58	91.4	8.6	0.0
Northland Pathology Laboratory	85	83.5	14.1	2.4
Pathlab Waikato	172	97.1	2.9	0.0
SCL Christchurch	185	100.0	0.0	0.0
SCL Dunedin	148	98.6	0.7	0.7
Taranaki Medlab	55	100.0	0.0	0.0
Valley Diagnostic Laboratory	107	97.2	2.8	0.0
<b>Total</b>	<b>6,112</b>	<b>91.1</b>	<b>7.1</b>	<b>1.8</b>

## **4.7 Satisfactory but limited and unsatisfactory smears by laboratory**

### **Definition**

Satisfactory but limited smears are those smears reported with a Bethesda adequacy code of A2 (satisfactory but limited).

Unsatisfactory smears are those smears reported with a Bethesda adequacy of A3 (unsatisfactory).

It is important to note that the adequacy coding of a smear is influenced by both smear taking technique and laboratory reporting practice.

The recently revised Bethesda System no longer includes a satisfactory but limited category. Until the NCSP adopts this most recent revision of the Bethesda System, the IMG-NCSP will continue to report the satisfactory but limited smears by laboratory indicator. When the NCSP adopts the recently revised Bethesda System, consideration will be given to changing the current target for unsatisfactory smears.

### **Target**

The target for satisfactory but limited smears is not more than 20% of all smears reported for a given laboratory.

The target for unsatisfactory smears is not less than 0.5% and not more than 2.0% of all smears reported for a given laboratory.

### **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 satisfactory but limited smears and the number of unsatisfactory smears reported were expressed as a proportion of the total number of smears processed during the quarter by each laboratory reporting cytology.

### **Results**

Table 14 shows the number and proportion of satisfactory but limited and unsatisfactory smears taken during the quarter and reported by the specified laboratories. Overall, 103,205 smears were processed, of which 17.7% were reported as satisfactory but limited. This was similar to that reported last quarter (17.5%) and was within the target of not more than 20%.

Among the laboratories, the proportion of satisfactory but limited smears varied considerably. This proportion ranged from 3.7% for Southern Community Laboratory Dunedin to 29.2% for Medical Laboratory Wellington. Three of thirteen laboratories that processed smears during the quarter reported more than 20% of smears as satisfactory but limited. These three laboratories were Auckland Hospital Laboratory (20.4%), Diagnostic Medlab Auckland (21.4%) and Medical Laboratory Wellington (29.2%). A high proportion of satisfactory but limited smears is associated with a high level of short interval re-screening (see Section 4.1).

Overall, 0.8% of the 103,205 smears processed were reported as unsatisfactory for evaluation. This was slightly less than that reported for previous monitoring quarters (0.9%), but within the target range of 0.5% - 2.0%. Auckland Hospital Laboratory (2.8%) and Medical Laboratory Wellington (2.6%) both reported more than 2.0% of smears as unsatisfactory, which is the same as that reported last quarter. Four laboratories reported less than 0.5% of smears they processed as unsatisfactory. These laboratories were Diagnostic Medlab Auckland (0.4%), Medlab Hamilton (0.3%),

Medlab South Christchurch (0.4%) and Southern Community Laboratory Christchurch (0.3%). The latter two laboratories have reported low proportions of unsatisfactory smears in the previous monitoring quarters.

## RECOMMENDATIONS

### Service Issues

The following recommendation was previously stated in Report 4, Section 4.18, and is still applicable.

1. The reasons for laboratories reporting levels of unsatisfactory smears outside the target range should be sought, particularly those laboratories reporting levels below the target range.

**Table 14. The number and proportion of satisfactory but limited and unsatisfactory smears by laboratory.**

Laboratory	Total number of smears processed	Satisfactory but limited smears [target = not more than 20%]		Unsatisfactory smears (%) [target = 0.5 – 2.0%]	
		Number	Proportion (%)	Number	Proportion (%)
<i>Hospital-based</i>					
Auckland Hospital Laboratory	2,129	435	20.4	59	2.8
Canterbury Health Laboratories	1,297	222	17.1	13	1.0
<i>Community-based</i>					
Diagnostic Medlab Auckland	30,875	6,616	21.4	124	0.4
Medical Laboratory Wellington	8,750	2,552	29.2	224	2.6
Medlab Bay of Plenty	7,330	1,289	17.6	34	0.5
Medlab Central, Palmerston North	7,468	1,220	16.3	43	0.6
Medlab Hamilton	7,221	1,123	15.6	25	0.3
Medlab South Christchurch	10,609	1,598	15.1	42	0.4
Pathlab Waikato	2,624	423	16.1	14	0.5
Southern Community Laboratory Christchurch	5,469	590	10.8	17	0.3
Southern Community Laboratory Dunedin	10,041	375	3.7	62	0.6
Taranaki Medlab	5,543	1,053	19.0	109	2.0
Valley Diagnostic Laboratory	3,849	748	19.4	57	1.5
<b>Total</b>	<b>103,205</b>	<b>18,244</b>	<b>17.7</b>	<b>823</b>	<b>0.8</b>

