

Quarterly Report 5
***National Cervical Screening
Programme***

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

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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 Independent Monitoring Group received data from the National Cervical Screening Programme Register for this report on 11 February 2002. This quarterly report was sent to the Ministry of Health on 18 July 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 principal purpose of this monitoring is to assist the National Screening Unit (NSU) of the Ministry of Health (MoH) to improve the quality of the NCSP. This is a quarterly report for the period October - December 2001.

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 and 6-monthly. Following recommendations in Report 4, the enrolment, participation, coverage, non-participation and re-participation will no longer be reported quarterly, but annually.

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. Therefore, the results for these indicators are not comparable with those reported in quarterly reports 1-4. These indicators are short interval re-screening, delayed re-screening for women with a high grade abnormality and follow up of women with HSIL cytology. The reason for the changes to the calculations is that the data definitions and programming for data extracted from the complete dataset for the various calculations, have been reviewed and refined. To allow comparisons of results for all indicators over time, errata for reports 1-4 will be attached to report 6.

Short interval re-screening, a measure of resource utilisation amongst women with a normal smear history, was estimated to be 22.7% for women aged 20-69 years. This continues to be much higher than the target of 10%. Short interval re-screening was highest amongst 30-34 year old women (24.6%). Amongst the DHB areas, the level of short interval re-screening varied considerably. It ranged from 16.0% for Waikato to 29.9% for 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 estimated using satisfactory smears only. When satisfactory but limited smears were excluded, short interval re-screening was estimated to be 14.5%.

22,770 participating women aged 20-69 years with a high grade cytological or histological abnormality recorded on the NCSP-Register had completed their treatment by 1 October 2000. Of these 22,770 women, 72.5% had a smear within the 15 months prior to 31 December 2001. This was less than the 85% target. 1,516 of these 22,770 women had no smear recorded.

Between 1 January and 31 December 2000, 4,886 women had a high grade cytology result recorded on the NCSP-Register. About three-quarters (74.6%) 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 356 of the 4,886 women, a subsequent histology result was not recorded on the NCSP-Register. The proportions of women who had no histology recorded on the NCSP-Register varied considerably amongst the NCSP regions.

Of the 104,112 satisfactory or satisfactory but limited smears processed during the quarter, 7.6% were reported as abnormal. This was within the target of not more than 10%. Amongst the laboratories, the two hospital-based laboratories and two of the eleven community-based laboratories reported more than 10% of the smears they processed as abnormal.

All but three laboratories who processed smears, met the 7-day cytology turn around time target and most laboratories met or were very close to achieving the 14-day target. The histology turn around time varied considerably amongst the laboratories. For all laboratories who processed cervical histology combined, the 5-day histology turn around time was 83.3%. This was less than the target of 90%. Three of the fifteen hospital-based laboratories and eight of the fifteen community-based laboratories met the 5-day histology turn around time target.

Overall, 0.9% of all (105,553) smears processed during the quarter were reported as unsatisfactory for evaluation. The proportion of smears reported as unsatisfactory was less than the target range (0.5-2.0%) for two laboratories and greater than the target range for a further two laboratories.

Two laboratories were clearly below the target range for the positive predictive value of HSIL cytology reports.

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 makes the following recommendations in order to assist with improving the quality of the National Cervical Screening Programme. The National Indicator targets were considered when developing these recommendations. The recommendations are grouped into data related issues and service related issues.

2.1 Data Issues

1. The IMG-NCSP consider 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 data required for calculating the colposcopy waiting time indicators is required urgently in order for the IMG-NCSP to monitor colposcopy services.
3. Efforts to collect data from those DHB colposcopy units who have not provided data should continue.

2.2 Service Issues

1. 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, North West Auckland and Tairāwhiti).
2. Efforts to reduce the high level of short interval re-screening in all 5-year age groups, particularly the 20-59 year age groups, need to continue including efforts to educate smear takers and women about the nationally recommended intervals for screening.
3. Reasons why 1,516 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 who have not had annual smears should be assessed.
6. The IMG-NCSP provides the coded numbers of the 356 women who had a high grade cytology report but no recorded follow-up histology result to the NSU so follow-up arrangements for these women can be checked.
7. Reasons why a histology specimen was not taken within 12 weeks of a high grade smear for about one-quarter of women, particularly Māori and Pacific women, need to be examined.

8. Efforts to reduce the relatively high levels of reporting of total abnormalities at Medlab Bay of Plenty and Pathlab Waikato should continue.
9. The IMG-NCSP should use the monitoring data set to investigate the outcome of women with ASCUS cytology results.
10. Medical Laboratory Wellington, Medlab Central Palmerston North and Valley Diagnostic Laboratory should work towards achieving and maintaining the 7-day cytology turn around time target.
11. All nineteen laboratories that did not meet the 5-day histology turn around time target should work towards achieving this.
12. Reasons for laboratories reporting levels of unsatisfactory smears outside the target range should be sought, particularly those laboratories that reported levels below the target range (Medlab South Christchurch and Southern Community Laboratory Christchurch).
13. The low positive predictive value of HSIL results reported by Medlab Bay of Plenty and Pathlab Waikato should be investigated.
14. Efforts to reduce the number of women with HSIL cytology waiting more than 4 weeks for colposcopic assessment should continue.
15. Efforts to reduce the number of women with LSIL cytology waiting more than 26 weeks for colposcopic assessment should continue.
16. Reasons for the variation in the proportion of satisfactory but limited smears between smear taker groups and amongst smear taker subgroups defined by volume of smears taken in the previous 12 months need to be examined.

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 indicators including 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 calculated quarterly and 6-monthly. Each indicator and how it was calculated is described in the results section under separate headings that identify the specific indicators. Indicators to be calculated 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 not being either Maori or Pacific were grouped together as 'Other'. This group included those women for whom their ethnic group was unknown.¹

Unless otherwise stated, women's ages at the end of the reporting quarter were used when calculating the indicators.

Women were assigned to both a NCSP region and a District Health Board (DHB) area by NCSP-Register staff. Each woman was allocated to the NCSP region and District Health Board (DHB) area in which they lived, 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 region to which they were allocated had boundaries identical to a DHB area, then they were allocated to that DHB area, otherwise their DHB area was unspecified.

¹ The National Screening Unit estimated that for about 10% of women enrolled on the NCSP-Register, ethnicity was recorded as unknown.

4.0 Results

This reporting quarter ended on 31 December 2001. This report includes national indicators reported quarterly and 6-monthly. 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.

Following recommendations in Report 4, enrolment, participation, coverage, non-participation and re-participation will no longer be reported quarterly, but annually. Also, a new indicator, the laboratory histology turn around time, has been included and will be reported quarterly.

