

Quarterly Report 7
National Cervical Screening Programme

April – June 2002

*Independent Monitoring Group
of the National Cervical Screening Programme*

Technical Report No. 44
Hugh Adam Cancer Epidemiology Unit
Department of Preventive and Social Medicine
University of Otago

FEBRUARY 2003

Independent Monitoring Group of the National Cervical Screening Programme
University of Otago
PO Box 913
Dunedin

12 February 2003

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:

Dr Brian Cox, Public Health Physician

Dr Gary Fentiman, Gynaecologist

Dr Margaret Sage, Cytopathologist

Dr Fred Mayall, Pathologist

Mrs Linda Thompson, Maori Representative

Mrs Christine Rimene, Maori Health Researcher

Dr Coleen Lewis, General Practitioner

Ms Maureen Anderson, Consumer Representative

Mr Harold Neal, Scientific Officer, Cytotechnology

Dr Mary Jane Sneyd, Epidemiologist

Dr Kirsten Coppell, Public Health Physician

National Screening Unit, Ministry of Health ex-officio representatives are:

Ms Jane McEntee, Manager, National Cervical Screening Programme

Mrs Sandie Matcham, National Register Co-ordinator, IS Team

Ms Lesley Mack, Senior Analyst, National Cervical Screening Programme

The IMG-NCSP received data from the National Cervical Screening Programme Register for this report on 2 August 2002. This quarterly monitoring report was sent to the Ministry of Health on 12 February 2003.

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

CONTENTS

1.0	Executive Summary.....	1
2.0	Recommendations.....	3
3.0	Methods.....	5
4.0	Results.....	6
4.1	Short Interval Re-screening.....	6
4.2	Delayed re-screening for women with a high grade abnormality.....	10
4.3	Follow-up of women with HSIL cytology	12
4.4	Laboratory smear reporting.....	22
4.5	Laboratory cytology turn around time.....	27
4.6	Laboratory histology turn around time	29
4.7	Satisfactory but limited and unsatisfactory smears by laboratory	32
4.8	Cytology reports predicting HSIL (positive predictive value).....	35
4.9	Waiting time for colposcopic assessment for HSIL or ASCUS possible high grade..	38
4.10	Waiting time for colposcopic assessment for LSIL or ASCUS.....	41
4.11	Satisfactory but limited and unsatisfactory smears by smear taker	44
	Appendix 1	47
	Appendix 2	51
	Appendix 3	52

TABLES

Table 1. Short interval re-screening proportion (%) by 5-year age groups for the 33 months to 30 June 2002.....	8
Table 2. Short-interval re-screening proportion (%) for 20-69 year old women for each DHB area	9
Table 3. Timeliness of the most recent smear among women with a previous high grade or more serious abnormality.....	11
Table 4. Timeliness of histology report after an ASCUS possible high grade or more serious cytology result for enrolled 20-69 year old women	14
Table 5. Timeliness of histology report after HSIL or ASCUS possible high grade cytology result for enrolled 20-69 year old Maori women.....	15
Table 6. Timeliness of histology report after HSIL or ASCUS possible high grade cytology result for enrolled 20-69 year old 'Other' women.....	15
Table 7. Timeliness of histology report after HSIL or ASCUS possible high grade cytology result for enrolled 20-69 year old Pacific women.....	16
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.....	17
Table 9. The number of women with no histology result recorded by NCSP-Register status and source of any subsequent smear.	18
Table 10. A summary of laboratory indicators reported.	20
Table 11. The number and proportion of satisfactory or satisfactory but limited smears in broad cytological categories for each laboratory.....	25
Table 12. Timeliness of the reporting of smears by laboratory	28
Table 13. Timeliness of the reporting of histology by laboratory.....	31
Table 14. The number and proportion of satisfactory but limited and unsatisfactory smears by laboratory.....	34
Table 15. Cytology reports predicting HSIL by laboratory	37
Table 16. Waiting time for colposcopic assessment of HSIL or ASCUS possible high grade by DHB colposcopy service.	40
Table 17. Waiting time for colposcopic assessment of LSIL or ASCUS by DHB colposcopy service.....	43
Table 18. The number and proportion (%) of satisfactory but limited and unsatisfactory smears for each smear taker group.	46

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) and providers of cervical screening services to improve the quality of the NCSP. This is a quarterly report for the period April – June 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 and 6-monthly. To calculate the indicators for this report, anonymous data provided by the NSU for women enrolled on the NCSP-Register were used. Aggregate anonymous data for women referred to DHB colposcopy units were also provided by the NSU.

The way in which some indicators were calculated has changed slightly since earlier reports. Therefore, the data presented in reports 1-5 were revised so that changes in indicator results could be observed over time. These revised tables appear in volume II of report 6. The affected indicators were short interval re-screening, delayed re-screening for women with a high grade abnormality, follow-up of women with HSIL cytology, laboratory smear reporting, laboratory cytology turn around time, laboratory histology turn around time and positive predictive value of HSIL.

Short interval re-screening, a measure of resource utilisation, was estimated to be 21.0% for women aged 20-69 years. Satisfactory but limited smears can generate a one year recall recommendation and when these smears were excluded, estimated short interval re-screening was 11.9%. Both these estimates of short interval re-screening were higher than the target of 10%. Short interval re-screening was highest among women aged 45-49 years 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 12.6% in the West Coast to 28.1% in both Auckland and Waitemata when both satisfactory and satisfactory but limited smears were included.

24,507 participating women aged 20-69 years with a high grade cytological or histological abnormality recorded on the NCSP-Register had completed assessment and treatment before 1 April 2001. Of these 24,507 women, 72.4% had a smear within the 15 months prior to 30 June 2002. This was less than the target of 85%. 1,508 of these 24,507 women had had no smear result recorded since their high grade abnormality.

5,087 women had an ASCUS possible high grade or more serious cytology result recorded on the NCSP-Register between 1 July 2000 and 30 June 2001. About three-quarters (72.7%) 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 422 of the 5,087 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 noticeably amongst the NCSP regions with 159 of the 422 women residing in the Bay of Plenty region.

Thirteen laboratories reported cervical cytology during the April - June 2002 reporting quarter. Overall, of the 108,316 satisfactory or satisfactory but limited smears processed during the quarter, 6.9% were reported as abnormal, which was within the target of not more than 10%. The two hospital-based laboratories and one community-based laboratory reported more than 10% of the smears they read as abnormal.

Three of the thirteen laboratories processing smears did not meet the 7-day cytology turn around time target, although one of these laboratories was very close to achieving it. All laboratories either met or were very close to achieving the 14-day target.

