GlobalMed

Transportable Exam Backpack®

Learner Guide

Disclaimer:

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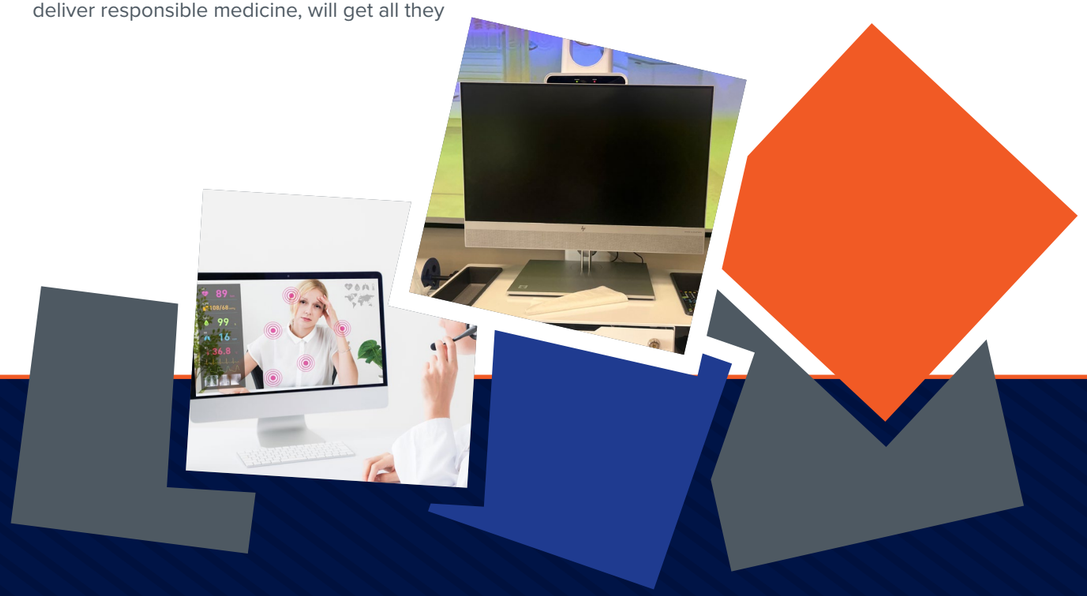
Contents

WHO WE
ARE?

GlobalMed powers the world's most advanced virtual health technology platform and wellness applications that support a patient at any point in the continuum of care. Providers are enabled with integrated software and data-capturing tools to deliver a complete and accurate patient encounter for evidence-based treatment and improved patient outcomes. Providers looking to manage
Capacity, reduce costs, expand patient care and deliver responsible medicine, will get all they

WHAT WE
DO?

Specializing in both federal and commercial spaces, GlobalMed technology has enabled approximately 50 million consults in nearly 100 countries. Its highly secure virtual health platform has earned the U.S. Defense Health Agency's Authority to Operate on the DoD network and is used worldwide from the VA and White House Medical Unit to rural American hospitals, correctional facilities, oil rigs, and even villages in Africa. Founded in 2002 by a Marine Corps Reserve Veteran still serving as CEO.



To improve lives throughout the world by delivering transformative health and wellness solutions across the continuum of care.

Learner Guide - How to

Get Familiar With The Guide: Start by flipping through the guide to get a general overview of what it covers. This will give you an idea of the scope of the training and help you identify areas that you may need to focus on.

Understand The Objectives: Pay particular attention to the learning objectives outlined in the guide. These objectives should guide your study and practice. Your goal should be to master each objective by the end of your training.

Follow The Structure: Most learner guides are structured in a way that gradually builds on knowledge. It's best to follow the guide from beginning to end, rather than skipping around. This way, you ensure that you're building on a solid foundation of knowledge.

Take Notes: As you read through the guide, jot down notes or underline important points. This active engagement helps with memory retention. You will find note pages throughout each section.

Review Periodically: Don't just read through the guide once. Regular review is key to long-term retention of what you've learned. Review previous sections of the guide before moving on to new material.

Stay Motivated: Learning can be challenging and sometimes frustrating. But remember why you're doing this, keep your end goals in sight, and stay motivated.

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Objectives

By the end of this training you will be able to:

- Recall the main features of Transportable Exam® Backpack.
- Understand the purpose and benefits of using the Transportable Exam® Back-
- Apply the knowledge of Intergrated Medical Devies.
- Analyze common issues that may arise during virtual visits, such as internet connectivity, audio and video quality, and troubleshoot these issues using problem-solving skills.

Transportable Exam® Backpack Overview

OVERVIEW

The GlobalMed® Transportable Exam® Backpack (TEB) brings a new dimension to delivering virtual care to patients in remote environments. This lightweight, USB-powered design provides a simple and organized solution, configured for in-home care or remote provider consultations with our suite of clinical devices.

Our devices allow a wide array of clinical data collection, from vital signs including blood pressure, heart rate and temperature, to heart and lung sounds. Even in the most rural areas or isolated locations, a clinician can gather video evidence for an ENT consultation, and even capture ultrasound images, expanding care to patients anytime.

Transportable Exam® Backpack

WHAT'S INCLUDED

Items in the Transportable Exam Backpack include the following:

- TotalExam, Lite 2.0 – **Qty 1**
- TotalExam, Oto 2.0 – **Qty 1**
- USB C-USB 2.0 TotalExam cable – **Qty 1**
- TotalExam, polarizing hood – **Qty 1**
- TotalExam, tongue depressor attachment – **Qty 1**
- USB 2.0 – 2.5M cable – **Qty 1 (for connecting to laptop)**
- TotalVitals (USB) – **Qty 1**
- Child blood pressure cuff – **Qty 1**
- Large adult blood pressure cuff – **Qty 1**
- ClearSteth stethoscope – **Qty 1**
- Klipsch in-ear headphones – **Qty 1**
- One touch collars – **Qty 5**
- 6" disposable tongue depressor – **Qty 5**
- 4.25 adult specula – **Qty 5**
- 3.0mm child specula – **Qty 5**
- TV thermometer covers – **Qty 1**

Optional accessories:

- ClearProbe – **Qty 1**
- TotalECG – **Qty 1**

Transportable Exam® Backpack

FEATURES

The Transportable Exam backpack presents the following features:

LIGHTWEIGHT AND COMPACT BAG DESIGN

The Transportable Exam backpack is designed with comfort and efficiency in mind. Its goal is to enable care without burdening the individual, as well as being an optimal choice for care that involves travel.