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 cancer 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.² 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 calculate this indicator the following women were included:

1. enrolled women aged 20-69 years at the end of the reporting period,
2. women whose history at enrolment was recorded as normal on the NCSP-Register,
3. women whose 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,
4. women who enrolled during the 33-months prior to the end of the reporting period, but whose previous smear was recorded as being less than 5-years prior to the enrolment date.

Enrolled women whose smear taken prior to the one taken during the 33-month period was more than five years previously were excluded. For women whose previous smear

² 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.

was five or more years ago a further smear in one year is recommended.³ Also, women who had an unsatisfactory smear reported during the 33-month period were excluded. Smears considered unsatisfactory for evaluation by the laboratory generate a 3-month recall.⁴

The number of women who had two or more smears recorded minus those who had at least one smear recorded as abnormal 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.

Each smear is classified as satisfactory, satisfactory but limited or unsatisfactory for laboratory reading. 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.⁵ 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).

Short interval re-screening results presented in this report are not directly comparable with those shown in reports 1, 2, 3 and 4. The calculation method has changed (see Executive Summary, page 1).

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 22.7% when both satisfactory and satisfactory but limited smears were included. When satisfactory but limited smears were excluded, the overall level of short interval re-screening was 14.5%.

When both satisfactory and satisfactory but limited smears were included, short interval re-screening was highest amongst 30-34 year old women (24.6%). Short interval re-screening was almost as high amongst 25-29 and 35-54 year old women (23.0% or slightly more). It was also relatively high amongst the 20-24 and 55-59 year age groups (21.7% and 21.4%, respectively). A similar pattern was observed when only satisfactory smears were included, but for each age group the level of short interval re-screening was at least 7% lower. The estimated level of short interval re-screening ranged from 9.3% amongst 65-69 year old women to 16.1% amongst 30-34 year old women when only satisfactory smears were included.

Table 2 shows the estimated level of short interval re-screening for 20-69 year old women by DHB area. Short interval re-screening continued to vary considerably amongst the DHB areas. When both satisfactory and satisfactory but limited smears were included, short interval re-screening ranged from 16.0% in Waikato to 30.0% in

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

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

⁵ Revised Bethesda Coding Standard. Appendix 9. National Cervical Screening Programme Interim Operational Policy and Quality Standards. Health Funding Authority. October 2000.

Auckland. Higher levels of short interval re-screening were also observed in North West Auckland (29.6%) and Tairāwhiti (29.8%). Lower levels of short interval re-screening were also observed in Otago (16.7%), Southland (16.6%) and Whanganui (16.4%). For each DHB area, the difference between the estimated level of short interval re-screening using satisfactory and satisfactory but limited smears, and that using satisfactory smears only varied. For the Capital Coast area, the difference between the two estimated levels of short interval re-screening was 11.2%, whereas in Southland the difference was only 2.9%.

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 fully the continued level of short interval re-screening observed.

RECOMMENDATIONS

Service Issues

1. 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, North West Auckland and Tairāwhiti).

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

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

Table 1. Short interval re-screening proportion (%) by 5-year age groups for the 33 months to 30 September 2001 [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	27,481	9,277	4,225	21.7	12.1
25-29	46,452	14,273	4,584	23.1	14.1
30-34	55,661	16,639	3,909	24.6	16.1
35-39	58,833	16,437	3,252	23.7	15.5
40-44	55,483	14,978	2,860	23.0	15.0
45-49	45,435	12,372	2,220	23.5	15.4
50-54	38,151	10,018	1,554	23.1	15.6
55-59	28,242	6,781	929	21.4	13.9
60-64	22,318	4,718	565	19.1	12.0
65-69	16,445	3,027	392	16.4	9.3
Total 20-69	394,501	108,520	24,490	22.7	14.5

† 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	29.9	20.3
Bay of Plenty	19.5	8.7
Canterbury	19.6	14.8
Capital Coast	26.9	15.7
Hawkes Bay	18.9	12.5
Hutt	22.6	15.4
Lakes	20.4	11.7
Manawatu	19.7	12.9
Nelson-Marlborough	17.9	8.1
North West Auckland	29.6	19.4
Northland	25.7	16.6
Otago	16.7	13.5
South Auckland	26.3	16.1
South Canterbury	20.1	14.9
Southland	16.6	13.7
Tairāwhiti	29.8	20.9
Taranaki	18.5	10.9
Waikato	16.0	7.5
Wairarapa	22.8	13.9
West Coast	20.3	13.8
Whanganui	16.4	13.2
DHB Unspecified	24.3	18.1
Total	22.7	14.5

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 is considered delayed. It is recommended that women with a history of a high grade abnormality have annual smears until age 70 years⁶.

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 Appendices 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% for a smear within the last 18 months.

Calculation

Participating women⁷ 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'⁸ following assessment and treatment prior to 1 October 2000 were included.⁹ 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 October 2000.

The delay re-screening for women with a high grade abnormality indicator was calculated differently for this quarter compared with previous quarters (see Executive

⁶ Cervical Screening. Guidelines for the Management of Women with Abnormal Cervical Smears. National Cervical Screening Programme. 1999.

⁷ See Appendix 1 for the definition of participating women.

⁸ 'Women are "signed out" so that no letters are sent from the Register advising them of their results or recommended recall while they are under the care of a specialist or colposcopist. Once the period of colposcopy or treatment has finished women are "signed in" and the Register then will send letters as appropriate to their test results and smear history.' P6.24 NCSP Interim Operational Policy and Quality Standards. October 2000.

⁹ 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.

Summary, page 1). The results for this indicator presented in this report are not comparable with those in reports 1,2,3 and 4.

Results

Table 3 shows the number and proportion of participating women aged 20-69 years with a high grade abnormality recorded on the NCSP-Register, who had completed treatment before 1 October 2000 and whose most recent smear was less than 15 months ago, between 15 and 18 months ago and more than 18 months prior to the end of the reporting quarter. 22,770 women with a high grade abnormality recorded on the NCSP-Register had completed assessment and treatment before 1 October 2000. Of these 22,770 women, 72.5% had a smear within 15 months of the end of this reporting quarter. This was less than the target of 85%. Just over three-quarters (77.9%) of the 22,770 women had a smear within 18 months. This was much less than the target of 99%.

For 15.4% of the 22,770 women, their last smear was more than 18 months prior to 31 December 2001 and 1,516 women had no smear result recorded. Some of these women may have moved to live overseas and the NCSP-Register still did not have this information. Sometimes there are clinical reasons for follow up smears not being taken.

RECOMMENDATIONS

Service Issues

1. Reasons why 1,516 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 who have not had annual smears 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	16,515	72.5	72.5
15-18 months	1,234	5.4	77.9
More than 18 months	3,505	15.4	93.3
No smear	1,516	6.7	100.0
Total	22,770	100.0	

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 report 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 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 January and 31 December 2000 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 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 more serious cytology result were expressed as proportions of the total number of women with an ASCUS possible high grade, HSIL or more serious cytology result between 1 January and 31 December 2000. 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 also were 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 health 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.

