

TAKING SAMPLES FOR CERVICAL SCREENING

A Resource Pack for Trainers

**NHSCSP Publication No 23
April 2006**

Published by:

NHS Cancer Screening Programmes
Fulwood House
Old Fulwood Road
Sheffield
S10 3TH

Tel: 0114 271 1060

Fax: 0114 271 1089

Email: nhs.screening@cancerscreening.nhs.uk

Web site: www.cancerscreening.nhs.uk

© NHS Cancer Screening Programmes 2006

The contents of this document may be copied for use by staff working in the public sector but may not be copied for any other purpose without prior permission from the NHS Cancer Screening Programmes.

ISBN 1 84463 030 7

Further copies of this publication are available from the Department of Health Publications Orderline quoting NHSCSP Publication No 23

Tel: 08701 555 455

Fax: 01623 724 524

Email: doh@prolog.uk.com

CONTENTS

	Page No
PREFACE	vi
ACKNOWLEDGEMENTS	vi
1. INTRODUCTION	1
1.1 Purpose of the resource pack	1
1.2 Training audience	1
1.3 Course content	1
1.4 PowerPoint presentation	1
1.5 Other resources	1
2. THE TRAINING PROCESS	2
2.1 Delivery of training	2
2.2 Trainers and training supervisors	2
2.3 Training records	2
2.4 Practical training	2
2.5 Final assessment	3
2.6 Maintaining competence	3
2.7 Update training	3
3. THEORETICAL COURSE	4
3.1 Course content	4
3.2 Course organisation	4
SESSION A: THE NHS CERVICAL SCREENING PROGRAMME	5
A1 Aims of the NHS Cervical Screening Programme	5
A2 History of cervical screening in the UK	5
A3 Some current statistics	5
A4 Important elements in the success of the programme	5
A5 Recommended screening intervals	6
A6 What about unscheduled tests?	7
A7 NHS Cancer Screening Programmes website	7
SESSION B: THE BACKGROUND TO CERVICAL SCREENING	8
B1 Epidemiology and natural history of cervical cancer	8
B2 Risk factors for cervical cancer	8
B3 Screening for cervical cancer	9

Taking Samples for Cervical Screening

B4	Limitations of cervical screening	10
B5	Future developments for cervical screening	11
SESSION C: ORGANISATION OF THE NHS CERVICAL SCREENING PROGRAMME		13
C1	Local protocols	13
C2	Sample takers	13
C3	Primary care trusts (PCTs)	14
C4	Call and recall	14
C5	General practitioners	15
C6	Other clinicians who provide cervical screening services	15
C7	Cytology laboratories	16
C8	Colposcopy clinics	16
C9	Hospital based programme coordinators	16
C10	Quality assurance	16
C11	National coordination	16
SESSION D: EQUALITY OF ACCESS TO CERVICAL SCREENING		18
D1	Making an informed choice	18
D2	<i>Cervical Screening – The Facts</i>	18
D3	Checking for understanding	18
D4	Women from minority ethnic groups	18
D5	Women with learning disabilities	19
D6	Preparation for women with learning disabilities	19
D7	Woman with physical disabilities	20
D8	Women who are not registered with a GP	20
D9	Automatic ceasing from cervical screening for reasons of age	20
D10	Other circumstances for ceasing a woman	21
D11	Women who ask to withdraw from the screening programme	21
D12	Screening after a woman has been ceased	21
SESSION E: UNDERSTANDING THE TEST RESULTS		23
E1	Negative results	23
E2	Inadequate results	23
E3	Borderline nuclear change	23
E4	Mild dyskaryosis	24
E5	Moderate dyskaryosis	24
E6	Severe dyskaryosis	24
E7	Severe dyskaryosis ?invasive carcinoma	24
E8	Glandular neoplasia or ?glandular neoplasia	24
SESSION F: ANATOMY AND PHYSIOLOGY OF THE PELVIC ORGANS		25
F1	Structure and function of the female genitalia	25
F2	The transformation zone	25

Taking Samples for Cervical Screening

SESSION G: PRACTICAL ASPECTS OF TAKING CERVICAL SAMPLES	27
PREPARING FOR THE CONSULTATION	28
G1 The room	28
G2 Equipment for taking samples for LBC	28
G3 Equipment for taking samples for conventional cytology	29
WELCOMING THE WOMAN	30
G4 Checking the woman's identity	30
G5 Giving information and answering questions	30
G6 Taking a clinical history	31
G7 Taking a screening history	31
G8 Preparing the HMR101 test request form	32
VISUALISING THE CERVIX	33
G9 Choose the appropriate speculum	33
G10 Appearance of the cervix	33
G11 Sampling the transformation zone	34
G12 Nabothian follicles	34
G13 Polyps	34
G14 Bleeding on taking a sample	35
G15 Clinical suspicion of malignancy	35
TAKING A SAMPLE FOR LIQUID BASED CYTOLOGY (LBC)	36
G16 Taking the sample	36
G17 Taking an additional endocervical sample	36
G18 If a wide ectropion is present	36
G19 Fixing the sample	37
G20 Remove the speculum and complete the consultation	37
TAKING A SAMPLE FOR CONVENTIONAL CYTOLOGY	38
G21 Choosing a sampler	38
G22 Labelling the slide	38
G23 Using an extended tip spatula	38
G24 Using an endocervical brush as well as a spatula	39
G25 Using a Cervex-Brush®	39
G26 Transferring the cells to the glass slide	39
G27 Fixing the slide	40
G28 Withdrawing the speculum	40
ENDING THE CONSULTATION	40
G29 Completing the consultation	41
G30 Completing the test request form	41
G31 Sending the sample	42
G32 Documenting the procedure	42
G33 Disposing of equipment and waste	42
G34 Infection control	42
G35 Auditing the test results	42
4. FURTHER READING	44
5. PERSONAL RECORD BOOK	47

PREFACE

This resource pack replaces the *Resource Pack for Training Smear Takers*, which was published in 1998. It has been updated to take account of developments in the NHS Cervical Screening Programme (NHSCSP), including the introduction of liquid based cytology (LBC), and changes in the organisation in the wider NHS.

ACKNOWLEDGEMENTS

The previous resource pack was produced by a working group which included representatives of professional bodies and the NHSCSP. This resource pack has been revised by the NHSCSP Clinical Primary Care Quality Assurance (QA) Coordinating Group. Thanks are due to Ruth Stubbs, QA Primary Care QA Coordinator, North West QA Reference Centre, for producing the PowerPoint presentation and to David Mannion for technical advice.

The NHSCSP is also grateful to the British Society for Clinical Cytology (BSCC) for permission to reproduce the diagram of the transformation zone on page 26.

1. INTRODUCTION

1.1 Purpose of the resource pack

This resource pack represents best practice for the training of sample takers. It is designed to be used for training doctors and nurses working in primary care, family planning clinics and other settings where cervical samples are taken as part of the NHS Cervical Screening Programme (NHSCSP). The resource pack is intended to be used by experienced trainers to enable them to offer a common core of learning to all sample takers to ensure consistency and to provide learning to a minimum recognised level across the NHSCSP. It is not intended to be used by practice staff for unsupervised training.

1.2 Training audience

The pack is designed to be used for training qualified doctors and nurses because it assumes prior knowledge and experience of professional standards and delivery of patient care.

The pack can also be used as a basis for update training for existing sample takers.

Trainers will need to tailor their training approach to take account of the prior learning and experience of trainees.

1.3 Course content

The resource pack includes guidance on theoretical and practical elements of training. The information included in the training sessions has been prepared in bullet point summary to ensure that each subject is covered adequately. Sources of more detailed information are included as further reading and are referenced where appropriate.

The statistical information in the pack is correct at the date of publication, but trainers should check the NHSCSP website (www.cancerscreening.nhs.uk) for the most up to date figures.

1.4 PowerPoint presentation

A PowerPoint presentation is available on the CD that accompanies this publication. The presentation includes slides and speaker's notes and is arranged in sessions corresponding to those in the resource pack. It is expected that trainers will select the slides that are relevant to the session or sessions which they are delivering and supplement them with slides giving examples based on their local screening programme.

1.5 Other resources

Trainers may also wish to make use of other teaching techniques such as videos, demonstrations and discussion sessions. Some other resources are listed in the Further reading sections at the end of each session and in Chapter 4.

2. THE TRAINING PROCESS

2.1 Delivery of training

Training for sample takers is normally organised through primary care trusts (PCTs). The training is in two parts: a theoretical course plus a period of practical training. The theoretical training should be delivered by a trainer who is an experienced and practising sample taker. The recommended content for the theoretical course is given in Chapter 3. The length of the theoretical course will depend on the prior knowledge and experience of the trainees but is expected to last at least one full day (or equivalent). Practical training should take place in the practice or clinic where the trainee is based. It should be supervised either by the trainer or by another suitably experienced sample taker. Trainees should also visit a cytology laboratory and a colposcopy clinic during their training. All training should be completed within a nine month period.

2.2 Trainers and training supervisors

Trainers and training supervisors must be experienced and practising sample takers who are able to demonstrate continuing competence in taking samples for cervical screening with particular reference to:

- sampling of the transformation zone
- technique for taking samples
- fixing of samples
- audit of results, including adequacy rate.

Trainers and training supervisors should have good teaching and communication skills and should undertake regular update training and maintain awareness of developments in the cervical screening programme.

