Pulmonary Function Technologist Series

Code No.	Class Title	Occ. Area	Prob. Period	Class Spec Effective Date	Exam Effective Date	Last Action
4592	Pulmonary Function Technologist I	02 Semi-Professional	~~6~~ 12 mo.	~~01/15/2017~~	~~01/15/2017~~	~~Add~~ Revise
4593	Pulmonary Function Technologist II	02 Semi-Professional	6 mo.	~~01/15/2017~~	~~01/15/2017~~	~~Add~~ Revise
4594	Pulmonary Function Technologist III	02 Semi-Professional	6 mo.	~~01/15/2017~~	~~01/15/2017~~	~~Add~~ Revise

Promotional Line: 226

Series Narrative

Employees in positions allocated to this series conduct physiologic and diagnostic testing of lung functions to provide physicians with data to detect the presence of lung disease; ~~e.g., spirometry, diffusion testing, lung volumes, airway resistance, respiratory muscle forces, bronchial provocation testing~~; diagnose the type of pathologic process; assess functional status, level of disability, and response to therapy; and also determine the prognosis of patients with pulmonary disease. These tests involve direct interaction with the patient, require the use of specialized testing equipment, and require making qualitative assessments of the presence and nature of abnormal results. They communicate the test results to the physician in charge for a decision.

Pulmonary Function Technologists typically:

1. Explain the testing procedures to the patient
2. Have the patient perform multiple tests of ventilatory function
3. Operate, monitor, and obtain data from a variety of equipment used in pulmonary testing
4. Assist the physician in performance of more difficult procedures,
5. Responsible for maintaining and ordering supplies; maintaining equipment; training and directing ~~lower~~ lower-level technologists, medical students, and pulmonary trainees.

DESCRIPTIONS OF LEVELS OF WORK

Level I: Pulmonary Function Technologist ~~I~~ 1 **4592**

Employees in positions allocated to this level conduct routine pulmonary tests, working under direct supervision from a ~~higher~~ higher-level technologist and/or physician.

~~A(n) Pulmonary Function Technologist I typically~~ Illustrative examples of work:

1. Calibrates, operates, records, and obtains data from ~~such~~ equipment ~~as water spirometer, carbon monoxide and helium gas analyzers and blood gas analyzer, and medical computer~~.

2. Explains and demonstrates to patients the nature of the test they will be performing;

~~2.~~3. Positions and observes patient during the actual test.

~~3.~~4. Conducts and repeats, if necessary, such tests as--

   a. Measurement of lung volumes by a dilutional gas technique
   b. Measurement of lung diffusion capacity by the single breath carbon monoxide technique
   c. Measurement of forced vital capacity and expiratory flow rates
   d. Measurement of the maximum voluntary ventilation
   e. Measurement of thoracic gas volume and airway resistance by the body
   f. Plethysmograph method
   g. Operation of blood gas analyzer to analyze arterial blood as well as expired air;

~~4.~~5. Calculates the results of the tests from the data collected.

~~5.~~6. Compiles and records information on patients in patients' files and log books.

~~6.~~7. Removes, disassembles, cleans, and sterilizes medical equipment and materials when tests are completed.

~~7.~~8. Assists ~~higher-level~~ higher-level technicians in performing more advanced tests of pulmonary function.

~~8.~~9. Learns to perform newly developed tests of pulmonary functions when they become clinically applicable.

~~9.~~10. Initiates, or aids, if directed by medical personnel, in resuscitation proceedings or other necessary emergency procedures~~; is trained to become certified in Cardiac Pulmonary Resuscitation (CPR).~~

~~10.~~11. Performs other related duties as assigned.

Level II: Pulmonary Function Technologist ~~II~~ 2 **4593**

Employees in positions allocated to this level under general supervision perform advanced tests of pulmonary function specifically requested by pulmonary physicians. Some of the advanced tests are performed under direct supervision of the medical personnel. They may also be trained to assist physicians in performing clinical procedures, such as fiberbronchoscopy.

~~A(n) Pulmonary Function Technologist II typically -~~ Illustrative examples of work:

1. Calibrates, operates, records and obtains data from such instruments as: oxygen and carbon dioxide gas analyzers, bicycle ergometers & treadmills, pressures ~~&~~ and flow transducers, electromyogram amplifiers, and electroencephalogram.
2. Is trained to become certified in the procedures of arterial puncture and drawing of arterial blood for blood gas analysis.
3. Performs or assists the physician in conducting advanced tests of respiratory functions:
    a. Prepares the necessary supplies, such as needles, syringes, and local anesthetics
    b. Assists the physician in preparing the patient
    c. Conducts such tests as:
        i. Exercise studies on the bicycle ergometer or treadmill
        ii. Pulmonary gas exchange and shunt studies
        iii. Lung compliance study
        iv. Regulation of ventilation
        v. Sleep studies
    d. Alerts the physician to patient difficulties and assists the physician in the event of complications.
    e. Tabulates and calculates, or assists in tabulation and calculation of, the data from tests for interpretation by the physician.
    f. May be trained to assist the pulmonary physician in performing diagnostic and therapeutic procedures, such as fiberoptic bronchoscopy, thoracentesis, and pleural biopsy:
        1. Prepares and maintains for use supplies and equipment
        2. Arranges for transport of, or transports, patient to procedure room
        3. Checks chart for completion of preliminary procedures and availability of necessary information
        4. Prepares patient for procedure, such as administering topical local anesthesia, positioning patient, and explaining procedure
        5. Assists physician during procedure, such as during a bronchoscopy
        6. Observes ECG monitor; notifies physicians of abnormalities; assists in any emergency resuscitative efforts
        7. Is responsible for preparing material obtained from these procedures for analysis by laboratories