This indicator was calculated differently from previous quarterly monitoring reports (see Executive Summary, page 1). Therefore, the following results are not comparable to those reported in quarterly reports 1, 2, 3 and 4.

Results

Table 4 shows the number and proportion of women aged 20-69 years at 31 December 2001 who had ASCUS possible high grade, HSIL or more serious cytology (according to the hierarchy of Bethesda codes, Appendix 2) reported during the period 1 January to 31 December 2000 and who had a histology specimen taken within 12 weeks, between 13 and 26 weeks, between 27 and 52 weeks, and 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 January and 31 December 2000, 4,886 enrolled women had a smear taken with an ASCUS possible high grade, HSIL or more

serious cytology result recorded on the NCSP-Register. About three-quarters (74.6%) of these women had a histology specimen taken and recorded on the NCSP-Register within 12 weeks of their high grade smear being taken. This was less than the target of 90%. Of the 4,886 women, 91.6% 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 January to 30 December 2000 and had a histology specimen taken within 12 weeks, between 13 and 26 weeks, between 27 and 52 weeks and after more than 52 weeks of the smear being taken. Amongst the three ethnic groups, neither of the two targets was reached. 'Other' women had the highest proportion (77.3%) of women who had a histology specimen taken within 12 weeks of their high grade smear compared with Maori and Pacific women. The proportions were 63.6% for Maori women and 61.9% 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 numbers and proportions of women aged 20-69 years in each NCSP region with HSIL cytology between 1 January to 30 December 2000 who had a histology 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 and proportion of women with no histology recorded is also shown. The proportion of women in each region who had a high grade smear taken with a subsequent histology taken within 12 weeks as recorded on the NCSP-Register varied considerably amongst the regions. This proportion ranged from 51.2% for Bay of Plenty to 87.5% for Tairāwhiti. While no NCSP region reached the 12-week target of 90%, Tairāwhiti (100%) reached the 52-week target of 99%.

For 356 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 numbers of women who had no histology recorded on the NCSP-Register differed, but the proportions were similar. 64 (8.0%) Maori women, 280 (7.1%) 'Other' women and 12 (9.5%) Pacific woman had no histology result recorded on the NCSP-Register following a high grade smear (Tables 5, 6 and 7). Amongst the NCSP regions, Bay of Plenty clearly had the greatest proportion of women with no histology result recorded on the NCSP-Register following a high grade smear. 98 of 520 (18.8%) women with a high grade smear in Bay of Plenty did not have a subsequent histology result recorded. 87 (6.3%) of women in Auckland and 55 (11.2%) of women in Wellington had not had a histology result recorded following a high grade smear. Amongst the other NCSP regions fewer numbers of women had no histology recorded.

Table 9 summarises women with a high grade smear and no histology recorded on the NCSP-Register. For 217 (61.0%) of the 356 women with no histology recorded, there was either no subsequent smear or one taken by a non-specialist. Of these 217 women, 117 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. For the remaining 100 women, their follow-up was less clear. Of these 100 women, 45 women were in the Bay of Plenty, 17 in Auckland, 10 in Wellington and 9 in the

Manawatu/Wanganui region, these regions represented 81% of the total (data not shown).

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 not to allow their histology results to be recorded on the NCSP-Register. It is also possible that some women may not have been referred for specialist assessment and some women may have been referred, but not yet seen by a specialist.

RECOMMENDATIONS

Service Issues

1. The IMG-NCSP provides the coded numbers of the 356 women who had a high grade cytology report but no recorded follow-up histology result, 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 a histology specimen was not taken within 12 weeks of a high grade smear for about one-quarter of women, particularly Maori and Pacific women, need to be examined.

Table 4. Timeliness of histology reports after an HSIL 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	3,647	74.6	74.6
13-26 weeks	583	11.9	86.6
27-52 weeks	246	5.0	91.6
More than 52 weeks	54	1.1	92.7
Subtotal	4,530	92.7	
No histology reported	356	7.3	100.0
Total	4,886		

Table 5. Timeliness of histology reports after an HSIL 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	509	63.6	63.6
13-26 weeks	144	18.0	81.6
27-52 weeks	73	9.1	90.7
More than 52 weeks	10	1.3	92.0
Subtotal	736	92.0	
No histology reported	64	8.0	100.0
Total	800		

Table 6. Timeliness of histology reports after an HSIL 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	3,060	77.3	77.3
13-26 weeks	417	10.5	87.8
27-52 weeks	161	4.1	91.9
More than 52 weeks	42	1.1	92.9
Subtotal	3,680	92.9	
No histology reported	280	7.1	100.0
Total	3,960		

Table 7. Timeliness of histology reports after an HSIL 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	78	61.9	61.9
13-26 weeks	22	17.5	79.4
27-52 weeks	12	9.5	88.9
More than 52 weeks	2	1.6	90.5
Subtotal	114	90.5	
No histology reported	12	9.5	100.0
Total	126		

Table 8. Timeliness of histology reports after an HSIL 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 period										
	Within 12 weeks		13-26 weeks		27-52 weeks		More than 52 weeks		No histology reported		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Auckland	1,074	77.5	139	10.0	74	5.3	12	0.9	87	6.3	1,386
Bay of Plenty	266	51.2	113	21.7	32	6.2	11	2.1	98	18.8	520
Canterbury	433	81.5	43	8.1	15	2.8	9	1.7	31	5.8	531
Hawkes Bay	135	73.0	20	10.8	16	8.6	1	0.5	13	7.0	185
Manawatu Wanganui	274	81.8	20	6.0	14	4.2	2	0.6	25	7.5	355
Nelson/ Marlborough	106	64.6	43	26.2	12	7.3	1	0.6	2	1.2	164
Northland	113	71.5	25	15.8	11	7.0	3	1.9	6	3.8	158
Otago	258	84.0	33	10.7	9	2.9	0	0.0	7	2.3	307
Southland	109	81.3	14	10.4	6	4.5	1	0.7	4	3.0	134
Tairāwhiti	77	87.5	7	8.0	4	4.5	0	0	0	0.0	88
Taranaki	128	75.3	24	14.1	8	4.7	1	0.6	9	5.3	170
Waikato	314	80.1	42	10.7	17	4.3	2	0.5	17	4.3	392
Wellington	341	69.5	59	12.0	26	5.3	10	2.0	55	11.2	491
West Coast	19	76.0	1	4.0	2	8.0	1	4.0	2	8.0	25
Total	3,647	74.6	583	11.9	246	5.0	54	1.1	356	7.3	4,886

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
	None or non-specialist	Specialist	
Not signed in	100	70	170
Signed in since high grade cytology result	117	69	186
Total	217	139	356

Laboratory Indicators

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

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%)		Positive predictive value of HSIL (target range = 65%-85%)		Smear turn around time proportion (%) (target = 90%)	
	Number		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	Within 7 days	
<i>Predominantly hospital clinic work</i>																
Auckland Hospital Laboratory	2,201		413	18.8	61	2.8	1,630	76.45	107	5.02	502	23.55	145	73.8	96.82	
Canterbury Health Laboratories	1,525		220	14.4	31	2.0	1,234	83.72	50	3.39	240	16.28	19	94.7	100.00	
Healthlab Otago#													3	100.0		
Waikato Hospital Laboratory#													47	61.7		
Wellington Hospital Laboratory#													7	85.7		
Rest of table 10 continued on next page																

* Unsatisfactory smears excluded.

