TRAINING REQUIREMENTS FOR MEDICAL STAFF WORKING IN CERVICAL CYTOPATHOLOGY

LBC Implementation Guide No 3
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1. INTRODUCTION

This guidance sets out the training requirements for medical staff working in the UK Cervical Screening Programmes as part of the implementation of the liquid based cytology (LBC) methodology for the collection and preparation of cervical samples.

2. TRAINING OBJECTIVE

The training objective is to develop additional skills which will allow the recognition of all types of cells found in cervical samples in order that abnormal, negative and inadequate cases may be accurately assessed in liquid based preparations. In order to achieve this, individuals should screen at least 350 liquid based cervical samples within the training period. The same training period and programme applies to both full and part time staff.

Training should be carefully planned, and the individual should be aware of what is involved and how competence in LBC is to be achieved within the training period.

3. RECORD OF TRAINING

Details of LBC training should be recorded and available for inspection. Individuals may use the training record included in this document (see Appendix 1) or alternatively may complete the relevant sections in the Royal College of Pathologists’ continuing professional development portfolio.

4. LBC INDUCTION COURSE

The LBC induction course is designed for medical and scientific staff of all grades who are already trained in conventional cervical cytopathology. Medical staff must attend an induction course at an NHS Cervical Screening Programme (NHSCSP) approved cytology training centre.

The purpose of the induction course is to provide an introduction and comprehensive overview of LBC. The basic principles of LBC will be common to all available commercial systems. The course comprises lectures, workshops and test sets, and emphasis will be given to the discussion of cases on a multiheaded microscope.
The induction course will last a minimum of 20 hours over a three day period. It is recommended that approximately 12 hours are dedicated to individual microscopy and a further six hours allocated to discussion of cases on a multiheaded microscope.

Lectures will cover:

- background to LBC
- LBC preparation devices
- use of the training log for non-medical laboratory staff
- normal cytological appearances and infections
- squamous and glandular dyskaryosis
- rapid screening technique
- troubleshooting.

Six sets of 20 slides will be presented during the three day induction course. The test sets will include inadequate and difficult cases and look-a-likes.

An example of the induction course programme is given in Appendix 2.

All staff will be allocated a **personal identification code** that will be used throughout their training.

It is strongly recommended that the training course director is present at most, if not all, of the multi-headed microscope discussion sessions.

### 5. CONSOLIDATION STAGE

Following completion of the induction course, medical staff must undertake an approved in-house consolidation stage. This will last up to four weeks, during which time training sets containing 200 LBC preparations will be fully screened microscopically. These sets will be selected to include a high proportion of cases containing abnormal cells, micro-organisms, hormonal effects and other morphological changes.

At this stage, the individual’s sensitivity for moderate dyskaryosis and above is calculated; if this is 95% or higher, the individual may progress to the **NHSCSP LBC interim test**. If the individual fails to achieve this level of sensitivity, then further additional training will be offered by the training centre on an individual basis.

The NHSCSP LBC interim test comprises a set of 20 unmarked slides of both negative and abnormal cases. Individual (anonymised) response sheets must be submitted to the training course director for marking. The response sheets will be scored according to the marking scheme given on the next page. Individuals are required to achieve a score of at least 80%.
Individuals can expect to receive their results within approximately 7–10 working days. An anonymised summary of results will be sent to the medical lead in cytology.

Individuals who do not pass the NHSCSP LBC interim test are expected to identify themselves to their medical lead in cytology.

6. MARKING SCHEME FOR TEST SETS

All stages of training will be scored according to the following scheme:

- For a slide that is not examined: 0 marks
- If the assessment matches the proffered grade: 5 marks
- If the assessment of an abnormal specimen (borderline or above) is one grade different from the proffered grade: 4 marks
- If the assessment (as above) is two or three grades different from the proffered grade: 3 marks
- If a negative sample is called either borderline or dyskaryotic: 2 marks
- If a dyskaryotic sample is called negative or inadequate: 2 marks
- If the assessment is glandular neoplasia and the proffered diagnosis is severe dyskaryosis or vice versa: 5 marks

There is no reduction in score for a missed infection nor is there a reduction in score for a negative slide that is assessed as inadequate or vice versa.

Additionally, note should be made of overcalls, ie negative preparations which are assessed as borderline nuclear abnormality or above. Undercalls should also be recorded, and these should be separated into low and high grade categories.

For the purposes of marking, squamous carcinoma is grouped with squamous dyskaryosis.

If more than one box in the morphological features section of the response sheet is ticked, it is assumed that the slide will be scored according to the highest abnormality recorded.

7. SUCCESSFUL COMPLETION OF TRAINING

Medical staff who have successfully completed the training stages up to and including the NHSCSP LBC interim test will be deemed to have completed their training and will be issued with an NHSCSP Certificate of Completion in Liquid Based Cytology Training. The certificate will be specific to the system on which the individual is trained.
8. **LBC SYSTEM CONVERSION COURSE**

Staff converting from one LBC system to another must attend a conversion course at an NHSCSP approved training centre.

The conversion course will last for one day and is a minimum of seven hours.

The training schedule should comprise the following elements:

- basic comparison of technical aspects of the system (including collection technique and technical troubleshooting)
- lecture(s) on comparative morphology with a focus on multiheaded microscopy discussion
- discussion of interesting/difficult cases.

A **Certificate of LBC System Conversion Training** will be issued on completion of the course. Course attendees will be encouraged to participate in a slide self-assessment exercise in their own laboratory.
## Appendix 1: Record of Completion of Training Stages

<table>
<thead>
<tr>
<th>Location and comments</th>
<th>Conversion course</th>
<th>Preparation type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Induction course</td>
<td>Training centre director</td>
<td>Name of centre attended for mandatory conversion course</td>
</tr>
<tr>
<td>Consolidation stage</td>
<td>Medical lead (cytology)</td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX 2: SUGGESTED PROGRAMME FOR THE INDUCTION COURSE

**Day 1**
- **Introduction**
  - Basic principles of LBC
    - *(cover all available commercial systems)*
  - The LBC training programme
  - Using the training log
- **Lecture**
  - Normal cytology and infections
- **Individual microscopy**
  - Normal cytology and infections
    - Test set 1 – 20 known LBC cases
- **Multihead review session**
  - Test set 1
- **Lecture**
  - Squamous and glandular dyskaryosis
- **Individual microscopy**
  - Squamous and glandular dyskaryosis
    - Test set 2 – 20 known LBC cases
- **Multihead review session**
  - Test set 2

Demonstration of inadequate and difficult dyskaryotic cases (20 cases)

**Day 2**
- **Individual microscopy**
  - Test set 3 (20 cases)
- **Multihead review session**
  - Test set 3
- **Individual microscopy**
  - Test set 4 (20 cases)
- **Multihead review session**
  - Test set 4
- **Rapid screening technique**
  - (20 cases)

**Day 3**
- **Individual microscopy**
  - Test set 5 (20 cases)
- **Multihead review session**
  - Test set 5
- **Individual microscopy**
  - Test set 6 (20 cases)
- **Multihead review session**
  - Test set 6

General discussion and review of course

Optional – question and answer session with representative(s) from commercial company(ies)