

Quarterly Monitoring Report 19

National Cervical Screening Programme

April to June 2005

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

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1. Executive Summary

This report provides data on performance indicators of the National Cervical Screening Programme (NCSP) for the period 1 April 2005 to 30 June 2005. Where the results for indicators have changed in comparison with previous quarters, these are described in the text.

Since Independent Monitoring Group (IMG) Quarterly Reports 18 and 19 were both considered at the May 2006 meeting of the IMG, recommendations were made for the reports together. These are presented in Report 19 only.

Follow-up of women with high grade cytology

In total, 4,915 women had a high grade cytology result recorded on the NCSP Register between 1 July 2003 and 30 June 2004. More than three-quarters (77.5%) of these women were recorded as having had a histology specimen taken within 12 weeks of their high grade smear being taken. This was less than the target of 90%. The proportion of women who had a histological specimen taken within 52 weeks of the high grade cytology was also below the 99% target (91.9%). For 346 (7.0%) of the 4,915 women, a subsequent histology result was not recorded on the NCSP Register. This is an increase in the proportions reported in the previous two quarters (6.4% and 5.9%). The proportions of women who had no histology recorded on the NCSP Register varied widely amongst the NCSP Regions and by ethnicity.

Ethnic disparities

When looking at the timeliness of histology reports following high grade cytology results the gap between ethnic groups has continued to widen over the last two quarters. For example, at 12 weeks, the proportion of non-Māori, non-Pacific women having reports of histological specimens has dropped from 81.5% in Quarterly Report 17 (October to December 2004) to 79.8% in this quarter, while for Pacific women there has been a much more significant drop from 61.0% to 55.6%. For women who had no histology results recorded on the NCSP Register following a high grade smear, the ethnic patterns of difference have remained steady over the last two quarters. The proportion of Pacific women with no histology recorded continues to be approximately double that of Māori women, and more than double that of non-Māori, non-Pacific

women. Within those women who had no histology result recorded, the proportions of Māori (45.8%) and Pacific women (40.0%) who did not have a subsequent smear after their high grade cytology report were approximately double that of non-Māori, non-Pacific women (20.6%).

Laboratory smear reporting

Ten laboratories reported cervical cytology during this quarter. Overall, of the 103,944 satisfactory or satisfactory but limited smears processed during the quarter, 7.0% were reported as abnormal, which was within the target of not more than 10%. Three laboratories reported abnormalities outside this target, with the highest reporting abnormalities in 18.6% of smears read. The overall proportion of smears reported as negative for dysplasia or malignancy was 93.0%, and all except two of the laboratories met the target of not more than 96%. The overall proportion of smears reported as high grade squamous intra-epithelial lesion (HSIL) was 1.2%, which was within the target of not less than 0.6%. Two laboratories were outside this target, reporting 0.3% and 0.4% of the smears they read as HSIL.

Laboratory cytology turn around time

All of the 10 laboratories reporting cervical cytology met the seven-day cytology turn around time target (90%) in this reporting quarter. Three laboratories met the 14-day turn around time target of 100%. A further five laboratories reported over 99.9%, and the laboratory with the lowest reported proportion of smears read within 14 days had read 99.5% of their smears in that time.

Laboratory histology turn around time

Twenty-seven laboratories reported cervical histology during the quarter. Eight laboratories did not meet the five-day histology turn around time target of 90%, and three of these have consistently fallen below this target over the previous year. Fifteen laboratories reported 100% of histology results within 10 working days of the specimen arriving at the laboratory.

Satisfactory but limited and unsatisfactory smears

The proportion of smears reported as satisfactory but limited varied considerably among the laboratories. Three laboratories exceeded the target of not more than 20% of smears

being satisfactory but limited. Two laboratories reported above the 0.5 to 2.0% target range for unsatisfactory smears. All of the laboratories reported more than 0.5% of smears as unsatisfactory for evaluation, which they also did in the previous quarter.

All smear taker groups (lay, medical, nurse, specialist and midwife) met the target for satisfactory but limited smears. When split by annual smear taking volume, all except two subgroups met the satisfactory but limited target. Almost all smear taker groups and subgroups split by annual smear volume met the target for the proportion of unsatisfactory smears.

Colposcopic assessment

The colposcopic service indicators were unable to be calculated because the data required were not available. Two colposcopy units did not provide any data for this reporting period. For any colposcopy unit, the highest reported number of women with a high grade cytology abnormality waiting longer than four weeks at the end of each month was 76. For any unit, the highest reported number of women with a low grade cytology abnormality waiting longer than 26 weeks at the end of each month was 122.

Positive predictive value of high grade cytology

Overall, the positive predictive value (PPV) of the programme (74.2%) was within the recommended target range (65 to 85%). Five laboratories reported a PPV outside this range; three fell below the lower limit and two above the upper limit of the target.

2. Background

The Independent Monitoring Group (IMG) of the National Cervical Screening Programme (NCSP) has been responsible for providing independent quantitative monitoring of the NCSP since 2001. Part of this responsibility is to produce quarterly reports of the national indicators for the NCSP. These indicators were established in 2000.

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

3. Abbreviations

The following abbreviations are used in this report:

ASCUS:	Atypical squamous cells of undetermined significance
ASCUS-HG:	Atypical squamous cells of undetermined significance, possible high grade
CIN:	Cervical intra-epithelial neoplasia; I: low grade; II, III: high grade
DHB:	District Health Board
HPV:	Human papilloma virus
HSIL:	High grade squamous intra-epithelial lesion
ISC:	Invasive Squamous Carcinoma
LSIL:	Low grade squamous intra-epithelial lesion
MoH:	Ministry of Health
NCSP:	National Cervical Screening Programme
NSU:	National Screening Unit of the Ministry of Health
PPV	Positive Predictive Value
SCL:	Southern Community Laboratories
SNOMED:	Systematised Nomenclature of Medicine

4. Recommendations

4.1 General issues

Since Independent Monitoring Group (IMG) Quarterly Reports 18 and 19 were considered together at the May 2006 meeting of the IMG, recommendations were made for the reports together. These are presented in Report 19 only.

- Outstanding responses from laboratories need to be addressed as a priority.

4.2 Data issues

Section 6.2 Laboratory smear reporting

- NSU is to request annual reports from Auckland Hospital Laboratory for analysis of the proportion of total abnormalities in cytology from community based smears.

Section 6.3 Laboratory cytology turn around time

- NSU is to seek an explanation from SCL Christchurch regarding the continuing problem of slow reporting of smears.

Sections 6.7 and 6.8 Waiting time for colposcopic assessment

- IMG is very concerned that women are potentially being put at risk through the non-reporting of colposcopy data by Nelson Marlborough and Northland, and again asks NSU to urgently seek an explanation.
- IMG is also very concerned about the potential inaccuracy of colposcopy data reporting, with many Regions reporting zero referrals. IMG would like NSU to investigate this as a matter of urgency.
- NSU is to follow-up the requirement for colposcopy clinics to provide dates of referral so that targets can be calculated.

4.3 Service issues

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

- NSU is to investigate women with no subsequent histology result recorded on the NCSP register individually (303 in Report 18 and 346 in Report 19). Priority is to be given to women with no subsequent smear, Pacific women, and then by Region.

Section 6.2 Laboratory smear reporting

- NSU is to seek an explanation from MedLab Central regarding their high total abnormalities rate.
- NSU is to seek an explanation from SCL Dunedin regarding their low rates of ASCUS and ASCUS-HG.
- NSU is to seek an explanation from Valley Diagnostic regarding their low rate of HSIL.

Section 6.4 Laboratory histology turn around time

- It is noted that a review of current statistics show that the targets are now being met by six laboratories that did not meet them previously. However, this does not explain the unmet targets for Reports 14 through to 17, and which continue to be unmet in Reports 18 and 19. NSU is to also seek explanations from Hutt Hospital, North Shore Hospital and Wellington Hospital for this reporting period.

Section 6.7 Waiting time for colposcopic assessment for HSIL or ASCUS-HG

- NSU is to seek an explanation from Bay of Plenty, Counties Manukau, Hawke's Bay, Lakes, Southland and Waitemata regarding colposcopy waiting times.

Section 6.8 Waiting time for colposcopic assessment for LSIL or ASCUS

- NSU is to seek an explanation from Bay of Plenty, Counties Manukau, Hawke's Bay, Lakes, Southland, Waikato and Waitemata regarding colposcopy waiting times.

4.4 Previous recommendations

Recommendations made at the 5 December 2005 meeting based on discussions about Report 17, October to December 2004:

General issues

- The IMG recommends that relevant advisory groups (*i.e.* Maori, Pacific, Consumer Reference & NCSP) are sent IMG reports for consideration in terms of ethnic disparities.
- NSU is to report on status of their investigation of ethnicity data collection to the IMG.

Data issues

Section 6.2 Laboratory smear reporting

- For all of Table 5: There is a discrepancy between the figures reported here and Valley Diagnostic Laboratory's own figures and this is currently being investigated by the NSU. The IMG would like the results of this investigation, including the 42 month look back statistics, to be reported back to them.

Section 6.4 Laboratory histology turn around time

- The NSU is to investigate delayed reporting of histology by North Shore Hospital.

Sections 6.7 and 6.8 Waiting time for colposcopic assessment

- The IMG have concerns about the non-reporting of and the accuracy of the reported colposcopy data. The NSU should investigate this as a matter of urgency.

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

- The NSU should address ethnic disparities in timeliness of follow-up of high grade smears with urgency. Prioritise investigation of reasons for ethnic inequalities in outcomes. Researchers with Māori/Pacific expertise should lead this analysis.
- The NSU is to seek an explanation from Auckland, Bay of Plenty, and Waikato Regions as to why their timeliness of histology reporting following a high grade smear at 12 weeks has consistently been well below the target for the last four reports.
- The NSU is to investigate women with no subsequent histology result recorded on the NCSP Register following a high grade cytology result. Priority is to be given to Pacific women, then by Region, ordering these from those with the highest to the lowest percentage of no follow-up after a high grade cytology result.

Section 6.2 Laboratory smear reporting

- The NSU is to investigate why SCL Christchurch and Valley Diagnostic Laboratory were above the target for smears reported as negative for dysplasia or malignancy.
- The NSU is to request that Auckland Hospital Laboratory produce figures for total abnormalities for non-hospital based satisfactory or satisfactory but

limited smears for the period of Report 17 to be reported within six months from their receipt of this recommendation.

- The NSU is to investigate why the total abnormalities reporting pattern is consistently higher than the target for MedLab Bay of Plenty and MedLab Central.

Section 6.3 Laboratory cytology turn around time

- Due to circumstances explained by the NSU the IMG is not making a recommendation relating to MedLab Central's seven-day turnaround time for cytology reporting.
- The NSU is to seek an explanation as to why MedLab Bay of Plenty is below the seven-day target for timeliness of cytology reporting.
- The NSU is to seek explanations as to why SCL Christchurch, Diagnostic MedLab Auckland, and MedLab Central are below the 14-day target for cytology reporting.

Section 6.4 Laboratory histology turn around time

- The IMG request that Rotorua Hospital provide a relevant response to the histology turnaround time recommendation from Report 14 through to Report 17.

Recommendations made at the 26 September 2005 meeting based on discussions about Reports 15 and 16, April to September 2004:

Data issues

Sections 6.7 and 6.8 Waiting time for colposcopic assessment

- There are concerns with the non-reporting and with the accuracy of reported colposcopy data. The NSU should investigate this as a matter of urgency.

Service issues

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

- The NSU is to investigate women with no subsequent histology result recorded on the NCSP Register following a high grade cytology. Priority is to be given to Regions from the lowest to the highest percentage of follow-up histology.
- The NSU is to investigate the reasons for ethnic disparities in histology follow-up times and look at the extent to which this contributes to inequalities in outcomes.

Section 6.2 Laboratory smear reporting

- The NSU is to seek an explanation from MedLab Wellington and SCL Christchurch as to why their HSIL rates were below the target.
- The NSU is to investigate why Auckland Hospital, MedLab Central and Canterbury Health Laboratories are above the total abnormalities target.

Section 6.3 Laboratory cytology turn around time

- The NSU is to seek individual explanations from the appropriate laboratories for why 22 smears were not reported on within 14 days (Report 16).

Section 6.4 Laboratory histology turn around time

- The NSU is to investigate the reasons behind the slow histology turn around times of Auckland, Hutt, Rotorua and Wellington hospital laboratories, and to clarify why any laboratories should still have outstanding specimens to report on at 11 or more working days. Note that this recommendation is only for the 49 specimens in Report 16 that were reported on after 11 working days.