† Does not include inflammation or infection.

‡ Auckland Hospital Laboratory was previously known as National Women’s Hospital Laboratory.

These three laboratories no longer process smears, but they were doing so during the time period for which the positive predictive value of HSIL cytology reports indicator was calculated.

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%)		Positive predictive value of HSIL (target range = 65%-85%)		Smear turn around time proportion (%) (target = 90%)
	Number		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	Within 7 days
<i>Predominantly community work</i>															
Diagnostic Medlab Auckland	31,206		6,795	21.8	217	0.7	29,487	95.44	191	0.62	1,408	4.56	358	74.6	99.95
Medical Laboratory Southland#													15	80.0	
Medical Laboratory Wellington	9,937		2,557	25.7	257	2.6	8,787	90.94	84	0.87	875	9.06	74	75.7	73.80
Medlab Bay of Plenty	7,689		1,746	22.7	39	0.5	6,481	84.84	96	1.26	1,158	15.16	226	56.6	97.70
Medlab Central, Palmerston North	7,842		1,432	18.3	47	0.6	7,184	92.72	53	0.68	564	7.28	121	69.4	87.46
Medlab Hamilton	7,307		948	13.0	34	0.5	6,635	91.50	71	0.98	616	8.50	56	80.4	96.08
Medlab South Christchurch	10,567		1,317	12.5	32	0.3	9,740	92.97	102	0.97	736	7.03	99	79.8	100.00
Nelson Diagnostic Laboratory#													11	72.7	
Pathlab Waikato	3,059		677	22.1	33	1.1	2,665	88.22	32	1.06	356	11.78	45	53.3	99.63
SCL** Christchurch	5,256		507	9.6	8	0.2	4,930	94.52	62	1.19	286	5.48	77	75.3	99.96
SCL** Dunedin	10,469		331	3.2	87	0.8	9,806	95.21	137	1.33	493	4.79	161	84.5	99.89
Taranaki Medlab	4,676		814	17.4	67	1.4	4,144	90.38	58	1.26	441	9.62	71	83.1	99.52
Valley Diagnostic Laboratory	3,819		687	18.0	45	1.2	3,533	93.84	47	1.25	232	6.16	43	72.1	77.67
Total	105,553		18,444	17.5	958	0.9	96,256	92.45	1,090	1.05	7,856	7.55	1,578	72.9	95.23

† Does not include inflammation or infection.

* Unsatisfactory smears excluded.

**SCL = Southern Community Laboratory.

These two laboratories no longer process smears, but they were doing so during the time period for which the positive predictive value of HSIL cytology reports indicator was calculated.

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.¹⁰

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 but not otherwise specified
- (c) atypical squamous cells of undetermined significance (ASCUS), excluding ASCUS possible high grade
- (d) low grade squamous intraepithelial neoplasia (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 neoplasia (HSIL)
- (i) adenocarcinoma-in-situ (AIS)
- (j) Adenocarcinoma of the cervix¹¹
- (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.

¹⁰ The prevalence of 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 which 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.

Reporting practices may also differ among laboratories. In particular, there are variations in the reporting of the ASCUS (atypical squamous cells of undetermined significance) category. The interpretation and value of this ASCUS category is the subject of an international debate amongst cytopathologists.

¹¹ Adenocarcinoma of the cervix includes adenocarcinoma not otherwise specified, adenocarcinoma probably of endocervical origin, adenocarcinoma probably of endometrial origin and adenocarcinoma probably of extrauterine origin.

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).

Targets

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 of smears taken during the quarter and recorded on the NCSP-Register 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 processed smear tests. The results are grouped into laboratories reporting smears predominantly for hospital clinics, and laboratories reporting smears predominantly from the community. Since the first (October-December 2000) monitoring report the number of hospital-based laboratories has decreased from five to two, and the number of community based laboratories has decreased from fourteen to eleven.¹²

During this reporting quarter, 104,112 satisfactory or satisfactory but limited smears were taken, and the number of smears processed by each laboratory ranged from 1,474 at Canterbury Health Laboratories to 30,895 at Diagnostic Medlab Auckland. The number of satisfactory or satisfactory but limited smears taken for women of all ages was 99,174 for the April - June 2001 quarter and 100,921 for the July – September 2001 quarter. For the October - December 2000 and January - March 2001 reporting quarters only smears for women aged 20-69 years were enumerated.

Overall, 92.5% of the 104,112 smears were reported as negative for dysplasia or malignancy. This was 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.

¹² In the first monitoring report, Southern Community Laboratory was counted as one although smears were processed at two separate laboratory sites. Subsequent monitoring reports have considered the two sites of Southern Community Laboratory separately.

The proportion of smears reported as HSIL was 1.1% for all laboratories combined. This was the same as that reported last quarter and within the target of not less than 0.6%. Each laboratory met the target, but there was variation amongst the laboratories. As expected, the two hospital-based laboratories reported higher proportions of smears as HSIL compared with the community-based laboratories. The proportion of smears reported as HSIL was 5.0% for Auckland Hospital Laboratory and 3.4% for Canterbury Health Laboratories. Amongst the community-based laboratories, the proportion of smears reported as HSIL ranged from 0.6% for Diagnostic Medlab Auckland to 1.3% for Southern Community Laboratory Dunedin.

For all laboratories combined, the target of not more than 10% of smears reported as abnormal was not exceeded. The proportion of all satisfactory or satisfactory but limited smears reported with an abnormality was 7.6%, which was lower than that reported for July - September 2001 (8.1%) and April - June 2001 (7.8%). The two hospital-based laboratories both reported more than 10% of the slides they processed to be abnormal: Auckland Hospital Laboratory (23.6%) and Canterbury Health Laboratories (16.3%). Two community-based laboratories also reported more than 10% of the slides they processed as abnormal: Medlab Bay of Plenty (15.2%) and Pathlab Waikato (11.8%). Medlab Bay of Plenty and Pathlab Waikato both reported relatively high proportions of smears as ASCUS compared with the other community laboratories. The proportion of smears reported as ASCUS was 9.8% for Medlab Bay of Plenty and 8.2% for Pathlab Waikato. These proportions have declined since the April - June 2001 quarter, when the proportion of smears reported as ASCUS was 13.6% for Medlab Bay of Plenty and 13.9% for Pathlab Waikato.