8. Keeps log book and procedure book up to date by following up on all laboratory reports, recording results, and informing physician of any significant findings
9. ~~Is responsible for~~ Ensures the physician's operative report ~~getting~~ is included in the clinical chart and ~~acquiring~~ acquires physician's signature for records and forms
10. Keeps record of clinical consults, procedures, and medical service plan records
11. Arranges with suppliers for use of new supplies

g. Keeps equipment and areas of procedure cleaned; makes incidental repairs, adjustments, and replacements of equipment; reports to superior defects in equipment and when major repairs or replacement of parts are necessary; returns supplies to central supply when appropriate.

h. Conducts tests performed by ~~lower~~ lower-level technologists as assigned.

i. Performs duties at the lower level of this series.

j. Performs related duties as assigned.

Level III: Pulmonary Function Technologist ~~III~~ 3 **4594**

Employees in positions allocated to this level, under administrative direction serve as the technical supervisor of a pulmonary function laboratory. In conjunction with the supervising physician, these technologists select, train, direct, and evaluate ~~lower~~ lower-level technologists. They have administrative responsibilities for patient scheduling, patient billing, supply, and technical responsibilities for equipment maintenance, troubleshooting malfunctions, initiating minor repairs, and purchasing supplies and equipment. They may also conduct research studies and participate~~s~~ in the teaching of pulmonary function testing to medical and nursing students and house staff.

~~A(n) Pulmonary Function Technologist III typically~~ Illustrative examples of work:

1. Arranges schedules of patients; determines patient priority on day of testing.
2. Assesses patients' overall condition and ability to perform tests; if physician not present, determines the test to be done.
3. Assigns, directs, schedules, and evaluates the work of ~~lower~~ lower-level technologists.
4. Performs complex pulmonary testing procedures as needed.
5. Arranges for technologists to be trained, certified, and ~~rectified~~ recertified in ~~cardiac pulmonary~~ cardiopulmonary resuscitation and trains ~~lower~~ lower-level technicians in the use of newly acquired equipment.
6. Prepares daily work reports that show the number and type of tests made.

7. Handles billing procedures for hospital payments~~,~~ and medical service plans ~~including Medicare, public aid, and private insurance~~; ~~is responsible for~~ ensures billing ~~papers being~~ is sent to proper accounting agencies of the hospital.
8. Keeps laboratory accounts of billing and summarizes monthly.
9. Monitors supplies for the laboratory; is responsible for stock level, storage, utilization, and ordering of supplies.
10. Responsible for equipment maintenance; troubleshoots malfunctions of bioinstrumentation equipment and computers and makes repairs or contacts various manufacturers for repair, overhauling, and replacement of equipment; participates in decisions on purchase of new equipment; maintains protocol for troubleshooting equipment.
11. Maintains and updates protocols for all testing procedures, which includes procedures for calibrating operations, calculations of data, and for quality control testing of all procedures.
12. Participates in the formal and in-service programs for training of physicians and paramedical personnel:
    a. Demonstrates specific techniques of pulmonary function testing;
    b. Develops training materials for classroom instruction in the operation and maintenance of medical equipment;
13. ~~Is responsible for maintaining and executing~~ Maintains and executes safety regulations of the laboratory.
14. Assists in planning, development, and evaluation of new methods, procedures and techniques of pulmonary function testing.
15. Takes part in clinical investigations conducted by pulmonary physicians that utilized procedures performed in the laboratory, such as assisting in developing research protocol and performing testing procedures (including those not routine to the laboratory but part of the research project)
16. Performs duties at the lower levels of this series.
17. Performs related duties as assigned.

MINIMUM ACCEPTABLE QUALIFICATIONS

Level 1: Pulmonary Function Technologist ~~I~~ 1 **4592**

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1. Associate~~s~~ degree in Respiratory Therapy from an accredited program~~,~~.

- AND -

2. Certified Respiratory Therapist (CRT) or Registered Respiratory Therapist (RRT) credentialed by the National Board for Respiratory Care (NBRC), ~~meets the requirements, but must obtain the CPFT certification within 6 months of the initial training period.~~

- AND -

3. Current Basic Life Support (BLS) certification, ~~.~~

- AND -

4. Valid Respiratory Care Practitioner (RCP) license issued by the Illinois Department of Financial and Professional Regulation (IDFPR) ~~Valid Illinois Respiratory Therapist License.~~

Note: Possession of a Certified Pulmonary Function Technologist (CPFT) or Registered Pulmonary Function Technologist (RPFT) meets the requirement of #2 above.