Transportable Exam® Backpack

INTEGRATED 4-PORT USB HUB

The Transportable Exam backpack has an integrated USB hub with four ports, two of which are accessible underneath the TotalVitals Insert. The TotaECG Bluetooth dongle and the USB connector for the TotalVitals come plugged into the USB port. To connect the devices to your laptop, use the provided USB extender.

Please note that the TotalECG and the TotalVitals come plugged into the hub. In order to connect these devices to your laptop, use the provided USB extender.

STEP 1 -

- STEP 2

STEP 3 -

Transportable Exam® Backpack

DEDICATED LAPTOP POCKET UP TO 15.6”

The backpack provides a dedicated laptop pocket to ensure its safety in travel.

CUSTOM FOAM INSERTS TO SUPPORT PERIPHERAL DEVICES

All devices and their accessories are stored in custom inserts to protect the equipment during transport.

ADDITIONAL STORAGE POCKETS FOR PERIPHERAL ACCESSORIES

The front pocket of the backpack provides ample room for any accessories needed for the devices included.

Transportable Exam® Backpack

USING THE DEVICES

This chapter provides information on how to get started with the included device.

Transportable Exam® Backpack

INSTALLING THE TOTALEXAM LITE 2.0 CAMERA

1. Plug the TotalExam Lite camera or oto into the provided cable. This will be connected to the USB hub and will be recognized once you connect the USB extender to your laptop.

2. There are no drivers or software to install or download.

3. The TotalExam Lite camera does not require any additional power outside of that supplied by the USB 2.0 connection.

TotalExam Lite 2.0 Camera & Otoscope

TOTALEXAM LITE CAMERA CONTROL LOCATIONS

Transportable Exam® Backpack

TOTALVITALS

The TotalVitals device can be taken out of the backpack to give additional patient access, up to six feet. To temporarily remove the device from the backpack, lift the case by its lip and pull up. To put back in the case, place the top end into the cavity first and secure in place.

For details on how to use this device and its peripherals, please see the Intergrated Medical Devices Learn Guide.

Once the device is out of the bag, the cable management solution for the TotalVitals is exposed. Carefully wind and unwind the cable as needed.

Notes

Integrated Medical Devices

Note: For more information regarding integrated devices, please visit www.globalmed.com.

- **TotalExam® 3.2 (Otoscope, Variable Polarizing Derm Hood, Autofocus Head)**
- **ClearSteth®**
- **TotalVitals (Vital Signs)**
- **TotalECG (Electrocardiogram)**
- **Welch Allyn Diagnostic Cardiology Suite (Spirmetry)**
- **SimpliVue (Ultrasound)**

Device Panel Icons

The following tables indicate the functions of each icon that appears on the consult screen.
Device Panel icons, located on the left side of the screen:

Icon	Function
	3rd party cameras (non-GlobalMed). This is only displayed if plugged into work-station.
	Launch Stethoscope module. Only enabled if licensed.
	Launch ECG module. Only enabled if licensed.
	Launch Spirometry module. Only enabled if licensed.
	Launch Ultrasound module. Only enabled if licensed.
	Launch Audiology module. Only enabled if licensed.
	Access Vital Signs Panel. Only enabled if licensed.
	Otoscope camera. Only displayed if plugged into workstation.
	TotalExam® 2 HD camera. Only displayed if plugged into workstation.
	TotalExam® 3 camera. Only displayed if plugged into workstation.
	Expand and Collapse Device Panel

Icon	Function
	3rd pa Takes a snapshot of the image displayed in the viewing pane, including any annotations and measurements. If a snapshot is displayed, clicking this icon again will create a new snapshot in the evidence tray with any newly added annotations and measurements. rty cameras (non-GlobalMed). This is only displayed if plugged into workstation.
	Video Format Fill: Adjusts the view of the camera stream by toggling between full-screen and a consolidated view.
	Annotation: Draws a circle/ellipse on the displayed image or video.
	Annotation: Draws a square/rectangle on the displayed image or video.
	Annotation: Draws a free-form line on the displayed image or video.
	Annotation: Draws a single-capped arrow on the displayed image or video.
	Annotation: Allows user to add text on the displayed image or video.
	Measurement selection.
	Measurement: Draws a double-capped arrow showing current calibrated measurement.
	Measurement: Draws a capped line showing current calibrated measurement.
	Measurement: Draws a capped gap showing current calibrated measurement.
	Measurement Calibration selection.
	Calibration: Adds new calibration.
	Calibration: Displays current list of saved calibrations (can save 10 max), including the current de-fault.
	Erases all annotations added. If viewing a snapshot, it will only erase the last annotation added to the snapshot. Clicking the icon again will continue to erase the annotations on the snapshot in reverse order.
	Erases all annotations added. If viewing a snapshot, it will only erase annotations newly added to the snapshot.

TotalExam® 3.2

TotalExam 3 Button Functionality

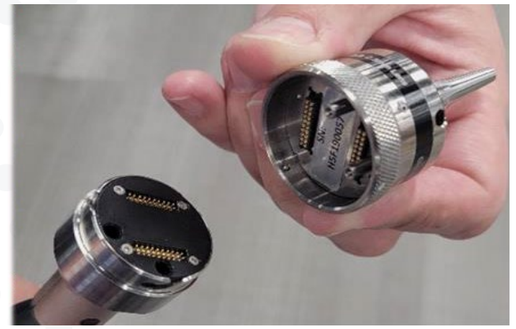
The TotalExam® 3.2 combines excellent HD image quality, intuitive design and versatility to take your telemedicine imagery needs to a new level of high definition imagery. The TotalExam 3.2 has interchangeable attachments including autofocus and otoscope heads, dermatology attachments and accessories.