RECOMMENDATIONS

Service Issues

1. Efforts to reduce the relatively high levels of reporting of total abnormalities at Medlab Bay of Plenty and Pathlab Waikato should continue.
2. 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 and 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 favouring reactive		AGUS favouring dysplasia		ASCUS possible HSIL		HSIL (target = not less than 0.6%)		Total abnormalities† (target = not more than 10%)		Total number of smears
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
<i>Predominantly hospital clinic work</i>																	
Auckland Hospital Laboratory‡	1,630	76.5	188	8.82	189	8.86	9	0.42	0	0.00	12	0.56	107	5.02	502	23.55	2,132
Canterbury Health Laboratories	1,234	83.7	84	5.70	96	6.51	4	0.27	2	0.14	2	0.14	50	3.39	240	16.28	1,474
Rest of table 11 continued on next page																	

† Does not include inflammation or infection

‡ Auckland Hospital Laboratory was previously known as National Women's Hospital Laboratory.

Table 11 continued

Laboratory	Negative for dysplasia or malignancy (target = not more than 96%)		Total ASCUS (including ASCUS possible HSIL)		LSIL		AGUS favouring reactive		AGUS favouring dysplasia		ASCUS possible HSIL		HSIL (target = not less than 0.6%)		Total abnormalities† (target = not more than 10%)		Total number of smears
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
<i>Predominantly community work</i>																	
Diagnostic Medlab Auckland	29,487	95.4	609	1.97	582	1.88	18	0.06	1	0.00	40	0.13	191	0.62	1,408	4.56	30,895
Medical Laboratory Wellington‡	8,787	90.9	483	5.00	293	3.03	10	0.10	2	0.02	14	0.14	84	0.87	875	9.06	9,662
Medlab Bay of Plenty	6,481	84.8	748	9.79	276	3.61	32	0.42	4	0.05	10	0.13	96	1.26	1,158	15.16	7,639
Medlab Central, Palmerston North	7,184	92.7	259	3.34	235	3.03	6	0.08	6	0.08	50	0.65	53	0.68	564	7.28	7,748
Medlab Hamilton	6,635	91.5	251	3.46	287	3.96	5	0.07	0	0.00	9	0.12	71	0.98	616	8.50	7,251
Medlab South Christchurch	9,740	93.0	366	3.49	239	2.28	18	0.17	3	0.03	22	0.21	102	0.97	736	7.03	10,476
Pathlab Waikato	2,665	88.2	249	8.24	68	2.25	4	0.13	2	0.07	4	0.13	32	1.06	356	11.78	3,021
SCL* Christchurch	4,930	94.5	111	2.13	111	2.13	0	0.00	0	0.00	4	0.08	62	1.19	286	5.48	5,216
SCL* Dunedin	9,806	95.2	53	0.51	290	2.82	4	0.04	2	0.02	16	0.16	137	1.33	493	4.79	10,299
Taranaki Medlab‡	4,144	90.4	206	4.49	166	3.62	8	0.17	2	0.04	8	0.17	58	1.26	441	9.62	4,585
Valley Diagnostic Laboratory	3,533	93.8	63	1.67	120	3.19	2	0.05	0	0.00	6	0.16	47	1.25	232	6.16	3,765
Total	96,256	92.5	3,670	3.53	2,952	2.84	120	0.12	24	0.02	197	0.19	1,090	1.05	7,856	7.55	104,112

† Does not include inflammation or infection.

* SCL = Southern Community Laboratory.

‡ About 700 smears sent to Medical Laboratory Wellington for processing were read by Taranaki Medlab, but they were included in Medical Laboratory Wellington results as they were not identifiable.

4.5 Laboratory cytology turn around time

Definition

Laboratory cytology turn around time is the period of time between the smear being received in 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 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, as recorded on 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 each laboratory during the quarter. Smear results for women of all ages were included.

Results

Table 12 shows the proportion of smears received and reports issued within the specified time periods for each laboratory. Overall, 95.2% of smears received by laboratories were reported within 7 working days. This was almost the same as that for the July - September 2001 quarter (95.3%) and more than the target of 90%. Three laboratories did not reach the 7-day target. They were Medical Laboratory Wellington (73.8%), Medlab Central Palmerston North (87.5%) and Valley Diagnostic Laboratory (77.7%). Similar results were reported for Medical Laboratory Wellington (78.7%) and Valley Diagnostic Laboratory (75.8%) in the previous reporting quarter, while Medlab Central Palmerston North achieved a 99.2% 7-day turn around time.

Overall, the 14-day target of 100% was almost achieved. Almost all smear reports (99.98%) were issued within 14 working days of smears being received by the laboratory. This was almost the same as that for the July - September 2001 quarter (99.97%) and better than that for April - June 2001 (96.8%), January - March 2001 (90.3%) and October - December (95.1%) reporting quarters. Six laboratories did not reach the 14-day target, but they were very close to achieving it.

RECOMMENDATIONS

Service Issues

1. Medical Laboratory Wellington, Medlab Central Palmerston North and Valley Diagnostic Laboratory should work towards achieving and maintaining the 7-day cytology turn around time target.

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

Laboratory	Within 7 working days	From 8-14 working days		More than 14 working days
	Proportion (%)	Proportion (%)	Cumulative Proportion (%)	Proportion (%)
<i>Predominantly hospital clinic work</i> Auckland Hospital Laboratory	96.82	3.03	99.85	0.15
Canterbury Health Laboratories	100.00	0.00	100.00	0.00
<i>Predominantly community work</i> Diagnostic Medlab Auckland	99.95	0.05	100.00	0.00
Medical Laboratory Wellington†	73.80	26.17	99.97	0.02
Medlab Bay of Plenty	97.70	2.30	100.00	0.00
Medlab Central, Palmerston North	87.46	12.52	99.98	0.03
Medlab Hamilton	96.08	3.92	100.00	0.00
Medlab South Christchurch	100.00	0.00	100.00	0.00
Pathlab Waikato	99.63	0.34	99.97	0.03
Southern Community Laboratory Christchurch	99.96	0.04	100.00	0.00
Southern Community Laboratory Dunedin	99.89	0.06	99.95	0.05
Taranaki Medlab†	99.52	0.48	100.00	0.00
Valley Diagnostic Laboratory	77.67	22.11	99.78	0.22
Total	95.23	4.75	99.98	0.02

† About 700 smears sent to Medical Laboratory Wellington for processing were read by Taranaki Medlab, but they were included in Medical Laboratory Wellington results as they were not identifiable.