Thirty-one laboratories reported cervical histology during the April - June 2002 reporting quarter. For all laboratories combined, the 5-day histology turn around time was 94.6%, which was more than the target of 90%. Seven of the fifteen hospital-based laboratories and all fifteen community-based laboratories met the 5-day histology turn around time target. Most laboratories had reported all or almost all histology results within 10 working days.

The proportion of smears reported as satisfactory but limited varied considerably among the laboratories. Only one of thirteen laboratories that processed smears during the quarter reported more than 20% of smears as satisfactory but limited. Two hospital-based laboratories and one community-based laboratory reported more than 2.0% of smears they read as unsatisfactory. Three community-based laboratories reported less than 0.5% of smears they read as unsatisfactory.

The target for the positive predictive value of HSIL indicator is 65-85%. One laboratory was slightly above the target range (85.7%) and one laboratory was clearly below the target range (50.0%).

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 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 did not provide any or incomplete data (Good Health Wanganui, Lakeland Health, Pacific Health Tauranga, Pacific Health Whakatane, South Auckland Health Wairarapa Health, Waitemata Health, Northland Health and Tairāwhiti Healthcare) should continue.

2.2 Services 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, Capital Coast, Counties Manakau, and Waitemata).
2. 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.
3. Reasons why 1,508 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 had smears less frequently than recommended should be assessed.
6. Reasons why 422 women with a high grade cytology report have no subsequent histology result recorded on the NCSP-Register need to be examined by the NSU.
7. Reasons why histology reports were 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. Efforts to reduce the relatively high level of reporting of total abnormalities at Medlab Bay of Plenty 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 Bay of Plenty and Valley Diagnostic Laboratory should work towards maintaining the 7-day target.
11. Auckland Hospital Laboratory, Healthlab Otago, Hutt Hospital Laboratory, Rotorua Hospital Laboratory, Southland Hospital Laboratory, Taranaki Base Hospital Laboratory, Wanganui Hospital Laboratory and Wellington Hospital Laboratory should work towards achieving the 5-day histology turn around time target.
12. 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 (Diagnostic Medlab Auckland, Medlab Bay of Plenty and Southern Community Laboratory Christchurch).
13. The low positive predictive value of HSIL reported by Pathlab Waikato should be investigated.
14. Reasons for missing histology results should be sought, particularly for those smears read by Medlab Bay of Plenty.
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 and 6-monthly. Each indicator is described in the results section under the separate headings that identify the specific indicators. Indicators that are 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 were used. Aggregate anonymous data for women referred to DHB colposcopy units were also provided by the NSU.

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.¹

Only those cytology and histology results recorded on the NCSP-Register were used for the calculation of indicators.

Unless otherwise stated, women's ages at the end of the reporting quarter were used when calculating the indicators. The registration status and demographic details of each woman at the time of the data download were used for all calculations.

Women were assigned to both a NCSP region and a District Health Board (DHB) area by the NCSP-Register. Each woman was allocated to the NCSP region and DHB area in which they lived, with two exceptions. Women whose address was unknown were allocated to the NCSP region according to their 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.

¹ 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 30 June 2002. 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.

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

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

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

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 they generate a 3-month recall.⁴

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.

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

The number of women who met the above criteria and who, during the 33-months prior to the end of the reporting period, had two or more smears recorded minus those who had at least one smear recorded as abnormal⁵ 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.⁶ 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 for 20-69 year old women was 21.0% when both satisfactory and satisfactory but limited smears were included. This was almost the same as that reported for the previous quarter (20.9%). When only satisfactory smears were included, the estimated level of short interval re-screening was 11.9%, which was also similar to that reported last quarter (11.8%).

Short interval re-screening was highest amongst women aged 45-49 years (22.2%). It was similarly high amongst women aged 20-44 and 50-59 years, ranging from 20.5% to 22.0%. The lowest level of short interval re-screening (15.9%) occurred among women aged 65-69 years. When only satisfactory smears were included, the estimated level of short interval re-screening was similar amongst women aged 30-59 years, ranging from 12.1% for women aged 30-34 years to 13.8% for 50-54 year old women. The lowest level of short interval re-screening was lowest among women aged 65-69 years (8.7%).

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 12.6% in the West Coast to 28.1% in both Auckland and Waitemata. High levels of short interval re-screening were also observed for Capital Coast (25.2%) and Counties Manakau (24.6%). Low levels of short interval re-screening were also observed for Otago (14.7%) and Southland (13.6%). When satisfactory smears only were included, the estimated level of short interval for each DHB area ranged from 5.1% for Nelson/Marlborough to 17.3% for Auckland. 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 2.8% for Otago to 13.2% 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 fully explain the continued level of short interval re-screening observed.

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

⁵ 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).

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

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, Capital Coast, Counties Manakau, and Waitemata).

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 old age groups, need to continue including efforts to educate smear takers and women about the nationally recommended intervals for cervical screening.

Table 1. Short interval re-screening proportion (%) by 5-year age groups for the 33 months to 30 June 2002 [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	28,456	9,581	4,476	21.3	9.3
25-29	47,430	13,348	4,555	20.5	9.6
30-34	59,309	16,208	4,033	22.0	12.1
35-39	64,434	16,489	3,477	21.3	12.5
40-44	64,253	16,180	3,193	21.3	12.5
45-49	52,924	13,709	2,529	22.2	13.5
50-54	43,863	10,966	1,691	22.0	13.8
55-59	33,674	7,840	1,062	20.8	12.4
60-64	26,873	5,422	647	18.2	10.6
65-69	19,778	3,490	409	15.9	8.7
Total	440,994	113,233	26,072	21.0	11.9

† 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%].

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
Auckland	42,101	13,295	2,037	28.1	17.3
Bay of Plenty	20,937	6,363	2,644	20.3	7.1
Canterbury	54,496	12,098	2,736	18.1	12.8
Capital Coast	34,856	10,370	2,135	25.2	12.9
Counties Manakau	37,472	10,387	1,544	24.6	12.6
Hawkes Bay	15,747	3,202	742	16.4	10.3
Hutt Valley	16,384	4,168	802	21.6	13.5
Lakes	12,110	3,590	1,488	19.8	8.9
MidCentral	16,892	3,619	898	17.0	9.6
Nelson-Marlborough	16,007	3,437	998	16.3	5.1
Northland	15,913	4,343	839	23.2	14.8
Otago	22,969	4,126	882	14.7	11.9
South Canterbury	6,273	1,329	294	17.3	11.9
Southland	12,550	2,202	570	13.6	10.3
Tairāwhiti	4,528	1,267	423	20.6	11.3
Taranaki	13,011	2,914	991	16.0	6.7
Waikato	35,793	8,312	3,154	15.8	5.4
Wairarapa	3,879	956	209	20.4	10.9
Waitemata	46,338	14,417	1,948	28.1	16.9
West Coast	3,417	561	150	12.6	9.3
Whanganui	6,698	1,527	371	18.3	10.6
DHB Unspecified	2,623	750	217	22.2	12.2
Total	440,994	113,233	26,072	21.0	11.9

† A1 = satisfactory smear

‡ A2 = satisfactory but limited smear

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.⁷

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 women⁸ 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'⁹ following assessment and treatment prior to 1 April 2001 were included.¹⁰ 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 April 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 April 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. 24,507 women with a high grade abnormality recorded on the NCSP-Register had completed assessment and treatment before 1 April 2001. This number has increased from 23,619 reported for the January – March 2002 quarter. Of the 24,507 women, 72.4% had a smear within 15 months of the end of this reporting quarter. This was very similar to that reported for previous quarters, but less than the

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

⁸ The definition of participating women is included in Appendix 1.