2.3 Training records

Each trainee should keep a record of their training in a personal training record book. An example is included in Chapter 5. Trainees must record the topics covered by theoretical training in their personal record book and must document their practical training (see section 2.4 below). Trainees should also document their visits to the cytology laboratory and the colposcopy clinic.

2.4 Practical training

Trainees should make arrangements with their training supervisor for sessions of practical observation and training. For the first practical session, the trainee should be accompanied by the training supervisor throughout and should:

- identify training needs in discussion with the supervisor
- observe at least two samples being taken
- take a minimum of five samples under supervision.

The supervisor and the trainee should then decide whether the student may proceed without further direct supervision. Subsequently, the trainee should take and document a minimum of 20 unsupervised samples. Easy access to a trained colleague during the training period is essential.

2.5 Final assessment

The training supervisor and the trainee are expected to maintain regular contact to discuss progress towards meeting identified training needs. They should meet for a final evaluation session that should include a final clinical assessment. The trainee must have completed a minimum of 20 cytologically adequate samples before the final evaluation session.

2.6 Maintaining competence

Sample takers should conduct continuous self evaluation to ensure continuing competence in accordance with their professional codes of conduct. They should audit and reflect on their individual rates of inadequate tests and abnormal test results compared with the rates reported by the local laboratory.

2.7 Update training

Sample takers should undertake a minimum of one half day's update training every three years. Update training should address the following issues:

- current developments in the cervical screening programme both nationally and locally
- recent literature relevant to sample taking, sampling devices and women's needs
- changes to local screening policies and procedures
- personal learning needs
- a qualitative assessment of 20 consecutive samples.

3. THEORETICAL COURSE

3.1 Course content

The course summarises information and guidance that has been published elsewhere by the NHSCSP. References to the relevant NHSCSP publications, which include detailed policy and professional guidance, are given in the Further reading section at the end of each session. Where no formal guidance has been published, this course represents current best practice in cervical screening.

3.2 Course organisation

The course includes the following sessions:

Session A:	The NHS Cervical Screening Programme
Session B:	The Background to Cervical Screening
Session C:	Organisation of the NHS Cervical Screening Programme
Session D:	Equality of Access to Cervical Screening
Session E:	Understanding the Test Results
Session F:	Anatomy and Physiology of the Pelvic Organs
Session G:	Practical Aspects of Taking Cervical Samples

The order in which these sessions are delivered, and the time allocated to each, will depend on local arrangements. The training organiser may invite different speakers with specialist knowledge, eg public health, cervical cytology or colposcopy, to contribute. Not all the sessions need to be delivered on the same day – it may be useful to intersperse theoretical training sessions with periods of practical training in the trainees' workplace.

SESSION A: THE NHS CERVICAL SCREENING PROGRAMME

A1 Aims of the NHS Cervical Screening Programme

- The aim of the NHS Cervical Screening Programme (NHSCSP) is to reduce the number of women who develop invasive cervical cancer (incidence) and the number of women who die from it (mortality). It does this by offering regular screening to women so that conditions which might otherwise develop into invasive cancer can be identified and treated.

A2 History of cervical screening in the UK

- Cervical screening began in the UK in the mid-1960s. By the mid-1980s, although many women were having regular tests, there was concern that those at greatest risk were not being tested, and that those who had positive results were not being followed up and treated effectively.
- The NHSCSP was set up in 1988 when the Department of Health instructed all health authorities to introduce computerised call and recall systems and to meet certain quality standards.

A3 Some current statistics

The following statistics are the latest available. They are taken from the cervical screening programme's annual statistical bulletin for 2004–05 and relate to the cervical screening programme in England. For further details, including a link to the statistical bulletin, see the NHS Cancer Screening Programmes website (www.cancerscreening.nhs.uk).

- The NHSCSP invited 4.7 million women for screening in 2004–05.
- In 2004–05, 3.3 million women aged 25–64 were tested in England.
- In 2004–05, 3.6 million women of all ages were tested in England.
- In 2004–05, 80.3% of eligible women aged 25–64 resident in England had been screened at least once in the previous five years.
- Laboratories across the country examined an estimated 4.0 million samples in England in 2004–05.
- Cervical screening, including the cost of treating cervical abnormalities, is estimated to cost about £157 million a year in England.

A4 Important elements in the success of the programme

- The identification and invitation of all eligible women at appropriate screening intervals. Eligible women are those aged between 25 and 64 years who have a cervix.
- The achievement of at least 80% coverage of eligible women.
- Information for women to help them make an informed choice about whether or not to come for cervical screening.

Taking Samples for Cervical Screening

- A team approach to ensure continuity of care for the woman.
- Quality assurance processes supported by clear administrative and clinical protocols.

A5 Recommended screening intervals

Age group (years)	Frequency of screening
25	First invitation
25–49	3 yearly
50–64	5 yearly
65+	Only screen those whose last three tests included an abnormal result, or women who have never been screened and request a test

Why are women under 25 not invited?

- In women under the age of 25, invasive cancer is extremely rare, but cell changes in the cervix are common. Although lesions treated in very young women may prevent cancers from developing many years later, the evidence¹ suggests that screening can safely start at age 25 and that it is relatively ineffective in younger women. Lesions that are destined to progress will still be screen detectable, and those that would regress will no longer be a source of anxiety. Younger women will not have to undergo unnecessary investigations and treatments.
- Any woman under 25 who is concerned about her risk of developing cervical cancer or her sexual health generally should contact her GP or genito-urinary medicine (GUM) clinic.

Why are women over 65 not invited?

- Women aged 65 and over who have had three consecutive negative tests are taken out of the call and recall system. The natural history and progression of cervical cancer means that it is highly unlikely that such women will go on to develop the disease.
- Women aged 65 and over who have never been screened are entitled to a test if they request one.

What about women who are not sexually active?

- The NHSCSP invites all women between the ages of 25 and 64 for cervical screening. However, if a woman has never been sexually active with a man, research evidence shows that her chance of developing cervical cancer is very low indeed. This is not no risk – only very low risk. In these circumstances, a woman might choose to decline the invitation for cervical screening on this occasion.
- If a woman is not currently sexually active but has had male partners in the past, it is recommended that she continues to attend for screening.

What about non-NHS tests?

Tests carried out privately or abroad do not affect a woman's entitlement to an NHS screening test. The NHS has no responsibility for the quality of non-NHS tests, although the results may be recorded on a woman's NHS screening record to complete her screening history.

A6 What about unscheduled tests?

If a woman is in the age group to be screened, and has had a test in the previous routine screening interval, additional tests should not be carried out, even for any of the following reasons:

- when attending for contraceptive advice or services
- when attending for advice on hormone replacement therapy
- during pregnancy or when attending for postnatal services
- in women with genital warts
- in women with vaginal discharge
- in women with infection
- in women who have had multiple sexual partners
- in women who are heavy cigarette smokers.

A7 NHS Cancer Screening Programmes website

This is the main source of up to date information about the NHSCSP, including summaries and PDF files of publications. It includes details of how to order hard copies plus useful links to other relevant websites.

Further reading

Cervical Screening – A Pocket Guide. NHS Cancer Screening Programmes, 2004.

Liquid Based Cytology and National Policy. NHS Cancer Screening Programmes, 2005 (GP Fact sheet).

NHS Cancer Screening Programmes website (www.cancerscreening.nhs.uk).

Sasieni P, Adams J, Cuzick J. Benefits of cervical screening at different ages: evidence from the UK audit of screening histories. *British Journal of Cancer*, 2003, 89(1): 88–93.

SESSION B: THE BACKGROUND TO CERVICAL SCREENING

B1 Epidemiology and natural history of cervical cancer

- Cancer of the cervix uteri is the second most common cancer among women worldwide. Almost 80% of cases occur in developing countries, and in many regions cervical cancer is the most common cancer in women.
- Cervical cancer is the eleventh most common cause of cancer deaths in women in the UK. It accounts for about 2% of all cancers in women in the UK.
- The incidence of cervical cancer fell by 42% between 1988 and 1997 (England and Wales).
- It is estimated that cervical screening saves approximately 4500 lives per year in England.
- In 2003, 951 deaths from cervical cancer were registered in England. Mortality rates generally increase with age, with the highest number of deaths occurring in the 75–79 age group. Less than 5% of cervical cancer deaths occur in women under 35.
- Mortality rates in 2000 were 60% lower (3.3 per 100 000 women) than they were 30 years earlier (8.3 per 100 000 women in 1971).
- The latest relative survival figures for England show that an average of 61% of women diagnosed with cervical cancer between 1996 and 1999 were alive five years later.
- Cancer of the cervix can take many years to develop. Cervical screening is designed to detect cell changes called cervical intraepithelial neoplasia (CIN), which may develop into cervical cancer if left untreated.
- Changes in the glandular cells which line the cervical canal are reported as cervical glandular intraepithelial neoplasia (CGIN). These cells may develop into adenocarcinoma if left untreated. CGIN is much less common than CIN. Screening by cervical cytology is a less reliable way to detect CGIN than CIN.