4.6 Laboratory histology turn around time

Definition

Laboratory histology turn around time is the period of time between the cervical 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 to the colposcopist within 5 working days of the specimen being received by the laboratory, and 100% of final histology reports issued to the colposcopist within a reasonable time period of the specimen being received by the laboratory.

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, as recorded on the NCSP-Register, was used to measure the laboratory histology turn around time. 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 biopsy and treatment histology results for women of all ages were included.

Results

Table 13 shows the timeliness of the reporting of histology results by laboratories. For all laboratories combined the 5-day histology turn around time was 83.3%. This was less than the 90% target. Three of the fifteen hospital-based laboratories and eight of the fifteen community-based laboratories met the 5-day target.

RECOMMENDATIONS

Data Issues

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

Service Issues

1. All nineteen laboratories that did not meet the 5-day histology turn around time target should work towards achieving this.

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

Laboratory	Within 5 working days	Within 6 or more than working days
	Proportion (%)	Proportion (%)
<i>Predominantly hospital clinic work</i>		
Auckland Hospital Laboratory	41.72	58.28
Canterbury Health Laboratories	89.49	10.51
Healthlab Otago	60.90	39.10
Hutt Hospital Laboratory	71.30	28.70
Memorial Hospital Hastings Lab	90.22	9.78
Middlemore Hospital Laboratory†	96.88	3.13
Nelson Hospital Laboratory	32.79	67.21
North Shore Hospital Laboratory	97.00	3.00
Rotorua Hospital Laboratory†	26.74	73.26
Southland Hospital Laboratory	65.52	34.48
Taranaki Base Hospital Laboratory	67.38	32.62
Waikato Hospital Laboratory	86.44	13.56
Wanganui Hospital Laboratory	65.38	34.62
Wellington Hospital Laboratory	58.48	41.52
Whangarei Hospital Laboratory	79.67	20.33
<i>Predominantly community work</i>		
Diagnostic Medlab Auckland	91.45	8.55
Medical Laboratory Southland†	100.00	0.00
Medical Laboratory Wellington	79.50	20.50
Medlab Bay of Plenty	89.32	10.68
Medlab Central, Palmerston North	88.79	11.21
Medlab Hamilton	79.45	20.55
Medlab South Christchurch	100.00	0.00
Medlab South working for Timaru	100.00	0.00
Nelson Diagnostic Laboratory	88.40	11.60
Northland Pathology Laboratory†	62.90	37.10
Pathlab Waikato	98.09	1.91
Southern Community Laboratory Christchurch	98.95	1.05
Southern Community Laboratory Dunedin	97.92	2.08
Taranaki Medlab	98.61	1.39
Valley Diagnostic Laboratory	86.05	13.95
Total	83.29	16.71

† Some histology results for this quarter were not provided to the NCSP-Register.

4.7 Satisfactory but limited and unsatisfactory smears by laboratory

Definitions

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 code 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 laboratory indicator.

Targets

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 each expressed as a proportion of the total number of smears processed during the quarter by each laboratory.

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, 105,553 smears were processed, of which 17.5% were reported as satisfactory but limited. This met the target of not more than 20%.

Among the laboratories, the proportion of satisfactory but limited smears reported varied considerably. This proportion ranged from 3.2% for Southern Community Laboratory Dunedin to 25.7% for Medical Laboratory Wellington. Four of the thirteen laboratories that processed smears during the quarter reported more than 20% of smears as satisfactory but limited compared with seven of fifteen in the last quarter reported. The four laboratories were Diagnostic Medlab Auckland (21.8%), Medical Laboratory Wellington (25.7%), Medlab Bay of Plenty (22.7%) and Pathlab Waikato (22.1%). A high proportion of satisfactory but limited smears is associated with a high level of short interval re-screening (see Section 4.1).

Overall, 0.9% of the 105,553 smears processed were reported as unsatisfactory for evaluation. This level has remained unchanged since this indicator was first reported in the January - March 2001 monitoring report and is 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. Two laboratories reported less than 0.5% of smears they processed as unsatisfactory. These laboratories were Medlab South Christchurch (0.3%) and Southern Community Laboratory Christchurch (0.2%). Both these laboratories have reported low levels of unsatisfactory smears in the previous three monitoring quarters.¹³

RECOMMENDATIONS

Service Issues

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

1. Reasons for laboratories reporting levels of unsatisfactory smears outside the target range should be sought, particularly those laboratories which reported levels below the target range (Medlab South Christchurch and Southern Community Laboratory Christchurch).

¹³ This indicator was not included in the first quarterly monitoring report.

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

Laboratory	Smears processed	Satisfactory but limited smears (target = not more than 20%)		Unsatisfactory smears (target = 0.5 – 2.0%)	
	Number	Number	(%)	Number	(%)
<i>Predominantly Hospital</i> Auckland Hospital Laboratory	2,201	413	18.8	61	2.8
Canterbury Health Laboratories	1,525	220	14.4	31	2.0
<i>Predominantly Community</i> Diagnostic Medlab Auckland	31,206	6,795	21.8	217	0.7
Medical Laboratory Wellington†	9,937	2,557	25.7	257	2.6
Medlab Bay of Plenty	7,689	1,746	22.7	39	0.5
Medlab Central, Palmerston North	7,842	1,432	18.3	47	0.6
Medlab Hamilton	7,307	948	13.0	34	0.5
Medlab South Christchurch	10,567	1,317	12.5	32	0.3
Pathlab Waikato	3,059	677	22.1	33	1.1
Southern Community Laboratory Christchurch	5,256	507	9.6	8	0.2
Southern Community Laboratory Dunedin	10,469	331	3.2	87	0.8
Taranaki Medlab†	4,676	814	17.4	67	1.4
Valley Diagnostic Laboratory	3,819	687	18.0	45	1.2
Total	105,553	18,444	17.5	958	0.9

† About 700 smears sent to Medical Laboratory Wellington for processing were read by Taranaki Medlab, but they were included in Medical Laboratory Wellington results as they were not identifiable.

4.8 Cytology reports predicting HSIL (positive predictive value)

The reporting of histology involves a degree of subjective assessment of the cellular appearances as examined under a microscope and histology reporting practices can differ among pathologists and laboratories. A different pathologist or laboratory from the one who reported the cervical smear may issue histology reports.

Definition

Cytology reports predicting HSIL is the probability of a histological report of HSIL or more serious abnormality given an HSIL or more serious cytology report. This is called the positive predictive value of an HSIL cytology result.