⁹ '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.

¹⁰ 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.

target of 85%. Just over three-quarters (77.7%) of the 24,507 women had a smear within 18 months. This proportion was also very similar to that reported for previous quarters and much less than the target of 99%.

For 16.1% of the 24,507 women, their last smear was more than 18 months prior to 30 June 2002 and 1,508 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 1,508 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	17,752	72.4	72.4
15-18 months	1,290	5.3	77.7
More than 18 months	3,957	16.1	93.8
No smear recorded	1,508	6.2	100.0
Total	24,507	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 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 30 June 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 July 2000 and 30 June 2001 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 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 July 2000 and 30 June 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 recorded 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 and if so, whether it was taken by a non-specialist or specialist.

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 30 June 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 July 2000 to 30 June 2001 and had a histology specimen taken within 12 weeks, between 13 and 26 weeks, between 27 and 52 weeks, or after 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 July 2000 and 31 June 2001, 5,087 women had an ASCUS possible high grade, HSIL or more serious cytology result recorded on the NCSP-Register. About three-quarters (72.7%) 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 5,087 women with an ASCUS possible high grade, HSIL or more serious cytology result recorded on the NCSP-Register, 90.4% 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 July 2000 to 30 June 2001 and had a histology specimen taken within 12 weeks, between 13 and 26 weeks, between 27 and 52 weeks, or after 52 weeks of the smear being taken. Amongst the three ethnic groups, neither of the two targets was reached. Three-quarters (75.8%) of 'Other' women had a histology

specimen taken within 12 weeks of their high grade smear compared with 59.5% of Maori women and 56.8% of 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. The proportion of Maori, 'Other' and Pacific women who had a histology specimen taken and result recorded following their ASCUS possible high grade, HSIL or more serious smear was 89.4%, 92.5% and 81.1%, respectively.

Table 8 shows the number and proportion of women in each NCSP region with a high grade cytology result between 1 July 2000 and 30 June 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 44.9% for Bay of Plenty to 88.9% for Otago. No region reached the 12-week target of 90%, whereas two regions (Tairāwhiti and the West Coast) reached the 12-week target for the January - March 2002 reporting quarter.

For 422 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 10.6% for Maori women (Table 5), 7.5% for 'Other' women (Table 6) and 18.9% 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). 159 of 780 (20.4%) women with a high grade smear result in Bay of Plenty did not have a subsequent histology recorded on the NCSP-Register. Compared with other regions, relatively high numbers of women had no histology result recorded on the NCSP-Register in Auckland (99), Canterbury (27), Manawatu-Wanganui (30), Waikato (20) and Wellington (44).

Table 9 summarises women with no histology result recorded on the NCSP-Register following a high grade smear. Of the 422 women with no histology recorded, 109 (25.8%) women had no subsequent smear recorded and 158 (37.4%) women had a follow up smear taken by a non-specialist. Of these 267 women, 146 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 121 women, their follow-up was less clear. Of these 121 women, 61 were in Bay of Plenty, 20 in Auckland, 18 in Manawatu-Wanganui and 10 in Wellington NCSP regions (data not shown). These regions represented 90% of the total.

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 chosen to not have their histology results to be recorded on the NCSP-Register.

RECOMMENDATIONS

Service Issues

1. Reasons why 422 women with a high grade cytology report have no subsequent histology result recorded on the NCSP-Register need to be examined by the NSU.

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

2. Reasons why histology reports were 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	3,697	72.7	72.7
13-26 weeks	665	13.1	85.8
27-52 weeks	237	4.7	90.4
More than 52 weeks	66	1.3	91.7
Subtotal	4,665	91.7	100.0
No histology recorded on NCSP-Register	422	8.3	
Total	5,087	100.0	

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	498	59.5	59.5
13-26 weeks	168	20.1	79.6
27-52 weeks	67	8.0	87.6
More than 52 weeks	15	1.8	89.4
Subtotal	748	89.4	100.0
No histology reported	89	10.6	
Total	837	100.0	

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	3,136	75.8	75.8
13-26 weeks	479	11.6	87.3
27-52 weeks	161	3.9	91.2
More than 52 weeks	51	1.2	92.5
Subtotal	3,827	92.5	100.0
No histology reported	312	7.5	
Total	4,139	100.0	

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	63	56.8	56.8
13-26 weeks	18	16.2	73.0
27-52 weeks	9	8.1	81.1
More than 52 weeks	0	0.0	81.1
Subtotal	90	81.1	100.0
No histology reported	21	18.9	
Total	111	100.0	

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 No.
	Within 12 weeks		13-26 weeks		27-52 weeks		More than 52 weeks		No histology		
	No.	%	No.	%	No.	%	No.	%	No.	%	
Auckland	1,084	75.8	162	11.3	69	4.8	17	1.2	99	6.9	1,431
Bay of Plenty	350	44.9	209	26.8	45	5.8	17	2.2	159	20.4	780
Canterbury	406	81.2	46	9.2	14	2.8	7	1.4	27	5.4	500
Hawkes Bay	139	74.7	24	12.9	13	7.0	2	1.1	8	4.3	186
Manawatu/ Wanganui	280	78.2	27	7.5	20	5.6	1	0.3	30	8.4	358
Nelson/ Marlborough	116	69.0	35	20.8	10	6.0	2	1.2	5	3.0	168
Northland	140	76.5	26	14.2	8	4.4	2	1.1	7	3.8	183
Otago	224	88.9	14	5.6	5	2.0	5	2.0	4	1.6	252
Southland	102	77.9	13	9.9	7	5.3	2	1.5	7	5.3	131
Tairāwhiti	50	86.2	4	6.9	2	3.4	0	0.0	2	3.4	58
Taranaki	131	82.9	12	7.6	6	3.8	1	0.6	8	5.1	158
Waikato	313	79.6	43	10.9	13	3.3	4	1.0	20	5.1	393
Wellington	338	73.3	49	10.6	24	5.2	6	1.3	44	9.5	461
West Coast	24	85.7	1	3.6	1	3.6	0	0.0	2	7.1	28
Total	3,697	72.7	665	13.1	237	4.7	66	1.3	422	8.3	5,087

