EFFECTIVE DATE: 07|01|1999
POLICY LAST UPDATED: 03|06|2018

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
BlueCHiP for Medicare and Commercial Products
Home spirometry is considered 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 services not medically necessary.

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
BlueCHiP for Medicare and Commercial Products
The following codes are not medically necessary:

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
Not applicable

PUBLISHED
Provider Update, May 2018
Provider Update, May 2017
Provider Update, May 2016
Provider Update, November 2015
Provider Update, September 2014
Provider Update, November 2013
Provider Update, July 2012

REFERENCES

1. Otulana BA, Higenbottam T, Ferrari L et al. The use of home spirometry in detecting acute lung rejection and infection following heart-lung transplantation. Chest 1990; 97(2):353-7.

2. Fracchia C, Callegari G, Volpato G et al. Monitoring of lung rejection with home spirometry. Transplant Proc 1995; 27(3):2000-1.

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. 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. 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.