No.	Feature	Description
1	Locked/Unlocked	Indicator that represents the locked and unlocked position the ring the secures the camera head.
2	WB (White Balance)	After the desired light intensity is selected, hold the camera 2 inches away from the provided white balance sticker and press the WB button. Note: this process will need to be repeated if the light intensity changes.
3	LED	Adjusts the light intensity by toggling through 4 different intensities: Dim, Medium, Bright, Max.
4	FF (Freeze Frame)	Press and release the FF button to pause the live camera stream and capture a freeze frame image, press the button to resume the live camera stream.

Inner Ear Audiology

Configuring TotalExam 3 for Inner Ear Images

The Otoscope head must be used to capture inner ear images. If the Otoscope Head is not attached to the TotalExam 3 camera, follow the steps below to attach it.



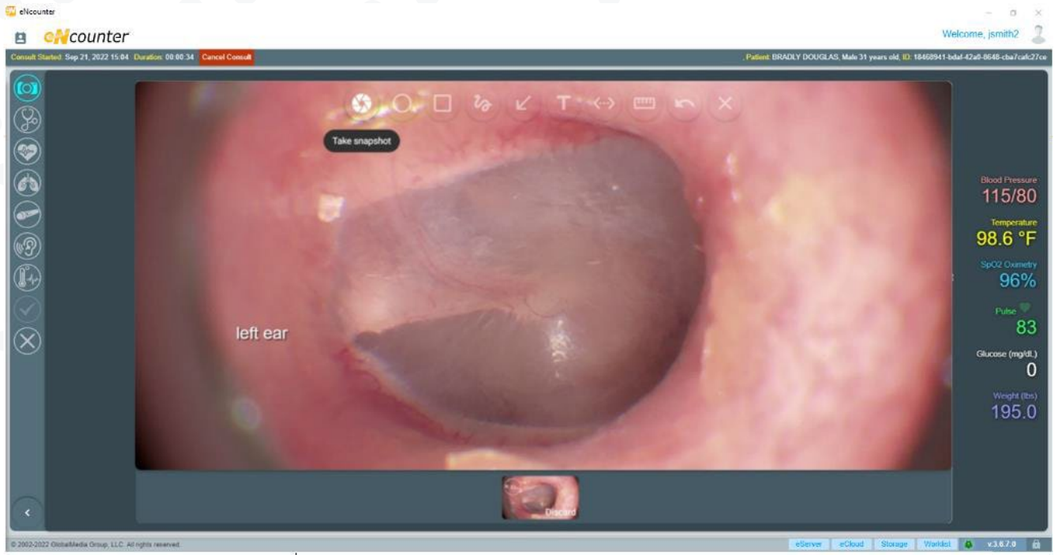
a. If applicable, remove the current that is attached to the camera by twisting the ring on the camera head from the locked to the unlocked position.

b. Insert two alignment pins on the Otoscope Head into the holes in the camera wand.

c. Secure the head to the wand by twisting the ring on the camera head from the unlocked to the locked position.

Configuring TotalExam 3 for Inner Ear Images

Insert the otoscope in the patient's ear and press the FF button to freeze/resume the live camera stream, then select the Take Snapshot icon to capture an image. The captured image, along with any annotations that were added, will appear in the Evidence Tray at the bottom of the Consult Screen.



Outer Ear Audiology

Configuring TotalExam 3 for Outer Ear Images

1. The Auto Focus head must be used to capture inner ear images. If the Otoscope Head is not attached to the TotalExam 3 camera, follow the steps below to attach it.
2. If applicable, remove the current that is attached to the camera by twisting the ring on the camera head from the locked to the unlocked position.
3. Insert two alignment pins on the Auto Focus head into the holes in the camera wand.
4. Secure the head to the wand by twisting the ring on the camera head from the from the unlocked to the locked position.
5. Connect the accessory attachment to the neck of the TotalExam 3 camera wand. Make sure that the camera buttons are facing upwards.
6. Insert the elongated measurement tool into the accessory attachment.