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	61	60	67	188
Signed in since high grade cytology result	48	98	88	234
Total	109	158	155	422

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%)	Positive predictive value of HSIL (target = 65-85%)
		No.	%	No.	%	No.	%	No.	%	No.	%	Within 7 days	%
<i>Hospital-based</i>	Number	No.	%	No.	%	No.	%	No.	%	No.	%	Within 7 days	%
Auckland Hospital Laboratory	2,809	540	19.2	91	3.2	2,138	78.66	165	6.07	580	21.34	99.96	78.0
Canterbury Health Laboratories	1,297	206	15.9	28	2.2	1,106	87.16	37	2.92	163	12.84	99.85	80.0
Waikato Hospital Laboratory**	-	-	-	-	-	-	-	-	-	-	-	-	66.7
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.

** Ceased reading smears July 2001

Table 10 *continued*

Laboratory	Total number of smears processed	Satisfactory but limited smears		Unsatisfactory smears		Negative for dysplasia or malignancy*		HSIL*		Total abnormalities*†		Smear turn around time proportion (%)	Positive predictive value of HSIL
		(target = not more than 20%)		(target = 0.5 – 2.0%)		(target = not more than 96%)		(target = not less than 0.6%)		(target = not more than 10%)		(target = 90%)	(target = 65-85%)
<i>Community-based</i>	Number	No.	%	No.	%	No.	%	No.	%	No.	%	Within 7 days	%
Diagnostic Medlab Auckland Medical Laboratory	31,614	6,240	19.7	122	0.4	30,175	95.82	192	0.61	1,317	4.18	100.00	78.8
Southland** Medical Laboratory Wellington	-	-	-	-	-	-	-	-	-	-	-	-	85.7
Medlab Bay of Plenty#	6,958	1,621	23.3	153	2.2	6,176	90.76	73	1.07	629	9.24	75.57	76.4
Medlab Central, Palmerston North	7,615	1,295	17.0	34	0.4	6,612	87.22	97	1.28	969	12.78	86.12	69.9
Medlab Hamilton	8,104	1,386	17.1	63	0.8	7,374	91.71	116	1.44	667	8.29	99.98	77.9
Medlab South Christchurch	7,711	1,254	16.3	47	0.6	6,997	91.30	59	0.77	667	8.70	99.69	74.1
Pathlab Waikato#	11,262	1,990	17.7	101	0.9	10,413	93.30	88	0.79	748	6.70	100.00	81.0
SCL‡ Christchurch	2,894	481	16.6	25	0.9	2,622	91.39	21	0.73	247	8.61	98.96	50.0
SCL‡ Dunedin	7,119	940	13.2	23	0.3	6,790	95.69	48	0.68	306	4.31	93.37	82.3
Taranaki Medlab	12,276	613	5.0	86	0.7	11,687	95.87	151	1.24	503	4.13	95.90	79.8
Valley Diagnostic Laboratory	5,709	1,025	18.0	91	1.6	5,143	91.55	62	1.10	475	8.45	99.25	84.6
Total	3,879	745	19.2	67	1.7	3,613	94.78	39	1.02	199	5.22	89.77	68.8
	109,247	18,336	16.8	931	0.9	100,846	93.10	1,148	1.06	7,470	6.90	96.13	77.0

* Unsatisfactory smears excluded

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

** Ceased reading smears August 2001

‡ SCL = Southern Community Laboratory

An unknown number of smears sent to Medlab Bay of Plenty were read by Pathlab Waikato but are recorded as having been read by Medlab Bay of Plenty.

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.¹¹

The Bethesda System is used by the NCSP to record the cytological result of each smear.¹² 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 Bethesda diagnosis codes were assigned to broad cytological categories and these are shown in Appendix 2. The hierarchy of broad cytological categories, with increasing severity from (a) to (l) is:

- (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) adenocarcinoma¹³
- (k) cancer not otherwise specified
- (l) invasive squamous carcinoma of the cervix

Definition

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

1. 1. negative for dysplasia or malignancy
2. total ASCUS
3. AGUS favour reactive
4. AGUS favour dysplasia
5. LSIL (CIN 1 and/or HPV)
6. ASCUS possible high grade
7. HSIL
8. Total abnormalities (smears reported as ASCUS or more serious)

¹¹ 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 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.

¹² Bethesda Coding Standard 1998 was used for this monitoring period.

¹³ Adenocarcinoma includes adenocarcinoma not otherwise specified, adenocarcinoma probably of endocervical origin, adenocarcinoma probably of endometrial origin and adenocarcinoma probably of extrauterine origin.

Targets

The targets for laboratory smear reporting are:

1. Negative for dysplasia or malignancy not more than 96%,
2. HSIL not less than 0.60%,
3. Total abnormalities not more than 10%.

Calculation

The Bethesda diagnosis codes, as recorded on the NCSP-Register, of satisfactory or satisfactory but limited smears taken during the reporting quarter were used to calculate the number of smears in each broad cytological category (listed in the definition above) for each laboratory. These were expressed as proportions of the total number of satisfactory or satisfactory but limited smears reported by each laboratory. Where a single smear had more than one diagnosis code, the most serious ranked code was used according to the hierarchy of codes. Total abnormalities included all smears with a diagnosis code of ASCUS or more serious abnormality according to the hierarchy of broad cytological categories. Smear results for women of all ages were included. Smears recorded as being unsatisfactory for evaluation were excluded.

Results

Table 11 shows the number and proportion of satisfactory or satisfactory but limited smears in the specified cytological categories for smears taken during the quarter and read by each of the laboratories that read 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, 108,316 satisfactory or satisfactory but limited smears were taken, and the number of satisfactory or satisfactory but limited smears reported by each laboratory ranged from 1,269 at Canterbury Health Laboratories to 31,492 at Diagnostic Medlab Auckland.

Overall, of the 108,316 smears 93.1% were reported as negative for dysplasia or malignancy. This was slightly higher than that reported last quarter (92.7%), but 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 read as negative for dysplasia or malignancy compared with all but one community-based laboratories. The proportion of smears reported as negative for dysplasia or malignancy was 87.2% for Medlab Bay of Plenty and more than 90% for the other community based laboratories.