Target

The target for cytology reports predicting HSIL is not less than 65% and not more than 85% of all HSIL or more serious smear results reported by a given laboratory.

Calculation

The first smear from women reported as indicating the presence of HSIL in the six month period 1 January 2001 to 30 June 2001 and subsequent histology reports for biopsies taken within 6 months of the smear from the same women during the 12 month period 1 January 2001 to 31 December 2001 were compared. When more than one histology result was present, the most severe abnormality was chosen. The number of women with histological confirmation of an HSIL or more serious lesion was expressed as a proportion of all women with an HSIL cytology report and subsequent histology. This measures the positive predictive value of a HSIL cytology report.

This indicator was calculated for each laboratory according to where the smears were processed.

Results

Table 15 shows the number of high grade or more serious abnormality cytology reports for which there were follow-up histology reports on the NCSP-Register and the proportion of these cytology reports, which were confirmed as HSIL or more serious abnormality on histology for each laboratory. Between 1 January and 30 June 2001 there were 1,587 cytology reports with a subsequent histology recorded on the NCSP-Register. Of these 1,587 cytology reports, 73.0% were confirmed as having HSIL or invasive carcinoma on histology. This was within the target range of 65-85%.

Six laboratories were outside the positive predictive value target range and of these three were above and three were below the range. The three laboratories (Canterbury Health Laboratories (94.7%), Healthlab Otago (100%) and Wellington Hospital Laboratory (85.7%)) that were above the target range processed smears predominantly from women attending hospital clinics. For the Healthlab Otago, there were only 3 HSIL cytology reports for which there were subsequent histology reports. Waikato Hospital Laboratory (61.7%), Medlab Bay of Plenty (57.0%) and Pathlab Waikato (53.3%) were below the target range. Both Healthlab Otago and Waikato Hospital have ceased processing smears.

RECOMMENDATIONS

Service Issues

1. The low positive predictive value of HSIL results reported by Medlab Bay of Plenty and Pathlab Waikato should be investigated.

Table 15. Cytology reports predicting HSIL (positive predictive value) by laboratory [target = 65-85%].

Laboratory	Number of HSIL or invasive carcinoma cytology reports with a follow up histology report	Proportion (%) of HSIL or invasive carcinoma cytology reports confirmed on histology
<i>Predominantly hospital clinic work</i>		
Auckland Hospital Laboratory	144	73.6
Canterbury Health Laboratories	19	94.7
Healthlab Otago†	3	100.0
Waikato Hospital Laboratory	47	61.7
Wellington Hospital Laboratory	7	85.7
<i>Predominantly community work</i>		
Diagnostic Medlab Auckland	362	74.9
Medical Laboratory Southland	15	80.0
Medical Laboratory Wellington	75	76.0
Medlab Bay of Plenty	228	57.0
Medlab Central, Palmerston North	123	69.9
Medlab Hamilton	56	80.4
Medlab South Christchurch	99	79.8
Nelson Diagnostic Laboratory†	11	72.7
Pathlab Waikato	45	53.3
SCL Christchurch	77	75.3
SCL Dunedin	161	84.5
Taranaki Medlab	71	83.1
Valley Diagnostic Laboratory	44	72.7
Total	1,587	73.0

† Ceased processing smears April 2001.

4.9 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 MoH. Prior to the establishment of the IMG-NCSP data required to calculate this indicator were not collected. Because data definitions were inconsistent¹⁴ 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 MoH.

Results

Table 16 shows the reported number of women with an HSIL or ASCUS possible high grade cytology result referred each month for a colposcopic assessment at each DHB colposcopy service and the reported number of women referred for colposcopic assessment of a HSIL or ASCUS possible high grade cytology result waiting longer than 4 weeks at the end of each month. Capital and Coast, Counties Manakau, Hawkes Bay, Hutt Valley, Nelson/Marlborough, Tairāwhiti, Waikato and Wairarapa DHB colposcopy services did not provide any data. Some data were missing for Lakes, Northland, Southland, Taranaki, Waitemata and Whanganui DHB colposcopy services.

Among those colposcopy units who provided data to the MoH, Lakes had the highest number of women (16) with an HSIL or ASCUS possible high grade cytology abnormality reported to be waiting longer than 4 weeks at the end of a month. For MidCentral, Otago and Waitemata, no women were reported to be waiting longer than 4 weeks for a colposcopic assessment.

¹⁴ 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

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 who have not provided data should continue.

Service Issues

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

Table 16. Waiting time for colposcopic assessment for HSIL or ASCUS possible high grade by District Health Board colposcopy services.

District Health Board	Number of women referred each month for colposcopic assessment of HSIL or ASCUS-HG			Number of women referred waiting longer than 4 weeks at the end of each month		
	October	November	December	October	November	December
Auckland	30	27	31	1	2	0
Bay of Plenty	71	85	59	3	0	3
Canterbury	40	33	51	12	5	4
Capital and Coast†						
Counties Manakau†						
Hawkes Bay†						
Hutt Valley†						
Lakes‡				13	16	
MidCentral	15	20	17	0	0	0
Nelson-Marlborough†						
Northland‡				2	3	2
Otago	20	22	20	0	0	0
South Canterbury	8	3	3	0	1	0
Southland‡				9	12	2
Tairāwhiti†						
Taranaki‡	23	28	19			
Waikato†						
Wairarapa†						
Waitemata‡		0	24	0	0	0
Whanganui‡				0	1	0
West Coast	5	1	7	0	2	2
Total						

† No data provided

‡ Missing data

4.10 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 for 95% or more of women with a low grade cytology result to be assessed 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 (MoH). Prior to the establishment of the IMG-NCSP data required to calculate this indicator were not collected. Because data definitions were inconsistent¹⁵ and some data were missing, it was not possible to calculate this indicator. Nevertheless, the number of women with low grade cytology results who were referred to a DHB colposcopy clinic each month, and the number of women with low grade cytology results 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 MoH.

Results

Table 17 shows the reported number of women with low grade cytology results referred for a colposcopic assessment and the reported number of women referred for colposcopic assessment of low grade cytology results waiting longer than 26 weeks at the end of each month for each DHB colposcopy service. Capital and Coast, Counties Manakau, Hawkes Bay, Hutt Valley, Nelson/Marlborough, Tairāwhiti, Waikato and Wairarapa DHB colposcopy services did not provide any data. Some data were missing for Lakes, Northland, Southland, Taranaki, Waitemata and Whanganui DHB colposcopy services.

For some colposcopy units, the number of new referrals for low grade abnormalities appeared much lower than expected, for example Bay of Plenty and Taranaki.