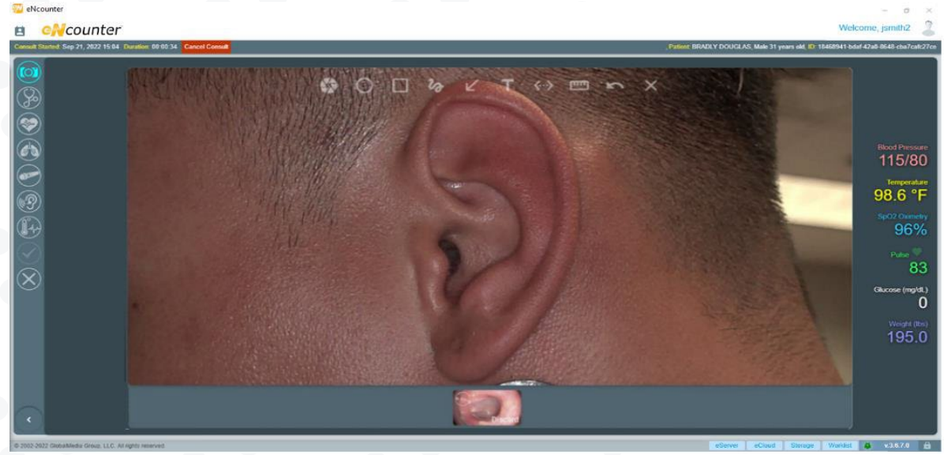
Elongated Measurement

Accessory Attachment

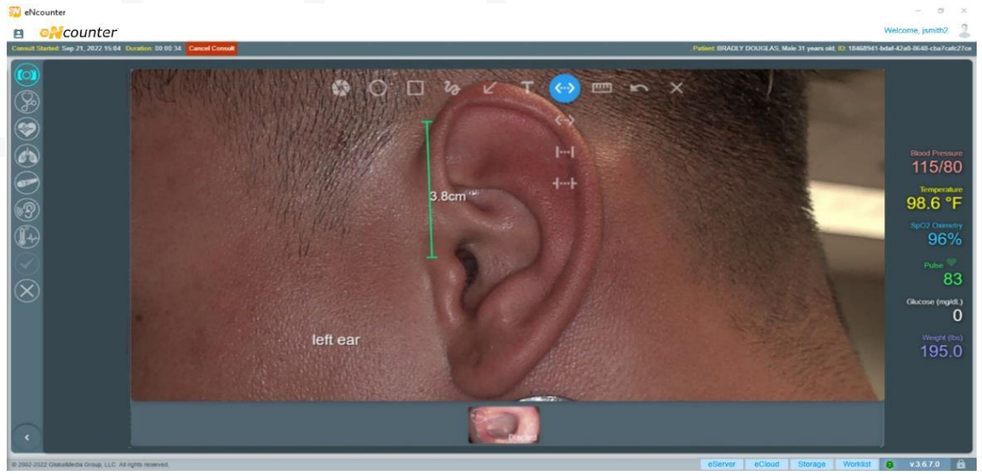
Outer Ear Audiology

Capturing Outer Ear Images using TotalExam 3

1. Rest the elongated measurement tool on the neck directly beneath the patient's ear.
2. With the buttons positioned upwards, press the FF button to freeze/resume the live camera stream.
   Note: Placement of the elongated measurement tool beneath the patient's ear must be consistent when gathering images. This ensures accurate and precise measurements.



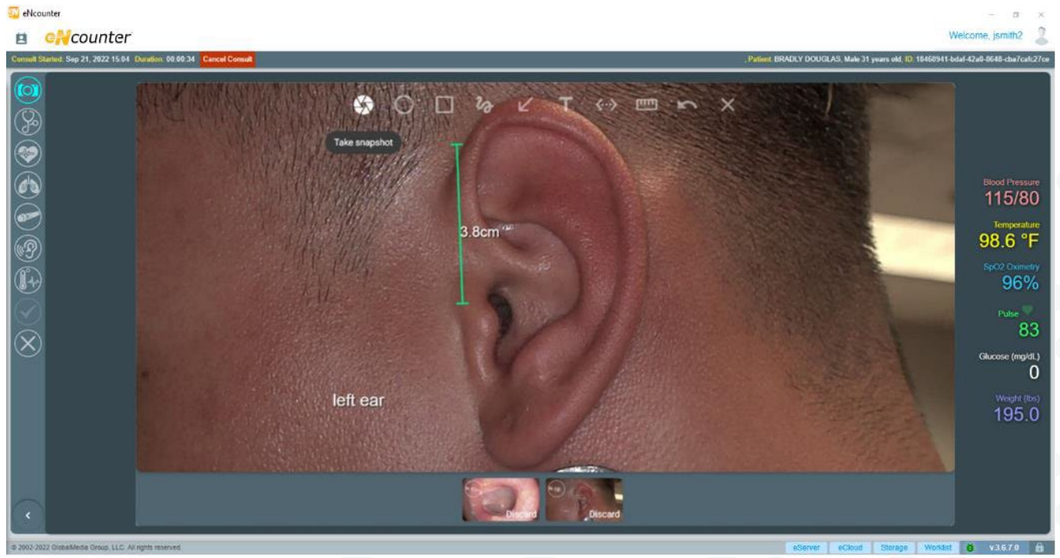
3. Once the image is captured, **select the Measurement icon**, and select the desired style of measurement.
4. **Click and drag the cursor** to make the desired measurements.



Outer Ear Audiology

Capturing Outer Ear Images using TotalExam 3

5. **Select Take Snapshot to capture an image**. The captured image, along with any annotations that were added, will appear in the Evidence Tray at the bottom of the Consult Screen.

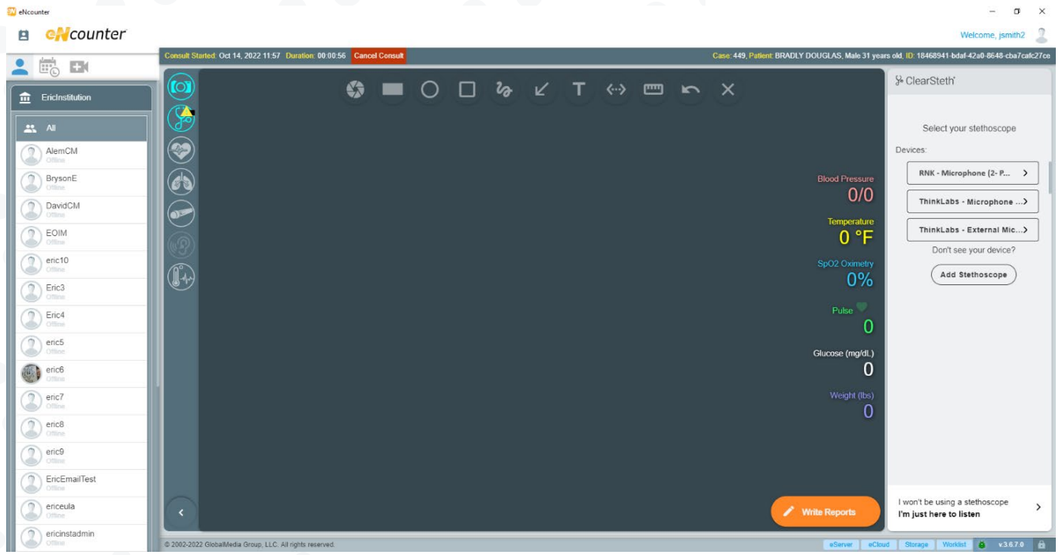


ClearSteth (Stethoscope)

ClearSteth is GlobalMed's digital auscultation software and has been integrated to work natively with eNcounter to transmit stethoscope audio to an end user as well as listen to incoming stethoscope audio.