B2 Risk factors for cervical cancer

- Human papillomaviruses (HPVs) are a group of more than 80 viruses. Some types, in particular HPV16 and HPV18, are found in over 99% of cervical cancers. The types that are implicated in cervical cancer are called 'high risk' types. Other types appear harmless, whereas some others (eg HPV6 and HPV11) cause genital warts. The types that cause genital warts do not place a woman at increased risk of developing cervical cancer.
- The majority of sexually active women will come into contact with high risk HPV types at some time in their life. In most women, their body's own immune system will get rid of the infection without them ever knowing it was there. Only a minority of women who are positive for high risk HPV types will develop cervical abnormalities (CIN) which may develop into cervical cancer if left untreated.
- Women with many sexual partners, or whose partners have had many partners, are more at risk of developing cervical cancer. This is because their behaviour is more likely to expose them to HPV. However, a woman with only one partner could contract HPV if that partner has previously been in contact with the virus.

Taking Samples for Cervical Screening

- Women who are immunosuppressed (eg those who are taking immunosuppressive drugs after an organ transplant or women who are HIV positive) may be at increased risk of developing cervical cancer. Cytological screening should be considered on an individual basis in accordance with national guidelines on colposcopy and programme management.
- Women who smoke are about twice as likely to develop cervical cancer as non-smokers. This may be because smoking is associated with high risk health behaviours or because it suppresses the immune system, allowing the persistence of high risk HPV infection. Stopping smoking appears to help clinical abnormalities to regress.
- Using a condom offers only very limited protection from transmission of HPV.
- Long term use of oral contraceptives increases the risk of developing cervical cancer but the benefits of taking oral contraceptives far outweigh the risks for the majority of women.
- Women with a late first pregnancy have a lower risk of developing cervical cancer than those with an early pregnancy; the risk rises with the number of pregnancies.
- Many women who develop cervical cancer have never been screened. Cervical screening can prevent around 75% of cancer cases in women who attend regularly.

B3 Screening for cervical cancer

General principles of screening

1. The condition sought should be an important health problem.
2. There should be an accepted treatment for patients with recognised disease.
3. Facilities for diagnosis and treatment should be available.
4. There should be a recognisable latent or early symptomatic stage.
5. There should be a suitable test or examination.
6. The test should be acceptable to the population.
7. The natural history of the condition, including development from latent to declared disease, should be adequately understood.
8. There should be an agreed policy on whom to treat as patients.
9. The cost of case finding (including diagnosis and treatment of patients diagnosed) should be economically balanced in relation to possible expenditure on medical care as a whole.
10. Case finding should be a continuing process and not a 'once and for all' project.

Effectiveness of cervical screening

A working group of the World Health Organization's International Agency for Research on Cancer (IARC) has concluded that:

- there is sufficient evidence that screening for cervical cancer by cytological examination of Pap smear cell samples does prevent death
- in an organised programme with quality control of every key step of the entire process, it is estimated that an 80% reduction in mortality can be achieved*
- advances such as improved handling of the cell samples and use of computers for cytological analysis could also reduce the incidence of invasive cervical cancer and death from the disease
- two major determinants of the effectiveness of public health screening programmes are high coverage of the target population and quality of the total screening episode, including the primary screening test and follow up of those with positive test results
- once an organised system is in place, opportunistic (or unscheduled) screening should be discouraged
- there is minimal benefit and substantial harm in screening women below age 25
- women who have always tested negative in an organised screening programme should cease screening once they attain the age of 65; there is little benefit in screening women over the age of 65 who have had at least two negative tests in the last 10 years
- for women over age 50, a five year screening interval is considered appropriate
- for women aged 25–49, a three year rather than a five year interval might be considered in countries with the necessary resources
- annual screening is not recommended at any age.

*Based on screening women between the ages of 35 and 64 every 3–5 years.

B4 Limitations of cervical screening

- Cervical screening can detect minor abnormalities in cervical cells which would have cleared up on their own without women ever knowing about them.
- Many women worry when a minor abnormality is found.
- Cervical screening is not a diagnostic test and does not pick up every abnormality of the cervix.
- Regular cervical screening can prevent around 75% of cervical cancers developing, but it does not prevent every case.
- Some women find having the test an unpleasant experience.

B5 Future developments for cervical screening

HPV testing as a means of identifying women at high risk of developing cervical cancer

- Women with a test result of borderline nuclear change or mild dyskaryosis who have no evidence of infection with high risk types of HPV are very unlikely to develop cervical cancer.
- HPV testing has been proposed as a means of distinguishing women at low risk of developing cervical cancer from those who are positive for high risk HPV types, who are at higher risk of developing cervical cancer.

HPV testing as a primary screening test

- The ARTISTIC trial (A Randomised Trial of HPV Testing in Primary Cervical Screening) is investigating HPV as a primary screening test. The trial is designed to provide evidence about the contribution which HPV testing could make to the cervical screening programme, either in addition to cervical cytology or as a stand alone test.

Vaccines

- Vaccines to protect against infection with certain high risk HPV types are likely to be available commercially soon. The NHSCSP is considering how this development might be included in the programme in the future: the optimum age for vaccination needs to be considered and the duration of the protection offered by vaccination is not yet known. Cervical screening currently remains the most effective way of preventing cervical cancer.

Further reading

Bosch FX, Lorincz A, Muñoz N et al. The causal relation between human papillomavirus and cervical cancer. *Journal of Clinical Pathology*, 2002, 55: 244–265.

Bosch, FX, Iftner T. *The Aetiology of Cervical Cancer*. NHS Cancer Screening Programmes, 2005 (NHSCSP Publication No 22).

Cancer Stats Monograph. Cancer Research UK, 2004.

Cervical Screening – A Pocket Guide. NHS Cancer Screening Programmes, 2004.

Colposcopy and Programme Management. NHS Cancer Screening Programmes, 2004 (NHSCSP Publication No 20).

IARC Handbooks of Cancer Prevention. Volume 10. Cervix Cancer Screening. International Agency for Research on Cancer (IARC), 2005.

Liquid Based Cytology and National Policy. NHS Cancer Screening Programmes, 2005 (GP Fact sheet).

NHS Cancer Screening Programmes website (www.cancerscreening.nhs.uk).

Peto J, Gilham C, Fletcher O, Matthews FE. The cervical cancer epidemic that screening has prevented in the UK. *Lancet*, 2004, 364(9430): 249–256.

Taking Samples for Cervical Screening

Understanding Cancer of the Cervix. Cancerbacup, 2004.

Understanding Cervical Screening. Cancerbacup, 2005.

Wilson JMG, Jungner G. *Principles and Practice of Screening for Disease.* World Health Organization, 1968.

SESSION C: ORGANISATION OF THE NHS CERVICAL SCREENING PROGRAMME

C1 Local protocols

Each practice or clinic where cervical samples are taken should have copies of the local protocols for the cervical screening programme.

Sample takers should know:

- the arrangements for call and recall
- the arrangements for women to be notified of their test results
- the content of standard letters and leaflets
- how to fill in the test request form correctly
- the importance of correct handling and labelling of the sample
- how to obtain supplies and which ones are recommended for use
- approximate times for the return of results from the local laboratory
- failsafe procedures for women with abnormal test results
- contact names and telephone numbers for:
 - the local cytology laboratory where samples are screened
 - the local hospital based programme coordinator
 - the local colposcopy clinic
 - the local GUM clinic
 - the local call and recall manager.

C2 Sample takers

Sample takers should understand the importance of checking with the woman that:

- she understands the purpose of the cervical screening test
- she understands the benefits and limitations of cervical screening
- her screening history is correct
- her address on the test request form is up to date.

Taking Samples for Cervical Screening

The woman's test result will usually be sent in writing to the woman's address shown on the test request form. If the woman does not wish this to happen, the sample taker should agree with the woman on another arrangement for her to receive her test result. The sample taker must make sure that in this case the woman understands that she accepts the responsibility for collecting her test result and making appointments for any necessary follow up. If the woman does not provide an address, she may not receive invitation letters for screening in future years.

In all cases, sample takers should also understand:

- that the sample taker has responsibility for ensuring that follow up action is taken in the case of inadequate or abnormal test results (eg that the necessary referral is made)
- that the woman's GP must be kept informed.

C3 Primary care trusts (PCTs)

- Commission cervical screening services for their population (they may do this through a lead PCT that acts on behalf of several PCTs).
- Each has a nominated person responsible for its cervical screening programme.
- PCTs are responsible for making sure that arrangements are in place for:
 - call and recall (including sending results in writing)
 - sample taking for all eligible women
 - laboratory reporting of samples
 - follow up of abnormal test results
 - failsafe systems.

C4 Call and recall

- The cervical screening call and recall system is administered on behalf of PCTs by primary care organisations or agencies.
- The call and recall system:
 - generates lists of women who are due to be invited for cervical screening
 - sends invitation letters and reminder letters to women due for screening
 - records test results on a woman's screening history
 - sends result letters to women to inform them of their test result.
- Some GPs and some laboratories may make their own arrangements to invite women and/or send them their test results. If this is the local arrangement, the PCT is responsible for ensuring that the arrangements comply with national guidelines and that every woman is sent her test result in writing.

C5 General practitioners

- General practitioners who provide cervical screening services are responsible for:
 - ensuring that women are provided with information and advice to enable them to make an informed choice about whether or not to participate in cervical screening
 - making arrangements for taking cervical samples
 - ensuring that arrangements are in place for women to get their test results
 - answering questions from women about test results and follow up for abnormal results
 - referring women for further investigation if necessary
 - cooperating with laboratory failsafe enquiries.
- Some GPs may opt not to provide cervical screening services. Where this is the case, the PCT is responsible for making alternative arrangements for another GP practice or health care provider to provide cervical screening services. This includes referring women for further investigation if necessary.
- A copy of the NHSCSP leaflet *Cervical Screening – The Facts* must be included with all invitation letters for screening. Sample takers may need to provide additional advice and information for women on an individual basis (see Session D).
- Where the call and recall system is used to produce result letters, it uses the address entered by the sample taker on the test request form. If the practice uses a prepopulated form, the GP or sample taker has a responsibility to check that the address shown is up to date.
- There may be exceptional circumstances where a woman does not wish her test result to be sent to her home address. The GP or sample taker should agree with the woman on an appropriate arrangement for her to collect her test result and should note the fact on the test request form.