5. Methods

The NSU of the Ministry of Health (MoH), through a committee of experts and a consultation process, established national indicators for the NCSP in 2000. Where it was considered appropriate and feasible, the NSU set targets for the indicators. Each indicator is described in the results section under separate headings that identify the specific indicators. The results for each indicator are discussed in relation to the set targets. For indicators with and without a target, changes over time are described.

To calculate the indicators for this report anonymised data, provided by the NSU, of women enrolled on the NCSP Register were used. This report includes results for Māori and Pacific women. Both the National Kaitiaki Group and the Pacific Women's Data Advisory Group approved the use of data for enrolled women recorded as identifying with Māori and Pacific ethnic groups, respectively, on the NCSP Register. For the purposes of the monitoring reports, women recorded on the NCSP Register as being not Māori or Pacific were grouped together as the non-Māori, non-Pacific group. This group includes women whose ethnic group was unknown, estimated as 9% of the total number of women on the NCSP Register.

Unless otherwise stated, a woman's age at the end of the reporting quarter was used when calculating the indicators. The registration status and demographic details of each woman at the time of the data download were used for all calculations. Women were assigned to both a NCSP Region and a District Health Board (DHB) area by the NCSP Register. Each woman was allocated to the NCSP Region and DHB area in which they lived, with two exceptions. Women whose address was unknown were allocated to the NCSP Region according to their last known smear taker, or according to the NCSP regional service office if the smear taker has indicated that the woman is no longer a patient there. Women who usually had their smears in a NCSP Region other than the one where they lived were allocated to the NCSP Region where they usually had their smears. For women in either of these situations, if the NCSP 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.

6. Results

6.1 Follow-up of women with high grade cytology

Definition

High grade cytology is defined as a cytology result of ASCUS possible high grade (ASCUS-HG), HSIL or more serious abnormality according to the hierarchy of the Revised Bethesda Coding System (1998) (Appendix 1). The timeliness of the follow-up of women with a high grade cytology result is estimated using the time elapsed before a histology specimen is taken following the high grade cytology result.

Targets

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

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

and

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

Calculation

The number of enrolled women aged 20 to 69 years at 30 June 2005 who had a high grade cytology result recorded on the NCSP Register between 1 July 2003 and 30 June 2004 was calculated. For each of these women the time between the date that the smear was taken and the date that the subsequent histology specimen was taken (including specimens taken up to five days before the smear) was calculated. The numbers of women with a histology specimen taken within 12 weeks, between 13 and 26 weeks, between 27 and 52 weeks and more than 52 weeks after their ASCUS-HG, HSIL or more serious cytology result were expressed as proportions of the total number of women with a high grade cytology taken between 1 July 2003 and 30 June 2004. The number and proportion of women with no histology result recorded on the NCSP Register following their high grade cytology were also calculated. Women without a subsequent histology recorded on the NCSP Register were also described in two ways: whether they had been signed back into the programme since their high

grade smear and whether they had a subsequent smear taken by either a non-specialist or specialist. This indicator was calculated for women of all ethnic groups, and separately for Māori, Pacific and non-Māori, non-Pacific women. It was also calculated for each NCSP Region.

Results

The timeliness with which a histology specimen was taken amongst women who had a high grade cytology result is shown in Table 1. Between 1 July 2003 and 30 June 2004, 4,915 women had a high grade cytology result. Of these, 3,809 (77.5%) had a histological specimen taken within 12 weeks of the abnormal cytology, compared to the target of 90%. This value is similar to that reported in the previous two quarters (78.8% and 79.4%). The proportion of women who had a histological specimen taken within 52 weeks of the high grade cytology was 91.9% (n=4,517). This value is similar to those reported in the previous two quarters (92.6% and 93.0%). There was no histology reported on the NCSP Register for 346 (7.0%) women who had a high grade cytological abnormality.

The timeliness of having a histological specimen taken following a high grade smear differed by ethnicity, as shown in Table 2. Compared to non-Māori, non-Pacific women, Māori and Pacific women were less likely to have a histological specimen taken within the recommended time periods. For example, at 12 weeks, 79.8% of non-Māori, non-Pacific women had a report of a histological specimen, compared to 69.7% of Māori and 55.6% of Pacific women. These figures are similar to those reported in the last quarter (81.0%, 70.8% and 59.9%, respectively). The differences by ethnicity persisted for all time periods following a high grade smear. Statistical tests showed the differences between the groups are very unlikely to be due to chance ($P < 0.001$).

The timeliness of having a histological specimen taken following a high grade smear differed by NCSP Region, see Table 3. No Region achieved the target of 90% of women having a histological specimen taken within 12 weeks of the smear. The Region with the highest proportion of women who had a histological report within this time period was West Coast (88.6%, n=31). The poorest performers were Auckland (70.8%) and Nelson/Marlborough (70.4%). For all Regions combined the

proportion of women who had histological reports within 12 weeks of the smear was 77.5%.

No Region reached the target of 99% of women having a histological specimen taken within 52 weeks of a high grade smear. For all Regions combined the proportion of women who had a high grade smear result with a subsequent histology taken within 52 weeks was 91.9%. All of the Regions have similar timeliness in reporting histological results for women with high grade smears compared to the previous quarter.

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

A relatively large number of women (n=346, 7.0%) had no histology report recorded on the NCSP Register following a high grade smear compared with the previous two quarters (6.4% and 5.9%). The absence of such a report was more common in Pacific women (13.9%) compared to Māori (7.7%) and non-Māori, non-Pacific women (6.7%), see Table 2. There were also differences by Region in the absence of a histological report following a high grade smear, see Table 3. Such an absence was common (above 6%) in Auckland, Canterbury, Manawatu/Wanganui and Waikato. In the last two reports, the absence of a histological report following a high grade smear was also common in Auckland, Canterbury and Waikato.

Further details of the 346 women who had no histology result recorded on the NCSP Register following a high grade smear are shown in Table 4. Of these, 90 (26.0%) had no subsequent smear recorded and 114 (33.0%) had a follow-up smear taken by a non-specialist. Of these 204 women who had either no follow-up smear or a smear taken by a non-specialist, 88 (43.1%) were recorded on the register as having been 'signed in' following their high grade smear result, indicating that they were being

recalled by the NCSP. The remaining 116 (56.9%) women did not appear to have been signed in, indicating that their follow-up was less clear.

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

- had further investigations and treatment, but their histology reports were erroneously omitted from the NCSP Register
- moved overseas and had follow-up there
- no indications for biopsy at colposcopic examination
- chosen not to have their histology results recorded on the NCSP Register.

The breakdown of subsequent smears by ethnicity for women who had a high grade cytology result but no histology report is shown in Table 5. There were similar patterns when considering these results according to whether the women had been signed back into the Programme or not. The proportions of Māori (45.8%) and Pacific women (40.0%) who did not have a subsequent smear after their high grade cytology report were approximately double that of non-Māori, non-Pacific women (20.6%). The proportion of Māori women who had a subsequent smear taken by a non-specialist (22.0%) was less than those for non-Māori, non-Pacific women (35.2%) and Pacific women (35.0%). The proportion of non-Māori, non-Pacific women (44.2%) who had a subsequent smear taken by a specialist was greater than those of Māori (32.2%) and Pacific women (25.0%). However, statistical tests have not been used to examine any differences between the ethnic groups due to the small numbers of women in the different categories.

Recommendations

1. NSU is to investigate women with no subsequent histology result recorded on the NCSP register individually (303 in Report 18 and 346 in Report 19). Priority is to be given to women with no subsequent smear, Pacific women, and then by Region.

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

Time period	n	Proportion %	Cumulative Proportion %
Within 12 weeks ¹	3,809	77.5	77.5
13 to 26 weeks	483	9.8	87.3
27 to 52 weeks ²	225	4.6	91.9
More than 52 weeks	52	1.1	93.0
Subtotal	4,569		
No histology recorded on NCSP Register	346	7.0	100
Total	4,915		

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

Table 2: Ethnic disparities in timeliness of a histology report after a high grade cytology result for enrolled 20 to 69 year old women

Time Period	Māori women			Pacific women			Non-Māori, non-Pacific women		
	n	Proportion %	Cumulative Proportion %	n	Proportion %	Cumulative Proportion %	n	Proportion %	Cumulative Proportion %
Within 12 weeks ¹	534	69.7	69.7	80	55.6	55.6	3,195	79.8	79.8
13 to 26 weeks	104	13.6	83.3	26	18.1	73.6	353	8.8	88.6
27 to 52 weeks ²	54	7.1	90.3	14	9.7	83.3	157	3.9	92.5
More than 52 weeks	15	2.0		4	2.8		33	0.8	
Subtotal	707		92.3	124		86.1	3,738		93.3
No histology recorded on NCSP Register	59	7.7	100	20	13.9	100	267	6.7	100
Total	766			144			4,005		

Difference between ethnic groups $P < 0.001$

Target: ¹90% with histology report within 12 weeks, ²99% within 52 weeks of a high grade smear

Note: the follow-up of the 346 women with no histology recorded on the NCSP Register is shown in Table 4

Table 3: Timeliness of a histology report after a high grade cytology result for enrolled 20 to 69 year old women by NCSP Region

NCSP Region	Time Periods										
	Within 12 weeks ¹		13 to 26 weeks		27 to 52 weeks ²		Within 52 weeks		No Histology		Total
	n	%	n	%	n	%	n	%	n	%	
Auckland	1,138	70.8	189	11.8	90	5.6	1417	88.1	172	10.7	1,608
Bay of Plenty	271	74.0	55	15.0	15	4.1	341	93.2	19	5.2	366
Canterbury	534	85.3	31	5.0	15	2.4	580	92.7	40	6.4	626
Hawke's Bay	142	78.0	23	12.6	4	2.2	169	92.9	8	4.4	182
Manawatu / Wanganui	234	85.1	11	4.0	9	3.3	254	92.4	20	7.3	275
Nelson / Marlborough	107	70.4	27	17.8	11	7.2	145	95.4	6	3.9	152
Northland	162	85.3	12	6.3	8	4.2	182	95.8	6	3.2	190
Otago/Southland	391	85.9	33	7.3	12	2.6	436	95.8	18	4.0	455
Tairāwhiti	63	84.0	5	6.7	4	5.3	72	96.0	3	4.0	75
Taranaki	107	76.4	13	9.3	11	7.9	131	93.6	8	5.7	140
Waikato	304	75.6	37	9.2	28	7.0	369	91.8	27	6.7	402
Wellington	325	79.5	46	11.3	18	4.4	389	95.1	17	4.2	409
West Coast	31	88.6	1	2.9	0	0.0	32	91.4	2	5.7	35
Total	3,809	77.5	483	9.8	225	4.6	4,517	91.9	346	7.0	4,915

Difference between NCSP Regions $P < 0.001$

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

Table 4: The number of women with high grade cytology but no histology result recorded, by NCSP Register status and source of any subsequent smear

Subsequent smear	Women's status since high grade cytology result		
	Not signed in	Signed in	Total
	n (%)	n (%)	n (%)
No subsequent smear	43 (24.3)	47 (27.8)	90 (26.0)
Subsequent smear taken by non-specialist	73 (41.2)	41 (24.3)	114 (33.0)
Smear taken by specialist	61 (34.5)	81 (47.9)	142 (41.0)
Total	177	169	346

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

Subsequent smear	Women's status since high grade cytology result								
	Not signed in			Signed in			Total		
	Māori women n (%)	Pacific women n (%)	Non-Māori, non-Pacific women n (%)	Māori women n (%)	Pacific women n (%)	Non-Māori, non-Pacific women n (%)	Māori women n (%)	Pacific women n (%)	Non-Māori, non-Pacific women n (%)
No subsequent smear	10 (34.5)	5 (38.5)	28 (20.7)	17 (56.7)	3 (42.9)	27 (20.5)	27 (45.8)	8 (40.0)	55 (20.6)
Smear by non-specialist	9 (31.0)	6 (46.2)	58 (43.0)	4 (13.3)	1 (14.3)	36 (27.3)	13 (22.0)	7 (35.0)	94 (35.2)
Smear by specialist	10 (34.5)	2 (15.4)	49 (41.5)	9 (30.0)	3 (42.9)	69 (52.2)	19 (32.2)	5 (25.0)	118 (44.2)
Total	29	13	135	30	7	132	59	20	267

