# Spirometry Learning Australia

# **Course Development & Implementation**

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## Spirometry training is the principal activity of Spirometry Learning Australia

Spirometry is recommended as an indispensable tool to aid in the diagnosis and monitoring of chronic airways disease  and has been shown to have a considerable impact on the rate of diagnosis  and clinical management of patients with COPD and asthma at the point of patient care (POC).

All national and international healthcare guidelines endorse this as best practice.

Research has shown that point-of-care (POC) spirometry testing, performed at the bedside of hospital patients or in healthcare clinics, is frequently of poor quality and unusable in the clinical setting. Traditional training methods have often proved unsuccessful.

It became important to promote confidence in its use and to ensure high quality spirometry testing in POC services such as primary care, outpatient departments and hospital wards.

In 2013, the Centre of Nursing and Midwifery Education & Research (CNMER), the Southern Adelaide Local Health Network (SALHN) and the Spirometry Learning Module Development Group, consisting of two SALHN Senior Respiratory Scientists, a SALHN Respiratory Nurse and a GP from Southern Adelaide, in conjunction with national and international respiratory experts, developed a novel model of spirometry training to address the existing shortfalls in POC spirometry training.

The Spirometry Learning Module (SLM) offers an interactive training opportunity that enables consistently high standard of operator performance resulting in accurate clinical information. This improvement facilitates best practice which ultimately improves patient outcomes.

Since the introduction of the SLM in 2013, over 200 health care professionals have received spirometry education and training including groups hosted through peak respiratory bodies such as Asthma Australia. These health care professionals include nurses, clinicians, scientists, health workers and healthcare providers who conduct spirometry testing from tertiary health, general practice and industrial workplaces in both metropolitan and regional, rural and remote settings,

The SLM approach, combining on-line learning with interactive resources supported by a face-to-face workshop and an integrated approach with respiratory scientists, proved to be effective in participants who successfully completed the SLM with significant improvements in knowledge of spirometry test quality perceived confidence and experience of participants in spirometry measurement, and perceived knowledge of spirometry measurement and interpretation. These positive effects persisted in participants who could be followed up to 12 months. (Effects of the Spirometry Learning Module on the knowledge, confidence, and experience of spirometry operators; Parsons R, Schembri D, Hancock K et al December 2019npj Primary Care Respiratory Medicine 29(1))

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The SLM suite of programs resides on a MOODLE Learning Management System (LMS). The SLM online resources include interactive presentations, filmed segments, questionnaires, assessments, quizzes, Frequently-Asked-Questions, useful links and information handouts. These high-quality resources have been developed with the skills and expertise of SALHN CNMER and SALHN Medical Illustration and Media are currently being considered for use by peak respiratory organisations such as Asthma Australia and National Asthma Council.

As part of the SLM resources, a SLM Spirometry Assessment Tool (SLM-SAT) was developed. Participants are expected to undertake spirometry testing on patients in their individual clinical setting, self-assess each patient spirometry test and submit a completed SLM-SAT to an experienced respiratory scientist for periodic review with online feedback provided. The SLM-SAT provides a standardised approach to the assessment of spirometry test quality and evaluation of spirometry operator competency. Currently there is no recognised, standardised assessment of spirometry test quality and literature searches suggest that this form of self-assessment confirmed through respiratory scientist feedback, has not previously been used in spirometry training. The recognition of poor test quality and non-reporting of unacceptable measurements is seen as central to ensuring quality-assured spirometry measurements.


The SLM courses and resources are freely available to all SALHN staff who conduct spirometry testing via the Southern Adelaide Health Education website.
In 2019, CNMER developed the Southern Adelaide Health (SAH) Learn community MOODLE LMS website to allow SALHN created training programs and resources to be delivered externally and the SLM suite of programs are currently hosted on this website.
Throughout 2019 and 2020 the SLM was reviewed and updated to SLMV2 and additional programs developed to become a suite of spirometry training and learning courses and resources.
In 2019 Spirometry Learning Australia (SLA) was established to enable access of the SLM courses to the wider health professional community facilitated by a well-established general practice, Chandlers Hill Surgery, with a long standing respiratory medicine interest and credibility in training, research and patient management.
The SALHN community-based MOODLE Learning Management System SAH Learn currently hosts the SLA training programs.
Eventbrite, an event management and ticketing website, is used to manage participants and to facilitate course registration and payment of fees.