C6 Other clinicians who provide cervical screening services

- Clinicians who provide cervical screening services in other settings (such as community clinics or GUM clinics) are responsible for:
 - ensuring that women are provided with information and advice to enable them to make an informed choice about whether or not to participate in cervical screening
 - making arrangements for taking cervical samples
 - referring women for further investigation if necessary
 - cooperating with laboratory failsafe enquiries.
- Where the call and recall system is used to produce result letters, it uses the address entered by the sample taker on the test request form. If the clinic uses a prepopulated form, the sample taker has a responsibility to check that the address shown is up to date.
- In exceptional circumstances where a woman does not wish her test result to be sent to her home address or notified to her GP, the sample taker should agree with the woman on an appropriate arrangement for her to collect her test result and appointments for any necessary follow up. They should note the fact on the test request form.

C7 Cytology laboratories

- Cytology laboratories that participate in the NHSCSP:
 - screen cervical samples which are accompanied by a test request form
 - allocate a result code and recommendation for management depending on the degree of abnormality seen
 - notify test results and recommendations for management to the call and recall system using standard action and result codes
 - inform the GP or clinician responsible for requesting the test if a woman requires urgent referral for colposcopy
 - set up a laboratory failsafe system for women who require further investigation or treatment.
- Many laboratories have arrangements for direct referral for colposcopy.

C8 Colposcopy clinics

- Colposcopy clinics that participate in the NHSCSP:
 - investigate and treat women with abnormal test results
 - provide follow up after treatment or discharge women back to routine recall
 - cooperate with laboratory failsafe enquiries
 - may take cervical samples from women referred because their cervix is difficult to visualise.
- A woman may be referred for colposcopy without waiting for her test result if an abnormality of the cervix is identified when the cervix is visualised or if she has symptoms which are suspicious of abnormality.

C9 Hospital based programme coordinators

- May be based in a cytology laboratory or in a colposcopy clinic and are responsible for:
 - ensuring that systems are in place for transferring test results from the laboratory to the call and recall system
 - collating histology results with cytology test results
 - ensuring that laboratory failsafe measures are initiated if necessary.

C10 Quality assurance

- Quality assurance reference centres are responsible for:
 - evaluating the quality of local cervical screening programmes
 - supporting quality improvement activities
 - arranging QA visits to laboratories and colposcopy clinics
 - monitoring primary care elements of local cervical screening programmes.

C11 National coordination

- The national office of the NHS Cancer Screening Programmes (based in Sheffield):
 - is responsible for improving the overall performance of the programme
 - develops systems and publishes guidance designed to assure a high quality of cervical screening
 - identifies important policy issues and helps to resolve them
 - works to improve communications within the programme and to women.

Further reading

Colposcopy and Programme Management. NHS Cancer Screening Programmes, 2004 (NHSCSP Publication No 20).

Guidelines on Failsafe Actions for the Follow Up of Cervical Cytology Reports. NHS Cancer Screening Programmes, 2004 (NHSCSP Publication No 21).

NHS Cancer Screening Programmes website (www.cancerscreening.nhs.uk).

SESSION D: EQUALITY OF ACCESS TO CERVICAL SCREENING

D1 Making an informed choice

- All women must be given the opportunity to make a genuinely informed choice about whether or not to attend for cervical screening based on an understanding about why they are attending, what happens during the test and what happens to their records after being screened.

D2 *Cervical Screening – The Facts*

- A copy of the leaflet *Cervical Screening – The Facts* is sent with the invitation letter to all women called or recalled for routine screening.
- The leaflet includes an explanation of the benefits and difficulties of cervical screening, what happens during the test and what an abnormal result might mean. The leaflet also informs women about the use of screening records for audit and other purposes.
- The leaflets are available as PDFs in English and 19 other languages: Arabic, Bengali, Cantonese, Farsi, French, Greek, Gujarati, Hindi, Italian, Polish, Portuguese, Punjabi, Somali, Sorani, Spanish, Turkish, Ukrainian, Urdu and Vietnamese. The leaflets are also available in Braille and on CD in English, French, Bengali, Polish, Punjabi and Urdu.

D3 Checking for understanding

Sample takers should understand the importance of checking that women who attend for cervical screening:

- have an understanding of the purpose of the cervical screening test and its benefits and difficulties
- know the procedure is for taking a sample of cells from the cervix to look for abnormalities. It is not a test for diagnosing cervical cancer.

Sample takers may need to provide additional information and support to women on an individual basis.

D4 Women from minority ethnic groups

Sample takers should be aware of the importance of:

- training for primary care teams in cultural awareness
- the inclusion of cervical screening in health education for minority ethnic women
- providing written information about screening in an appropriate language (if possible)
- language support, if appropriate, for women during sample taking.

Many women from minority ethnic groups have had negative experiences of cervical screening. Some may not have understood the purpose of the screening programme or the procedure for taking the sample. Language differences and lack of cultural awareness by primary care teams have compounded the problem.

D5 Women with learning disabilities

Sample takers should understand that women with learning disabilities:

- have the same right of access to cervical screening as other women
- cannot be assumed to be sexually inactive
- are entitled to information to make their own decision about cervical screening.

A picture leaflet, *An Easy Guide to Cervical Screening*, designed for women with learning disabilities and produced by the NHSCSP is available. A picture book about cervical screening produced by the Royal College of Psychiatrists in the *Books Beyond Words* series is also available. These are both designed to be used by women with learning disabilities, with their supporters, to enable them to make their own decisions about cervical screening and to prepare them for having a sample taken.

D6 Preparation for women with learning disabilities

Sample takers should be aware of the importance of:

- establishing that the woman has a basic understanding of cervical screening
- preparing the woman to have a test.

A preliminary visit to the practice or clinic before the woman attends to have the sample taken may be helpful. When the woman attends for a test, the sample taker should check for behavioural signs of compliance with the procedure. This is especially important when screening women for whom it may be difficult to ascertain their level of understanding or consent.

The behavioural signs to check for are:

1. Is the woman relaxed and cooperative?
2. Is she able to keep still?
3. Is she willing to get undressed?
4. Is she willing to be positioned?
5. Is she willing to accept having the speculum passed?
6. Does she maintain awareness throughout?

Non-cooperation by the woman, or distress, must be recognised as the woman's choice not to have the test on this occasion. The woman should be offered another appointment if she needs more preparation and reassurance.

Sample takers who work with learning disabled women should be confident and experienced in taking cervical samples.

D7 Woman with physical disabilities

Some women's physical disabilities may prevent them from achieving a position where the cervix can be visualised and a cervical sample taken. This may include women with severe arthritis or very severe obesity.

The sample taker should consider:

- access to the venue (can an alternative be offered?)
- the height of the couch
- the woman's physical limitations
- the possibility of a domiciliary visit
- the need for assistance
- seeking specialist advice if necessary.

Sample takers who work with physically disabled women should be confident and experienced in taking cervical samples. In the case of paraplegic women, the sample taker may need to make special arrangements, for example with the local colposcopy service, to take a sample at a clinic where a hoist is available.

D8 Women who are not registered with a GP

If a woman is not registered with a GP, the sample taker should:

- give the woman a copy of *The Facts* leaflet in an appropriate format
- ensure the woman understands the purpose of the test
- make appropriate arrangements for the woman to receive her test result
- make appropriate arrangements for follow up if the test result is abnormal
- explain to the woman that she may not receive invitation letters for future screening unless she registers with a GP.

D9 Automatic ceasing from cervical screening for reasons of age

A woman will be ceased automatically from the cervical screening programme in the following circumstances:

- following the first negative test result after her 60th birthday if none of her last three adequate test results was abnormal and she would otherwise be on routine recall
- following the first non-response to a screening invitation after her 60th birthday if she has never attended for a test.

This means that her name is permanently removed from the screening register and she is no longer sent invitations for testing.

D10 Other circumstances for ceasing a woman

A woman may be permanently ceased from the cervical screening programme for one or more of the following reasons only if:

- she has no cervix (eg women with a total hysterectomy, women with congenital absence of the cervix, or male to female transsexuals)
- she has had radiotherapy for cancer of the cervix
- she is terminally ill and her GP advises that a screening invitation would be distressing
- she is over 65 with one or more abnormal results in her last three adequate tests but her GP or gynaecologist advises that she no longer requires screening.

In all other circumstances (including when the woman has withdrawn her consent before or during previous screening appointments), the woman will be sent another invitation letter in three to five years so that she can make her own decision about whether or not to attend.

D11 Women who ask to withdraw from the screening programme

The woman herself can request that her name is removed from the screening register. No one else (such as a carer or a relative) can make this request.

Examples of circumstances where a woman should continue to be invited unless she confirms that she wishes to withdraw from the screening programme include:

- women who have never had sex with a man
- women with a physical disability that would make taking a sample difficult
- women who have been circumcised
- women with a learning disability
- women with a terminal illness (unless the GP judges that an invitation would be distressing).