## **4.8 Waiting time for colposcopic assessment for HSIL or ASCUS possible high grade**

### **Definition**

The waiting time for colposcopic assessment for HSIL or ASCUS possible high grade, 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.

### **Target**

The target is 95% or more of women with a high grade cytology result to have a colposcopic assessment within 4 weeks.

### **Calculation**

Data required for the calculation of the waiting time for assessment for HSIL or ASCUS possible high grade indicator are collected by DHB colposcopy clinics and reported to the Ministry of Health. Prior to the establishment of the IMG-NCSP data required to calculate this indicator were not collected. Because data definitions were inconsistent<sup>15</sup> and some data were missing, it was not possible to calculate this indicator. Nevertheless, the number of women with an HSIL or ASCUS possible high grade cytology result who were referred to a DHB colposcopy clinic each month, and the number of women with an HSIL or ASCUS possible high grade cytology result who were waiting longer than 4 weeks for a colposcopic assessment at the end of each month reported by DHB colposcopy services were provided by the Ministry of Health.

### **Results**

Table 15 shows the reported number of women with an HSIL or ASCUS possible high grade cytology results referred each month for a colposcopic assessment to each DHB colposcopy service, and the reported number of women referred for colposcopic assessment of an HSIL or ASCUS possible high grade cytology result waiting longer than 4 weeks at the end of each month. Capital Coast Health, Hutt Valley Health, Lakeland Health, Pacific Health Tauranga, South Auckland Health, Tairāwhiti Healthcare and Wairarapa Health did not provide data. For Good Health Wanganui, Health South Canterbury, Northland Health and Pacific Health Whakatane and Waitemata Health, some data were missing.

The number of new referrals for high grade abnormalities appeared lower than expected for Auckland Healthcare colposcopy service.

Among those colposcopy units who provided data to the Ministry of Health, up to 54 women with an HSIL or ASCUS possible high grade cytology abnormality were reported to be waiting longer than 4 weeks at the end of a month. For Healthcare Otago, MidCentral Health and Pacific Health (Whakatane) no women were reported to be waiting longer than 4 weeks.

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<sup>15</sup> Summary Of Findings From Questionnaire To Clarify Definitions Of CIN 1 And CIN 3 Used To Report Colposcopy Waiting Times. Unpublished Report. Ministry of Health, December 2000.

## RECOMMENDATIONS

### Data Issues

The following recommendations were previously stated in Report 5, Section 4.9, and are still applicable.

1. A suitable process to collect data required for calculating the colposcopy waiting time indicators is required urgently in order for the IMG-NCSP to monitor colposcopy services.
2. Efforts to collect data from those DHB colposcopy units (Capital Coast Health, Hutt Valley Health, Lakeland Health, Pacific Health Tauranga, South Auckland Health, Tairāwhiti Healthcare, Wairarapa Health, Waitemata Health, Good Health Wanganui, Health South Canterbury, Northland Health and Pacific Health Whakatane) who did not provide any or incomplete data should continue.

### Service Issues

The following recommendation was previously stated in Report 5, Section 4.9, and is still applicable.

1. Efforts to reduce the number of women with HSIL or ASCUS possible high grade cytology waiting more than 4 weeks for colposcopic assessment should continue.