The proportion of smears reported with a HSIL abnormality was 1.06% for all laboratories combined. This was very similar to that reported for previous reporting quarters and met the target of not less than 0.60%. 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, Medlab Central Palmerston North reported the highest proportion of smears as HSIL (1.44%). All laboratories met the target of not less than 0.60%. Diagnostic Medlab reported 0.61% of smears as HSIL. This is slightly higher than that reported for the previous quarter when 0.59% of smears were reported as HSIL.

For all laboratories combined, the target of not more than 10% of smears reported as abnormal was not exceeded. This proportion was 6.9%, which is lower than that reported for previous quarters; 7.3% for January-March 2002, 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 (21.3%) and Canterbury Health Laboratories (12.8%). One community-based laboratory also reported more than 10% of the smears they processed as abnormal: Medlab Bay of Plenty

(12.8%). Medlab Bay of Plenty reported a relatively high proportion of smears as ASCUS (8.1%) compared with all other laboratories (less than 7.0%).

RECOMMENDATIONS

Service Issues

1. Efforts to reduce the relatively high level of reporting of total abnormalities at Medlab Bay of Plenty should continue.

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

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 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.	%	No.	
<i>Hospital-based</i>																		
Auckland Hospital Laboratory	2,138	78.66	190	6.99	210	7.73	4	0.15	3	0.11	29	1.07	165	6.07	580	21.34	2,718	
Canterbury Health Laboratories	1,106	87.16	69	5.44	55	4.33	0	0.00	0	0.00	2	0.16	37	2.92	163	12.84	1,269	
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 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.	%	No.
<i>Community-based</i>																	
Diagnostic Medlab Auckland	30,175	95.82	507	1.61	596	1.89	8	0.03	0	0.00	27	0.09	192	0.61	1,317	4.18	31,492
Medical Laboratory Wellington	6,176	90.76	328	4.82	219	3.22	6	0.09	0	0.00	23	0.34	73	1.07	629	9.24	6,805
Medlab Bay of Plenty#	6,612	87.22	612	8.07	242	3.19	17	0.22	1	0.01	17	0.22	97	1.28	969	12.78	7,581
Medlab Central, Palmerston North	7,374	91.71	245	3.05	293	3.64	7	0.09	1	0.01	14	0.17	116	1.44	667	8.29	8,041
Medlab Hamilton	6,997	91.30	301	3.93	302	3.94	2	0.03	1	0.01	6	0.08	59	0.77	667	8.70	7,664
Medlab South Christchurch	10,413	93.30	365	3.27	272	2.44	12	0.11	6	0.05	39	0.35	88	0.79	748	6.70	11,161
Pathlab Waikato#	2,622	91.39	161	5.61	63	2.20	1	0.03	1	0.03	6	0.21	21	0.73	247	8.61	2,869
SCL* Christchurch	6,790	95.69	139	1.96	114	1.61	4	0.06	0	0.00	1	0.01	48	0.68	306	4.31	7,096
SCL* Dunedin	11,687	95.87	55	0.45	279	2.29	4	0.03	2	0.02	23	0.19	151	1.24	503	4.13	12,190
Taranaki Medlab	5,143	91.55	200	3.56	206	3.67	5	0.09	1	0.02	5	0.09	62	1.10	475	8.45	5,618
Valley Diagnostic Laboratory	3,613	94.78	52	1.36	107	2.81	0	0.00	0	0.00	3	0.08	39	1.02	199	5.22	3,812
Total	100,846	93.10	3,224	2.98	2,958	2.73	70	0.06	16	0.01	195	0.18	1,148	1.06	7,470	6.90	108,316

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

* SCL = Southern Community Laboratory.

An unknown number of smears sent to Medlab Bay of Plenty were read by Pathlab Waikato but are recorded as having been read by Medlab Bay of Plenty.

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 the smear was received and the date that the smear 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. Smears taken from enrolled women of all ages during the reporting period as recorded on the NCSP-Register were included.

Results

Table 12 shows the proportion of smears received and reports issued within specified time periods during the period 1 April to 30 June 2002 for each laboratory processing cervical cytology. Overall, 96.1% of smears received by laboratories were reported within 7 working days. This was greater than the target of 90%.

Overall, the 14-day target of 100% was almost achieved. For all smears received by laboratories between 1 April and 30 June 2002, 99.99% were reported within 14 working days.

Three of thirteen laboratories did not achieve the 7-day target. Valley Diagnostic Laboratory (89.8%) almost achieved the target, while Medlab Bay of Plenty (86.1%) was close to achieving the target and Medical Laboratory Wellington (75.6%) clearly did not meet the target.

Four laboratories did not meet the 14-day target, but they were very close to achieving it. Overall, 16 of 109,247 smears were not reported within 14 working days (data not shown).

RECOMMENDATIONS

Service Issues

1. Medical Laboratory Wellington, Medlab Bay of Plenty and Valley Diagnostic Laboratory should work towards 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	Number of smears processed	Within 7 working days	From 8 to 14 working days		More than 14 working days
		Proportion (%)	Proportion (%)	Cumulative proportion (%)	Proportion (%)
<i>Hospital-based</i>					
Auckland Hospital Laboratory	2,809	99.96	0.04	100.00	0.00
Canterbury Health Laboratories	1,297	99.85	0.15	100.00	0.00
<i>Community-based</i>					
Diagnostic Medlab Auckland	31,614	100.00	0.00	100.00	0.00
Medical Laboratory Wellington	6,958	75.57	24.42	99.99	0.01
Medlab Bay of Plenty	7,615	86.12	13.88	100.00	0.00
Medlab Central, Palmerston North	8,104	99.98	0.02	100.00	0.00
Medlab Hamilton	7,711	99.69	0.31	100.00	0.00
Medlab South Christchurch	11,262	100.00	0.00	100.00	0.00
Pathlab Waikato	2,894	98.96	1.04	100.00	0.00
Southern Community Laboratory Christchurch	7,119	93.37	6.62	99.99	0.01
Southern Community Laboratory Dunedin	12,276	95.90	4.07	99.98	0.02
Taranaki Medlab	5,709	99.25	0.75	100.00	0.00
Valley Diagnostic Laboratory	3,879	89.77	9.95	99.72	0.28
Total	109,247	96.13	3.86	99.99	0.01

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 clinician.

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.¹⁴ “If it is likely to take more than 10 days for the result to be reported the colposcopist should be informed.”¹⁵

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 calculated for each laboratory that processed cervical histology. Histology specimens included diagnostic biopsies, treatment biopsies, polyps and the cervical tissue of total hysterectomy specimens. For each laboratory, the numbers of cervical histology specimens received during the quarter and reported within 5 working days or 6-10 working days or more than 10 working days were expressed as proportions of the total number of cervical histology specimens received by each laboratory during the quarter. Cervical histology specimens taken from enrolled women of all ages during the reporting period as recorded on the NCSP-Register were included.