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

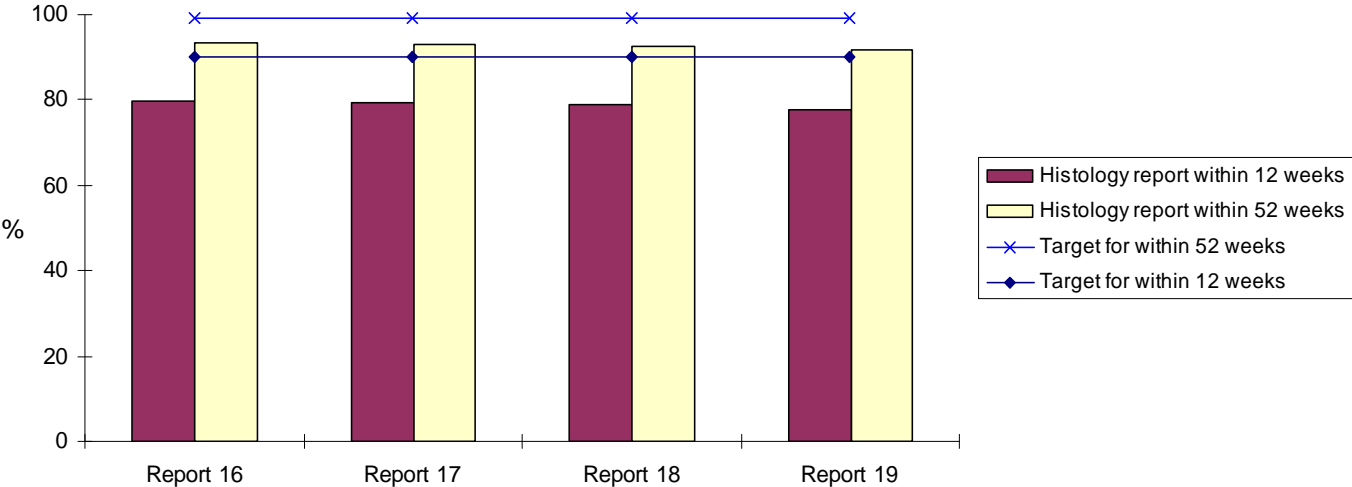


Figure 2: Timeliness of a histology report within 12 weeks of a high grade cytology result for enrolled 20 to 69 year old women by ethnicity

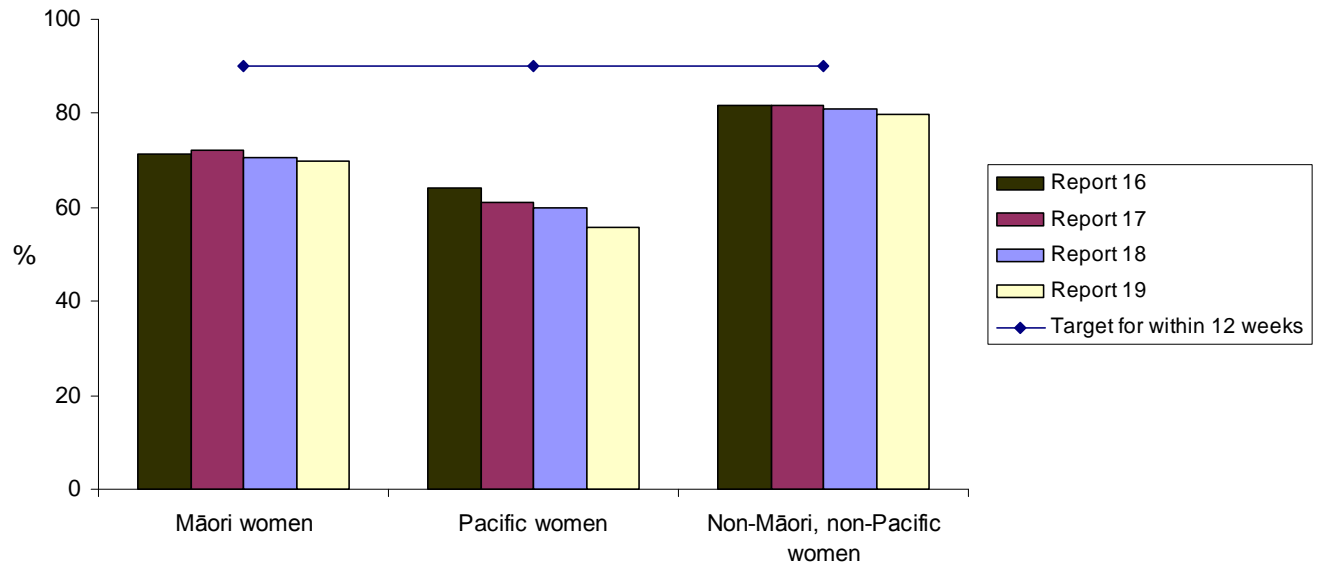


Figure 3: Timeliness of a histology report within 52 weeks of a high grade cytology result for enrolled 20 to 69 year old women by ethnicity

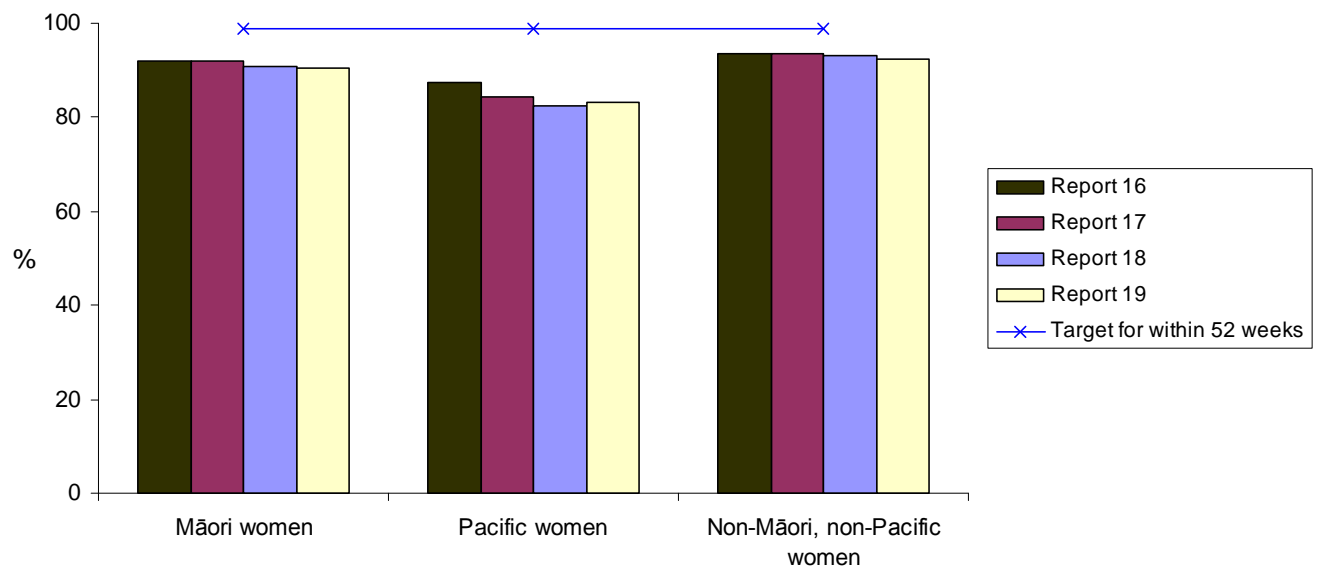


Figure 4: Timeliness of a histology report within 12 weeks of a high grade cytology result for enrolled 20 to 69 year old women by NCSP Region

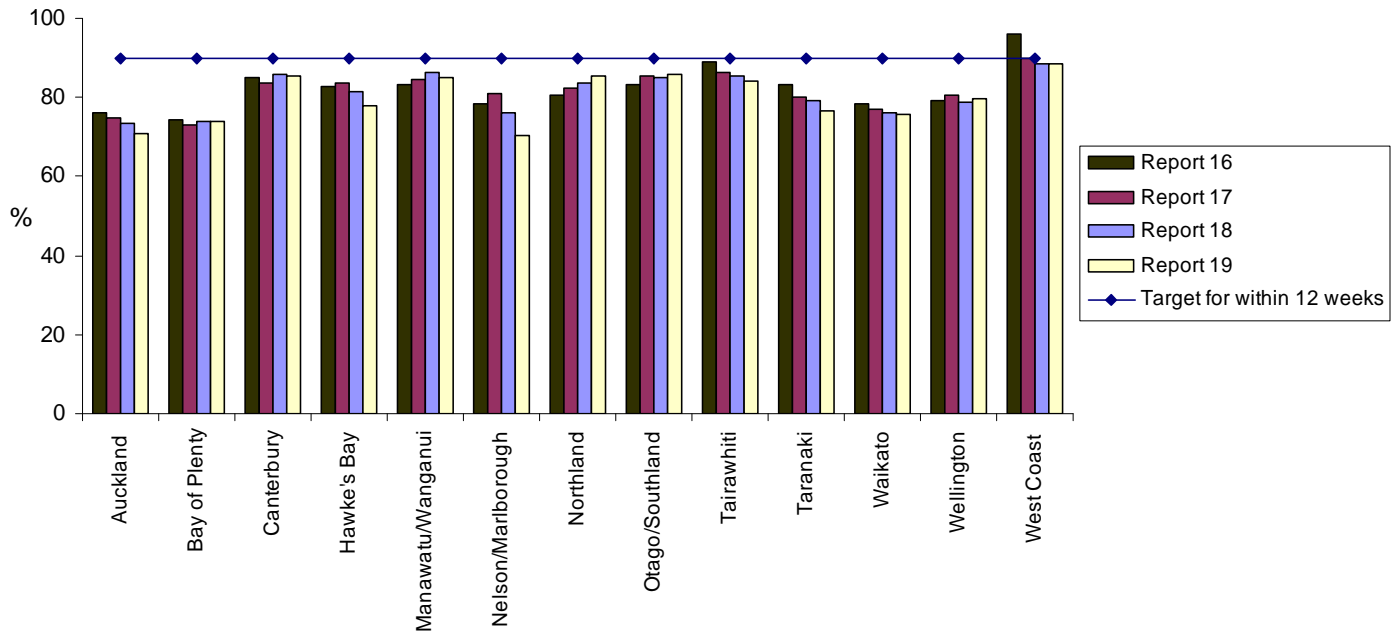
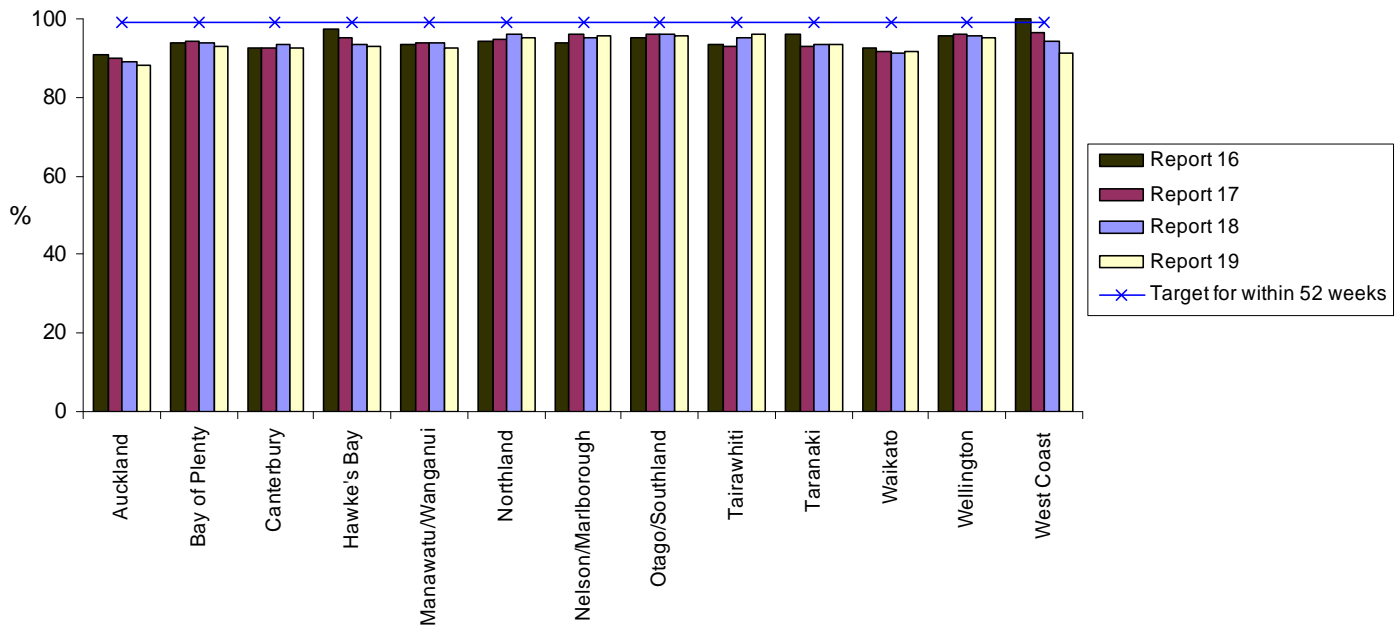