KNOWLEDGE, SKILLS AND ABILITIES (KSAs)

1. Ability to obtain Certified Pulmonary Function Technologist (CPFT) or Registered Pulmonary Function Technologist (RPFT) certification within the probationary period.
2. Knowledge and understanding of anatomy, physiology, and other science.~~;~~
~~1.~~3. ~~be able to calculate the right dose of a patient's medicine~~ Ability to calculate the correct dose of a patient's medication.
~~2.~~4. Knowledge of emergency resuscitation measures.
~~3.~~5. Knowledge of techniques used in computer applications
~~4.~~6. Ability to communicate effectively and provide excellent customer service.
~~5.~~7. Ability to maintain records.
~~6.~~8. Ability to understand and follow oral and written instructions.
~~7.~~9. Ability to communicate effectively in both ~~oral~~ verbal and written form.
~~8.~~10. Ability to demonstrate sensitivity, confidentiality, and respect when speaking to others ~~with patients, peers, faculty and staff~~.
~~9. Ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.~~

Level 2: Pulmonary Function Technologist ~~II~~ 2 **4593**

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1. Associate~~s~~ degree in Respiratory Therapy from an accredited program, ~~.~~

2. Certified as a Pulmonary Function Technologist (CPFT) or Registered Pulmonary Function Technologist (RPFT) credentialed by the National Board for Respiratory Care (NBRC), ~~.~~

- AND -

3. Current Basic Life Support (BLS) certification, ~~.~~

- AND -

4. Valid Respiratory Care Practitioner (RCP) license issued by the Illinois Department of Financial and Professional Regulation (IDFPR), ~~Valid Illinois Respiratory Therapist License.~~

- AND -

5. One year (12 months) of work experience comparable to that of a Pulmonary Function Technologist I.

KNOWLEDGE, SKILLS AND ABILITIES (KSAs)

1. Knowledge of pulmonary function laboratory preparations ~~(e.g., setting up test apparatus, including various analyzers and monitors)~~ and specialized testing procedures.
2. Knowledge of arterial punctures and ability to draw and analyze samples.
3. Knowledge and familiarity with American Thoracic Society guidelines.
4. Knowledge of emergency resuscitation measures.
5. Knowledge of techniques used in computer applications.
6. Skill in calibrating, operating and monitoring specialized equipment~~, such as oscilloscope in nitrogen washouts or electrocardiograph~~.
7. Skill in preparing daily work reports.
8. ~~Skill in calibrating specialized equipment, such as body plethysmograph.~~
9. Skill in attention to detail, ensuring patients are receiving the appropriate treatments and medications.
10. Strong problem-solving skills; evaluate patients' symptoms, consults with other healthcare professionals, and recommend and administer the appropriate treatments.
11. Ability to maintain laboratory equipment.
12. Ability to study, test, and recommend new procedures.
13. ~~Ability to be able to provide~~ Skill in providing emotional support to patients undergoing treatment and be sympathetic to their needs.

Level 3: Pulmonary Function Technologist ~~III~~ 3 **4594**

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1. Associate~~s~~ degree in Respiratory Therapy from an accredited program~~,~~.

- AND -

2. Certified as a Pulmonary Function Technologist (CPFT) or Registered Pulmonary Function Technologist (RPFT) credentialed by the National Board for Respiratory Care (NBRC)~~,~~.

- AND -

3. Current Basic Life Support (BLS) certification~~,~~.

- AND -

4. Valid Respiratory Care Practitioner (RCP) license issued by the Illinois Department of Financial and Professional Regulation (IDFPR), ~~Valid Illinois Respiratory Therapist License.~~

- AND -

5. Two years (24 months) of work experience comparable to that of a Pulmonary Function Technologist II that includes performing supervisory/lead worker or charge duties.

KNOWLEDGE, SKILLS AND ABILITIES (KSAs)

1. Knowledge of the basic principles of operation of laboratory equipment ~~(e.g. body box, pneumotachs, pressure transducers and amps, and computers)~~ and the ability to diagnose and troubleshoot minor problems in this equipment.
2. Knowledge of techniques used in computer applications
3. Skill in operation and maintenance of complex electronic equipment ~~(such as body phethysmograph, magnetic tape data acquisition system, and 0_2+ $C0_2$ gas analyzers)~~.
4. Skill in maintaining pulmonary laboratory equipment.
5. Skill in attention to detail, ensuring patients are receiving the appropriate treatments and medications.
6. Strong problem-solving skills; evaluate patients' symptoms~~,~~ and consults with other healthcare providers.
7. Ability to calculate data and represent graphically, such as a patient's progress over a period of time in relation to various tests.
8. Ability to prepare trainee curricula, technical reports, and research data.
9. Ability to develop new methods, procedures, and techniques for the pulmonary function laboratory.

10. ~~Ability to be able to provide~~ Skill in providing emotional support to patients undergoing treatment and be sympathetic to their needs.
11. Ability to supervise the pulmonary laboratory: to assign work, direct, ~~advice~~ advise, train, and evaluate ~~lower~~ lower-level Pulmonary Function Technologists, medical students, and pulmonary residents.