Capturing Outer Ear Images using TotalExam 3

1. **Click the stethoscope icon on the eNcounter** device panel to display the conferencing and ClearSteth panels.
2. If a stethoscope device is not configured, the user will be prompted to configure a stethoscope **by selecting a detected device under the Devices section** or to configure a listening device by selecting the option that reads "I won't be using a stethoscope I'm just here to listen".

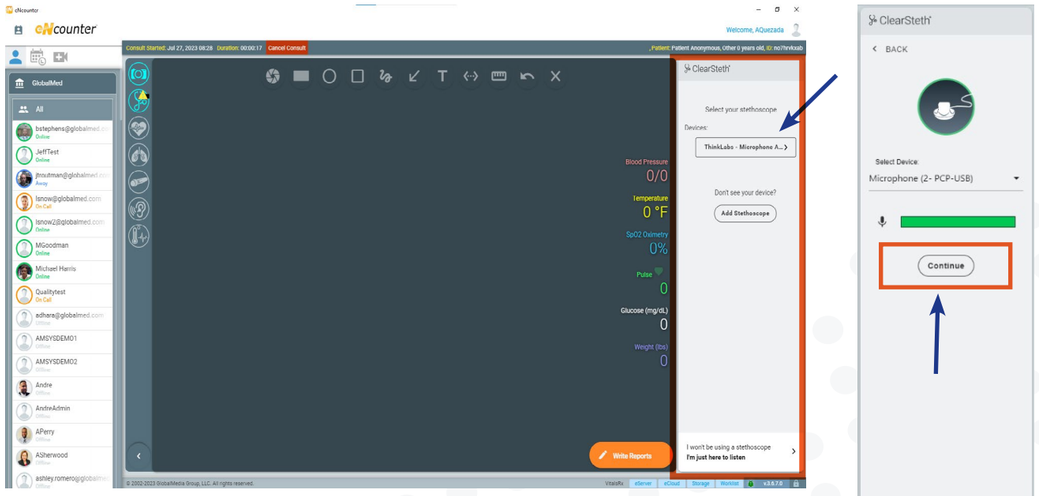


ClearSteth (Stethoscope)

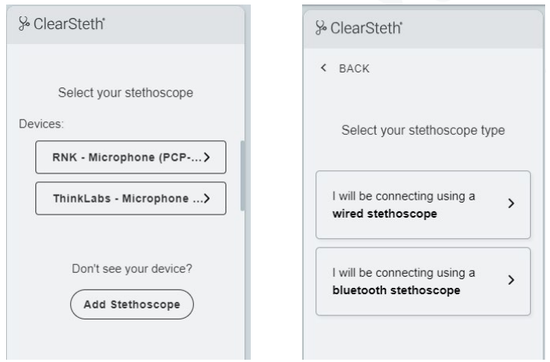
Configuring Wired Stethoscope (RNK)

From the **initial configuration screen**, **select the applicable wired stethoscope** from the list of detected devices under the Devices section.

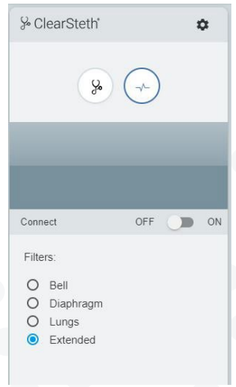
After selecting a detected stethoscope device, an audio verification prompt will be displayed. After verifying the stethoscope is transmitting audio, **click Continue**.



If the desired stethoscope was not detected initially or if a new stethoscope device needs to be added, click the Add Stethoscope button, and select the wired stethoscope option.



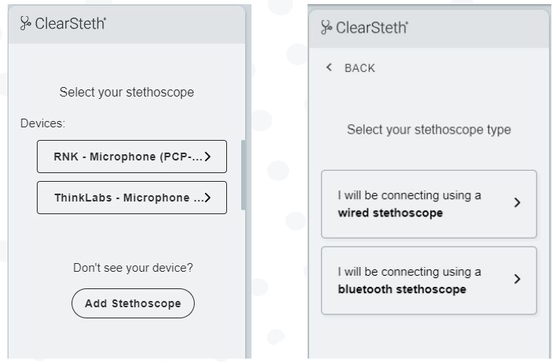
ClearSteth (Stethoscope)



After a stethoscope has been configured use the Stethoscope Settings Icon to modify or add a stethoscope configuration.

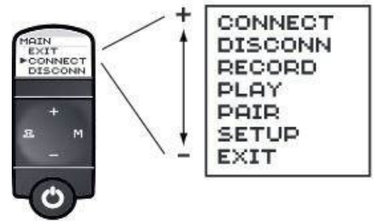
Configuring a Bluetooth Stethoscope (Littman)

From the initial configuration screen, select the Add Stethoscope button and then select the bluetooth stethoscope option.



After selecting the bluetooth stethoscope type the user will be prompted to set the Littman stethoscope into pair mode. Select Next after the stethoscope is in pair mode.

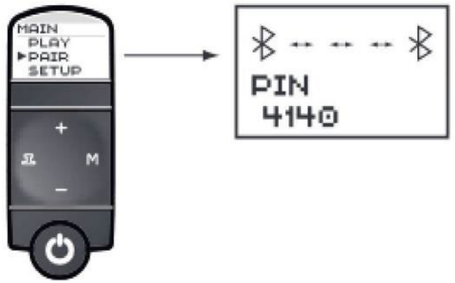
a. To set the Littman stethoscope into pair mode press the ‘M’ button the stethoscope’s directional pad to enter the main menu.