D12 Screening after a woman has been ceased

If a woman who has voluntarily withdrawn from the screening programme later changes her mind, she can ask for a new screening appointment at any time and will be returned to recall.

If a woman is aged over 65, and has not been screened since the age of 50, she is entitled to a new screening appointment if she requests one.

Women over 65 will not be recalled routinely.

Further reading

Ceasing Women from the NHS Cervical Screening Programme. NHS Cancer Screening Programmes, 2004 (NHSCSP Good Practice Guide No 1).

Consent to Cancer Screening. NHS Cancer Screening Programmes (Cancer Screening Series No 4) (in preparation).

Equal Access to Breast and Cervical Screening for Disabled Women. NHS Cancer Screening Programmes, 2006 (Cancer Screening Series No 2).

An Easy Guide to Cervical Screening (picture leaflet). NHS Cancer Screening Programmes, 2006.

Inequalities of Access to Cancer Screening: A Literature Review. NHS Cancer Screening Programmes, 2003 (Cancer Screening Series No 1).

Keeping Healthy 'Down Below'. Books beyond Words. Royal College of Psychiatrists, 2000.

Woman to Woman. Promoting Cervical Screening Amongst Minority Ethnic Women in Primary Care. A Participatory Research Project, 2nd edn. University of Leeds, 2004.

SESSION E: UNDERSTANDING THE TEST RESULTS

The sample taker should understand:

- the possible test results
- the meaning of the results
- the reasons for repeating a sample.

Sample takers should be aware of local protocols for the referral of women for colposcopy and guidelines for the clinical management of women.

Examples of cytological images may be presented in this session if the trainer has appropriate training in cytology. The trainer may wish to use examples from their local laboratory.

E1 Negative results

- Negative:
 - return to routine recall.
- Negative but with incidental observations:
 - investigate and manage any infection as appropriate.

The term 'normal' should be used to inform the woman of her test result.

E2 Inadequate results

- Repeat sample immediately after treating any infection or atrophy, preferably within 3 months.
- Repeat sample as soon as convenient if technically inadequate.
- Women who have had three consecutive inadequate samples should be referred for colposcopy.

E3 Borderline nuclear change

- Repeat test in six months.
- The majority of women will have subsequent normal test results.
- Three consecutive negative test results are required before the woman is returned to routine recall.
- Women who have had three consecutive tests reported as borderline nuclear change in squamous cells without being returned to routine recall should be referred for colposcopy.
- Women who have had one test reported as borderline nuclear change in endocervical cells should be referred for colposcopy.

Taking Samples for Cervical Screening

- Three consecutive negative test results six months apart are required before the woman is returned to routine recall unless she is returned to routine recall by the colposcopy clinic.
- Women who have had three abnormal test results of any grade in a 10 year period should be referred for colposcopy.

E4 Mild dyskaryosis

- Women who have had one test reported as mild dyskaryosis should ideally be referred for colposcopy, but it is acceptable to repeat the test in six months.
- Women who have had two tests reported as mild dyskaryosis without a return to routine recall should be referred for colposcopy.
- The majority of women with mild dyskaryosis will have subsequent test results that revert to normal.
- Three consecutive negative test results six months apart are required before the woman is returned to routine recall unless she is returned to routine recall by the colposcopy clinic.

E5 Moderate dyskaryosis

- Women who have had one test reported as moderate dyskaryosis should be referred for colposcopy.

E6 Severe dyskaryosis

- Women who have had one test reported as severe dyskaryosis should be referred for colposcopy.

E7 Severe dyskaryosis ?invasive carcinoma

- Women who have had one test reported as severe dyskaryosis ?invasive carcinoma should be referred urgently for colposcopy. They should be given their test result in person by the sample taker or GP. They should be seen in the colposcopy clinic within two weeks of referral.

E8 Glandular neoplasia or ?glandular neoplasia

- Women who have had one test reported as glandular neoplasia or ?glandular neoplasia should be referred urgently for colposcopy. They should be given their test result in person by the sample taker or GP. They should be seen in the colposcopy clinic within two weeks of referral.

Further reading

Cervical Screening Results Explained. A Guide for Primary Care. Cancer Research UK, 2003.

Colposcopy and Programme Management. Guidelines for the NHS Cervical Screening Programme. NHS Cancer Screening Programmes, 2004 (NHSCSP Publication No 20).

Liquid Based Cytology and National Policy. NHS Cancer Screening Programmes, 2005 (GP Fact sheet).

SESSION F: ANATOMY AND PHYSIOLOGY OF THE PELVIC ORGANS

F1 Structure and function of the female genitalia

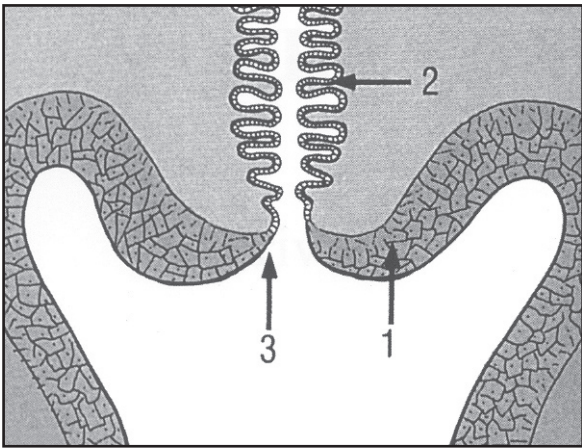
It is essential that students are familiar with the structure and function of the female genitalia:

- vulva
- vagina
- pelvic floor
- cervix uteri
- body of the uterus
- fallopian tubes and ovaries.

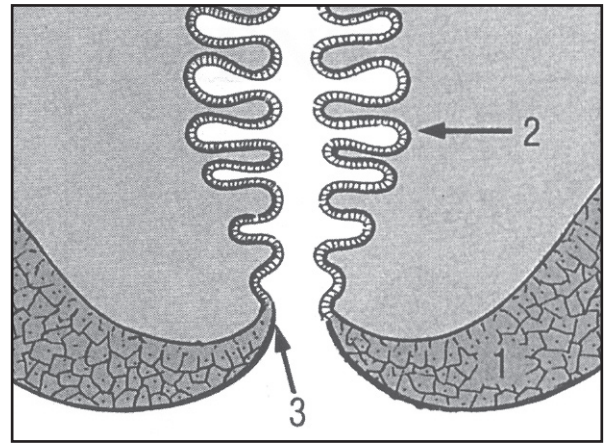
F2 The transformation zone

Special importance is attached to understanding the position of the cervix and the anatomy of the cervix and its cellular structure, with particular reference to the transformation zone and the squamocolumnar junction.

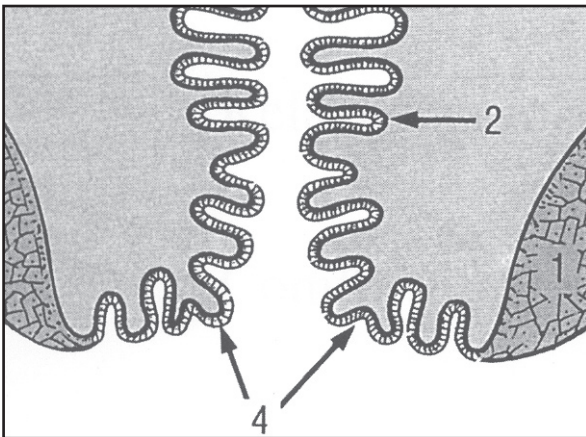
Trainers should draw attention to how age and pregnancy affect the position of the transformation zone and changes in cells. Figure 1 is reproduced with permission from the BSCC.



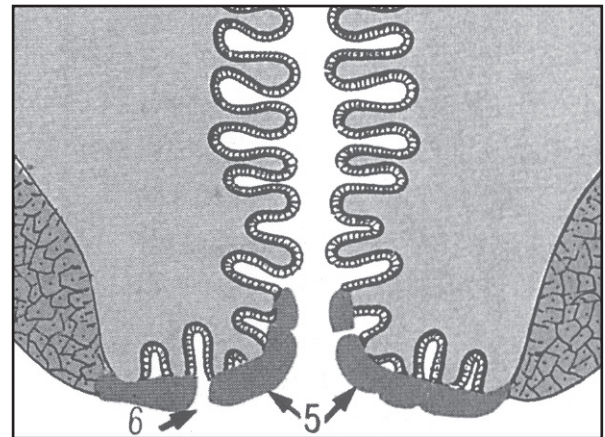
The cervical epithelium is of two kinds, the multilayered squamous epithelium on the ectocervix and the thinner columnar epithelium in the endocervix



At puberty the junction of these two types of epithelium lies at the external os



Hormonal changes at puberty and in pregnancy cause the cervix to change shape and the lower part of the endocervical canal becomes everted



The surface of the everted epithelium gradually changes to squamous epithelium. This altered area consisting of metaplastic squamous epithelium is known as the transformation zone. In postmenopausal women there is a reduction in size of the cervix. The squamocolumnar junction and part of the transformation zone come to lie in the endocervix.

1. Squamous epithelium
2. Columnar epithelium
3. Squamocolumnar junction
4. Everted columnar epithelium
5. Transformation zone
6. Gland openings in transformation zone

Figure 1 The transformation zone.

Reproduced with permission from *Taking Cervical Smears*. British Society for Cervical Cytology (BSCC), 2003 (video and booklet).