Figure 5: Timeliness of a histology report within 52 weeks of a high grade cytology result for enrolled 20 to 69 year old women by NCSP Region



6.2 Laboratory smear reporting

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. Negative for dysplasia or malignancy
2. ASCUS
3. ASCUS-HG
4. LSIL (CIN 1 and/or HPV)
5. HSIL
6. Total abnormalities (smears reported as ASCUS or more serious)

Targets

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

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

Calculation

The Bethesda diagnosis codes, as recorded on the NCSP Register, of satisfactory or satisfactory but limited smears taken during the reporting quarter were used to calculate the number of smears in each broad cytological category for each laboratory. These were expressed as proportions of the total number of 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 (see Appendix 1). 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

During the quarter, 103,944 satisfactory or satisfactory but limited smears were taken. The results of these, by laboratory, are shown in Table 6. The number of such smears reported by each laboratory ranged from 3,281 for Valley Diagnostic Laboratory to 29,939 for Diagnostic MedLab Auckland. Overall, 96,703 (93.0%) smears were reported as negative for dysplasia or malignancy, which was similar to the proportion reported in the last two quarters (92.9% and 92.2%). Two of the laboratories, SCL Christchurch (96.1%) and Valley Diagnostic Laboratory (96.4%) exceeded the target of not more than 96% of smears being negative for dysplasia or malignancy. Auckland Hospital Laboratory reported 81.4% of smears as negative for dysplasia or malignancy, a lower proportion than the other laboratories.

The proportion of smears reported with a HSIL abnormality was 1.2% for all laboratories combined. This figure met the target of not less than 0.6% and was identical to that reported for the previous two reporting quarters. Two laboratories did not meet this target; Valley Diagnostic Laboratory (n=11) reported 0.3% and MedLab Wellington (n=37) reported 0.4% of smears with a HSIL abnormality. Auckland Hospital Laboratory reported 231 (4.9%) smears with a HSIL abnormality, a higher proportion than the other laboratories.

For all laboratories combined, the target of not more than 10% of smears reported as abnormal was not exceeded. This proportion was 7.0%, similar to the previous two quarters (7.1% and 7.8%). Auckland Hospital Laboratory reported 871 (18.6%) smears processed as abnormal, and also reported high proportions for the previous two quarters (22.3% and 21.4%). The other laboratories to report more than 10% total abnormalities, Canterbury Health Laboratories (12.0%) and MedLab Central (12.8%), also exceeded the 10% target in the previous two quarters.

The proportion of smears reported as LSIL varied between laboratories, but was between 1.7% and 3.0% for all laboratories, with the exception of Auckland Hospital Laboratory (5.6%), Canterbury Health Laboratories (5.2%), and MedLab Central (8.4%). These three laboratories also reported higher proportions of LSIL abnormalities in the previous two quarters. Note that no target is set for proportion of smears reported as LSIL.

Recommendations

1. NSU is to request annual reports from Auckland Hospital Laboratory for analysis of the proportion of total abnormalities in cytology from community based smears.
2. NSU is to seek an explanation from MedLab Central regarding their high total abnormalities rate.
3. NSU is to seek an explanation from SCL Dunedin regarding their low rates of ASCUS and ASCUS-HG.
4. NSU is to seek an explanation from Valley Diagnostic regarding their low rate of HSIL.

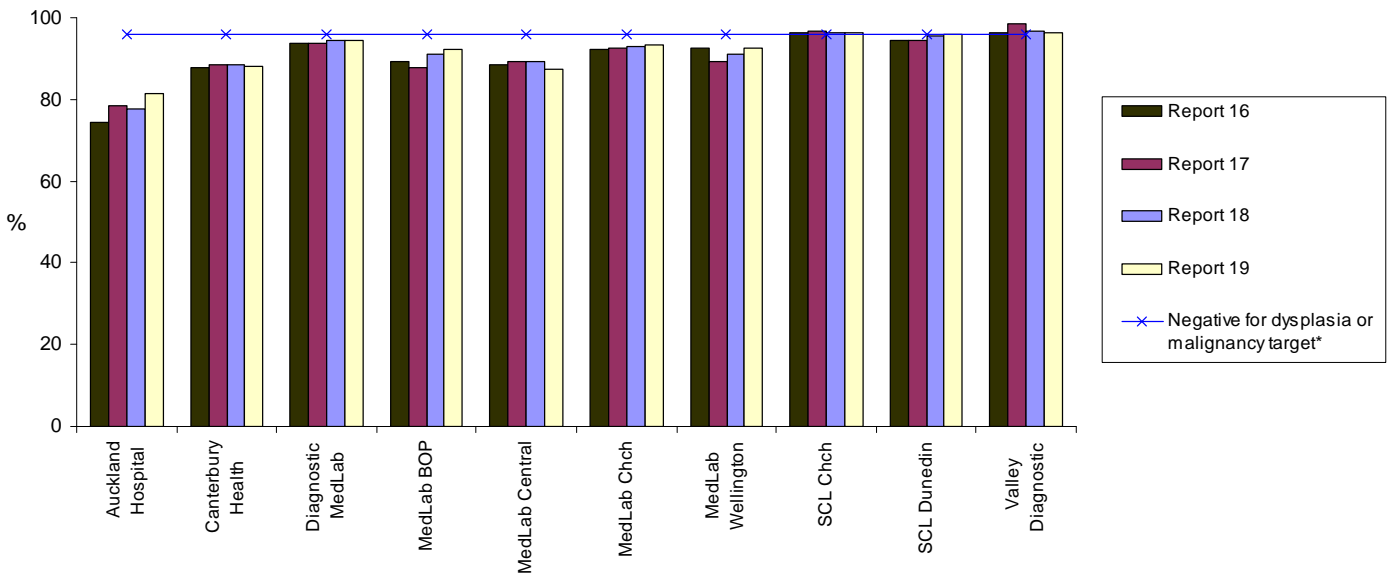
Table 6: The number and proportion of satisfactory or satisfactory but limited smears in broad cytological categories for each laboratory

Laboratory	Negative for dysplasia or malignancy ¹		ASCUS		ASCUS-HG		LSIL		HSIL ²		Total Abnormalities ³		Total smears
	n	%	n	%	n	%	n	%	n	%	n	%	
Auckland Hospital Lab.	3,822	81.4	321	6.8	34	0.7	263	5.6	231	4.9	871	18.6	4,693
Canterbury Health Lab.	3,851	88.0	168	3.8	42	1.0	228	5.2	81	1.9	525	12.0	4,376
Diagnostic MedLab Auckland	28,281	94.5	728	2.4	103	0.3	495	1.7	289	1.0	1,658	5.5	29,939
MedLab Bay of Plenty	8,681	92.1	343	3.6	18	0.2	287	3.0	92	1.0	746	7.9	9,427
MedLab Central	6,461	87.2	161	2.2	21	0.3	622	8.4	118	1.6	946	12.8	7,407
MedLab Christchurch	8,030	93.3	239	2.8	35	0.4	196	2.3	92	1.1	573	6.7	8,603
MedLab Wellington	8,557	92.5	324	3.5	63	0.7	258	2.8	37	0.4	690	7.5	9,247
SCL* Christchurch	6,175	96.1	66	1.0	12	0.2	117	1.8	49	0.8	251	3.9	6,426
SCL* Dunedin	19,683	95.8	8	0.0	87	0.4	520	2.5	227	1.1	862	4.2	20,545
Valley Diagnostic Lab.	3,162	96.4	33	1.0	8	0.2	65	2.0	11	0.3	119	3.6	3,281
Total	96,703	93.0	2,391	2.3	423	0.4	3,051	2.9	1,227	1.2	7,241	7.0	103,944

* SCL: Southern Community Laboratories

Targets are: ¹ not more than 96%, ² not less than 0.6%, ³ not more than 10%

Figure 6: The proportion of satisfactory or satisfactory but limited smears reported as negative for dysplasia or malignancy for each laboratory



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

Figure 7: The proportion of satisfactory or satisfactory but limited smears reported as HSIL for each laboratory

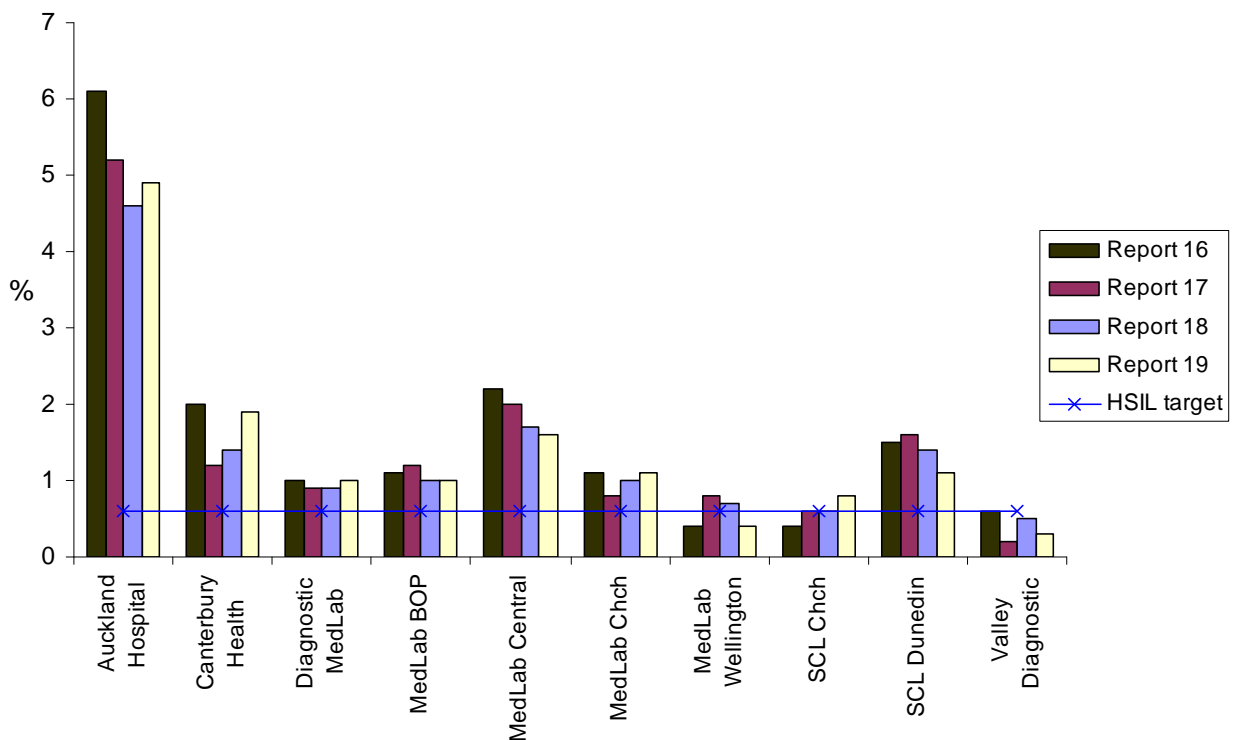
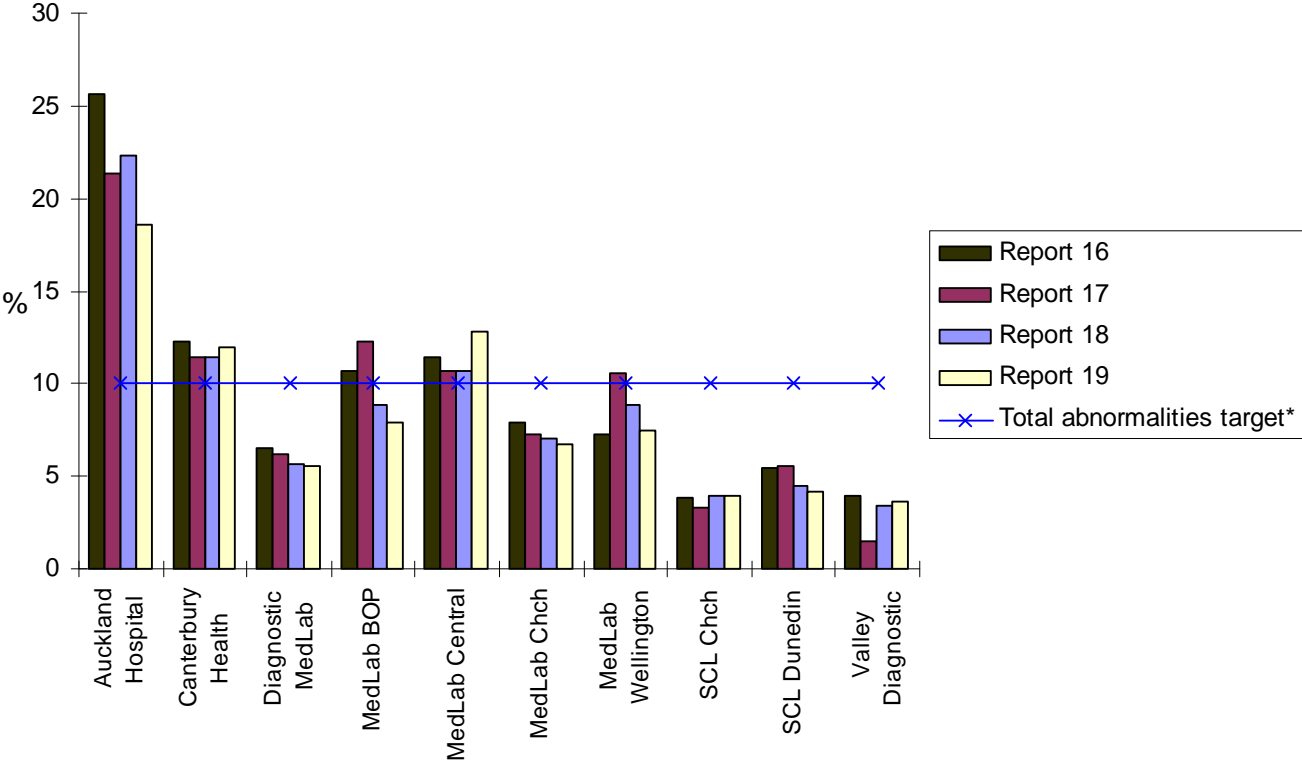