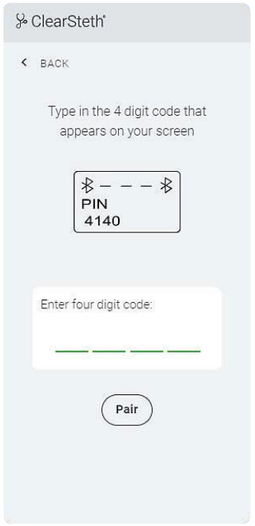


ClearSteth (Stethoscope)

Configuring a Bluetooth Stethoscope (Littman)

Scroll down and select, **'Pair'** by pressing the **'M'** button. Once the device is in **'Pair'** mode, a four-digit code will be displayed.





Enter the four-digit code provided on the stethoscope pair screen and select **'Pair'**.

Occasionally the pairing may be lost, and a connection cannot be made. To resolve this issue, utilize the following steps:

- Open the Windows Bluetooth Devices menu located in the system tray.
- Find the entry for the Littmann stethoscope, click the entry, and select Remove Device.
- Utilize the previous steps to pair the stethoscope again.

ClearSteth (Stethoscope)

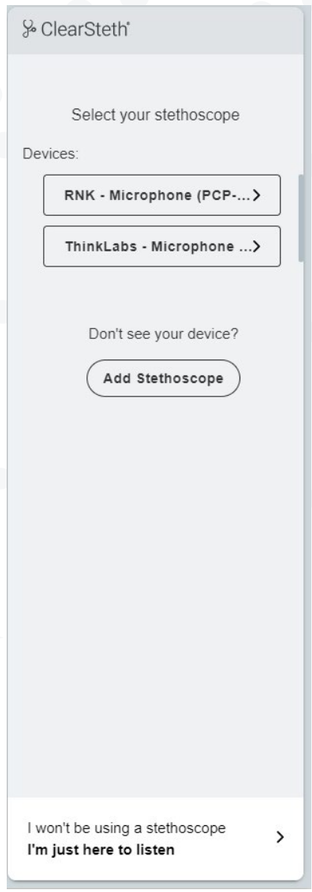
Configuring ClearSteth for Listening to Incoming Stethoscope Audio

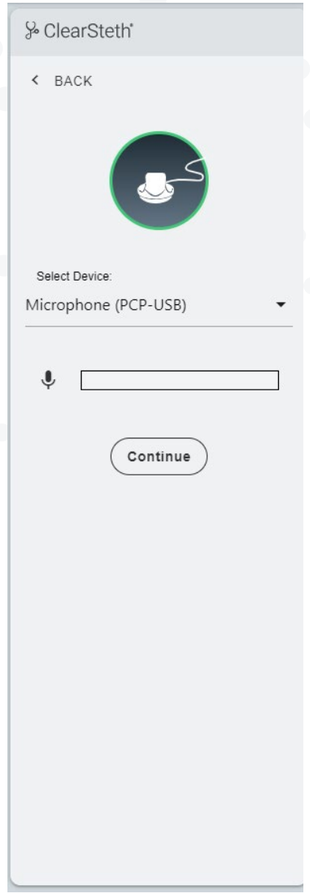
From the initial configuration screen, select the prompt at the bottom that reads "I won't be using a stethoscope I'm just here to listen".

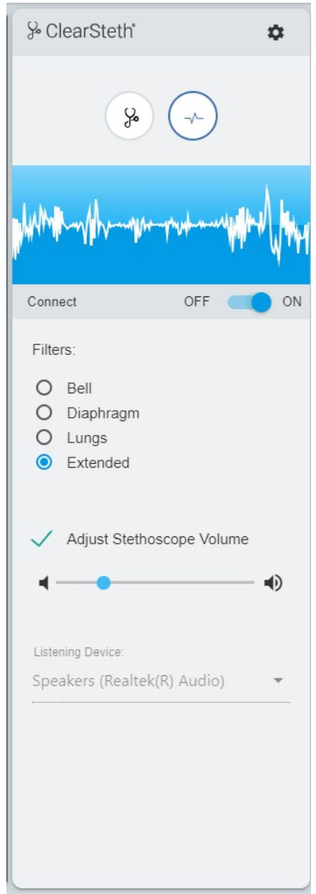
Select the applicable audio device under the 'Listening Device' section.

The 'Test' button is available to verify the listening device is receiving audio. Click 'Continue' to proceed

If the initial configuration screen is no longer available there is also a 'Listening Device' section at the bottom of the Clearsteth home screen.



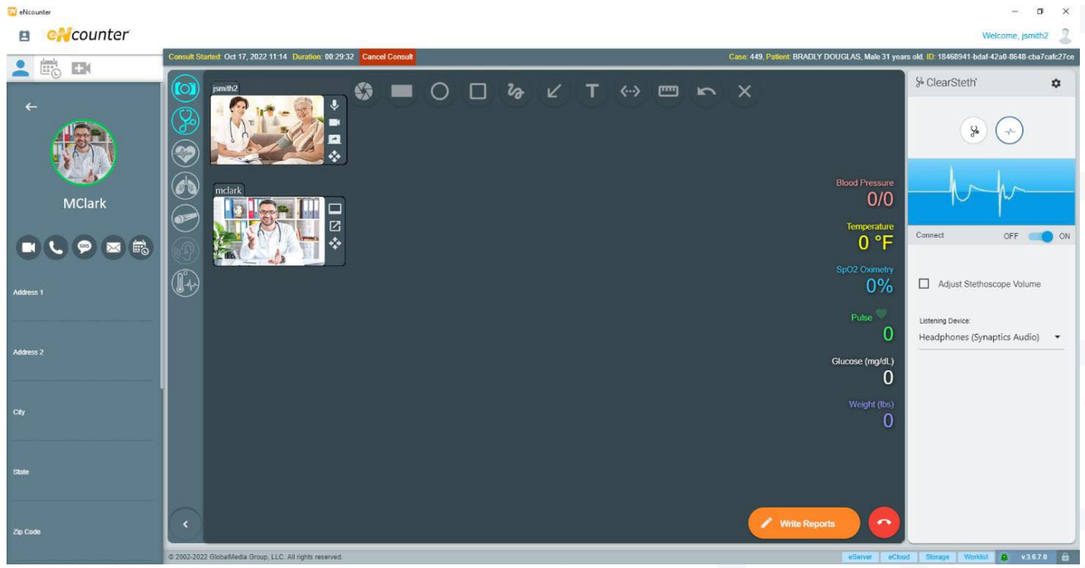




ClearSteth (Stethoscope)