**Table 15. Waiting time for colposcopic assessment of HSIL or ASCUS possible high grade by DHB colposcopy service.**

DHB Colposcopy Reporting Unit	Number of women referred for colposcopic assessment of HSIL or ASCUS-HG			Number of women referred waiting longer than 4 weeks at the end of each month.		
	January	February	March	January	February	March
Auckland Healthcare	32	33	19	0	0	1
Canterbury Health	47	50	59	15	23	24
Capital Coast Health†						
Coast Healthcare (West Coast)	3	5	5	2	1	1
Good Health Wanganui‡				0	0	0
Health South Canterbury‡		5	2		1	0
Health Waikato	37	27	48	7	7	7
Healthcare Hawkes Bay	12	10	7	-	-	7
Healthcare Otago	21	22	20	0	0	0
Hutt Valley Health†						
Lakeland Health†						
MidCentral Health	11	17	27	0	0	0
Nelson/Marlborough Health	2	12	4	5	1	3
Northland Health‡				6	2	8
Pacific Health Tauranga†				0	0	0
Pacific Health Whakatane‡						
South Auckland Health†						
Southern Health	10	16	14	1	3	2
Tairāwhiti Healthcare†						
Taranaki Healthcare	7	11	10	0	0	1
Wairarapa Health†						
Waitemata Health‡				40	31	47
Total						

† Data not provided

‡ Missing data

## **4.9 Waiting time for colposcopic assessment for LSIL or ASCUS**

### **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 ASCUS) cytology result to the time of the first colposcopic assessment.

### **Target**

The target is 95% or more of women with a low grade cytology result to have a colposcopic assessment within 26 weeks.

### **Calculation**

Data required for the calculation of the waiting time for assessment for LSIL indicator are collected by DHB colposcopy clinics and reported to the Ministry of Health. Prior to the establishment of the IMG-NCSP data required to calculate this indicator were not collected. Because data definitions were inconsistent<sup>16</sup> and some data were missing, it was not possible to calculate this indicator. Nevertheless, the number of women with a low grade cytology result who were referred to a DHB colposcopy clinic each month, and the number of women with a low grade cytology result who were waiting longer than 26 weeks for a colposcopic assessment at the end of each month reported by DHB colposcopy services were provided by the Ministry of Health.

### **Results**

Table 16 shows the reported number of women with low grade cytology results referred each month for a colposcopic assessment, 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 for each DHB colposcopy service. Capital Coast Health, Hutt Valley Health, Lakeland Health, Pacific Health (Tauranga), South Auckland Health, Tairāwhiti Healthcare and Wairarapa Health did not provide data. For Good Health Wanganui, Health South Canterbury, Health Waikato, Northland Health, Pacific Health (Whakatane) and Waitemata Health, some data were missing.

The number of new referrals for low grade abnormalities appeared lower than expected for Taranaki Healthcare colposcopy service.

Among those DHB colposcopy services who provided data to the Ministry of Health, the number of women referred for an assessment of a low grade abnormality waiting longer than 26 weeks was relatively high for Healthcare Hawkes Bay, Taranaki Healthcare and Waitemata Health.

## **RECOMMENDATIONS**

### **Data Issues**

1. See Section 4.8, Recommendation 1.
2. See Section 4.8, Recommendation 2.

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<sup>16</sup> Summary Of Findings From Questionnaire To Clarify Definitions Of CIN 1 And CIN 3 Used To Report Colposcopy Waiting Times. Unpublished Report. Ministry of Health, December 2000.

## Service Issues

The following recommendation was previously stated in Report 5, Section 4.10, and is still applicable.

1. Efforts to reduce the number of women with low grade cytology waiting more than 26 weeks for colposcopic assessment should continue.

**Table 16. Waiting time for colposcopic assessment of LSIL or ASCUS by DHB colposcopy service.**

DHB Colposcopy Reporting Unit	Number referred for colposcopic assessment of LSIL			Number of those referred waiting longer than 26 weeks at the end of each month		
	January	February	March	January	February	March
Auckland Healthcare	20	41	58	0	1	0
Canterbury Health	29	33	26	7	3	2
Capital Coast Health†						
Coast Healthcare (West Coast)	2	2	2	2	-	-
Good Health Wanganui‡				0	0	0
Health South Canterbury‡		7	11	1	0	1
Health Waikato‡				189	213	219
Healthcare Hawkes Bay	5	5	4	-	-	78
Healthcare Otago	12	21	18	0	0	0
Hutt Valley Health†						
Lakeland Health†						
MidCentral Health	10	12	10	8	0	7
Nelson/Marlborough Health	14	26	25	4	3	6
Northland Health‡				8	4	11
Pacific Health Tauranga†						
Pacific Health Whakatane‡				0	0	0
South Auckland Health†						
Southern Health	7	8	10	17	14	27
Tairāwhiti Healthcare†						
Taranaki Healthcare	1	0	1	18	25	18
Wairarapa Health†						
Waitemata Health‡				5	58	88
Total						

† Data not provided

‡ Missing data

## **4.10 Satisfactory but limited and unsatisfactory smears by smear taker**

### **Definition**

Satisfactory but limited smears are those smears reported with a Bethesda adequacy code of A2 (satisfactory but limited).