Amongst those DHB colposcopy services that provided data to the MoH, the number of women referred for an assessment of a low grade abnormality waiting longer than 26 weeks was particularly high for Bay of Plenty and Lakes DHB colposcopy services. Bay of Plenty had the highest number of women (147) with a low grade abnormality waiting for colposcopic assessment. The high level of smears reported with abnormalities by Medlab Bay of Plenty may be contributing to the high number of women waiting for assessment at these two colposcopy units.

¹⁵ 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

1. See Section 4.9, Recommendation 1.
2. See Section 4.9, Recommendation 2.

Service Issues

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

Table 17. Waiting time for colposcopic assessment for LSIL or ASCUS by District Health Board colposcopy services.

District Health Board	Number of women referred each month for colposcopic assessment of LSIL or ASCUS			Number of women referred waiting longer than 26 weeks at the end of each month		
	October	November	December	October	November	December
Auckland	56	61	30	0	0	0
Bay of Plenty	9	6	1	84	98	147
Canterbury	32	40	22	6	7	6
Capital and Coast†						
Counties Manakau†						
Hawkes Bay†						
Hutt Valley†						
Lakes‡				125	108	
MidCentral	8	10	10	3	2	7
Nelson-Marlborough†						
Northland‡				4	6	1
Otago	14	19	10	0	0	0
South Canterbury	19	17	14	0	0	1
Southland‡				0	3	5
Tairāwhiti†						
Taranaki‡	4	2	1	9		
Waikato†						
Wairarapa†						
Waitemata‡		7	41	1	2	3
Whanganui‡				0	0	1
West Coast	6	4	2	0	0	0
Total						

† No data provided

‡ Missing data

4.11 Satisfactory but limited and unsatisfactory smears by smear taker

Definitions

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 code 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 indicator.

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 18 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, 105,553 smears were taken during the reporting quarter, of which 16 were taken by lay smear takers, 69,540 by medical smear takers, 433 by midwives, 25,863 by nurses and 9,701 by specialists. Of the 105,553 smears, 81.6% were considered satisfactory, 17.5% were considered satisfactory but limited and 0.9% were considered unsatisfactory for reading. Overall, the proportion of satisfactory but limited and the proportion of unsatisfactory smears were within the targets.

Except for lay smear takers, the proportion of satisfactory but limited smears was within the target of not more than 20% for each smear taker group. Lay smear takers took only

16 smears this quarter and 25% of these were considered satisfactory but limited for reading.

For all medical smear takers, the proportion of satisfactory but limited smears (18.5%) was within the target, unlike last quarter when this proportion (20.2%) was slightly above the target of 20%. For medical smear takers who took fewer than 30 smears in the 12 months prior to 31 December 2001, the proportion of satisfactory but limited smears (22.0%) taken in the quarter was above the target. This proportion was less than that reported last quarter (26.4%). For specialist smear taker groups who took fewer than 30 smears and 30-100 smears during the 12 months prior to 31 December 2001, the proportions of satisfactory but limited smears taken during the quarter were 25.0% and 22.3%, respectively. While these proportions were slightly less than that reported last quarter, they were both greater than the target. For midwife smear takers who took fewer than 30 smears, the proportion of satisfactory but limited smears was 30.2%. This was higher than that reported last quarter (28.4%). This smear taker group took 433 smears this quarter and 473 smears last quarter.

The lay smear taker group did not have any smears classified as unsatisfactory. For each of the other smear taker groups, the proportion of smears considered unsatisfactory was within the target range of 0.5 - 2.0%. Amongst smear taker subgroups defined by volume of smears taken in the 12 months to 31 December 2001, the proportion of unsatisfactory smears was less than the target amongst nurses who took fewer than 30 smears annually (0.4%) and midwives who took 30-100 smears annually (0.0%), and the proportion of unsatisfactory smears was higher than the target amongst specialists who took fewer than 30 smears annually (2.3%) and specialists who took 30-100 smears annually (2.1%).

RECOMMENDATIONS

Service Issues

1. Reasons for the variation in the proportion of satisfactory but limited smears between smear taker groups and amongst smear taker subgroups defined by volume of smears taken in the previous 12 months need to be examined.

Table 18. The number and proportion (%) of satisfactory but limited and unsatisfactory smears in the quarter by annual volume of smears taken 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 (%)	Number (%)	Number (%)
Lay	< 30	0			
	30-100	16	12 (75.0)	4 (25.0)	0 (0.0)
	> 100	0			
	Total	16	12 (75.0)	4 (25.0)	0 (0.0)
Medical	< 30	3,744	2,871 (76.7)	824 (22.0)	49 (1.3)
	30-100	18,442	14,766 (80.1)	3,476 (18.8)	200 (1.1)
	> 100	47,354	38,377 (81.0)	8,564 (18.1)	413 (0.9)
	Total	69,540	56,014 (80.5)	12,864 (18.5)	662 (1.0)
Midwife	< 30	205	140 (68.3)	62 (30.2)	3 (1.5)
	30-100	57	46 (80.7)	11 (19.3)	0 (0.0)
	> 100	171	150 (87.7)	19 (11.1)	2 (1.2)
	Total	433	336 (77.6)	92 (21.2)	5 (1.2)
Nurse	< 30	1,458	1,172 (80.4)	280 (19.2)	6 (0.4)
	30-100	9,283	7,824 (84.3)	1,402 (15.1)	57 (0.6)
	> 100	15,122	12,906 (85.3)	2,145 (14.2)	71 (0.5)
	Total	25,863	21,902 (84.7)	3,827 (14.8)	134 (0.5)
Specialist	< 30	88	64 (72.7)	22 (25.0)	2 (2.3)
	30-100	674	510 (75.7)	150 (22.3)	14 (2.1)
	> 100	8,939	7,313 (81.8)	1,485 (16.6)	141 (1.6)
	Total	9,701	7,887 (81.3)	1,657 (17.1)	157 (1.6)
Total		105,553	86,151 (81.6)	18,444 (17.5)	958 (0.9)

Appendix 1

The following is a list of national indicators that will be reported 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 are 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 cancer

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.

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 a 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

BETHESDA codes by broad cytological abnormality category used for the IMG-NCSP reports.

- (a) Negative for dysplasia
- (b) Abnormal 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; C3B2C; C3B2E
- (f) AGUS favouring a dysplastic process - C3B2A1; C3B2B2; C3B2D
- (g) ASCUS-HG - C3A1E
- (h) HSIL - C3A2B; C3A2B1; C3A2B2; C3A2B3; C3A2B4; C3A2B5; C3A2B6; C3A2B7
- (i) AIS - C3B3D; C3B3E; C3B3F
- (j) Adenocarcinoma (not otherwise specified and other) - C3B3; C3B3B; C3B3C
- (k) Adenocarcinoma (endocervical) - C3B3A
- (l) Cancer not otherwise specified - C3C; C4
- (m) Squamous Cancer - C3A3