SESSION G: PRACTICAL ASPECTS OF TAKING CERVICAL SAMPLES

The following stages must be included in this session:

- preparing for the consultation
- welcoming the woman:
 - checking her identity
 - informed choice
 - taking a clinical history
 - taking a screening history
 - preparing the test request form
- visualising the cervix
- taking the sample
- ending the consultation
 - completing the test request form
 - sending the sample
 - documenting the procedure
 - infection control
 - disposing of equipment and waste.

Bimanual pelvic examination should not be undertaken as a routine part of sample taking in asymptomatic women.

PREPARING FOR THE CONSULTATION

G1 The room

The environment for sample taking should:

- be warm
- be well lit
- be private
- be comfortable
- have a relaxed atmosphere.

G2 Equipment for taking samples for LBC

You will need the following equipment:

- an examination couch
- a good light source
- sterilisation facilities
- specula of different sizes, reusable or once only use
- disposable gloves
- a supply of test request forms and a black ball point pen
- information leaflets for women
- a supply of Cervex-Brushes®
- a supply of EndoCervex® endocervical brushes
- a supply of fixative vials – ThinPrep® or SurePath™
- packaging for transporting LBC samples.

G3 Equipment for taking samples for conventional cytology

If you are taking samples for conventional cytology, you will need:

- an examination couch
- a good light source
- sterilisation facilities
- specula of different sizes, reusable or once only use
- disposable gloves
- a supply of test request forms and a black ball point pen
- information leaflets for women
- a supply of extended tip spatulas in various widths
- a supply of endocervical brushes
- a supply of glass microscope slides
- a pencil for labelling the slides
- a suitable fixative
- a box for transporting slides.

WELCOMING THE WOMAN

G4 Checking the woman's identity

Use more than one identifier and confirm:

- her name
- address
- date of birth
- NHS number (if known).

G5 Giving information and answering questions

Explain to the woman the purpose of cervical screening and what will happen at each step of the procedure.

Every woman should know:

- the purpose of cervical screening and its limitations
- the likelihood of a normal test result (about 92% of adequate tests)
- the meaning of a normal test result (low risk, not no risk)
- the likelihood of an inadequate test (about 9% for conventional cytology, 1–2% for LBC) and why this may occur
- the meaning of being recalled following an abnormal test result
- when and how test results will be made available
- the importance of the woman always reporting any abnormal bleeding or discharge to her doctor.

Explain clearly to the woman what you are going to do during the procedure and what to expect. Women who are having a test for the first time may need a more detailed explanation, including an explanation of the speculum and the sampling device. Women need to know that they will have to remove their underwear and that the speculum will be inserted into their vagina. Consent is demonstrated if the woman cooperates with the procedure. Non-cooperation by the woman or distress must be recognised as the woman's choice not to have the test on this occasion. Another date for the test may be offered.

Some women may wish to have a chaperone irrespective of the sex of the sample taker. The offer of a chaperone should be made to the woman in accordance with local policies. If a chaperone is declined, this should be noted.

G6 Taking a clinical history

Ask about:

- date of last menstrual period (LMP)
- any abnormal bleeding
- any unusual vaginal discharge
- contraception.

You should not take a sample in the following circumstances *unless you think the woman will not reattend*:

- during menstruation
- if the woman is pregnant (defer the test unless the woman has previously failed to respond to screening invitations and has gone more than three years without cervical screening)
- less than 12 weeks postnatally
- if there is a discharge/infection present, treat the infection and take the sample on another occasion.

The screening test is not a diagnostic tool and a normal test result could offer false reassurance. Women with symptoms of abnormal bleeding or persistent discharge should be referred for further investigation without waiting for the cytology result.

G7 Taking a screening history

Check the woman's screening history:

- date of last test
- any abnormal test results
- if so:
 - when
 - where (laboratory)
 - result
 - treatment
 - follow up.

G8 Preparing the HMR101 test request form

Check the details for the cytology request form HMR101. Detailed instructions can be found on the NHS Cancer Screening Programmes website (www.cancerscreening.nhs.uk). The HMR101 form, with the woman's demographic and GP details, can be downloaded from the Open Exeter system (for more information, see www.openexeter.nhs.uk).

The following data items should be completed by the sample taker:

- woman's surname, previous surnames, first names (check details, including spelling, with the woman)
- full postal address and postcode (check details, including spelling, with the woman)
- date of birth
- NHS number
- name and address of sender if not GP
- name and address of GP
- GP's local and national code
- woman's hospital registration number (if applicable)
- source of sample (type of organisation)
- date of this test
- first day of last menstrual period
- condition if applicable (pregnant, postnatal, IUCD fitted, use of hormones)
- reason for test
- any clinical information (to be completed after sample is taken)
- signature/ID of sample taker.

VISUALISING THE CERVIX

G9 Choose the appropriate speculum

- All sample takers should have a range of specula available from very small, small, medium to large, and including a long bladed narrow speculum such as the 'Winterton' speculum to enable better visualisation of the cervix when the vagina is long or the cervix is lying posteriorly.

Examples should be available when discussing the choice of speculum.

- Check the quality of equipment selected.
- Insert the speculum:
 - warm or cool the speculum under running water to reach body temperature
 - make it clear to the woman that the speculum has been sterilised and that it is simply being warmed (or cooled)
 - if necessary use a little water based lubricant, but avoid the tip of the speculum so as not to contaminate the cervix
 - the speculum should be passed gently, directing it in a downward direction using gentle, unhurried movements
 - opening and closing the speculum slightly or changing the angle of insertion should bring the cervix into view
 - a common error is failure to insert the speculum far enough into the vagina
 - time should be allowed after passing the speculum to allow the woman to relax.

G10 Appearance of the cervix

- Multilayered squamous epithelium appears pink peripherally.
- The external appearance of a wide area of columnar epithelium is called cervical eversion (this may also be called ectopy or ectropion); this will be exaggerated further by opening the speculum.
- Laceration of the cervix associated with childbirth exposes more of the canal lined by columnar epithelium.
- No treatment for cervical eversion is required unless symptomatic.
- After previous treatment for CIN, there may appear to be a 'rosette' of reddened epithelium centrally on the cervix which is asymptomatic and does not bleed to touch and represents an old area of healing.

Examples of colposcopy images may be presented in this session. Trainers may wish to refer to the Cervix Chart for Sample Takers in Primary Care.

G11 Sampling the transformation zone

The whole cervix should be visualised to obtain a satisfactory sample:

- CIN can develop anywhere in the vaginally exposed columnar epithelium, so the whole transformation zone needs to be sampled
- the position of the transformation zone varies – the part of the transformation zone adjacent to the squamocolumnar junction (SCJ) is the most vulnerable to CIN
- if the SCJ is visible, the sample must include the whole circumference of the SCJ and the adjacent 1 cm of squamous epithelium
- if the SCJ is in the endocervical canal and not visible, the sample must include cells from the canal in addition to the ectocervix.

The sample taker must visualise the cervix at the time that the sample is taken and ensure that the whole of the transformation zone has been sampled. It is not possible for the laboratory to be certain that the full circumference of the cervix has been sampled whatever the cellularity or cell content of the sample. A sample taken from half of the cervix would look to the cytologist the same as one from the whole circumference.

If an experienced sample taker is unable to visualise the cervix, the woman should be referred to a colposcopy clinic for investigation.

Samples taken after treatment for glandular neoplasia, CIN2 or CIN3 are special cases, and sample takers should ensure that information about previous treatment is given on the test request form.

G12 Nabothian follicles

- These are mucus retaining cysts formed as islands of columnar epithelium that are covered by squamous epithelium.
- They are usually small (about 5 mm in diameter), but occasionally may enlarge to 1–1.5 cm.
- If several are present the cervix may have a knobbly appearance.
- No treatment is required.

G13 Polyps

- Small ectocervical polyps where the base can be seen and which are asymptomatic do not require referral for gynaecological opinion.
- Large, symptomatic or endocervical polyps where the base cannot be seen should be referred for a gynaecological opinion, although they are usually benign.

G14 Bleeding on taking a sample

Bleeding on taking a sample is not uncommon, especially from the columnar epithelium.

If the cervix bleeds with no clinical suspicion of malignancy:

- assess the amount of bleeding and consider possible causes
- if bleeding is a repeated problem and causes repeated inadequate samples, or if the woman has postcoital bleeding, consider whether she should be referred to a gynaecologist for further investigation
- send the sample to the laboratory
- warn the woman the test may be inadequate
- reassure the woman.

G15 Clinical suspicion of malignancy

- Cervical cancer is rare in the UK, and many regular sample takers will never see a single case.
- In a gross example, the cervix is enlarged and the surface is irregular and friable, crumbling to the touch.
- Large blood vessels may be seen bleeding freely when rubbed by the end of the speculum.
- There may also be a sweet smelling, but offensive, watery discharge.

If the cervix bleeds with clinical suspicion of malignancy:

- and a clinician considers the cervical appearance is suspicious of malignancy, the woman must be referred immediately to a gynaecologist
- and a sample is taken, ensure clear clinical details are noted on the cytology request form and in the woman's notes
- a normal test result can occasionally be obtained in the presence of malignancy so could be falsely reassuring.

If you have any concerns about the woman's health when the cervix is visualised, you should seek appropriate clinical advice.