Figure 8: The proportion of satisfactory or satisfactory but limited smears reported as total abnormalities for each laboratory



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

6.3 Laboratory cytology turn around time

Definition

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

Targets

The targets for the laboratory cytology turn around time are:

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

Calculation

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

Results

The proportion of smears received and reports issued within specified time periods during the period 1 April to 30 June 2005 for each laboratory processing cervical cytology are shown in Table 7. Overall, 99.7% of the 105,357 smears received by laboratories were reported within seven working days. This was greater than the target of 90%, as was the proportion reported in the last two quarters (99.5% and 95.3%). All 10 reporting laboratories achieved the seven-day target of 90%.

Overall, the 14-day target of 100% was almost achieved, with 55 (0.05%) smears not reported within 14 working days. All laboratories were close to the target and all reported over 99% of smears within 14 working days. The reporting time for the 55 smears that were outside the 14-day target ranged from 15 to 77 days, with the median time being 36 days.

Recommendations

1. Outstanding responses from laboratories need to be addressed as a priority.
2. NSU is to seek an explanation from SCL Christchurch regarding the continuing problem of slow reporting of smears.

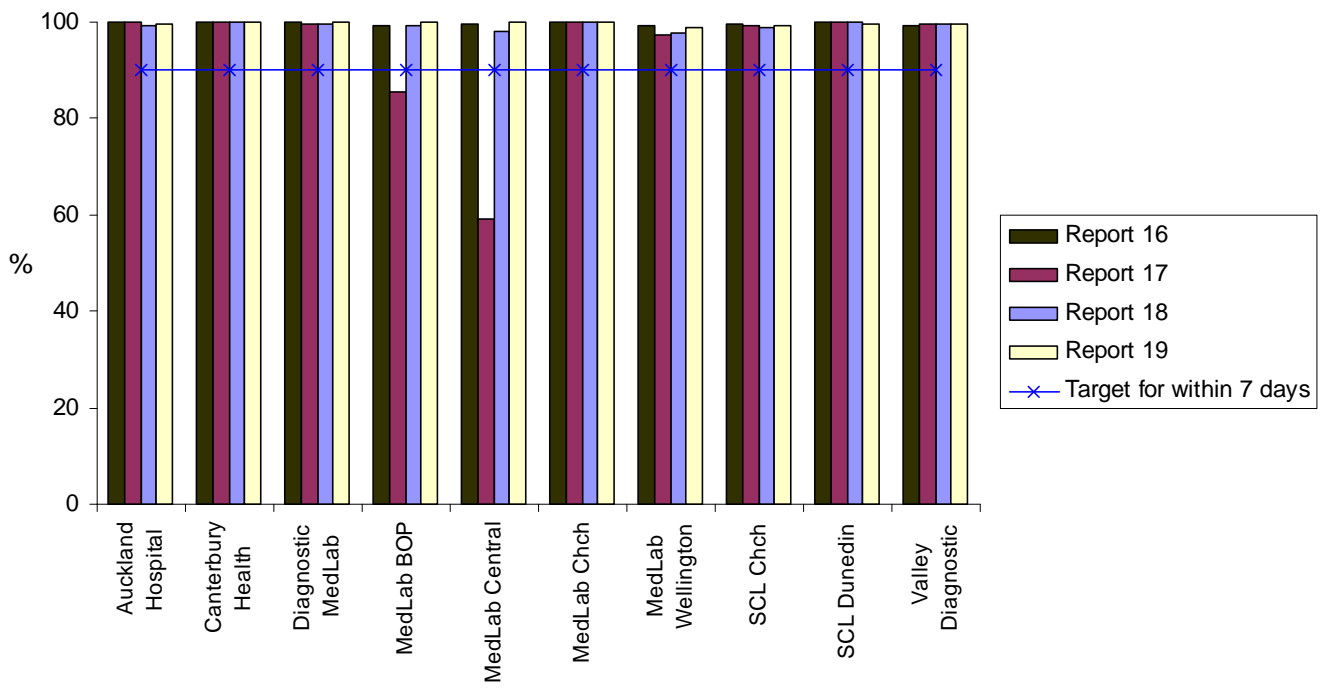
Table 7: Timeliness of the reporting of smears by laboratory

Laboratory	Number of smears	Within 7 working days ¹		From 8 to 14 working days		Within 14 working days ²		More than 14 days	
	processed	(%)		(%)		(cumulative %)		(%)	
	n	n	%	n	%	n	%	n	%
Auckland Hospital Lab.	4,725	4,717	99.8	3	<0.1	4,720	>99.8	5	0.1
Canterbury Health Lab.	4,422	4,420	>99.9	1	<0.1	4,421	>99.9	1	<0.1
Diagnostic MedLab Auckland	30,174	30,131	99.9	30	0.1	30,161	>99.9	13	<0.1
MedLab Bay of Plenty	9,508	9,498	99.9	8	<0.1	9,506	>99.9	2	<0.1
MedLab Central	7,472	7,463	99.9	8	0.1	7,471	>99.9	1	<0.1
MedLab Christchurch	8,905	8,905	100.0	0	0.0	8,905	100.0	0	0.0
MedLab Wellington	9,504	9,382	98.7	122	1.3	9,504	100.0	0	0.0
SCL* Christchurch	6,490	6,446	99.3	15	0.2	6,461	99.5	29	0.5
SCL* Dunedin	20,820	20,786	99.8	30	>0.1	20,816	>99.9	4	<0.1
Valley Diagnostic Lab.	3,337	3,324	99.6	13	0.4	3,337	100.0	0	0.0
Total	105,357	105,072	99.7	230	0.2	105,302	99.95	55	0.05

* SCL: Southern Community Laboratories

Targets are: ¹ 90% within seven working days, ² 100% within 14 working days

Figure 9: Proportion of smears reported on within seven working days



6.4 Laboratory histology turn around time

Definition

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

Targets

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

Calculation

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

Results

The timeliness of histology reporting by the 27 laboratories that provided results to the NCSP Register in this quarter is shown in Table 8. There were a total of 6,914 histology specimens recorded on the NCSP Register, compared to 6,251 in the previous quarter. The number of specimens reported by each laboratory varied considerably, ranging from 23 in both MedLab Christchurch and SCL Hawke’s Bay to 1,098 in Diagnostic MedLab

Auckland. For all laboratories combined, the proportion of histological specimens reported on within five working days was 88.2%, below the target of 90%, and similar to the figure reported in the previous quarter (87.8%).

Eight laboratories did not meet the five-day 90% target. North Shore Hospital only issued reports within five days for 51 of the 453 (11.3%) histology specimens received. The other laboratories that did not meet the five-day 90% target this quarter were Auckland Hospital Laboratory (75.1%), Hutt Hospital (78.1%), MedLab Wellington (88.0%), Nelson Diagnostic Laboratory (82.5%), Rotorua Hospital (76.5%), Waikato Hospital (87.6) and Wellington Hospital (62.9%). Five of the eight laboratories also did not meet this target in the previous quarter, Auckland Hospital (68.9%), Hutt Hospital (67.0%), MedLab Wellington (89.5%), North Shore Hospital (16.0%) and Wellington Hospital (68.7%).

Auckland Hospital Laboratory (22.0%), Hutt Hospital (19.5%), MedLab Wellington (12.0%), Nelson Diagnostic (17.5%), Rotorua Hospital (14.8%), Waikato Hospital (11.3%) and Wellington Hospital (33.6%) reported the greatest proportion of histology results six to 10 working days from the specimens being received. Overall, 419 (6.1%) specimens were reported more than 10 working days after the time that they were received by the laboratory. The majority of these (n=371) were from North Shore Hospital, which reported 81.9% of histology results 11 or more working days from the specimens being received. The reporting time for the 419 specimens ranged from 11 to 55 days, with the median time being 18 days.

Recommendations

1. It is noted that a review of current statistics show that the targets are now being met by six laboratories that did not meet them previously. However, this does not explain the unmet targets for Reports 14 through to 17, and which continue to be unmet in Reports 18 and 19. NSU is to also seek explanations from Hutt Hospital, North Shore Hospital and Wellington Hospital for this reporting period.

