

**SPECIFICATION FOR MEDICAL LABORATORY SCIENTIST
CERVICAL CYTOLOGY TRAINING
(VOCATIONAL REGISTRATION PROGRAMME IN CERVICAL CYTOLOGY)**

1.0 PREAMBLE

This specification describes the training for Bachelor of Medical Laboratory Science (BMLSc) new graduates beginning a career in cervical cytology to meet the Medical Laboratory Technologists Board (MLTB) Competency Document 2001, *Registration requirements: Competencies learning outcomes and performance criteria* for registration as a Medical Laboratory Scientist.

This specification is also aligned with the Health Practitioners Competence Assurance Act 2003 (HPCA) scope of practice requirements.

The 'trainee' is a BMLSc graduate, or equivalent as agreed with the MLTB, with conditional registration and a requirement for supervision, undertaking the Vocational Registration Programme in Cervical Cytology.¹

The accrediting body is the MLTB, which will be known as the Medical Laboratory Sciences Board (MLSB) from September 2004, under the terms of the HPCA.

The outcome will be a registered Medical Laboratory Scientist with a scope of practice in cytology. Trainees who successfully complete the Vocational Registration Programme in Cervical Cytology (the programme) will receive a Certificate of Competence in Cervical Cytology from the MLSB.²

Terms are defined in the CTA Head Agreement and/or Service Agreement.

2.0 DESCRIPTION OF SERVICES

The programme is designed to support the first year of practice for Bachelor of Medical Scientist (BMLSc) graduates entering the cytology workforce. The focus is on specific vocational training in primary screening and interpretation of cervical smears to a standard of proficiency indicated in the programme logbook and workbook.

Trainees will be eligible for registration by the MLSB and certification in a scope of practice after successful completion of the programme over a minimum of six months full time practical supervised laboratory work experience. The funding basis for this component is a maximum of 12 months.

The programme aims to build on undergraduate theoretical knowledge and extend the graduates' practical abilities while integrating relevant theory with ongoing development of practical skills. The combination of a logbook and workbook allows the trainee and supervisor / trainer to continually monitor progress and achievements at a flexible pace in the laboratory practice setting.

¹ Note that this is subject to the final decisions of the MLSB under the implementation of the HPCA in September 2004.

² Ibid.

Screening competency will be achieved by mastery and evaluation using reference material and screening tests.

2.1 LEARNING ENVIRONMENT

The learning environment for the programme will be provided by cytology laboratories contracted by the National Cervical Screening Programme (NCSP). The laboratories are required to be IANZ accredited and practice in accordance with the *NCSP Operational Policy and Quality Standards (OPQS)*. The MLSB will provide general oversight of the programme, with specific oversight of the learning environment being devolved to the programme coordinator and the planned national cytology training body³.

Monitoring of the programme to be yearly through an annual report and “request for approval” of any programme changes for the next year, to the MLSB.

The laboratories will have the following minimum staffing and facilities for training:

- a supervising registered medical laboratory scientist
- co-opted trainer/s
- designated training time for supervisors and trainers as per A2.1.2 of this specification
- recognised standard text books, access to relevant journals, internet access, and an image database and/or kodachromes
- organised glass slide teaching files with a full range of normal and abnormal examples
- glass slide test sets
- good quality microscope and desk facilities for the student
- suitable study/teaching area
- multiheaded microscope for case review

Trainees will be required to attend tutorials and workshops (combination of in-house and/or external) equating to a minimum participation of 6 days (or 48 hours in total), organised by the supervisor and programme coordinator at intervals through the year. These tutorials and workshops are designed to support screening knowledge and skill development and will comprise theory and multihead microscope slide review and teaching.

³ A cytology-training model for New Zealand is being finalised in collaboration with the Cytology Training Group that includes representatives from the four sector professional bodies – the RCPA, MLSB, NZIMLS and the NZ Society of Cytology.

2.1.1 Clinical Placement

Training will take place in a cytology laboratory, which is contracted to provide a cervical cytology service for the NCSP. The laboratory must employ at least one senior registered cytoscientist who has a minimum of five years full time (or equivalent) cytology experience. Note that this person may be the cytology department head and / or the principal supervisor.

