

# SOFTWARE *Review*

## The Invaluable Jones Satellite Spirometer

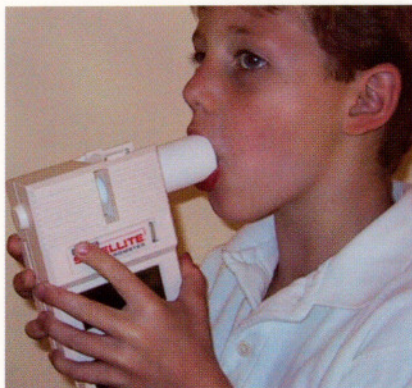
By S. David Scott, PhD, MD

THE JONES SATELLITE SPIROMETER BY Jones Medical of Oak Brook, IL, is an invaluable tool with applications for a variety of settings from hospitals and clinics to physician offices and schools.

### FEATURES

This light, handheld electronic device measures flow-volume and time-volume data and displays it with predicted values down to age 6. A separate key is pressed to print pre- and postbronchodilator test data showing percentage of improvement.

The Satellite's memory accommodates remote testing and validation for later printing via the Base Station module. When the result is printed, the Base Station automatically selects the best of the two of three trials. The graphic depiction of flow-volume and time-volume data is shown with digital display.



The Jones Satellite Spirometer is a versatile instrument. The lightweight, handheld device measures flow-volume and time-volume data.

*photo/courtesy the author*

## I use the Jones Satellite Spirometer in the office as part of my routine evaluation.

The Jones Satellite spirometer can also be connected to a personal computer for interactive use and full-size display of graphical data, and it can be connected to a variety of printers to produce 8.5-by-11-inch reports. The integrated disposable mouthpiece/transducer minimizes sterilization problems.

### APPLICATIONS

These features allow a physician, nurse practitioner, respiratory care practitioner or trained nonmedical personnel to accurately measure respiratory parameters in a variety of clinical settings. Proper use requires little training.

In the hospital, the Jones Satellite Spirometer can be used on rounds to measure lung function and to guide therapy. This allows clinicians to measure and record data in the medical record daily. I have used the Jones

Satellite Spirometer for several years as an adjunct to respiratory care services in my hospital, and it has enabled me to change therapy and improve patient care.

In the clinic, the unit is very valuable because it allows rapid assessment of asthmatic patients. Although peak-flow meters have been used this way, they are effort-dependent tests. Spirometry yields effort-independent data that gives more lung-function information.

In the emergency department (ED), serial bedside testing is indispensable. Access to immediate spirometry data on asthmatics allows more efficient triage. The ability to print data, including test time, provides an excellent treatment record. This makes it

possible to review ED asthma-management efficiency. Specific, objective FEV<sub>1</sub> data makes the decision to admit or discharge a patient more intelligent and more reliable.

I used the Jones Satellite Spirometer in the office as part of my routine evaluation. I find that my clinical assessment of lung function, and my patients' subjective evaluation of respiratory status, is inferior to spirometry.

When poor office results are obtained, I find it easier to convince patients to administer their therapy more carefully. Also, when patients see they cannot accurately predict lung function, they're willing to increase therapy.

I often compare Jones Satellite Spirometer results to standard hospital pulmonary function tests (PFTs). When patients come in having PFTs, I use the Jones to compare results. In every case, the comparison shows little significant difference.

### VERSATILE TOOL

The Jones Satellite Spirometer is also a valuable clinical teaching tool. Explaining to students what the results mean pathophysiologically enhances teaching value of rounds and clinics, and improves students' overall understanding of respiratory illness.

The portability of the Jones Satellite Spirometer and its ease of use make it a valuable tool for large-population or workplace testing. Often, patients present with work-related symptoms, but show normal lung function when tested. Cause of symptoms would be easier to determine with frequent on-site testing. Routine testing also could help diagnose a variety of respiratory diseases early and could support large-scale smoking-cessation programs.

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