Attachment 6

Impulse Oscillometry SOP

NIOSH/RHD

IOS (Oscillometry) Technician Short Guide
Updated October 2018, SentrySuite 2.21

Preparation:
Warm power source/impulse generator for 5 minutes on first use.

Calibration:
Calibration tools, volume calibration. OPEN SCREEN DOOR.

Ambient values have to be updated every 4 hours. In upper right corner click on the ambient button (has picture of thermometer on it). Pressure mmHg=inHG x 25.4. Click save to save entered ambient values.

Run 3 speed calibration (start=F1); start with syringe pole out, follow directions on screen.

SHUT SCREEN DOOR.

BIO QC:
Tech does test on self (search, 'Type' BIOQC if need to find, add new if need to add).

Subjects:
Select "new" for each subject, enter patient data then **F1** to save (Do not select Asian race).

Explain the measurement procedure to the subject prior to starting the first measurement—maybe let them try the mouthpiece. Tell them you may ask them to breath faster or slower.

Subject should:
Sit upright, (head level or slight extension)
Feet flat on floor
Wear noseclips
Hold cheeks
Tongue under mouthpiece, tight seal. No swallowing.

Subject should breathe normally during the measurement at 15 – 20 breaths per minute.

The measurement is started with **F1**, or by pressing the start icon on screen. Machine zeros out first.

Have subject sigh, or give a regular exhale, before getting on mouthpiece.

The two bar indicators in the right part of the screen show breaths per min and tidal breathing. Try and stay in the green on both. For tidal breathing, a steady (non-variable) breathing pattern is necessary.

Normal test: Best values of R5Hz , R20Hz, and X5Hz are between the LL and UL values. Also—CHECK THE AUTO INTERPRETATION tab at bottom of test screen.

Quality test: CO5hz is > 0.7 and CO20hz is > 0.9

<u>Backup:</u>

Plug a secure thumb drive into the laptop—do whatever is needed to login to drive.

Go to Database Handling menu from main screen of IOS software.

Data export/import.

Search Patient.

Select the day's patients. A search by date is easiest.

Select "Check All" box to mark all the day's tests to backup.

SQL export/import filename—BROWSE.

Find the thumb drive—it will be marked PRIVATE.

Go to (or make) a folder for the IOS number (IOS system, not laptop).

XML is the default export type, leave that as is.

Name the export file IOSMMDD where MM=month and DD= day of month.

Click Open.

Click Export.

Wait until export has completed; this can take quite a few minutes for just a handful of records.