2.1.2 Formal Teaching Programme

General Requirements

The Programme Coordinator will oversee the programme in partnership with the laboratory principal supervisor of the trainee. The logbook and workbook will provide formal standardised guidelines for teaching and learning requirements. They will also provide a training record and evidence of competency in cervical cytology.

The programme coordinator, supervisor and trainee will utilise a variety of teaching and learning approaches. It is expected that teaching and learning approaches will develop over time and include a combination of approved formal external and laboratory based (in house) tuition, as well as some shared collaborative approaches.

These will include:

- student self learning – text books
- student self learning – internet resources
- student centred tutorials
- case based study
- practical laboratory work involving cytopreparatory technique
- practical laboratory work involving microscopy
- glass slide teaching sets
- self evaluation teaching sets
- kodachrome/digital image teaching sets
- test evaluation sets
- multihead microscope review
- presentations by students
- visit to a colposcopy clinic
- review of current literature by students
- use of digital/video equipment in relation to microscopic material
- peer review sessions
- relevant external programmes
- final test set
- distant learning (eg, web based, streamed video)

The learning outcomes, content and assessment are detailed in *Vocational Registration Programme in Cervical Cytology* published by NCSP. These learning outcomes will be mostly assessed in house by practical skill evaluation, however they will include short answer questions that will be marked by the programme coordinator.

Laboratory based training is ongoing and specific hours may be variable. Microscopy training is the major component of the programme, the competent practice of primary screening, assessment and the interpretation of abnormal cell and smear changes. Interactive learning (trainee with supervisor / trainer) will constitute an average 4 hours per week depending on the requirements for multi-head microscope discussion and tuition.

An additional 40 hours of independent study leave for workshop attendance during the first year of vocational training is as an integral part of the programme.

Specific Requirements

The major components of the programme are:

- the screening process
- cytological interpretation of normal and abnormal cervical smears
- reporting of cervical smears
- quality control, quality assurance, and standards associated with cervical cytology
- the histological basis of normal and disease processes of the cervix
- important clinical and epidemiological factors associated with the interpretation and reporting of cervical smears

The programme will have a major emphasis towards samples prepared by the conventional Papanicolaou smear technique. Liquid based cytology may be incorporated for those practitioners employed in a laboratory which processes and/or interprets liquid based samples⁴.

Major Goals and Achievements of the Programme Mastery and Competence

On the satisfactory completion of the programme logbook the trainee will have demonstrated mastery and competency to the following standards:

- Fully proficient in the screening process employed for the primary screening of cervical smears, in order that the smears can be secondary screened by either full or rapid review determined by national standards.

⁴ LBC training would be the responsibility of the employing laboratory in the first instance, pending the development of national standards.

- Accurately detect and identify inflammation and infections in cervical smears.
- Accurately detect atypical/abnormal cell changes in cervical smears.
- Understand the cell criteria and concepts of the progression of squamous lesions (HPV/low grade and high grade SIL, invasive carcinoma), and develop knowledge in order to make informed decisions regarding the grading of squamous cell abnormalities.
- Understand the cell criteria and concepts of glandular lesions (endocervical and endometrial) in order to detect and identify abnormal glandular cell changes in cervical smears.
- Understand the histological basis of normal and abnormal cellular changes encountered in cervical smears.
- Be conversant with current reporting systems and quality control procedures.
- Practise with a high level of professionalism as part of the NCSP and laboratory team.
- Practise with a level of sensitivity to the needs of Maori culture consistent with the cultural context requirements stated on page 1.13 of the NCSP Operational Policy and Quality Standards (OPQS).
- Treat specimens in a manner that is consistent with the requirements of Maori culture described in Standard 5.17 of the NCSP OPQS and requirements on page 5.2 of the NCSP OPQS.

Targets

The following targets must be met as to ensure satisfactory completion of the logbook and Vocational Registration programme:

- Completion of the cytopreparatory section of the logbook.
- Primary screen a minimum of 3000 cervical smears. All of these smears to be fully rescreened by qualified laboratory staff (refer P5.15 NCSP OPQS). Those trainees who have passed their practical placement assessment in a cytology laboratory in their fourth year, will be required to primary screen a minimum of 2500 cervical smears, and all of these smears are to be fully re-screened qualified laboratory staff (refer P5.15 NCSP OPQS).
- Completion of a number of ongoing evaluation test sets to determine screening and interpretation progress.
- Maintain a log of outcomes of all smears primary screened, and correlate these with the final report in order to determine the accuracy of the screen and the interpretation.
- Successfully detect and identify each diagnostic encounter up to 5 times at the discretion of the supervisor.
- Correlate and post review the histology associated with abnormal cervical smears to aid individual learning.
- Following the completion of the primary screen target, and the ongoing evaluation tests, and when deemed competent by the supervisor, sit a practical screening test (final test set) comprising

normal and abnormal cervical smears in order to assess screening proficiency and the interpretation of abnormal cell changes. 80% mastery is required with the following conditions:

