



Australian Government

HLTHPS011 Measure spirometry

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Modification History

Release	Comments
1	This unit of competency was first released in HLT Health Release 10.0.

Application

This unit describes the skills and knowledge required to prepare an individual for spirometry, complete the spirometry test and to provide a report as an aid to the diagnosis and management of ventilatory impairment.

This unit applies to any health worker who takes spirometry measurements. Spirometry measurement is commonly conducted in hospitals, respiratory physician's rooms, general practitioner (GP) rooms, pharmacies and pathology collection centres.

The skills in this unit must be applied in accordance with current Commonwealth and State/Territory legislation, Australian/New Zealand standards and industry codes of practice

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite unit(s)

No pre-requisite units

Competency field(s)

N/A

Unit sector(s)

Pathology

Elements and Performance Criteria

Element	Performance criteria
<i>Elements define the essential outcomes</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element</i>
1. Prepare spirometer and materials for use	1.1 Prepare spirometer equipment in accordance with manufacturer specifications

2. Prepare individual for procedure	2.1 Greet individual courteously and identify self 2.2 Identify individual according to organisational procedures 2.3 Obtain, read and record individual's information according to organisational-procedures 2.4 Identify and respond to contraindications for performing spirometry within scope of own job role 2.5 Clarify information with requesting health professional 2.6 Take accurate measurements from the individual, consider other inputs and calculate reference values from established value sets 2.7 Position individual to ensure comfort and safety of individual and self, according to test requirements
3. Perform spirometry	3.1 Prepare equipment to commence recording and record additional information 3.2 Coach individual through procedure with the provision of continuous instruction, encouragement and reassurance 3.3 Observe individual throughout the procedure for ability to continue 3.4 Identify recording as technically correct 3.5 Provide individual with feedback on performance 3.6 Repeat spirometry as necessary to comply with current industry standards 3.7 Make technically acceptable measurements according to current industry standards 3.8 Select indices for report according to current industry standards 3.9 Identify the need for administration of a bronchodilator according to current industry standards and medical officer request 3.10 Allow sufficient time for peak effect from bronchodilator and repeat spirometry 3.11 Identify and respond to clinical emergencies according to organisational procedures
4. Complete spirometry measurement	4.1 Assist individual as required on completion of procedure 4.2 Review follow up arrangements with individual 4.3 Respond to the individual's questions

	4.4 Dispose of waste and clean materials according to organisational procedures, and infection control guidelines 4.5 Clean, restock and store equipment according to manufacture specifications 4.6 Complete report and provide a provisional interpretation of results and forward to physician for final interpretation 4.7 Forward report and interpretation to requesting medical officer 4.8 Enter details of individual and test completed on to database and/or hospital information system
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Foundation skills

The foundation skills essential to performance of this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

Skills	Description
Oral communications skills to:	interact with individual using some specialised vocabulary.
Writing skills to:	complete familiar and unfamiliar documentation including reports.
Reading skills to:	interpret routine information in individual's records, technical and procedural documents, infection control guidelines.
Numeracy skills to:	take routine measurements.
Problem solving skills to:	interpret routine test results and respond to non-routine emergency situations.
Digital skills to:	routinely forward test results to requesting medical officer.

Range of conditions

N/A

Assessment Requirements for HLTHPS011 Measure spirometry

Performance Evidence

The candidate must show evidence of the ability to complete tasks outlined in elements and performance criteria of this unit, manage tasks and manage contingencies in the context of the job role.

There must be evidence that the candidate has:

- followed established technical, infection control and safety procedures to produce spirometry measurements for at least 3 different individuals that accurately measures the maximal expiratory ventilatory capacity, including:
 - at least 1 spirometry measurement in a simulated environment
 - at least 2 spirometry measurements on at least 2 individuals in the workplace or simulated work environment

Knowledge Evidence

The candidate must be able to demonstrate essential knowledge required to effectively complete tasks outlined in elements and performance criteria of this unit, manage tasks and manage contingencies in the context of the work role.

This includes knowledge of:

- purpose, principles and protocols of spirometry
- legal and ethical considerations for spirometry, including:
 - duty of care
 - informed consent
 - records management
 - privacy, confidentiality and disclosure
 - industry standards
 - work role boundaries – responsibilities and limitations
- basic pharmacology related to respiratory function relevant for spirometry measurement
- anatomy and physiology relevant for understanding and conducting spirometry
- set up, operation and routine maintenance of spirometry equipment
- patterns of normal/abnormal results related to both respiratory disease and technical factors relevant for spirometry measurement
- features of technically correct recordings, including:
 - no hesitation at start
 - evidence of maximal effort

- no cough within first second
 - end of test criteria met
 - reproducibility
- mathematical and statistical information relevant for spirometry measurement
- reference values required for spirometry measurement and the factors that contribute to calculation of individual's reference values and how to incorporate these, including:
 - weight
 - height
 - age
 - gender
 - race
- how to convert volumes from atmospheric temperature and pressure (ATP) to body temperature and pressure saturated (BTPS)
- common causes of individual non-compliance in spirometry and the appropriate remedies
- complications and contraindications for individuals undergoing spirometry measurement, and how to respond
- emergency procedures specific to spirometry instrument quality control procedures, including:
 - calibration
 - biological control measures
- relevance of environmental factors in spirometry, including temperature and humidity
- features and functions of respiratory therapy products

Assessment Conditions

All aspects of the performance evidence must be demonstrated using simulation prior to demonstration in a clinical workplace setting or an environment that reflects a real workplace.

The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - spirometer
 - individual's information
 - documented procedures for candidate to follow
- modelling of industry operating conditions, including integration of situations requiring problem solving

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors and must hold this unit or demonstrate equivalent skills and knowledge to that contained within this unit.

Mandatory Workplace Requirements

Assessment of performance evidence may be in a workplace setting or an environment that accurately represents a real workplace.

Unit Mapping Information

Previous Code and Title	Equivalence	Comments
HLTHPS004 Measure spirometry	Equivalent	Minor changes to performance criteria, clarification of performance evidence and assessment conditions. Foundation skills made explicit.

Links

Companion volumes, including implementation guides, are found on the national training register - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>.