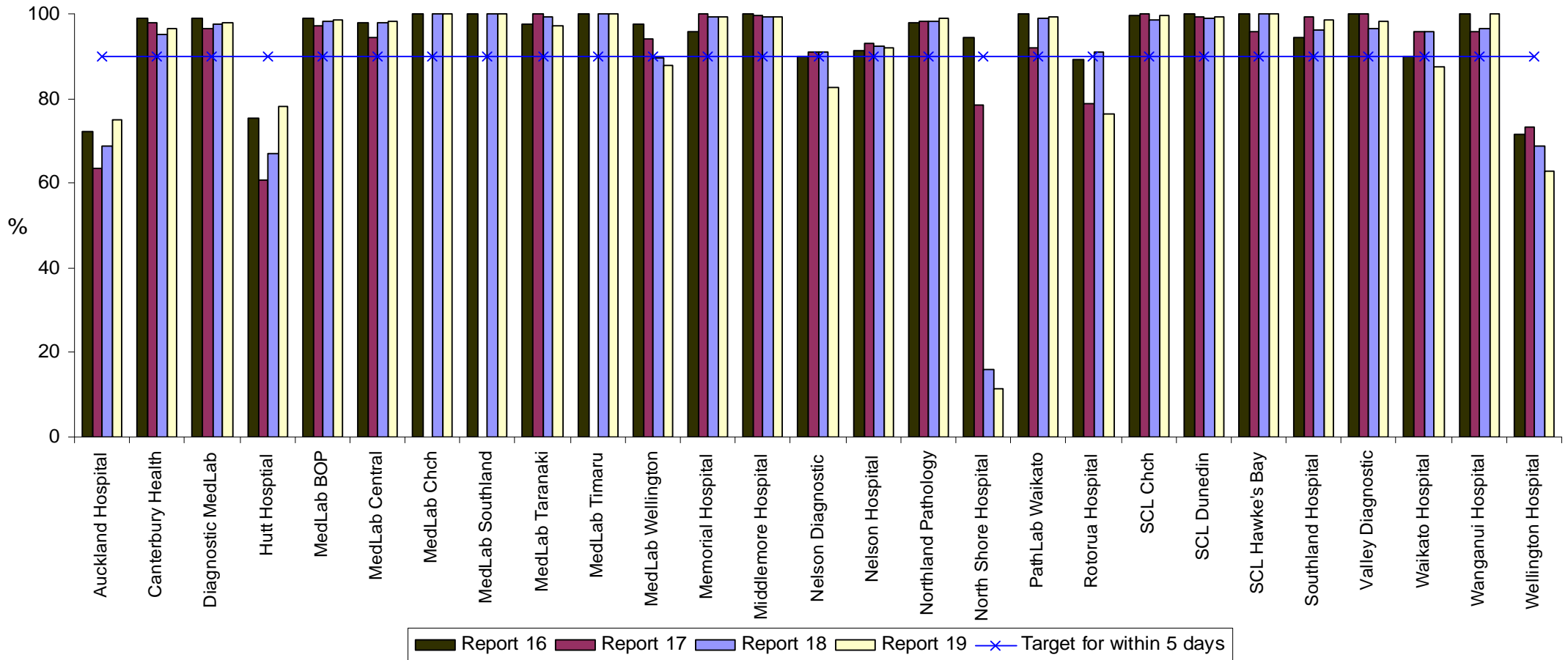
Table 8: Timeliness of the reporting of histology by laboratory

Laboratory	Number of specimens processed	Within 5 working days ¹		6 to 10 working days		11 or more working days	
		n	%	n	%	n	%
Auckland Hospital Lab.	341	256	75.1	75	22.0	10	2.9
Canterbury Health Laboratories	552	534	96.7	15	2.7	3	0.5
Diagnostic MedLab Auckland	1,098	1,074	97.8	24	2.2	0	0.0
Hutt Hospital	82	64	78.1	16	19.5	2	2.4
MedLab Bay of Plenty	527	520	98.7	5	1.0	2	0.4
MedLab Central	413	405	98.1	7	1.7	1	0.2
MedLab Christchurch	23	23	100	0	0.0	0	0.0
MedLab Southland	57	57	100	0	0.0	0	0.0
MedLab Taranaki	110	107	97.3	3	2.7	0	0.0
MedLab Timaru	89	89	100	0	0.0	0	0.0
MedLab Wellington	192	169	88.0	23	12.0	0	0.0
Memorial Hospital Hastings	131	130	99.2	0	0.0	1	0.8
Middlemore Hospital	336	334	99.4	2	0.6	0	0.0
Nelson Diagnostic Lab.	57	47	82.5	10	17.5	0	0.0
Nelson Hospital	221	203	91.9	12	5.4	6	2.7
Northland Pathology	177	175	98.9	2	1.1	0	0.0
North Shore Hospital	453	51	11.3	31	6.8	371	81.9
Pathlab Waikato	160	159	99.4	1	0.6	0	0.0
Rotorua Hospital	81	62	76.5	12	14.8	7	8.6
SCL* Christchurch	233	232	99.6	1	0.4	0	0.0
SCL* Dunedin	457	454	99.3	2	0.4	1	0.2
SCL* Hawke's Bay	23	23	100	0	0.0	0	0.0
Southland Hospital	210	207	98.6	3	1.4	0	0.0
Valley Diagnostic Lab.	57	56	98.3	1	1.8	0	0.0
Waikato Hospital	485	425	87.6	55	11.3	5	1.0
Wanganui Hospital	66	66	100	0	0.0	0	0.0
Wellington Hospital	283	178	62.9	95	33.6	10	3.5
Total	6,914	6,100	88.2	395	5.7	419	6.1

Targets: ¹ 90% within five working days, ² 100% within a reasonable period of time

* SCL: Southern Community Laboratories

Figure 10: Laboratory histology five-day turn around time



6.5 Satisfactory but limited and unsatisfactory smears by laboratory

Definition

Satisfactory but limited smears are those smears reported with a Bethesda adequacy code of A2. Unsatisfactory smears are those smears reported with a Bethesda adequacy of A3 (Revised Bethesda Coding System, 1998). It is important to note that the adequacy coding of a smear is influenced by both smear taking technique and laboratory reporting practice. The revised Bethesda System 2001 no longer includes a satisfactory but limited category. When the NCSP adopts the revised Bethesda System 2001 (from July 2005), consideration will be given to changing the current target for unsatisfactory smears.

Targets

The target for satisfactory but limited smears is not more than 20% of all smears reported for a given laboratory. The target for unsatisfactory smears is not less than 0.5% and not more than 2.0% of all smears reported for a given laboratory.

Calculation

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

Results

The number and proportion of satisfactory but limited and unsatisfactory smears taken during the quarter and reported by each cytology laboratory is shown in Table 9. Overall, 105,357 smears were processed, of which 16.8% were reported as satisfactory but limited, a similar figure to that reported for the last quarter (17.5%) 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 8.2% for SCL Dunedin to 22.6% for Diagnostic MedLab Auckland, which along with

MedLab Christchurch (20.4%) and Valley Diagnostic (20.4%) exceeded the target of not more than 20% of smears read as satisfactory but limited.

Overall, 1,413 (1.3%) of the 105,357 smears processed were reported as unsatisfactory for evaluation. This is similar to the proportion reported in the last quarter (1.1%) and is within the target range of 0.5 to 2.0%. Each laboratory reported unsatisfactory smears in this target range with the exception of MedLab Christchurch (3.4%), and MedLab Wellington (2.7%). Both these laboratories also reported above the target range for unsatisfactory smears in the previous quarter. All of the laboratories reported more than 0.5% of smears as unsatisfactory for evaluation, which they also did in the previous quarter.

Recommendations

No recommendations were made, since the “satisfactory but limited” category is no longer in use. This indicator will continue to be reported on, since the proportion of unsatisfactory smears is still of interest.

Table 9: The number and proportion of satisfactory but limited and unsatisfactory smears by laboratory

Laboratory	Smears processed n	Satisfactory but limited smears ¹		Unsatisfactory smears ²	
		n	%	n	%
Auckland Hospital Lab.	4,725	851	18.0	32	0.7
Canterbury Health Lab.	4,422	368	8.3	46	1.0
Diagnostic MedLab Auckland	30,174	6,831	22.6	235	0.8
MedLab Bay of Plenty	9,508	1,580	16.6	81	0.9
MedLab Central	7,472	1,295	17.3	65	0.9
MedLab Christchurch	8,905	1,814	20.4	302	3.4
MedLab Wellington	9,504	1,716	18.1	257	2.7
SCL* Christchurch	6,490	879	13.5	64	1.0
SCL* Dunedin	20,820	1,705	8.2	275	1.3
Valley Diagnostic Lab.	3,337	681	20.4	56	1.7
Total	105,357	17,720	16.8	1,413	1.3

Targets: ¹not more than 20%, ² 0.5 to 2.0%

* SCL: Southern Community Laboratories

Figure 11: Satisfactory but limited smears by laboratory

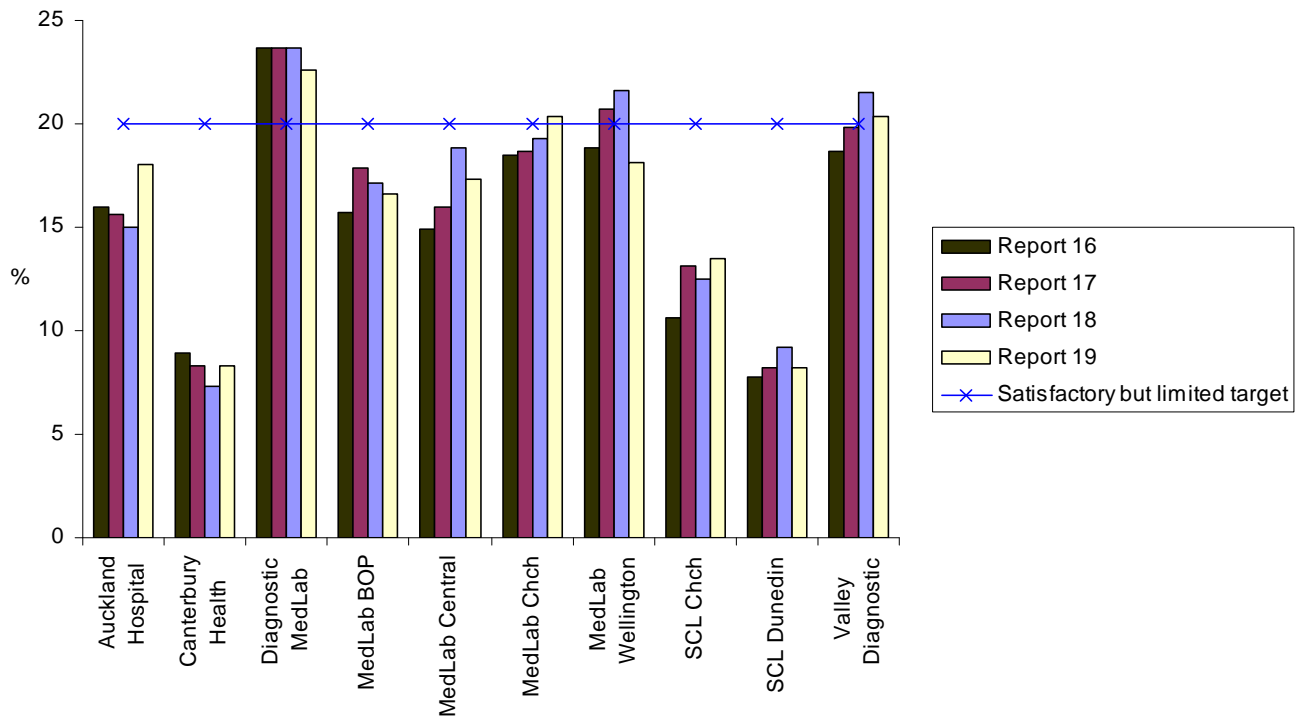
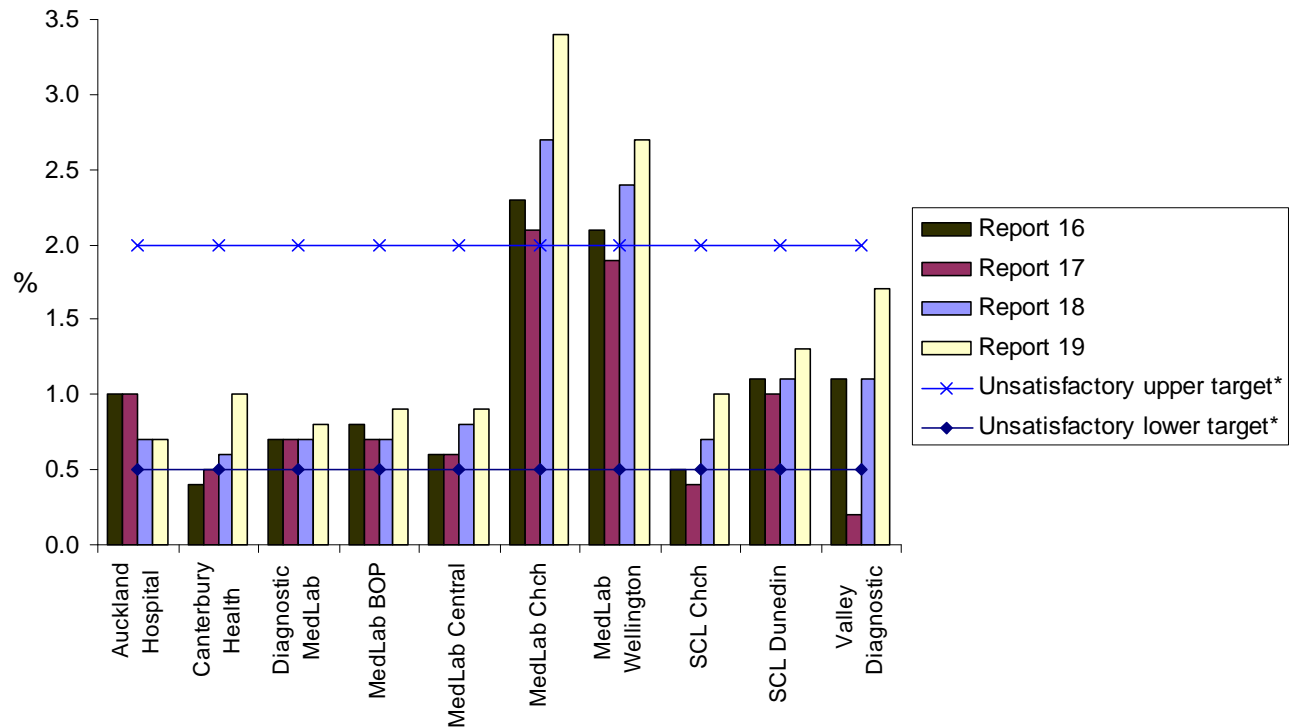


Figure 12: Unsatisfactory smears by laboratory



*Unsatisfactory smears target is not less than 0.5% and not more than 2.0% so laboratories should be between the two target lines

6.6 Satisfactory but limited and unsatisfactory smears by smear taker

Definition

Definitions and a description of the issues surrounding satisfactory but limited and unsatisfactory smears are given on Page 43.