- a final test set of 100 smears to be screened within a 3 working day time frame
- identify and interpret infections
- no false negative results for high grade and invasive lesions
- a diagnostic shift of +/- 1 for squamous lesions including hpv
- recognition of glandular lesions as abnormal
- participate in and record tutorials, educational activities, clinicopath and quality assurance (QA) sessions, and quality improvement programmes

Notes:

1. If the student is encountering difficulties in achieving mastery, the programme co-ordinator must be available for mentoring, time frame to achieve competency may be extended at the discretion of the supervisor.
2. Continue primary screening with full rescreen and further ongoing evaluation test sets if the final test set is not satisfactorily completed, followed by a further final test set at the discretion of the supervisor, but within 6 months (maximum duration of programme not to exceed 12 months).
3. Clinical Training Agency's funding for the programme is for a maximum of 12 months.
4. Test sets may only be conventional cervical smears.

2.1.3 Access to Resources

The trainee must have access to the following resources:

- recognised standard text books, access to relevant journals, internet access, and an image database and/or kodachromes
- organised glass slide teaching files with a full range of normal and abnormal examples
- glass slide test sets
- good quality microscope and desk facilities for the student
- suitable study/teaching area
- multi-headed microscope for case review

Providers of training must demonstrate trainee access or availability to these resources.

2.2 SUPERVISION

Supervision is required to meet the NCSP OPQS. It is also necessary to ensure quality of training and the professional safety of the trainee. All slides screened by the trainee will be rescreened prior to sign out.

The trainee will have one designated principal supervisor plus a further relieving supervisor to cover absence or leave. The supervisor may supervise two or more trainees, with the support of designated trainers.

Supervision will be both direct and indirect during the various teaching and learning activities of the programme in the laboratory setting. The designated principal supervisor, delegated relieving supervisor and / or co-opted trainers will provide supervision as required by the trainee.

Direct contact training should not exceed a ratio of 1 tutor to 3 trainees

2.2.1 Clinical Supervision

Clinical supervision will be provided or delegated by an educator team leader/principal supervisor with the following qualifications and experience:

- New Zealand BMLSc degree or equivalent with cytology major
- state registration with the MLSB (or its predecessor the MLTB)
- minimum of 5 years full time equivalent post state registration (with the MLSB or its predecessor the MLTB) experience in cytology
- significant cervical cytology experience
- proven involvement with training and education of cytologists
- demonstrated leadership ability
- actively participating in an approved continuing professional development programme
- a scope of practice in cytology
- proven ongoing competence in cytology

It is also desirable that the educator team leader / principal supervisor have or be completing:

- Post graduate qualification(s) in medical laboratory science and or laboratory management.
- Professional qualification(s) in medical laboratory science and or laboratory management.
- Adult education / supervision training / qualification.

The principal supervisor will:

- Plan and provide experiences that match existing trainee skill level and identified need.
- Review training objectives and needs with the trainee.
- Discuss, critically review and question clinical decisions made by both the trainee and trainer.
- Act as a role model.
- Give clear, timely and constructive feedback on progress.
- Assess trainee's progress and skill development against the defined objectives.

- Report as required to the programme coordinator.

General Requirements

The supervisor(s) is responsible for the day-to-day supervision of the trainee for the period up to and gaining an Annual Practising Certificate. This will include determining tasks and duties for the trainee, ensuring the logbook requirements are being maintained in a timely manner, and provide tutorials when required. The supervisor / trainer(s) will provide feedback / advice to the principal supervisor when required, particularly if any difficulties are encountered by the trainee with any aspect of the programme. Supervision will be continuous until full registration as a medical laboratory scientist is achieved ie, granted an Annual Practising Certificate (APC) by the MLSB with a scope of practice in cytology. All screening will be supervised to comply with Standard 508 of the NCSP OPQS (the Standards):

Slides read by less experienced staff: Any slides read by less experienced staff during training and prior to gaining qualifications must be fully rescreened and reported by a cytologist with experience and qualifications as defined in the NCSP OPQS.