Results

Table 13 shows the number of histology specimens reported and the timeliness of histology results reported by laboratories. 6,969 histology specimens were recorded on the NCSP-Register as having been received and reported by laboratories during the period 1 April – 30 June 2002. Thirty-one laboratories reported histology specimens and the number of histology specimens reported by each laboratory varied considerably, ranging from 35 for Southern Community Laboratory Hawkes Bay to 974 for Diagnostic Medlab Auckland.

For all laboratories combined, the 5-day histology turn around time was 94.6%. This met the target of 90%. Amongst the laboratories seven of the fifteen hospital-based laboratories and all sixteen community-based laboratories met the 5-day target. Auckland Hospital Laboratory (73.5%), Healthlab Otago (86.5%), Hutt Hospital Laboratory (84.8%), Rotorua Hospital Laboratory (89.6%), Southland Hospital Laboratory (89.9%), Taranaki Base Hospital Laboratory (79.2%), Wanganui Hospital Laboratory (85.9%) and Wellington Hospital Laboratory (76.1%) did not meet the 5-day target of 90%, although some were very close to achieving it.

Most laboratories had reported all or almost all histology results within 10 working days of the specimen arriving at the laboratory. Overall, 67 of 6,969 (1.0%) histology specimens received during the quarter were reported more than 10 working days after the time the specimens were received by the laboratory. Auckland Hospital Laboratory (5.2%), Healthlab Otago (5.4%), Rotorua Hospital Laboratory (5.7%) and Wellington Hospital Laboratory (5.6%) had higher proportions of histology specimens reported after 10 working days compared with the other laboratories.

¹⁴ P 5.21 National Cervical Screening Programme Interim Operational Policy and Quality Standards. Health Funding Authority, October 2000.

¹⁵ 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. Auckland Hospital Laboratory, Healthlab Otago, Hutt Hospital Laboratory, Rotorua Hospital Laboratory, Southland Hospital Laboratory, Taranaki Base Hospital Laboratory, Wanganui Hospital Laboratory and Wellington Hospital Laboratory should work towards achieving the 5-day histology turn around time target.

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	381	73.5	21.3	5.2
Canterbury Health Laboratories	561	98.9	0.7	0.4
Healthlab Otago	111	86.5	8.1	5.4
Hutt Hospital Laboratory	112	84.8	15.2	0.0
Memorial Hospital Hastings Lab	120	95.0	3.3	1.7
Middlemore Hospital Laboratory	281	98.9	1.1	0.0
Nelson Hospital Laboratory	102	93.1	2.9	3.9
North Shore Hospital Laboratory	438	100.0	0.0	0.0
Rotorua Hospital Laboratory	106	89.6	4.7	5.7
Southland Hospital Laboratory	129	89.9	10.1	0.0
Taranaki Base Hospital Laboratory	192	79.2	20.3	0.5
Waikato Hospital Laboratory	534	95.9	3.2	0.9
Wanganui Hospital Laboratory	71	85.9	14.1	0.0
Wellington Hospital Laboratory	251	76.1	18.3	5.6
Whangarei Hospital Laboratory	171	95.9	3.5	0.6
<i>Community-based</i>				
Diagnostic Medlab Auckland	974	99.4	0.5	0.1
Medical Laboratory Southland	45	100.0	0.0	0.0
Medical Laboratory Wellington	204	94.1	5.9	0.0
Medlab Bay of Plenty	494	97.6	1.8	0.6
Medlab Central, Palmerston North	440	95.9	4.1	0.0
Medlab Hamilton	75	100.0	0.0	0.0
Medlab South Christchurch	51	100.0	0.0	0.0
Medlab South working for Timaru	45	100.0	0.0	0.0
Nelson Diagnostic Laboratory	58	100.0	0.0	0.0
Northland Pathology Laboratory	81	93.8	4.9	1.2
Pathlab Waikato	246	100.0	0.0	0.0
SCL Christchurch	197	100.0	0.0	0.0
SCL Dunedin	297	98.7	1.3	0.0
SCL Hawkes Bay	35	97.1	0.0	2.9
Taranaki Medlab	86	100.0	0.0	0.0
Valley Diagnostic Laboratory	81	98.8	1.2	0.0
Total	6,969	94.6	4.4	1.0

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 both expressed as a proportion of the total number of smears processed during the quarter by each cytology reporting 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, 109,247 smears were processed, of which 16.8% were reported as satisfactory but limited. This was less than that reported last quarter (17.7%) and within the target of not more than 20%.

Among the laboratories, the proportion of satisfactory but limited smears varied considerably. This proportion ranged from 5.0% for Southern Community Laboratory Dunedin to 23.3% for Medical Laboratory Wellington. Medical Laboratory Wellington was the only laboratory that reported more than 20% of smears they read as satisfactory but limited, compared with three laboratories last quarter. For the previous quarter, Medical Laboratory Wellington reported 29.2% of the smears they read as satisfactory but limited. 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 109,247 smears processed were reported as unsatisfactory for evaluation. This is the same or very similar to that reported for previous monitoring quarters, and within the target range of 0.5% - 2.0%. Auckland Hospital Laboratory (3.2%), Canterbury Health Laboratories (2.2%) and Medical Laboratory Wellington (2.2%) reported more than 2.0% of smears as unsatisfactory. Three laboratories reported less than 0.5% of smears they processed as unsatisfactory compared with four last quarter. The three laboratories were Diagnostic

Medlab Auckland (0.4%), Medlab Bay of Plenty (0.4%) and Southern Community Laboratory Christchurch (0.3%).

RECOMMENDATIONS

Service Issues

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 (Diagnostic Medlab Auckland, Medlab Bay of Plenty and Southern Community Laboratory Christchurch).

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

Laboratory	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	2,809	540	19.2	91	3.2
Canterbury Health Laboratories	1,297	206	15.9	28	2.2
<i>Community-based</i>					
Diagnostic Medlab Auckland	31,614	6,240	19.7	122	0.4
Medical Laboratory Wellington	6,958	1,621	23.3	153	2.2
Medlab Bay of Plenty	7,615	1,295	17.0	34	0.4
Medlab Central, Palmerston North	8,104	1,386	17.1	63	0.8
Medlab Hamilton	7,711	1,254	16.3	47	0.6
Medlab South Christchurch	11,262	1,990	17.7	101	0.9
Pathlab Waikato	2,894	481	16.6	25	0.9
Southern Community Laboratory Christchurch	7,119	940	13.2	23	0.3
Southern Community Laboratory Dunedin	12,276	613	5.0	86	0.7
Taranaki Medlab	5,709	1,025	18.0	91	1.6
Valley Diagnostic Laboratory	3,879	745	19.2	67	1.7
Total	109,247	18,336	16.8	931	0.9

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 amongst pathologists and laboratories. A different pathologist or laboratory from the one who reported the cervical smear may issue histology reports.