Connecting with End Users

1. To initiate a meeting, **select the applicable user from the contacts tab** on the conferencing panel to view the user's contact options.
2. Depending on the end users supported communication configuration, **click the video or audio-only conference call icon** to connect with the end user.
3. Once connected, the end user's conferencing window will appear.
4. To begin sharing stethoscope sounds, **switch the 'Connect' toggle to ON**. An audio waveform will be displayed when the stethoscope is active.



If the desired stethoscope was not detected initially or if a new stethoscope device needs to be added, **click the Add Stethoscope button**, and **select the wired stethoscope option**.

5. To discontinue the transmission of stethoscope audio, switch the 'Connect' toggle to OFF.
6. To end the conference call, click the red phone icon.

ClearSteth (Stethoscope)

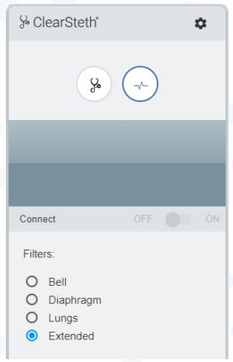
Using Stethoscope Filters

Clearsteth offers various audio filters that isolate specific audio frequency ranges to allow users to better hear the organs systems of interest.

Clinical evidence indicates that heart sounds begin below the **audible threshold of 20 Hz** and **do not exceed 1000Hz** - with most being heard between the **20-500Hz range**. High frequency heart sounds, such as murmurs of aortic insufficiency and mistrial insufficiency, are better heard with the use of a diaphragm that filters out the low frequency components of other heart sounds. Lung sounds are classified into the following groups: **Low (under 100 Hz)**, **middle (200-600Hz)**, and **high frequency (600-1200Hz)**. These categories capture the majority of clinically relevant respiratory sounds (crackles, wheezes, rubs, etc), even the **highest pitched wheezes rarely exceed 2000 Hz**.

RNK Stethoscope Filters - users on the receiving end of an RNK stethoscope call will be presented with 4 options for filtering the stethoscope audio.

- User can access these filters below the Connect toggle switch.



Filter	Frequency Range (Hz)	Description
Bell	20-350	Recommended for low frequency sounds, in-cluding heart sounds.
Diaphragm	20-1000	Recommended for low to moderate frequency sounds.
Extended	20-2000	Recommended for higher frequency breathing sounds, including wheezes and coughs.
Lungs	250-2000	Removes all filtering, allowing the user to hear the full spectrum of sound captured by the stethoscope.

ClearSteth (Stethoscope)

Littman Stethoscope Filters - users on the receiving end of a Littman stethoscope call will be presented with 3 options for filtering the stethoscope audio.

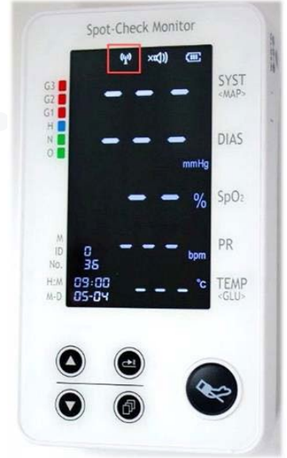
Filter	Frequency Range (Hz)	Description
Bell	20-200	Recommended for low frequency sounds, including heart sounds.
Diaphragm	100-500	Recommended for low to moderate frequency sounds.
Extended	50-500	Recommended for higher frequency breathing sounds, including wheezes and coughs.

To select a filter, press the filter button located on the device's directional pad.

TotalVitals (Vital Signs)

Configuring TotalVitals:

1. Each TotalVitals device will only support one of two connection options, **Bluetooth or USB**. Ensure the applicable connection type based on your device is selected in the device settings. TotalVitals devices that support Bluetooth connection type will display the flashing Bluetooth indicator. I**f the indicator is not displayed, then the device connection type is USB.**
2. **Press and hold the power button** located on the right side of the device to power it on.
3. When utilizing the USB connection option, **connect the device to the workstation via the USB cable**.
4. When utilizing the Bluetooth connection option, **pair the device with the Windows operating system by selecting "PC_300SNT"** from the available Bluetooth devices.
5. With the device powered on, initiate a consult in eNcounter, then **click the TotalVitals connectivity indicator** that appears in the footer to begin connecting the device to eNcounter. The bluetooth connectivity icon will flash intermittently until the device is connected to eNcounter, after the device is connected the icon stops flashing.

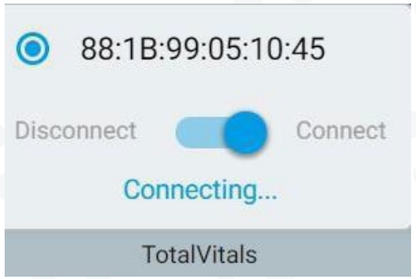


TotalVitals (Vital Signs)

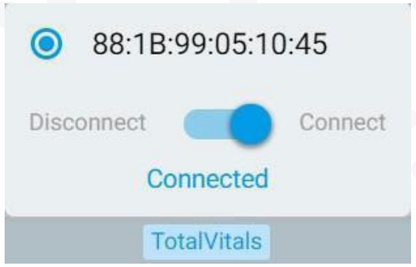
6. A prompt will appear indicating that eNcounter is Discovering the Bluetooth signal.

7. The Select Device prompt indicates the device has been found. **Select the MAC address associated with your device,** then **click the toggle switch** to connect with the device.