2.2.2 Educational supervision

Educational supervision will be carried out by the programme coordinator, whose responsibilities will include the oversight / organisation and delivery of formal workshops and tutorials.

The programme coordinator will liaise with the supervisor to provide / ensure:

- planning of the training programme
- integration of theory and practice.
- educational guidance and career guidance.
- facilitation of learning.
- monitoring progress and assessment against objective-based standards.
- constructive feedback.
- slide test set preparation.
- a mechanism to ensure the vocational trainee gains an appreciation of the wider aspects of vocational training.
- an annual report to the MLSB

2.2.3 Programme Coordination

The programme co-ordinator will have a minimum of the following qualifications, experience and attributes:

- requirements as per principal supervisor

- experience in adult education / training, course design and implementation
- proven communication skills both within the cytology sector and the NSU / NCSP
- extensive cytology experience
- demonstrated ongoing involvement in their own further education, training and professional development

Specific responsibilities of the programme co-ordinator:

- organisation and administration
- advice to trainees on requirements
- assessment of trainees and collation of supervisors assessments
- evaluation of placement
- liaison with service management
- liaison with other training co-ordinators in other centres overseas
- reporting and communication with the clinical training agency (CTA)
- advocacy for training and trainees (with professional body and service provider)
- accountability
- ensure trainees are aware of cultural support grants available from the Clinical Training Agency (CTA)
- apply to the CTA on behalf of cultural support grants where appropriate

2.4 EXPECTED OUTCOMES

2.4.1 TRAINEE OUTCOMES

Registration as a Medical Laboratory Scientist with a scope of practise in cytology, able to work unsupervised, with a Certificate of Competence in Cervical Cytology.⁵

2.4.2 CLIENT/ATTAINMENT OF SERVICE OUTCOMES

- Improved support and delivery of national cytology laboratory orientation, education and vocational training processes.
- Ensure that cytology laboratories have BMLSc graduate trainees with the capacity and capability to provide high quality and safe laboratory services to the women of New Zealand.
- Evidence of trainee competency for employing cytology laboratories, the NCSP and the MLSB.

⁵ Subject to the final implementation decisions by the MLSB under HPCA (2003).

3.0 ELIGIBILITY

3.1 TRAINEE ELIGIBILITY

1. A Bachelor of Medical Laboratory Science graduate employed in a cytology laboratory contracted by the NCSP.

OR

2. A scientist with equivalent qualifications approved by the MLSB on a case-by-case basis as suitable to complete the programme.

AND

3. A New Zealand resident

3.2 PROVIDER ELIGIBILITY

- MLSB recognition and approval as per the HPCA.
- Training Laboratories contracted to the NCSP

4.0 LOCATION AND SETTING

NCSP contracted cytology laboratories, either a District Health Board (DHB) laboratory or a Community Laboratory.

Any secondment of a trainee to another location for further training experience must comply with the relevant CTA contract and comply with the specification of the VRPCC.

5.0 ASSOCIATED LINKAGES

- Professional associations – MLSB, NZ Institute of Medical Laboratory Science (NZIMLS) and the NZ Society of Cytology (NZSC)
- Laboratory Accreditation body - IANZ
- Universities – Otago, Massey and AUT
- Royal College of Pathologists of Australasia (RCPA)

6.0 PURCHASE UNIT AND REPORTING UNIT

A training unit trainee formally enrolled in the training programme. Part time trainees will be funded on a pro-rata training unit basis.

7.0 QUALITY STANDARDS: PROGRAMME SPECIFIC

*This section should be read in conjunction with Schedule 1 Part 3 of the CTA Head Agreement, which specifies **generic** quality standards requirements for all programmes provided under the contract.*

NCSP OPQS: Standards 506, 507 and 508.

8.0 REPORTING REQUIREMENTS: PROGRAMME SPECIFIC

*This section should be read in conjunction with Schedule 1 Part 1 of the CTA Head Agreement, which specifies **generic** reporting requirements for all programmes provided under the contract*

An annual report by the programme coordinator to the MLSB, and copied to the national cytology training body, the NCSP and the CTA.