For good management of women with cervical abnormalities, regular multidisciplinary meetings, involving both colposcopists and pathologists, are a useful forum to discuss clinico-pathological correlation.

Definition

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

Target

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

Calculation

The first satisfactory smear from women reported as indicating the presence of HSIL or invasive squamous carcinoma in the six month period 1 July to 31 December 2001, and any subsequent histology reports for biopsies taken within 6 months of the smear from the same women during the 12 month period 1 July 2001 to 30 June 2002 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 or invasive carcinoma cytology report and subsequent histology. This measures the positive predictive value (PPV) of a HSIL cytology report.

The proportion of HSIL or invasive carcinoma cytology reports without a follow up histology report was also calculated for each laboratory.

The PPV of HSIL indicator was calculated for each laboratory according to where the smears were read.

Results

Table 15 shows for each laboratory the number and proportion of high grade or invasive carcinoma 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. Between 1 July and 31 December 2001 there were 1,856 HSIL or invasive carcinoma cytology reports. Of these 1,856 cytology reports, 1,636 (88.1%) had a subsequent histology recorded on the NCSP-Register. Of these 1,636 cytology reports, 77.0% were confirmed as having HSIL or more serious abnormality on histology. This was within the target range of 65-85%.

Two laboratories were outside the PPV indicator target range. The PPV for Medical Laboratory Southland was 85.7%, which was slightly above the target range. This laboratory reported only 7 HSIL or invasive carcinoma cytology smears, and ceased reading smears in August 2001. The PPV for Pathlab Waikato was 50.0%, which was clearly below the target range. For the previous 6 month period (1 January to 30 June 2001), the PPV for Pathlab Waikato was 54.2%.

For all laboratories, histology results following a HSIL or invasive carcinoma cytology report were missing for some women. The number and proportion of missing histology results varied amongst the laboratories. Medlab Bay of Plenty clearly had the greatest number (48) and proportion (28.1%) of smears reported as HSIL or invasive carcinoma with no subsequent histology result recorded within 6 months of the smear. As stated in section 4.3, 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. Also, some histology results may not have been forwarded to the NCSP-Register.

RECOMMENDATIONS

Service Issues

1. The low positive predictive value of HSIL reported by Pathlab Waikato should be investigated.
2. Reasons for missing histology results should be sought, particularly for those smears read by Medlab Bay of Plenty.

Table 15. Cytology reports predicting HSIL 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	Proportion of all HSIL or invasive carcinoma cytology reports without a follow up histology report
<i>Hospital-based</i>			
Auckland Hospital Laboratory	127	78.0	14.8
Canterbury Health Laboratories	60	80.0	9.1
Waikato Hospital Laboratory†	3	66.7	0.0
<i>Community-based</i>			
Diagnostic Medlab Auckland	321	78.8	10.6
Medical Laboratory Southland‡	7	85.7	12.5
Medical Laboratory Wellington	110	76.4	14.7
Medlab Bay of Plenty	123	69.9	28.1
Medlab Central, Palmerston North	104	77.9	8.8
Medlab Hamilton	112	74.1	9.7
Medlab South Christchurch	142	81.0	7.8
Pathlab Waikato	64	50.0	12.3
Southern Community Laboratory Christchurch	96	82.3	4.0
Southern Community Laboratory Dunedin	228	79.8	7.3
Taranaki Medlab	91	84.6	12.5
Valley Diagnostic Laboratory	48	68.8	14.3
Total	1,636	77.0	11.9

† Ceased reading smears July 2001

‡ Ceased reading smears August 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 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 inconsistent¹⁶ 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 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. Good Health Wanganui, Lakeland Health, Pacific Health Tauranga, Pacific Health Whakatane, South Auckland Health Wairarapa Health and Waitemata Health did not provide data. For Northland Health and Tairāwhiti Healthcare 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 MoH, up to 65 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. This is higher than that reported for the previous quarter, but fewer colposcopy units provided data for the January-March 2002 quarter. For Auckland Healthcare, Healthcare Otago, MidCentral Health and Tairāwhiti Healthcare no women were reported to be waiting longer than 4 weeks.

¹⁶ 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 who did not provide any or incomplete data (Good Health Wanganui, Lakeland Health, Pacific Health Tauranga, Pacific Health Whakatane, South Auckland Health Wairarapa Health, Waitemata Health, Northland Health and Tairāwhiti Healthcare) 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 16. 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.		
	April	May	June	April	May	June
Auckland Healthcare	36	41	31	0	0	0
Canterbury Health	61	63	48	15	13	13
Capital Coast Health	16	21	15	12	15	12
Coast Healthcare (West Coast)	1	2	4	2	3	2
Good Health Wanganui†						
Health South Canterbury	3	2	0	0	1	1
Health Waikato	36	26	31	7	7	8
Healthcare Hawkes Bay	19	10	18	0	0	3
Healthcare Otago	34	39	25	0	0	0
Hutt Valley Health	16	10	14	20	14	13
Lakeland Health†						
MidCentral Health	15	17	14	0	0	0
Nelson/Marlborough Health	6	2	4	3	3	1
Northland Health‡				7	4	4
Pacific Health						
Tauranga†						
Pacific Health						
Whakatane†						
South Auckland Health†						
Southern Health	13	20	13	9	14	8
Tairāwhiti Healthcare‡				0	0	0
Taranaki Healthcare	11	12	13	0	2	0
Wairarapa Health†						
Waitemata Health†						
Total						

† Data not 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 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 (MoH). Prior to the establishment of the IMG-NCSP data required to calculate this indicator were not collected. Because data definitions were inconsistent¹⁷ 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 MoH.

Results

Table 17 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. Good Health Wanganui, Lakeland Health, Pacific Health Tauranga, Pacific Health Whakatane, South Auckland Health and Wairarapa Health did not provide data. For Northland Health, Tairāwhiti Healthcare and Waitemata Health some data were missing.

Among 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 Health Waikato. For Auckland Healthcare, Healthcare Otago, MidCentral Health and Tairāwhiti Healthcare no women were reported to be waiting longer than 26 weeks.

