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Original Effective Date: 12/07/00

Reviewed: 10/24/24

Revised: 11/15/24

Subject: Home Spirometry

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

DESCRIPTION:

Spirometry is a noninvasive pulmonary function test that measures the volume and flow of air entering and leaving the lungs. Home spirometry (also known as ambulatory spirometry) uses battery-operated spirometers that permit regular daily measurement of pulmonary function including 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 spirometers should not be confused with incentive spirometers or peak flow meters.

Telespirometry utilizes a small hand-held device that provides testing for both spirometry and oximetry. The device records the results, which can then be sent via telephone in much the same way that a pacemaker transmits information to the healthcare provider. It has been proposed as a means to monitor sleep apnea, lung function, or desaturation occurrences.

Summary and Analysis of Evidence: Oppenheimer et al (2023) concluded, “This post hoc comparison of home and clinic spirometry is the largest conducted in asthma. Results showed that home spirometry was less consistent than and lacked agreement with clinic spirometry, suggesting that unsupervised home readings are not interchangeable with clinic measurements. However, these findings may only be applicable to home spirometry using the specific device and coaching methods employed in these studies. Postpandemic, further research to optimize home spirometry use is needed”. Anand et al (2023) states, “In conclusion, unsupervised home spirometry underestimates lung function measurements compared to supervised spirometry. We suggest caution and proper training if used owing to the possibility of underestimation and large variation in the differences between unsupervised and supervised measurements. Unsupervised home spirometry should not be used for diagnostic purposes; however, the results do suggest that unsupervised measurements may be suitable for outcome collection within large clinical research studies. The focus here is likely to be on the mean difference in

lung function between the study groups and a large sample size could overcome the added measurement variation, and so represent the population mean. Any future research should use technically validated devices in a comprehensively trained population across multiple timepoints to fully understand the value of unsupervised home spirometry." The American Thoracic Society and European Respiratory Society Technical Statement on Standardization of Spirometry (2019 Update) includes, "Updated standards are required for unattended home monitoring spirometry and peak flow monitoring". The evidence is insufficient to determine the effects of the technology on health outcomes.

POSITION STATEMENT:

Home spirometry is considered **experimental or investigational** for home monitoring of pulmonary function. The evidence is insufficient to determine the effects of the technology on health outcomes.

NOTE: Home spirometry used for monitoring post-lung and post-lung/heart transplantation recipients is included in the global case rates for the transplantation.

BILLING/CODING INFORMATION:

CPT Coding

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 review and interpretation by a physician or other qualified health care professional (**Investigationa**l)
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) (**Investigational**)
94016	Patient-initiated spirometric recording per 30-day period of time; review and interpretation only by a physician or other qualified health care professional (**Investigational**)

HCPCS Coding

A9284	Spirometer, non-electronic, includes all accessories (**Investigational**)
E0487	Spirometer, electronic, includes all accessories (**Investigational**)

REIMBURSEMENT INFORMATION:

Refer to section entitled **POSITION STATEMENT**.

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Advantage products: No National Coverage Determination (NCD) and/or Local Coverage Determination (LCD) was found at the time of the last guideline reviewed date.

DEFINITIONS:

Incentive spirometer: device used in pulmonary function testing for measuring the volume of gas moving in and out of the lungs.

Peak flow meter: portable device that measures air flow or peak expiratory flow rate (PEFR); routinely used in the management of asthma for determining airway status.

RELATED GUIDELINES:

None applicable.

OTHER:

None applicable.

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COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 10/24/24.

GUIDELINE UPDATE INFORMATION:

12/07/00	New Medical Coverage Guideline.
01/01/01	Reviewed – no changes.
12/15/02	Reviewed and revised.

11/15/03	Reviewed; no change (investigational).
10/15/04	Scheduled review; no change in coverage statement.
11/15/05	Scheduled review; no change in coverage statement; references updated.
11/15/06	Scheduled review; no change in coverage statement; added S8190.
08/15/07	Scheduled review; reformatted guideline; updated references.
11/15/08	Scheduled review; no change in position statement; add S8190 to the guideline; updated references.
01/01/09	Annual HCPCS coding update: added A9284 and E0487.
04/01/09	HCPCS 1st quarter coding update: remove S8190 – discontinued effective 03/31/09.
11/15/09	Scheduled review; position statement unchanged; references updated.
03/15/10	Revision of Position Statement regarding the use of home spirometry with lung and lung/heart transplant recipients; Description section revised; references updated.
01/01/13	Annual HCPCS coding update: revised descriptors for 94014 and 94016
05/11/14	Revision: Program Exceptions section updated.
11/01/15	Revision: ICD-9 Codes deleted.
03/15/18	Review; investigational position maintained; description, position statement, and references updated.
04/15/20	Review; Position statement maintained and references updated.
04/15/22	Review: Position statement maintained; references updated.
01/01/24	Position statements maintained.
1115/24	Review: Position statement maintained; description and references updated.