TAKING A SAMPLE FOR LIQUID BASED CYTOLOGY (LBC)

There are two LBC systems in current use in the NHSCSP. These are the ThinPrep® system and the SurePath™ system. Both systems use a plastic broom sampler. In limited circumstances (see below), an endocervical brush may be used to take an additional sample. The Cervex-Brush® sampler and EndoCervex® endocervical brush are recommended for use with both systems.

G16 Taking the sample

Using the Cervex-Brush®, insert the central bristles of the brush into the endocervical canal so that the shorter, outer bristles fully contact the ectocervix.

Using pencil pressure, rotate the brush **FIVE TIMES in a clockwise direction**.

In order to ensure good contact with the ectocervix, the plastic fronds of the brush are bevelled for **CLOCKWISE rotation only**.

A high cellular yield will be achieved with correct use of the brush.

G17 Taking an additional endocervical sample

An endocervical brush such as the EndoCervex Brush® should be used only in a very few circumstances. It should always be used in conjunction with a Cervex-Brush®. Sample takers should consider taking a second sample using an endocervical brush only if:

- they have difficulty in inserting the Cervex-Brush® into the os, ie if the os is narrow or stenosed
- the woman is being followed up for previous borderline changes in endocervical cells
- the woman is being followed up for a previously treated endocervical glandular abnormality (usually CGIN when the woman has not had a hysterectomy or radiotherapy) when a previous sample was inadequate because of the absence of endocervical cells.

Sample takers should take the EndoCervex Brush® sample after the Cervex-Brush® sample:

- by inserting the EndoCervex Brush® gently into the os, with the lower bristles remaining visible, and **rotate clockwise through one whole turn**.

Both samples should be fixed in the same vial, and a note made clearly on the cytology request form that two sampling devices have been used and the reason why.

G18 If a wide ectropion is present

A Cervex-Brush® should be used to collect the sample. If necessary, a second brush can be used by sweeping the transformation zone in accordance with the advice from the LBC equipment supplier. Both samples should be fixed in the same vial and noted on the cytology request form.

G19 Fixing the sample

IMMEDIATELY FIX THE SAMPLE using the appropriate instructions below and label the vial.

ThinPrep®

- Rinse the brush into the fixative vial using a vigorous swirling motion.
- Push the brush into the bottom of the vial at least 10 times, forcing the bristles apart. **FIRM PRESSURE IS NECESSARY or the cells will cling to the brush.**
- Inspect the brush for any residual material and remove any remaining by passing the brush over the edge of the fixative vial.
- Ensure that the material reaches the liquid or it will not be preserved.
- Tighten the cap so that the torque line passes the torque line on the vial.
- If you have placed any material on the edge of the vial, give it a shake.
- Label the vial.

SurePath™

- Simply remove the head of the brush from the stem and place into the vial of fixative.
- Screw the lid on and label the vial.

For both methods, it is essential that the sample is placed in the vial at once in order to achieve immediate fixation. Do this before you remove the speculum.

G20 Remove the speculum and complete the consultation

Withdraw the speculum gently, with the blades apart until the cervix is no longer within the blades. Allow the speculum to close and continue to withdraw it until it is removed.

TAKING A SAMPLE FOR CONVENTIONAL CYTOLOGY

G21 Choosing a sampler

The sampler used for taking a sample for conventional cytology is an extended tip spatula made in either plastic or wood, available in various widths. Alternatively, a plastic broom sampler such as the Cervex-Brush® may be used.

The choice of sampler depends on:

- the state of the os
- the shape and contours of the cervix
- the need to sample the whole of the transformation zone
- any unusual features.

G22 Labelling the slide

Using a pencil, label the glass slide at the frosted end with the woman's name and date of birth (ink is washed away by fixative). To avoid errors, sample takers should label the slide just before taking the sample, not in advance.

G23 Using an extended tip spatula

- Check the quality of equipment selected, eg for splinters/faults.
- The extended tip spatula anchors the tip in the os and makes it easier to scrape the ectocervix adjacent to the os as well as at the lower end of the endocervical canal.
- Rotate the spatula through **more than one complete turn** to ensure sampling of the whole cervix.
- If a wide ectropion is present, in addition to using the extended tip in the usual way, sample takers should use the flat (round) end of the spatula to collect cells to ensure that the whole transformation zone and squamocervical junction is sampled.
- Copious cervical mucus can remove the cells from the sampler as you withdraw it, resulting in a reduction of the number of cells in the sample.
- The cervix should not be swabbed; instead, the sample taker should either gently move the discharge away from the os with the blunt end of the sampler or twist the blunt end of the sampler in the mucus (particularly if the woman is mid-cycle) and lift the mucus off the cervix.

G24 Using an endocervical brush as well as a spatula

Sample takers should never use an endocervical brush alone to take a sample for conventional cytology. The endocervical brush is used to sample the endocervical canal, and sample takers should consider taking a brush sample as well as a spatula sample only if:

- they have difficulty in inserting the spatula into the os, ie if the os is narrow or stenosed
- the woman is being followed up for previous borderline changes in endocervical cells
- the woman is being followed up for a previously treated endocervical glandular abnormality (usually CGIN when the woman has not had a hysterectomy or radiotherapy) when a previous sample was inadequate because of the absence of endocervical cells.

Sample takers should take the endocervical brush sample after the spatula sample by:

- inserting the brush gently into the os with the lower bristles remaining visible and **rotating clockwise through one whole turn.**

G25 Using a Cervex-Brush®

- Insert the central bristles of the brush into the endocervical canal so that the shorter, outer bristles fully contact the ectocervix.
- Using pencil pressure, rotate the brush **FIVE TIMES in a clockwise direction.**
- In order to ensure good contact with the ectocervix, the plastic fronds of the brush are bevelled for **CLOCKWISE rotation only.**
- A high cellular yield will be achieved with correct use of the brush.

G26 Transferring the cells to the glass slide

IMMEDIATELY TRANSFER THE CELLS TO THE GLASS SLIDE using the appropriate instructions:

- for an extended tip spatula, transfer from both sides of the sampler using straight sweeps
- if using an endocervical brush, transfer by gently rolling the brush along the slide
- many laboratories prefer both spatula and brush samples on the same slide, but contact the local laboratory to check local policy
- transfer the sample from a Cervex-Brush® by using a ‘paint brush’ action, sweeping both sides of the brush along the long axis of the slide.

G27 Fixing the slide

IMMEDIATELY FIX THE SAMPLE:

- by immersing it in alcohol or by applying the supplied fixative from a dropper or spray onto the slide
- apply spray fixative from a distance of 7.5–15 cm (3–6 inches), ensuring that the whole sample is covered
- a drop of alcohol fixative spread across the slide before the application of the cells from an endocervical brush improves fixation
- leave the slide in a horizontal position to dry for about 15 minutes
- do not place slides in a refrigerator.

G28 Withdrawing the speculum

Withdraw the speculum gently with the blades apart until the cervix is no longer within the blades. Allow the speculum to close and continue to withdraw it until it is removed. Complete the consultation.

A poster *Cervical Screening: Useful Information about Taking Samples for Conventional Cytology* is available.

ENDING THE CONSULTATION

G29 Completing the consultation

- Ask the woman to dress before you complete the consultation.
- Check that the woman's name and date of birth are recorded on the slide or vial.
- Check that the cytology request form is complete.
- Explain to the woman how and when she will receive her test result.
- Discuss the possible results and follow up if appropriate.
- Ensure that the woman understands that if she has any abnormal bleeding or discharge she must see her GP.
- Let the woman know how to seek further advice.

G30 Completing the test request form

Complete the clinical data box:

- indicate the type of specimen
- specify if an additional sample (eg endocervical sample) was taken
- state whether the cervix was visualised during the examination and whether the full circumference of the cervix was sampled (this will enable the laboratory to determine the adequacy of the sample).

Also provide information on current signs and symptoms:

- any problems with sampling the cervix
- all clinical details, eg unusual bleeding
- comments on the appearance of the cervix
- details of an additional sampler, if used.

Also provide brief details of any significant history, including abnormal cytology (with slide number) and previous diagnosis and treatment. This will ensure that the laboratory has sufficient information to make an appropriate recommendation on the future management of the woman.

Check that all the relevant boxes are **complete** and **legible**.

Sign and provide the sample taker identification code (if used locally).

Taking Samples for Cervical Screening

If multipart HMR101 forms are used, the laboratory may send each colour coded part to the appropriate organisation. If single part forms are used, the laboratory will send printed or electronic reports directly from the laboratory computer system to each organisation.

Detailed instructions on completing the HMR101 form can be found on the NHS Cancer Screening Programmes website (www.cancerscreening.nhs.uk).

G31 Sending the sample

Send the sample with the request form to the laboratory, packed in accordance with local arrangements.

G32 Documenting the procedure

The details of the test should be recorded in the woman's notes. These should include:

- visualisation of the cervix
- sampling of the transformation zone
- date sample taken
- the sample taker's signature, with their name in block capitals, and their status.

There are benefits in standardising documentation and terminology within a practice or clinic. Trainees should record their actions clearly and accurately and should use only recognised abbreviations. As a failsafe measure, each sample taker should keep a list of all samples sent and correlate this with the results returned by the laboratory.

G33 Disposing of equipment and waste

Equipment and waste should be disposed of safely in accordance with local protocols.

G34 Infection control

Sample takers should follow local protocols for infection control.