RECOMMENDATIONS

Data Issues

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

¹⁷ 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 17. 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		
	April	May	June	April	May	June
Auckland Healthcare	59	53	32	0	0	0
Canterbury Health	24	33	16	2	2	3
Capital Coast Health	35	42	36	78	80	88
Coast Healthcare (West Coast)	1	2	2	-	2	1
Good Health Wanganui†						
Health South Canterbury	16	10	16	0	4	7
Health Waikato	52	43	78	254	289	323
Healthcare Hawkes Bay	13	10	5	0	0	77
Healthcare Otago	9	20	15	0	0	0
Hutt Valley Health	4	4	4	4	4	4
Lakeland Health†						
MidCentral Health	11	25	13	0	0	0
Nelson/Marlborough Health	21	24	29	3	3	2
Northland Health‡				18	16	13
Pacific Health Tauranga†						
Pacific Health Whakatane†						
South Auckland Health†						
Southern Health	12	10	17	42	10	14
Tairāwhiti Healthcare‡				0	0	0
Taranaki Healthcare	19	24	20	27	28	18
Wairarapa Health†						
Waitemata Health‡				111	15	31
Total						

† Data not provided

‡ Missing data

4.11 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 laboratory 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

Smears taken from enrolled women of all ages during the reporting quarter for which there was a result recorded on the NCSP-Register were used to calculate 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 numbers and proportions of satisfactory, satisfactory but limited and unsatisfactory smears taken in the quarter by annual volume of smears taken by each smear taker group. Overall, 109,247 smears were taken during the reporting quarter, of which 4 were taken by lay smear takers, 71,388 by medical smear takers, 27,516 by nurses, 9,806 by specialists and 533 by midwives. Of the 109,247 smears, 82.4% were considered satisfactory, 16.8% were considered satisfactory but limited and 0.9% were considered unsatisfactory for evaluation. Overall, the proportion of satisfactory but limited and the proportion of unsatisfactory smears were both within the targets.

The proportion of satisfactory but limited smears was within the target of not more than 20% for each entire smear taker group. Medical smear takers, specialists and midwives, who took fewer than 30 smears in the 12 months prior to 30 June 2002, the proportion of satisfactory but limited smears was greater than 20%. This proportion was relatively high for the midwife group (31.6%) compared with the medical smear takers (23.1%) and specialists (20.2%). The proportion of satisfactory but limited smears was also greater than 20% for specialists who took 30-100 smears annually (22.5%) and midwives who took 30-100 smears annually

(28.5%). The lay smear taker group did not have any smears considered to be satisfactory but limited, but this group only took 4 smears during the quarter.

The proportion of unsatisfactory smears was within the target range of 0.5-2.0 % for each entire smear taker group. For both lay smear takers and nurses who took fewer than 30 smears in the 12 months to 30 June 2002, the proportion of unsatisfactory smears was less than the target range, (0.0% and 0.4%, respectively). Lay smear takers only took 4 smears of which none were considered unsatisfactory. For both specialists who took fewer than 30 smears or 30-100 smears annually and midwives who took 30-100 smears annually, the proportions of unsatisfactory smears were above 2.0% (4.0%, 2.7% and 2.5%, respectively).

RECOMMENDATIONS

Nil

Table 18. 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	4	4	100.0	0	0.0	0	0.0
	30-100	0	0	0.0	0	0.0	0	0.0
	> 100	0	0	0.0	0	0.0	0	0.0
	Total	4	4	100.0	0	0.0	0	0.0
Medical	< 30	3,976	2,996	75.4	919	23.1	61	1.5
	30-100	18,843	15,273	81.1	3,400	18.0	170	0.9
	> 100	48,569	39,920	82.2	8,271	17.0	378	0.8
	Total	71,388	58,189	81.5	12,590	17.6	609	0.9
Nurse	< 30	1,640	1,365	83.2	268	16.3	7	0.4
	30-100	9,771	8,262	84.6	1,451	14.9	58	0.6
	> 100	16,105	13,779	85.6	2,230	13.8	96	0.6
	Total	27,516	23,406	85.1	3,949	14.4	161	0.6
Specialist	< 30	124	94	75.8	25	20.2	5	4.0
	30-100	889	665	74.8	200	22.5	24	2.7
	> 100	8,793	7,204	81.9	1,466	16.7	123	1.4
	Total	9,806	7,963	81.2	1,691	17.2	152	1.6
Midwife	< 30	152	102	67.1	48	31.6	2	1.3
	30-100	158	109	69.0	45	28.5	4	2.5
	> 100	223	207	92.8	13	5.8	3	1.3
	Total	533	418	78.4	106	19.9	9	1.7
Total		109,247	89,980	82.4	18,336	16.8	931	0.9

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 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 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.

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 (CIN2-3) or glandular intraepithelial lesions 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 IMG-NCSP reports.

Bethesda Coding Standard 1998 was used for this monitoring period.

- (a) Negative for dysplasia or malignancy
- (b) Abnormal not otherwise specified – C6
- (c) Atypical squamous cells of undetermined significance, excluding ASCUS possible high grade (ASCUS-LG) – C3A1; C3A1A; C3A1B; C3A1C; C3A1D; C3A1F; C3A1G
- (d) Low grade squamous intraepithelial lesion (LSIL) – C3A2A; C3A2A1; C3A2A2; C3A2A3
- (e) Atypical glandular cells of undetermined significance favouring a reactive process (AGUS favour reactive) – C3B2; C3B2A; C3B2B; C3B2B1; C3B2BC; C3B2E
- (f) Atypical glandular cells of undetermined significance favouring a dysplastic process (AGUS favour dysplasia) – C3B2A1; C3B2B2; C3B2D
- (g) Atypical squamous cells of undetermined significance, possible high grade (ASCUS-HG) – C3A1E
- (h) High grade squamous intraepithelial lesion (HSIL) – C3A2B; C3A2B1; C3A2B2; C3A2B3; C3A2B5; C3A2B6; C3A2B7
- (i) Adenocarcinoma-in-situ (AIS) – C3B3D; C3B3E; C3B3F
- (j) Adenocarcinoma (endocervical, not otherwise specified and other) – C3B3A; C3B3; C3B3B; C3B3C
- (k) Cancer not otherwise specified – C3C; C4
- (l) Invasive squamous carcinoma of the cervix – 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) Polyp – M76800
- (d) Atypia/HPV – M67000; M76700; M76720
- (e) CIN - not otherwise specified – M67015
- (f) LSIL – M67016
- (g) HSIL – M67017; M80102; M80702
- (h) Glandular dysplasia – M67031
- (i) Adenocarcinoma-in-situ – M81402
- (j) Other primary cervical cancer – M80203; M88003; M80003
- (k) Metastatic (non-cervical) carcinoma – M80006
- (l) Invasive adenocarcinoma – M81403
- (m) Adenosquamous carcinoma – M85603
- (n) Microinvasive squamous carcinoma – M80763
- (o) Invasive squamous carcinoma – M80703