Targets

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 by each smear taker group for the 12 months prior to the end of the reporting quarter was used to calculate the annual volume of smears taken by each smear taker group. For each group, the number of satisfactory but limited and unsatisfactory smears was expressed as a proportion of the total number of smears taken by that group.

Results

The numbers and proportions of satisfactory, satisfactory but limited and unsatisfactory smears taken in this quarter by annual volume of smears taken by each smear taker group is shown in Table 10. Overall, 105,357 smears were taken during the reporting quarter, of which 6 (<1%) were taken by lay smear takers, 64,917 (61%) by medical smear takers, 31,275 (30%) by nurses, 8,803 (8%) by specialists and 356 (<1%) by midwives. These proportions and volumes are almost identical to those reported in the last quarter.

The proportion of satisfactory but limited smears was within the target of not more than 20% for each smear taker group as a whole. When smear taker groups were considered by annual volume, the proportion of satisfactory but limited smears was greater than 20% for medical smear takers who took fewer than 30 smears, and

specialist smear takers who took 30 to 100 smears in the 12 months prior to 30 June 2005. The numbers of smears in each group, when split by annual volume, is too small for meaningful analyses for some smear taker groups.

The proportion of unsatisfactory smears was within the target range of 0.5 to 2.0% for smear taker groups, with the exception of medical and specialist smear takers with annual volumes of less than 30 smears. None of the smears taken by lay smear takers were reported as unsatisfactory for assessment.

Recommendations

No recommendations were made, since the “satisfactory but limited” category is no longer in use. This indicator will continue to be reported on, since the proportion of unsatisfactory smears is still of interest.

Table 10: 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	Satisfactory smears		Satisfactory but limited smears ¹		Unsatisfactory smears ²	
			n	%	n	%	n	%
Lay	<30	0	0	0.0	0	0.0	0	0.0
	30-100	6	6	100	0	0.0	0	0.0
	Total	6	6	100	0	0.0	0	0.0
Medical	<30	4,352	3,340	76.8	914	21.0	98	2.3
	30-100	18,892	15,088	79.9	3,507	18.6	297	1.6
	>100	41,673	33,675	80.8	7,484	18.0	514	1.2
	Total	64,917	52,103	80.3	11,905	18.3	909	1.4
Nurse	<30	2,056	1,668	81.1	356	17.3	32	1.6
	30-100	12,125	10,224	84.3	1,762	14.5	139	1.2
	>100	17,094	14,731	86.2	2,206	12.9	157	0.9
	Total	31,275	26,623	85.1	4,324	13.8	328	1.0

continued

Targets: ¹not more than 20%, ² 0.5 to 2.0%

Smear taker group	Annual volume of smears	Total number of smears	Satisfactory smears		Satisfactory but limited smears ¹		Unsatisfactory smears ²	
			n	%	n	%	n	%
Specialist	<30	179	149	83.2	26	14.5	4	2.2
	30-100	821	638	77.7	170	20.7	13	1.6
	>100	7,803	6,399	82.0	1,249	16.0	155	2.0
	Total	8,803	7,186	81.6	1,445	16.4	172	2.0
Midwife	<30	52	41	78.9	10	19.2	1	1.9
	30-100	106	93	87.7	12	11.3	1	0.9
	>100	198	172	86.9	24	12.1	2	1.0
	Total	356	306	86.0	46	12.9	4	1.1
Total		105,357	86,224	81.8	17,720	16.8	1,413	1.3

Targets: ¹not more than 20%, ² 0.5 to 2.0%

Figure 13: Satisfactory but limited smears by smear taker

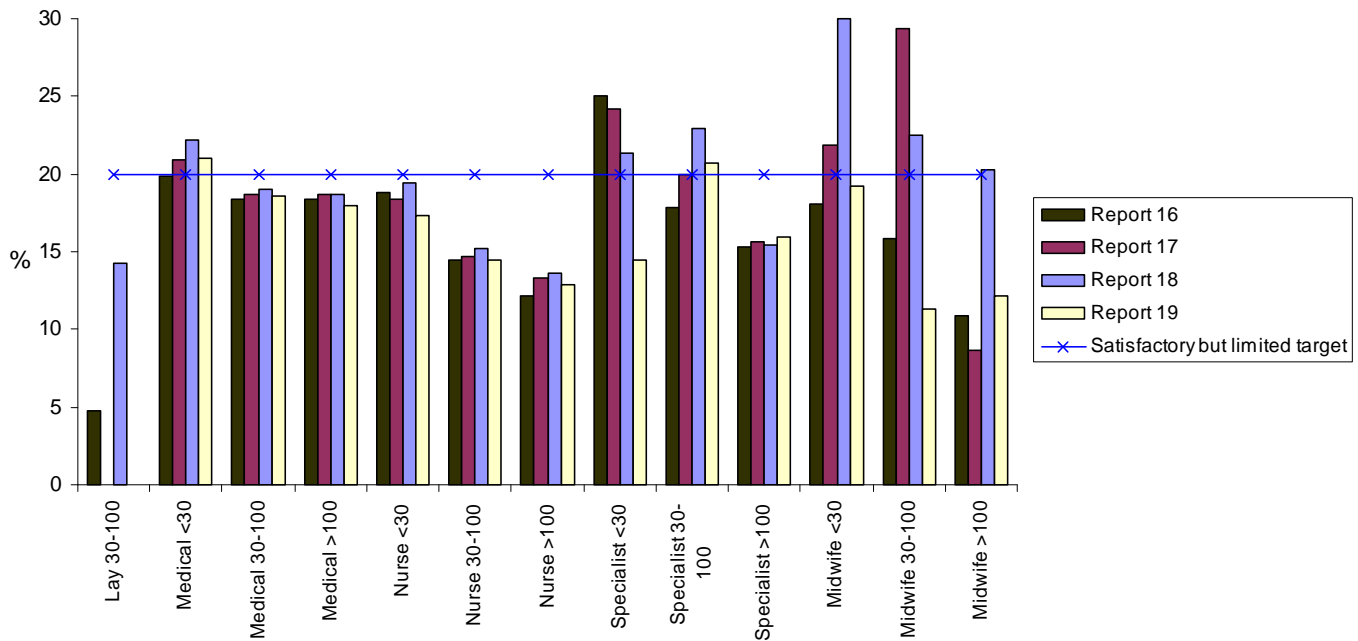
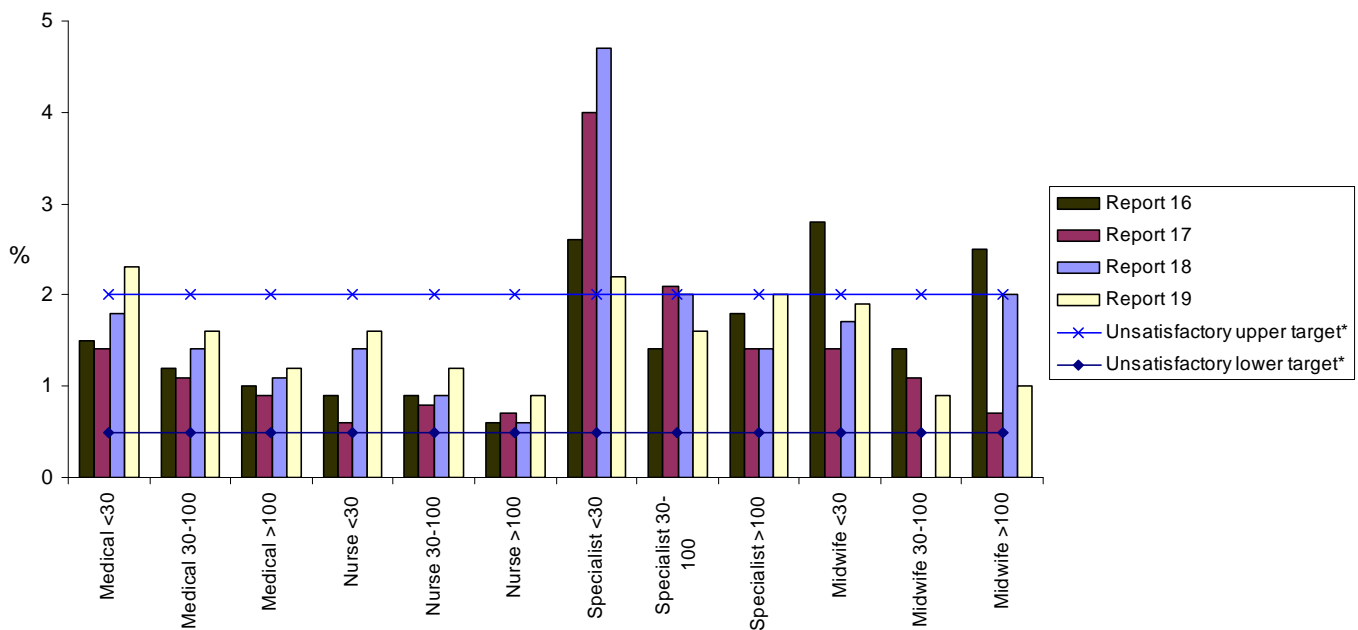


Figure 14: Unsatisfactory smears by smear taker



*Unsatisfactory smears target is not less than 0.5% and not more than 2.0% so smear takers should be between the two target lines. Lay group is not shown here because of the limited numbers of unsatisfactory smears.

6.7 Waiting time for colposcopic assessment for HSIL or ASCUS-HG

Definition

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

Targets

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

Calculation

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

Results

The reported number of women with a HSIL or ASCUS-HG cytology result referred each month for colposcopic assessment to each DHB colposcopy service, and the reported number of women referred for colposcopic assessment of a HSIL or ASCUS-HG cytology result waiting longer than four weeks at the end of each month is shown in Table 11. Two colposcopy units, Nelson Marlborough and Northland, did not provide any data for this reporting quarter, compared with three (Nelson Marlborough, Northland and Waitemata) that did not provide data for the previous quarter.

The reported number of women referred for an assessment of a HSIL or ASCUS-HG cytology abnormality waiting longer than four weeks at the end of each month was highest for Hawke's Bay colposcopy unit (76 women at the end of April, 61 women at

the end of May, and 0 women at the end of June). Hawke's Bay colposcopy unit also reported high numbers of women waiting longer than four weeks in the previous quarter. The number of colposcopy units which reported that no women waited longer than four weeks in any month was six, compared with seven in the previous quarter.

Recommendations

1. IMG is very concerned that women are potentially being put at risk through the non-reporting of colposcopy data by Nelson Marlborough and Northland, and again asks NSU to urgently seek an explanation.
2. IMG is also very concerned about the potential inaccuracy of colposcopy data reporting, with many Regions reporting zero referrals. IMG would like NSU to investigate this as a matter of urgency.
3. NSU is to follow-up the requirement for colposcopy clinics to provide dates of referral so that targets can be calculated.
4. NSU is to seek an explanation from Bay of Plenty, Counties Manukau, Hawke's Bay, Lakes, Southland and Waitemata regarding colposcopy waiting times.