G35 Auditing the test results

Sample takers should keep a record of their individual rates of inadequate tests and abnormal test results. If either is significantly out of line with the rates reported by the local laboratory, advice should be sought from a trainer, a gynaecologist and/or the laboratory.

Taking Samples for Cervical Screening

Further reading

Cervical Screening: Useful Information. Poster about taking samples for conventional cytology. NHS Cancer Screening Programmes (undated).

Cervix Chart for Sample Takers in Primary Care. NHS Cancer Screening Programmes, 2006 (NHSCSP Publication No 25).

Good Practice in Breast and Cervical Screening for Women with Learning Disabilities. NHS Cancer Screening Programmes, 2000 (NHSCSP Publication No 13).

Product based information provided by suppliers:

www.cytyc.com

www.medicalsolutions.co.uk

www.roversmedicaldevices.com

Taking Cervical Smears (video with booklet includes detailed instructions on sample taking techniques for conventional and LBC methods; also available as a CD). British Society for Clinical Cytology (BSCC), 2003.

4. FURTHER READING

Session A

Cervical Screening – A Pocket Guide. NHS Cancer Screening Programmes, 2004.

Liquid Based Cytology and National Policy. NHS Cancer Screening Programmes, 2005 (GP Fact sheet).

NHS Cancer Screening Programmes website (www.cancerscreening.nhs.uk).

Sasieni P, Adams J, Cuzick J. Benefits of cervical screening at different ages: evidence from the UK audit of screening histories. *British Journal of Cancer*, 2003, 89(1): 88–93.

Session B

Bosch FX, Lorincz A, Muñoz N et al. The causal relation between human papillomavirus and cervical cancer. *Journal of Clinical Pathology*, 2002, 55: 244–265.

Bosch, FX, Iftner T. *The Aetiology of Cervical Cancer*. NHS Cancer Screening Programmes, 2005 (NHSCSP Publication No 22).

Cancer Stats Monograph. Cancer Research UK, 2004.

Cervical Screening – A Pocket Guide. NHS Cancer Screening Programmes, 2004.

Colposcopy and Programme Management. NHS Cancer Screening Programmes, 2004 (NHSCSP Publication No 20).

IARC Handbooks of Cancer Prevention. Volume 10. Cervix Cancer Screening. International Agency for Research on Cancer (IARC), 2005.

Liquid Based Cytology and National Policy. NHS Cancer Screening Programmes, 2005 (GP Fact sheet).

NHS Cancer Screening Programmes website (www.cancerscreening.nhs.uk).

Peto J, Gilham C, Fletcher O, Matthews FE. The cervical cancer epidemic that screening has prevented in the UK. *Lancet*, 2004, 364(9430): 249–256.

Understanding Cancer of the Cervix. Cancerbacup, 2004.

Understanding Cervical Screening. Cancerbacup, 2005.

Wilson JMG, Jungner G. *Principles and Practice of Screening for Disease*. World Health Organization, 1968.

Session C

Colposcopy and Programme Management. NHS Cancer Screening Programmes, 2004 (NHSCSP Publication No 20).

Guidelines on Failsafe Actions for the Follow Up of Cervical Cytology Reports. NHS Cancer Screening Programmes, 2004 (NHSCSP Publication No 21).

NHS Cancer Screening Programmes website (www.cancerscreening.nhs.uk).

Taking Samples for Cervical Screening

Session D

Ceasing Women from the NHS Cervical Screening Programme. NHS Cancer Screening Programmes, 2004 (NHSCSP Good Practice Guide No 1).

Consent to Cancer Screening. NHS Cancer Screening Programmes (Cancer Screening Series No 4) (in preparation).

Equal Access to Breast and Cervical Screening for Disabled Women. NHS Cancer Screening Programmes, 2006 (Cancer Screening Series No 2).

An Easy Guide to Cervical Screening (picture leaflet). NHS Cancer Screening Programmes, 2006.

Inequalities of Access to Cancer Screening: A Literature Review. NHS Cancer Screening Programmes, 2003 (Cancer Screening Series No 1).

Keeping Healthy 'Down Below'. Books beyond Words. Royal College of Psychiatrists, 2000.

Woman to Woman. Promoting Cervical Screening Amongst Minority Ethnic Women in Primary Care. A Participatory Research Project, 2nd edn. University of Leeds, 2004.

Session E

Cervical Screening Results Explained. A Guide for Primary Care. Cancer Research UK, 2003.

Colposcopy and Programme Management. Guidelines for the NHS Cervical Screening Programme. NHS Cancer Screening Programmes, 2004 (NHSCSP Publication No 20).

Liquid Based Cytology and National Policy. NHS Cancer Screening Programmes, 2005 (GP Fact sheet).

Session G

Cervical Screening: Useful Information. Poster about taking samples for conventional cytology. NHS Cancer Screening Programmes (undated).

Cervix Chart for Sample Takers in Primary Care. NHS Cancer Screening Programmes, 2006 (NHSCSP Publication No 25).

Good Practice in Breast and Cervical Screening for Women with Learning Disabilities. NHS Cancer Screening Programmes, 2000 (NHSCSP Publication No 13).

Product based information provided by suppliers:

www.cytyc.com

www.medicalsolutions.co.uk

www.roversmedicaldevices.com

Taking Cervical Smears (video with booklet includes detailed instructions on sample taking techniques for conventional and LBC methods; also available as a CD). British Society for Clinical Cytology (BSCC), 2003.

Availability of publications

Copies of NHS Cancer Screening Programmes publications are available from the DH Publications Orderline:

Tel: 08701 555 455

Fax: 01623 724 524

E-mail: doh@prolog.uk.com.

Copies of leaflets for women *Cervical screening: The Facts* and the picture leaflet designed for women with learning disabilities are also available from the DH Publications Orderline.

Taking Samples for Cervical Screening

Details of publications and leaflets are available on the NHS Cancer Screening Programmes website (www.cancerscreening.nhs.uk). Copies of most can be downloaded. The website also has links to cancer charities such as Cancerbacup and Cancer Research UK.

Ordering details for the BSCC video and booklet are available on the BSCC website (www.clinicalcytology.co.uk).

5. PERSONAL RECORD BOOK

5.1 Personal training record

Sample takers should have a personal training record, including attendance at taught courses, supervised practice, visits to cytology laboratories and colposcopy clinics and update training. The following pages (A–F) are a guide to what should be included when designing a personal record book. Training supervisors may like to agree an action plan with the student before the student takes unsupervised samples.

A SUMMARY OF TRAINING

Name _____

Current role _____

Commencement of training (date) _____

Completion of theoretical course (date) _____

Visit to cytology laboratory _____

Date _____ Laboratory _____

Signature of cytologist in charge _____

Visit to colposcopy clinic _____

Date _____ Clinic _____

Signature of colposcopist in charge _____

Completion of practical training _____

Date _____ Signature of supervisor _____

Completion of training _____

This is to certify that _____

has satisfactorily completed training and is competent in taking samples for cervical cytology.

Date _____ Signature of trainee _____

Signature of trainer _____

B THEORETICAL COURSE

Subjects covered

Study method (eg distance learning, course attendance)

A The NHS Cervical Screening Programme

B The background to cervical screening

C Organisation of the NHSCSP

D Equality of access to cervical screening

E Knowledge of the local screening programme

F Anatomy and physiology of the pelvic organs

G Practical aspects of taking cervical samples

H Auditing the adequacy of samples

Comments

Completion of theoretical course(s)

Date _____ Signature of trainee _____

Signature of trainer _____

C RECORD OF PRACTICAL TRAINING (one sheet should be completed for each sample taken)

Name of trainee _____

Sample number _____ Observation
Supervised
Unsupervised

Date of sample _____

Client details

Code _____ Age _____

Date of last test _____ Date of LMP _____

Screening history

Reason for this test	Routine call	<input type="checkbox"/>	Opportunistic	<input type="checkbox"/>
	Routine recall	<input type="checkbox"/>	Follow up after treatment	<input type="checkbox"/>
	Previous abnormal	<input type="checkbox"/>	Other	<input type="checkbox"/>
	Previous inadequate	<input type="checkbox"/>		

Taking the sample

LBC SurePath LBC ThinPrep Conventional

Appearance of cervix _____

Any unusual vaginal discharge _____

Sampler used _____

Transformation zone seen Yes/No

SCJ seen Yes/No

Reflection on the practical training session

Trainee's comments

Supervisor's comments (supervised samples only)

Test result

Date received _____

Follow up action

Routine recall

Early recall

Referral for colposcopy

Other

Comments

E FINAL CLINICAL ASSESSMENT

Satisfactory

Welcoming the woman

Giving information and answering questions

Checking details for the cytology request form

Taking a history

Visualising the cervix

Positioning the woman

Choice of speculum

Inserting the speculum

Assessing the cervix

Taking the sample (conventional cytology)

Choosing the sampler

Sampling the cervix

Transferring the cells

Fixing the sample

Removing the speculum

Taking the sample (LBC)

Sampling the cervix

Transferring the cells

Removing the speculum

Ending the consultation

Explaining how and when results will be received

Completing the cytology request form

Completing the woman's records

Infection control and disposal of waste

Comments by trainee

Signature of trainee _____ **Date** _____

Comments by supervisor (formative feedback)

Signature of supervisor _____ **Date** _____

F UPDATE TRAINING

Date _____

Venue _____

Subjects covered

Comments by sample taker

Current inadequate rate _____ **Current positive pick-up rate** _____

Signature of sample taker _____

