

ARTP Best Practice for Work-based Training of Undergraduate Clinical Physiologists (Respiratory)

In order that students are supported appropriately in the workplace Registration Council for Clinical Physiology (RCCP) produced a set of training guidelines that have proved helpful to some departments. However, experience has shown that these need to be supplemented with recommendations on the planning of the undergraduate experience and the student's role whilst training. This document sets out the Association for Respiratory Physiology and Technology Physiology (ARTP) recommendations for progression of training during the current 4-year academic programme.

It is hard to put definitive times to the process as service commitment and individual student learning style will influence this. Instead, the start and end points have been given for each year.

Year 1

General hospital induction

Departmental induction

Observation of ALL investigations¹ - this should be ongoing through all 4 years

Outpatient spirometry with direct supervision^{2,3}

Outpatient spirometry with indirect supervision^{2,4}

Administration of short-acting bronchodilator with direct supervision^{2,3}

Collect evidence related to first year specialist module⁵

Lung volume measurement using 1 method with direct supervision³

Lung volume measurement using 1 method with indirect supervision⁴

Gas transfer measurement with direct supervision³

Gas transfer measurement with indirect supervision⁴

Spirometry on in-patients with direct supervision⁶

Start observations of non-assessed investigations

Assessment Activity:

Completion of Professional Practice Portfolio

Spirometry assessments

Bronchodilator response assessments

Lung volume assessments

Gas transfer test assessments

Presentation of evidence related to first year specialist module

Year 2

Mandatory training updates

Spirometry on both in and out patients indirectly supervised^{2,4}

Administration of short-acting bronchodilator with indirect supervision^{2,4}

Lung volume measurement using 1 method with indirect supervision^{2,4}

Gas transfer measurement with indirect supervision^{2,4}

Collect evidence related to second year specialist module

Measurement of resting pulse oximetry with direct supervision^{2,3}

Assisting role in field exercise testing (Non-lead role)⁷
Continue observations of non-assessed investigations

Back to supervised full lung function tests for at least 2 weeks at the end to check practical skills before the ARTP undergraduate Assessment Part I

Assessment Activity:

Completion of Professional Practice Portfolio
Assignments relating to Clinical practice and specialist modules
ARTP Undergraduate Assessment Part I

NB Need to ensure student and supervisor has time to perform required number of practical assessments

Year 3

Mandatory training updates

Administration of bronchodilator using a range of delivery methods with direct supervision^{2, 3}

Administration of bronchodilator using a range of delivery methods with indirect supervision^{3, 4}

Field exercise tests (inc. exercise tolerance and symptom severity)⁷

Assisting role in field exercise tests (Inc exercise tolerance and symptom severity)⁸

Measurement of resting pulse oximetry with indirect supervision^{3, 4}

Maximal inspiratory and expiratory mouth pressures; sniff pressures and supine vital capacity with direct supervision^{2, 3}

Observe overnight oximetry screening in patients⁹

Observe the measurement of airway resistance and conductance using body plethysmography.⁹

Observe the response to a test of exercise-induced asthma using both cycle ergometer and treadmill modalities.⁹

Observe measurement of lung volumes by body plethysmography, nitrogen washout and helium dilution.⁹

Observe the measurement of skin prick allergy testing.⁹

Observe the measurement of transcutaneous PO₂ and/or PCO₂.⁹

Assessment Activity:

Assignments relating to Clinical practice and specialist modules
Preparatory work for final year research project including identification of area of study, literature search, formulation of research question and data collection

Bronchodilator assessments

Pulse oximetry assessments

Field Exercise assessments

Respiratory Muscle assessments

Reflective activity

Year 4

Mandatory training updates

Administration of bronchodilator using a range of delivery methods with indirect supervision^{3,4}

Leading role in a range of field exercise tests (Inc exercise tolerance and symptom severity)⁸

Measurement of resting pulse oximetry with indirect supervision^{3,4}

Maximal inspiratory and expiratory mouth pressures; sniff pressures and supine vital capacity with indirect supervision^{3,4}

Observe and understand the principles of overnight oximetry screening in patients including interpretation and limitations of overnight sleep screening using pulse oximetry and recording of snoring⁹

Observe and understand the principles of the measurement of airway resistance and conductance using body plethysmography.⁹

Observe and understand the principles of the normal and abnormal response to a test of exercise-induced asthma using both cycle ergometer and treadmill modalities.⁹

Observe pulmonary rehabilitation and exercise prescription.

Observe and understand the principles of the measurement of lung volumes by body plethysmography, nitrogen washout and helium dilution.⁹

Observe and understand the principles of the measurement of skin prick allergy testing.⁹

Observe alternative tests for assessment of allergic status (e.g. RAST, patch testing)

Observe and understand the principles of the measurement and interpretation of bronchial challenge testing including Yan, dosimeter and tidal breathing methods.⁹

Observe and understand the principles of the measurement of transcutaneous PO₂ and/or PCO₂ to include principles of measurement and limitations, applications in sleep, exercise, LTOT and non-invasive ventilation.⁹

Assessment Activity:

Completion of Professional Practice Portfolio

Final year research project including data collection, statistical analysis and write up.

ARTP Undergraduate Assessment Part II

¹ At an early stage in his/her career, the student should be given the opportunity to observe ALL Respiratory Physiology investigations covered by the Record of Clinical Practice. If required, arrangements to other centres should be arranged if and where necessary.

² Those involved in training in of Respiratory Physiology techniques must hold a relevant qualification (ARTP Professional Body exam parts I and II or equivalent) maintain competency and keeping up to date with current practice and CPD

³ DIRECT supervision means that the student works with a qualified member of staff at all times

⁴ INDIRECT supervision is interpreted to mean that the student works alone with a qualified member of staff IMMEDIATELY available if needed

⁵ The knowledge underpinning spirometry, lung volumes and gas transfer testing is delivered over years 1 & 2 of the degree programme. Collection and judgement of evidence should relate to this delivery

⁶ A student in the first year of the programme is unlikely to have much life experience dealing with the sick. It is important that some sensitivity and support is shown when he/she first visits wards

⁷ The student's presence during field exercise testing would initially be in addition to the qualified members of staff running the test. When deemed able, the student would perform the test as assistant to the practitioner leading the test

⁸ The Record of Clinical Practice requires the student to be assessed leading field exercise testing in the presence of a practitioner who is qualified to lead the test

⁹ These are non-assessed components of the Clinical Physiology degree syllabus. However, demonstration of the student's underpinning knowledge and observational evidence including clinical data are required in the IRCP