Unsatisfactory smears are those smears reported with a Bethesda adequacy of A3 (unsatisfactory).

It is important to note that the adequacy coding of a smear is influenced by both smear taking technique and laboratory reporting practice.

The recently revised Bethesda System no longer includes a satisfactory but limited category. Until the National Cervical Screening Programme adopts this most recent revision of the Bethesda System, the IMG-NCSP will continue to report the satisfactory but limited smears by smear taker category.

### **Target**

The target for satisfactory but limited smears is not more than 20% of all smears reported for each smear taker category.

The target for unsatisfactory smears is not less than 0.5% and not more than 2.0% of all smears reported for each smear taker category.

### **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 total number of smears recorded against each smear taker 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.

For each smear taker group, the number of satisfactory but limited smears was expressed as a proportion of the total number of smears taken by each group.

For each smear taker group, the number of unsatisfactory smears was expressed as a proportion of the total number of smears taken by each group.

### **Results**

Table 17 shows the number and proportion of satisfactory but limited and unsatisfactory smears taken in the quarter by annual volume of smears taken by each smear taker group. Overall, 103,205 smears were taken during the reporting quarter, of which 8 were taken by lay smear takers, 69,205 by medical smear takers, 24,434 by nurses, 9,110 by specialists and 448 by midwives. Of the 103,205 smears, 81.5% were considered satisfactory, 17.7% were considered satisfactory but limited and 0.8% were considered unsatisfactory for evaluation. Overall, the proportion of satisfactory but limited and the proportion of unsatisfactory smears were both within the targets.

Except for midwives, the proportion of satisfactory but limited smears was within the target of not more than 20% for each entire smear taker group. For the midwife smear taker group this proportion was 20.3%.

Medical smear takers, specialists and midwives, who took fewer than 30 smears in the 12 months prior to 31 March 2002, had greater than 20% of their smears reported as satisfactory but limited. This proportion was relatively high for midwives (32.4%) compared with the medical smear takers (22.9%) and specialists (20.7%). For specialists who took 30-100 smears annually the proportion of satisfactory but limited smears was also greater than 20% (22.3%). The lay smear taker group did not have

any smears considered to be satisfactory but limited, but this group only took 8 smears during the quarter.

Overall, the proportion of unsatisfactory smears decreased with an increasing annual number of smears taken amongst each smear taker group, except for the lay smear taker group. No smears taken by lay smear takers were considered unsatisfactory. Midwives who took more than 100 smears in the 12 months prior to 31 March 2002 also did not have any smears considered unsatisfactory. For specialists who took fewer than 30 smears or 30-100 smears annually, the proportions of unsatisfactory smears were above 2.0% (2.4% and 2.2%, respectively). The proportions of unsatisfactory smears for all other smear taker groups were within the target range of 0.5 – 2.0%.

## RECOMMENDATIONS

Nil

**Table 17. The number and proportion (%) of satisfactory but limited and unsatisfactory smears for each smear taker group.**

Smear taker group	Annual volume of smears	Total number of smears taken in quarter	Satisfactory smears		Satisfactory but limited smears [target = not more than 20%]		Unsatisfactory smears [target = 0.5 – 2.0%]	
			Number	Proportion (%)	Number	Proportion (%)	Number	Proportion (%)
Lay	< 30	6	6	100.0	0	0.0	0	0.0
	30-100	2	2	100.0	0	0.0	0	0.0
	> 100	0	0	0.0	0	0.0	0	0.0
	Total	8	8	100.0	0	0.0	0	0.0
Medical	< 30	4,266	3,238	75.9	975	22.9	53	1.2
	30-100	18,331	14,805	80.8	3,361	18.3	165	0.9
	> 100	46,608	37,626	80.7	8,628	18.5	354	0.8
	Total	69,205	55,669	80.4	12,964	18.7	572	0.8
Nurse	< 30	1,257	1,026	81.6	220	17.5	11	0.9
	30-100	8,901	7,543	84.7	1,313	14.8	45	0.5
	> 100	14,276	12,105	84.8	2,100	14.7	71	0.5
	Total	24,434	20,674	84.6	3,633	14.9	127	0.5
Specialist	< 30	169	130	76.9	35	20.7	4	2.4
	30-100	770	581	75.5	172	22.3	17	2.2
	> 100	8,171	6,722	82.3	1,349	16.5	100	1.2
	Total	9,110	7,433	81.6	1,556	17.1	121	1.3
Midwife	< 30	179	119	66.5	58	32.4	2	1.1
	30-100	87	71	81.6	15	17.2	1	1.1
	> 100	182	164	90.1	18	9.9	0	0.0
	Total	448	354	79.0	91	20.3	3	0.7
Total		103,205	84,138	81.5	18,244	17.7	823	0.8