Table 11: 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 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	25	28	34	0	0	0
Bay of Plenty	25	19	23	14	10	8
Canterbury	36	27	45	0	0	0
Capital and Coast	10	0	0	1	0	0
Counties Manukau	0	46	49	0	34	31
Hawke's Bay	22	26	17	76	61	0
Hutt Valley	5	3	1	9	3	3
Lakes	8	12	14	6	7	6
MidCentral	11	10	12	0	0	0
Nelson Marlborough	NR	NR	NR	NR	NR	NR
Northland	NR	NR	NR	NR	NR	NR
Otago	23	22	20	0	0	0
South Canterbury	1	2	3	0	0	1
Southland	0	0	0	5	7	0
Tairāwhiti	2	4	2	2	3	0
Taranaki	8	9	7	3	3	2
Waikato	26	24	22	2	0	2
Wairarapa	2	4	0	2	3	0
Waitemata	0	0	0	0	0	62
West Coast	2	2	0	0	0	0
Whanganui	7	6	3	0	0	0
Total	213	244	252	120	131	115

NR: data not reported

6.8 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.

Targets

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

Calculation

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

Results

The reported number of women with low grade cytology results referred each month for colposcopic assessment to each DHB colposcopy service, and the reported number of women referred for colposcopic assessment of a low grade cytology result waiting longer than 26 weeks at the end of each month is shown in Table 12. Two colposcopy units, Nelson Marlborough and Northland, did not provide any data for this reporting quarter, compared with three (Nelson Marlborough, Northland and Waitemata) that did not provide data for the previous quarter.

The reported number of women referred for an assessment of a LSIL or ASCUS cytology abnormality waiting longer than 26 weeks at the end of each month was high for Bay of Plenty colposcopy unit (122 women at the end of April, 120 women at the end of May, and 76 women at the end of June), Hawke's Bay colposcopy unit (84 women at the end

of April, 93 women at the end of May, and 0 women at the end of June), and Lakes colposcopy unit (46 women at the end of April, 75 women at the end of May, and 55 women at the end of June). Eight of the colposcopy units reported that no women waited longer than 26 weeks in any month, compared with six in the previous quarter.

Recommendations

1. IMG is very concerned that women are potentially being put at risk through the non-reporting of colposcopy data by Nelson Marlborough and Northland, and again asks NSU to urgently seek an explanation.
2. IMG is also very concerned about the potential inaccuracy of colposcopy data reporting, with many Regions reporting zero referrals. IMG would like NSU to investigate this as a matter of urgency.
3. NSU is to follow-up the requirement for colposcopy clinics to provide dates of referral so that targets can be calculated.
4. NSU is to seek an explanation from Bay of Plenty, Counties Manukau, Hawke's Bay, Lakes, Southland, Waikato and Waitemata regarding colposcopy waiting times.

Table 12: Waiting time for colposcopic assessment of LSIL or ASCUS by DHB colposcopy service

DHB Colposcopy Reporting Unit	Number of women referred for assessment of LSIL or ASCUS			Number of women referred waiting longer than 26 weeks at the end of each month		
	April	May	June	April	May	June
Auckland	36	58	35	0	0	0
Bay of Plenty	42	36	30	122	120	76
Canterbury	46	40	34	0	0	0
Capital and Coast	39	0	0	0	0	0
Counties Manukau	0	40	34	0	36	29
Hawke's Bay	7	19	5	84	93	0
Hutt Valley	15	13	3	0	0	0
Lakes	15	14	33	46	75	55
MidCentral	30	0	0	1	1	8
Nelson Marlborough	NR	NR	NR	NR	NR	NR
Northland	NR	NR	NR	NR	NR	NR
Otago	17	19	16	0	0	0
South Canterbury	1	2	0	1	1	1
Southland	7	13	0	12	13	0
Tairāwhiti	6	4	3	2	3	0
Taranaki	13	11	9	0	0	0
Waikato	39	35	27	26	29	29
Wairarapa	13	17	0	2	1	0
Waitemata	0	0	0	0	0	54
West Coast	6	2	0	0	0	0
Whanganui	20	29	25	0	0	0
Total	352	352	254	296	372	252

NR: data not reported

6.9 Positive predictive value for women with a high grade smear

Definition

The PPV for women with a high grade smear is a measure of the accuracy of high grade cytology reports. It is defined as the probability of a histological report of HSIL or higher following a HSIL or invasive squamous carcinoma (ISC) cytology report. Cytology reports of ASCUS-HG are **not** included in the PPV.

Target

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

Calculation

All satisfactory smears that were reported as HSIL or ISC in the six month period from 1 July 2004 to 31 December 2004 (*i.e.* the six months ending six months prior to the current reporting quarter) were identified. Where a woman had more than one HSIL or ISC smear in this period, the first one was used. For each woman, all histology results taken in the period from five days before the HSIL or ISC smear to 182 days (6 months) after that smear were identified. When more than one histology result was present, the first histology which was classified as high grade or cancer on the Systematised Nomenclature of Medicine (SNOMED) classification was identified (see Appendix 3). Those women whose high grade smear was classified as high grade or worse on histology are termed as having “histological confirmation of the HSIL or ISC”.

The number of women with histological confirmation of a HSIL or ISC smear was expressed as a proportion of all women with a HSIL or ISC cytology report and a subsequent histology. This measures the PPV for women with a HSIL or ISC cytology report. This indicator was calculated for each laboratory according to where the smears were read.

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

It should be noted that this section is not comparable with any previous reports due to a change in the PPV calculation method.

Results

The number of women with high grade or ISC cytology reports and subsequent histology reports on the NCSP Register is shown in Table 13. This table also shows the proportion of women for whom these cytology reports were confirmed on histology as HSIL or more serious abnormality (which is the PPV). The proportion of women with a HSIL or ISC smear without histological follow-up is also shown in Table 13.

During the period 1 July 2004 to 31 December 2004, there were 1,615 women with HSIL or ISC cytology reports, of whom 1,456 (90.2%) had a subsequent histology recorded on the NCSP Register. Of these, 1,080 (74.2%) were confirmed as having HSIL or more serious abnormality on histology. This PPV is within the target range of 65 to 85%.

Five laboratories reported a PPV outside the target range of 65 to 85%. MedLab Central (57.0%), MedLab Wellington (63.5%), and Valley Diagnostic Laboratory (55.9%) all reported a PPV below the target range. Canterbury Health Laboratories (91.5%) and MedLab Bay of Plenty (87.1%) both reported a PPV above the target range.

For all laboratories combined, no histology results were recorded on the NCSP Register for 159 women (9.8%) within six months of a woman having a HSIL or ISC report. This proportion varied amongst the laboratories, ranging from 0.0% (n=0) for MedLab Hamilton to 15.3% (n=27) for MedLab Central. Other laboratories with high proportions of HSIL reports with no subsequent histology within six months were Diagnostic MedLab Auckland (11.0%, n=31) and MedLab Wellington (10.5%, n=10). Reasons for these apparent omissions are described in Section 6.1 and could include i) women who have moved overseas and had follow-up there, ii) women who did not have an indication for biopsy at colposcopic examination, iii) women who opted to not allow their histology results to be recorded on the NCSP Register or iv) histology results which were not forwarded or not recorded on the NCSP Register.

Recommendations

No recommendations were made since the PPV indicator was re-calculated after the IMG meeting due to the discovery of an error in the calculation methodology.

Table 13: Positive predictive value for women with a high grade smear

Laboratory	HSIL reports with a histology report		HSIL confirmed by histology		HSIL reports without a histology		Total
	n	%	n	%**	n	%	n
Auckland Hospital Lab.	177	91.7	147	83.1	16	8.3	193
Canterbury Health Lab.	47	94.0	43	91.5	3	6.0	50
Diagnostic MedLab Auckland	252	89.0	185	73.4	31	11.0	283
MedLab Bay of Plenty	93	91.2	81	87.1	9	8.8	102
MedLab Central	149	84.7	85	57.0	27	15.3	176
MedLab Christchurch	73	92.4	54	74.0	6	7.6	79
MedLab Hamilton	6	100.0	5	83.3	0	0.0	6
MedLab Wellington	85	89.5	54	63.5	10	10.5	95
SCL* Christchurch	47	95.9	38	80.9	2	4.1	49
SCL* Dunedin	493	90.1	369	74.8	54	9.9	547
Valley Diagnostic Lab.	34	97.1	19	55.9	1	2.9	35
Total	1,456	90.2	1,080	74.2	159	9.8	1,615

* SCL: Southern Community Laboratory

** Positive predictive value: proportion of HSIL reports confirmed on histology. Target: 65 to 85%

Appendix 1: Summary of the Revised Bethesda Coding Standard (1998)

The hierarchy of broad cytological categories is:

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

Appendix 2: Ethnicity breakdown tables

Table i: Ethnicity breakdown by NCSP Region for histology reports within 12 weeks after a high grade cytology result

NCSP Region	Histology report within 12 weeks after a high grade cytology result						Total number of women with high grade cytology results		
	Maori		Pacific		Non-Maori Non-Pacific		Maori	Pacific	Non-Maori Non-Pacific
	n	%	n	%	n	%	n	n	n
Auckland	115	59.9%	51	48.1%	972	74.2%	192	106	1310
Bay of Plenty	58	58.6%	2	66.7%	211	79.9%	99	3	264
Canterbury	34	85.0%	3	75.0%	497	85.4%	40	4	582
Hawke's Bay	36	80.0%	0	0.0%	106	78.5%	45	2	135
Manawatu / Wanganui	47	79.7%	-	-	187	86.6%	59	-	216
Nelson / Marlborough	7	50.0%	-	-	100	72.5%	14	-	138
Northland	50	79.4%	1	100.0%	111	88.1%	63	1	126
Otago / Southland	33	84.6%	7	87.5%	351	86.0%	39	8	408
Tairāwhiti	31	83.8%	-	-	32	84.2%	37	-	38
Taranaki	9	47.4%	-	-	98	81.0%	19	-	121
Waikato	71	67.6%	4	100.0%	229	78.2%	105	4	293
Wellington	41	78.8%	12	75.0%	272	79.8%	52	16	341
West Coast	2	100.0%	-	-	29	87.9%	2	-	33

- indicates no women with high grade cytology result

Table ii: Ethnicity breakdown by NCSP Region for histology reports within 52 weeks after a high grade cytology result

NCSP Region	Histology report within 52 weeks after a high grade cytology result						Total number of women with high grade cytology results		
	Maori		Pacific		Non-Maori Non-Pacific		Maori	Pacific	Non-Maori Non-Pacific
	n	%	n	%	n	%	n	n	n
Auckland	164	85.4%	84	79.2%	1169	89.2%	192	106	1310
Bay of Plenty	89	89.9%	3	100.0%	249	94.3%	99	3	264
Canterbury	37	92.5%	4	100.0%	539	92.6%	40	4	582
Hawke's Bay	43	95.6%	2	100.0%	124	91.9%	45	2	135
Manawatu / Wanganui	51	86.4%	-	-	203	94.0%	59	-	216
Nelson / Marlborough	14	100.0%	-	-	131	94.9%	14	-	138
Northland	58	92.1%	1	100.0%	123	97.6%	63	1	126
Otago / Southland	38	97.4%	7	87.5%	391	95.8%	39	8	408
Tairāwhiti	35	94.6%	-	-	37	97.4%	37	-	38
Taranaki	16	84.2%	-	-	115	95.0%	19	-	121
Waikato	94	89.5%	4	100.0%	271	92.5%	105	4	293
Wellington	51	98.1%	15	93.8%	323	94.7%	52	16	341
West Coast	2	100.0%	-	-	30	90.9%	2	-	33

- indicates no women with high grade cytology result

Appendix 3: SNOMED codes for high grade histologies

M67017	CIN ¹ II (HSIL ²) or CIN ¹ III (HSIL ²) or Carcinoma in-situ
M80703	Invasive squamous cell carcinoma
M80763	Microinvasive squamous cell carcinoma
M81402	Adenocarcinoma in-situ
M80203	Undifferentiated carcinoma
M88003	Sarcoma
M80003	Other malignancy ³
M80006	Metastatic tumour
M81403	Invasive adenocarcinoma
M85603	Adenosquamous carcinoma
M80102	CIN ¹ III (HSIL ²)
M80702	Carcinoma in-situ

¹ CIN: Cervical intra-epithelial neoplasia

² HSIL: High grade squamous intra-epithelial lesion

³ Other malignancy: Carcinosarcoma; Choriocarcinoma; Miscellaneous primary tumour; Small cell carcinoma; Malignant tumour; Small cell type; Melanoma; Other primary epithelial malignancy

National Cervical Screening Programme. SNOMED Coding for Histology. 2001.
Wellington: Ministry of Health.