Medical Coverage Policy | Home Spirometry

EFFECTIVE DATE: 07|01|1999
POLICY LAST REVIEWED: 01|08|2025

OVERVIEW
Home spirometry devices allow for the monitoring of pulmonary function in the home. Their primary proposed use is by lung transplant recipients to aid in the early diagnosis of infection and rejection. They can potentially also be used in other situations that require pulmonary function monitoring.

MEDICAL CRITERIA
Not applicable

PRIOR AUTHORIZATION
Not applicable

POLICY STATEMENT
Medicare Advantage Plans
Home monitoring of pulmonary function is not covered as the evidence is insufficient to determine the effects of the technology on health outcomes.

Commercial Products
Home monitoring of pulmonary function is not medically necessary as the evidence is insufficient to determine the effects of the technology on health outcomes.

COVERAGE
Benefits may vary between groups/contracts. Please refer to the appropriate section of the Benefit Booklet, Evidence of Coverage or Subscriber Agreement for not medically necessary/not covered benefits/coverage.

BACKGROUND
In the immediate post-operative period, lung transplant recipients must be carefully monitored for the development of either rejection episodes or infectious complications. Monitoring techniques include complete pulmonary function testing, serial chest X-rays, bronchioalveolar lavage, and transbronchial biopsy. Transbronchial biopsy is thought to be the only objective method of distinguishing between these 2 common complications. Transbronchial biopsy is typically performed on a routine schedule, with additional biopsies performed if the patient becomes symptomatic. Home spirometry is proposed as a technique to provide daily monitoring to promptly identify presymptomatic patients who may benefit from a diagnostic transbronchial biopsy.

Home spirometry uses battery-operated spirometers that permit regular daily measurement of pulmonary function in the home, typically forced expiratory volume in 1 second (FEV-1) and forced vital capacity (FVC). The device has been primarily investigated among lung transplant recipients as a technique to provide early diagnosis of infection and rejection. Home spirometry may also be referred to as ambulatory spirometry.

There are few studies on home spirometry use and most of the available literature did not evaluate the impact of home spirometry use on health outcomes. The evidence is insufficient that home spirometry improves the net health outcome and, thus, the technology is considered not medically necessary.

CODING

Medicare Advantage Plans and Commercial Products
The following codes are not covered for Medicare Advantage Plans and not medically necessary for Commercial Products:

94014 Patient-initiated spirometric recording per 30-day period of time; includes reinforced education, transmission of spirometric tracing, data capture, analysis of transmitted data, periodic recalibration and physician review and interpretation

94015 Patient-initiated spirometric recording per 30-day period of time; recording (includes hook-up, reinforced education, data transmission, data capture, trend analysis, and periodic recalibration)

94016 Patient-initiated spirometric recording per 30-day period of time; physician review and interpretation only

RELATED POLICIES
None

PUBLISHED
Provider Update, March 2025
Provider Update, March 2024
Provider Update, April 2023
Provider Update, June 2022
Provider Update, June 2021

REFERENCES

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2. Fracchia C, Callegari G, Volpato G et al. Monitoring of lung rejection with home spirometry. Transplant Proc 1995; 27(3):2000-1. 3.
3. Adam TJ, Finkelstein SM, Parente ST et al. Cost analysis of home monitoring in lung transplant recipients. Int J Technol Assess Health Care 2007; 23(2):216-22. 4.
4. Kugler C, Fuehner T, Dierich M et al. Effect of adherence to home spirometry on bronchiolitis obliterans and graft survival after lung transplantation. Transplantation 2009; 88(1):129-34.
5. Guihot A, Becquemin MH, Couderc LJ et al. Telemetric monitoring of pulmonary function after allogeneic hematopoietic stem cell transplantation. Transplantation 2007; 83(5):554-60. 6.
6. Brouwer AF, Roorda RJ, Brand PL. Comparison between peak expiratory flow and FEV(1) measurements on a home spirometer and on a pneumotachograph in children with asthma. Pediatr Pulmonol 2007; 42(9):813-8.