# Appendix 1

The following is a list of national indicators that will be reported 6-monthly or annually. Each indicator is defined and the target, if any, is stated.

## **Enrolment**

### **Definition**

Enrolled women were defined as women aged 20-69 years at the end of the reporting period who had ever had a smear recorded on the NCSP-Register. Women who were recorded on the NCSP-Register as deceased, living overseas, being too ill to continue being screened or having had indicated to the programme they did not wish to have any more smears were excluded. Women with a normal smear history who were recorded on the NCSP-Register as no longer participating in routine screening because they had had a hysterectomy for a benign reason were also excluded.

### **Target**

There is no target for enrolment, but changes over time will be monitored.

## **Participation**

### **Definition**

Participation is the proportion of 20-69 year old enrolled women who have had a smear recorded on the NCSP-Register within the 6 years prior to the end of the reporting period.

### **Targets**

The targets for participation were 85% for the unadjusted population and 90% for the hysterectomy-adjusted population. Following a recommendation by the IMG-NCSP, the target for participation for the unadjusted population was lowered to 80% in December 2001. The target for the adjusted population is unchanged.

## **Coverage**

### **Definition**

Coverage is the proportion of 20-69 year old enrolled women who have had a cervical smear recorded on the NCSP-Register in the 36 months prior to the end of the reporting period. A 36-month period was used because this is the recommended cervical screening interval for women in New Zealand. Also, international comparisons will be possible.

### **Targets**

The targets for coverage are 80% for the unadjusted population and 85% for the hysterectomy-adjusted population.

## **Women enrolled on the register but not currently participating**

### **Definition**

Non-participants are enrolled women who have not had a smear recorded on the NCSP-Register in the 6 years prior to the end of the reporting period.

### **Target**

There is no target for this indicator.

## **Re-participation rate**

### **Definition**

The re-participation rate is the proportion of enrolled women who had no smear results recorded on the NCSP-Register in the 6 years prior to the reporting period, and who had a smear result recorded on the NCSP-Register during the reporting period. It is a measure of effective health promotion activities aimed at encouraging women overdue for a smear to have another.

### **Target**

There is no target for this indicator.

## **Cervical cancer incidence and stage of invasive cervical cancer**

### **Definitions**

Cervical cancer incidence is the annual rate of new registrations of invasive cervical cancer (ICD9 code 180) per 100,000 women, age standardised to Segi's World population.

The stage of invasive cervical cancer is the classification of the extent of invasive cervical cancer cases at diagnosis by FIGO staging (I-V).

### **Targets**

The targets for cervical cancer incidence are 8.6 or less per 100,000 women by 2005 for all women and 11.0 or less per 100,000 women by 2005 for Maori women.

The target for stage of cervical cancer is 70% or more of new cervical cancers classified as FIGO stage I at diagnosis.

## **Cervical cancer mortality**

### **Definition**

Cervical cancer mortality is the annual rate of death from cervical cancer (ICD9 code 180) per 100,000 women, age standardised to Segi's world population.

### **Targets**

The targets for cervical cancer mortality are 2.5 or less per 100,000 women by 2005 for all women and 6.0 or less per 100,000 women by 2005 for Maori women.

## **Cytology abnormality reporting**

### **Definition**

Cytology abnormality reporting is the rate at which specified cytological cervical abnormalities are reported. A cytological abnormality may not be confirmed at clinical examination or biopsy.

For the purposes of this monitoring report, cytological abnormality reporting is the rate at which cytological cervical abnormalities are recorded by the NCSP-Register for a specified time period.

### **Targets**

There are no targets.