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Spirometry Learning Australia's flagship course, 'Spirometry Learning Module – Competency Assessment' (SLM – CA) course continues to be a comprehensive training program for health professionals who wish to achieve competency in point-of-care (POC) spirometry testing. It is designed to provide health professionals with the expertise, practical skills and confidence necessary to obtain quality assured POC spirometry measurements and reliably interpret test results. The SLM-CA is compliant with national and international spirometry standards (ATS/ERS).

In addition, SLM-Educational Resources for Health Professionals has been developed to support clinicians and healthcare professionals who interpret spirometry measurements but do not conduct spirometry testing.
Spirometry Learning Australia suite of resources include:
Spirometry Learning Australia – Competency Assessment
Spirometry Learning Australia – Refresher Course
Spirometry Learning Australia – Competency Assessment – Coal Mine Workers
Spirometry Learning Australia – Educational Resources for Health Professionals

## Spirometry Learning Module for Coal Mine Workers

SLA's Spirometry Learning Module-Competency Assessment course has been adapted for training health care professionals conducting spirometry testing as part of the Coal Mine Workers health surveillance program (Spirometry Learning Module for Coal Mine Workers). It is designed to provide health professionals with the expertise, practical skills and confidence necessary to obtain quality assured POC spirometry measurements and reliably interpret test results.
It provides comprehensive training in the application, measurement and interpretation of expiratory spirometry and incorporates a competency assessment tool.
The SLM-CMW is compliant with national and international spirometry standards (ATS/ERS) and meets the TSANZ Standards for Spirometry Training Courses.
Spirometry Learning Australia meets best practice quality standards relating to their organisation to ensure the delivery of quality training and assessment services.

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Participants must complete 5-6 hours of on-line pre learning modules, including an assessment quiz, which is hosted on the Southern Adelaide Local Health Network (SALHN) website's learning management system. The web-based components are self-paced and include presentations, video segments and interactive case-based resources. Learning outcomes are objectively assessed.

Participants must undertake the 6-hour face-to-face or virtual interactive workshop which includes hands-on components to allow participants to apply their new knowledge in a practical setting.

Attendees must then complete the post workshop spirometry self-assessment modules via the SALHN learning management platform. Ten (10) accurate spirometry assessments are required to be submitted for senior respiratory scientist review.

The Spirometry Assessment Tool has been designed to standardise self-assessment and simplify reviewer feedback.

Workshops are presented by trainers (engaged by Spirometry Learning Australia as an employee or a contractor) with CRFS qualification and evidence of 5 years' experience (through CV or letter of employment) OR Level 7 of the Australian Qualifications Framework which included a major in science (e.g. Bachelor or Science) AND Graduate qualification (e.g. Graduate Certificate related to Respiratory Science) AND evidence of 5 years' experience (through CV or letter of employment)

SLA's on-line educational resources are used by other organisations such as National Asthma Council Australia.

## SLA Staff

SLA is a partnership of two experienced respiratory health care professionals who form the SLM Executive.

Dr Kerry Hancock is a specialist General Practitioner with an extensive respiratory background who also acts as the SLA Business Manager.

Richard Parsons is a senior respiratory scientist who is the site supervisor and Quality Officer for the SALHN Flinders Medical Centre Respiratory Function Laboratory and acts as the SLA Program Manager.

Both Kerry and Richard share presenting duties for all webinars and Practical Skills Workshops.

The original Spirometry Development Group have transitioned to the SLA Advisory Council whose members include a Principal Respiratory Scientist, a Nurse Consultant and the Chandlers Hill Surgery Business & Practice Manager.

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