## **Histology abnormality reporting**

The Systematised Nomenclature of Medicine (SNOMED) histology codes is used by the NCSP-Register to record the histological result of vaginal and cervical histology specimens. Each histology specimen can be assigned a maximum of five SNOMED codes. Laboratories usually code histology results and the coded results are transferred electronically to the NCSP-Register. Histology specimens include diagnostic biopsies, treatment biopsies, polyps and the cervical tissue of total hysterectomy specimens.

### **Definition**

Histology abnormality reporting is the rate at which specified histological cervical abnormalities are reported.

For the purposes of this monitoring report, histology abnormality reporting is the rate at which histological cervical abnormalities are recorded by the NCSP-Register for a specified time period.

### **Targets**

There are no targets.

## **Interval cancers**

### **Definition**

Interval cancers are those invasive cervical cancers diagnosed between screening examinations in women whose cytology results were negative for dysplasia or malignancy at their last smear.

### **Target**

There is no target.

## **Programme sensitivity**

### **Definition**

Programme sensitivity is the proportion of all women with invasive cervical cancer (both screen detected and interval cases) whose cervical cancer was detected by screening within a defined period.

### **Targets**

The targets for squamous cervical cancer are more than 85% at one year and more than 75% at three years.

## **Opt off rate**

### **Definition**

The opt off rate is the proportion of all cervical cytology results reported by a laboratory which are not sent to the NCSP-Register.

### **Target**

There is no target.

## **Cytology reports predicting HSIL (positive predictive value)**

### **Definition**

Cytology reports predicting HSIL is the probability of a histological report of HSIL or invasive cancer given an HSIL cytology report. This is called the positive predictive value of an HSIL cytology report.

### **Target**

The target is not less than 65% and not more than 85%.

## **Accuracy of negative cytology reports**

### **Definition**

The accuracy of negative cytology reports is the ability of a laboratory to correctly identify a negative smear.

### **Target**

For women with an histological diagnosis of HSIL or more serious, not more than 20% of their cytology slides reported within the preceding 42 months as negative are, on review, consistent with HSIL or more serious abnormality.

## **Residual high grade disease after treatment**

### **Definition**

Residual high grade disease after treatment is high grade squamous or glandular intraepithelial lesions (CIN2-3) present at the post treatment colposcopy (usually at 4-6 months) for all methods of treatment.

### **Target**

The target is 15% or less with residual high grade disease.

## Appendix 2

### **BETHSEDA codes by broad cytological abnormality category used for IMG-NCSP reports.**

- (a) Negative for dysplasia
- (b) Abnormal for not otherwise specified – C6
- (c) ASCUS-LG – C3A1; C3A1A; C3A1B; C3A1C; C3A1D; C3A1F; C3A1G
- (d) LSIL – C3A2A; C3A2A1; C3A2A2; C3A2A3
- (e) AGUS favouring a reactive process – C3B2; C3B2A; C3B2B; C3B2B1; C3B2BC; C3B2E
- (f) AGUS favouring a dysplastic process – C3B2A1; C3B2B2; C3B2D
- (g) ASCUS-HG – C3A1E
- (h) HSIL – C3A2B; C3A2B1; C3A2B2; C3A2B3; C3A2B5; C3A2B6; C3A2B7
- (i) AIS – C3B3D; C3B3E; C3B3F
- (j) Adenocarcinoma (endocervical, not otherwise specified and other) – C3B3A; C3B3; C3B3B; C3B3C
- (k) Cancer not otherwise specified – C3C; C4
- (l) Squamous Cancer – C3A3

## Appendix 3

### **Snomed codes by broad histological abnormality category used for the IMG-NCSP reports.**

- (a) Normal – M60000
- (b) Other non-neoplastic – M40000; M72480; M73000; M01000
- (c)
- (d) Polyp – M76800
- (e) Atypia/HPV – M67000; M76700; M76720
- (f) CIN - not otherwise specified – M67015
- (g) LSIL – M67016
- (h) HSIL – M67017; M80102; M80702
- (i) Glandular dysplasia – M67031
- (j) Adenocarcinoma-in-situ – M81402
- (k) Other primary cervical cancer – M80203; M88003; M80003
- (l) Metastatic (non-cervical) carcinoma – M80006
- (m) Invasive adenocarcinoma – M81403
- (n) Adenosquamous carcinoma – M85603
- (o) Microinvasive squamous carcinoma – M80763
- (p) Invasive squamous carcinoma – M80703