8. The prompt will then indicate that the device is Connecting to eNcounter



9. After the connection process is completed successfully the prompt will change to indicate that the device is Connected.



TotalVitals (Vital Signs)

Blood Pressure:

1. To take a blood pressure reading, **connect the cuff tube to the “NIBP” port**.

2. **Press and release the blood pressure button** to begin the measurement. The eNcounter Vitals Overlay will reflect any vitals data measured by the device.

Pulse Rate:

1. To take a patient’s pulse, **connect the oximeter probe to the “SpO2” port** and insert the patient’s finger into the clip of the probe. The measurement will begin automatically.

Note: TotalVitals continuously reads the patient’s pulse. If the oximeter is removed from the patient’s finger, the readings reset to 0.

TotalVitals (Vital Signs)

Temperature:

1. To take a patient's temperature, **connect the probe to the "Temp" port**

2. **Remove the tip cover**, insert the tip into the ear canal, and press the scan button on the top side of the probe to begin reading. The eNcounter vitals fields reflect any vitals data registered on the device.

TotalECG (Electrocardiogram):

1. Ensure TotalECG is selected in the device settings.

2. Ensure the TotalECG device has **two AA batteries** and the Bluetooth dongle is attached to the workstation via USB.

3. Attach the leads to the patient as necessary.

4. Power on the **TotalECG by pressing any button**.

5. **Click the down arrow** to highlight Start Transmitting, **then click the select button**.

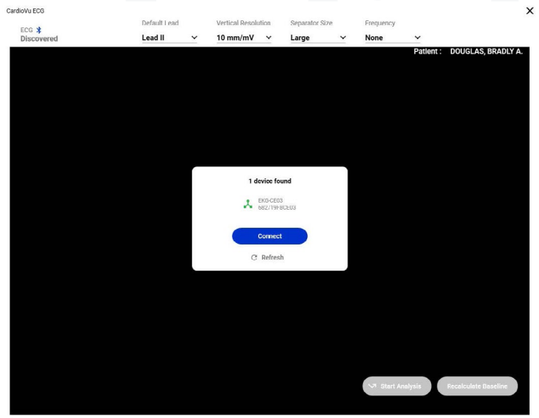
6. Verify the device is transmitting before launching the ECG module **(it should read "Searching for Host" on the screen)**. Then click the ECG icon on the consult screen in eNcounter to launch the ECG module.

7. **Click confirm** on the prompt to proceed.

8. Once TotalECG is located, the device information will populate the screen.

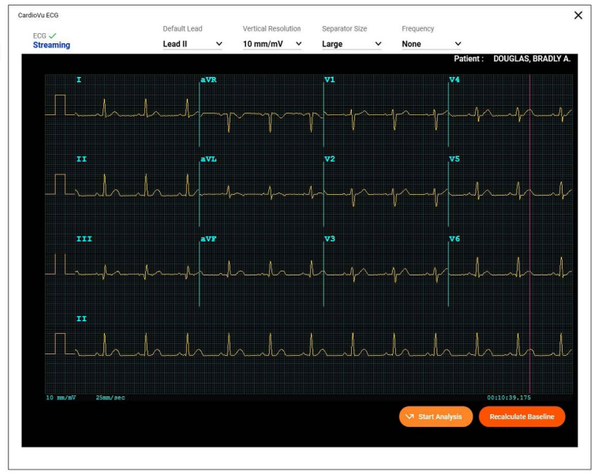
9. **Click the Connect button**. Once paired, the software streams live ECG data.

Note: Device pairing with software may take a few moments.



10. The Recalculate Baseline function can be used to reset the baseline from which the QRS complex is measured.

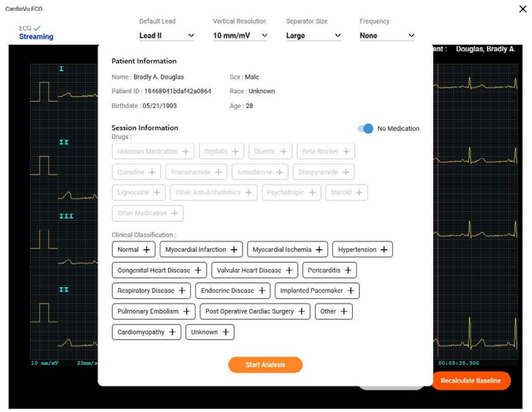
11. **Click Start Analysis** to capture a ten-second reading of ECG data and generate a report.



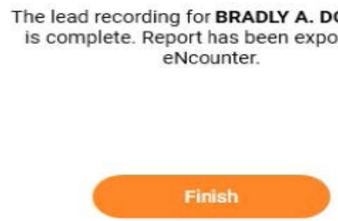
TotalVitals (Vital Signs)

12. The Start Analysis window allows users to record patient information related to applicable medications and observed clinical classifications

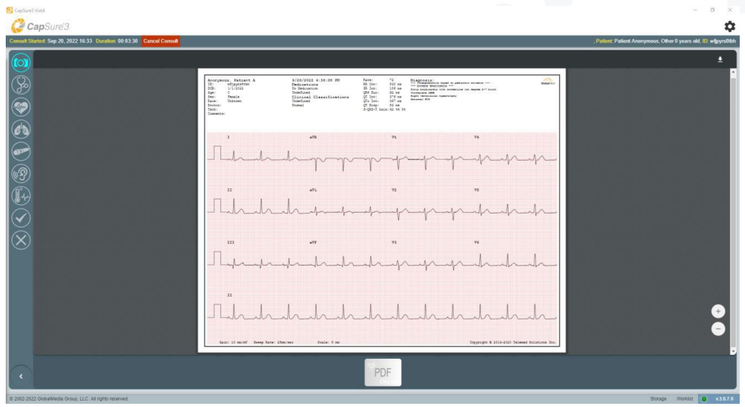
13. After the relevant patient information has been recorded, **select Start Analysis to proceed**.



14. If the report is successfully exported to ENcounter, a confirmation message will appear.



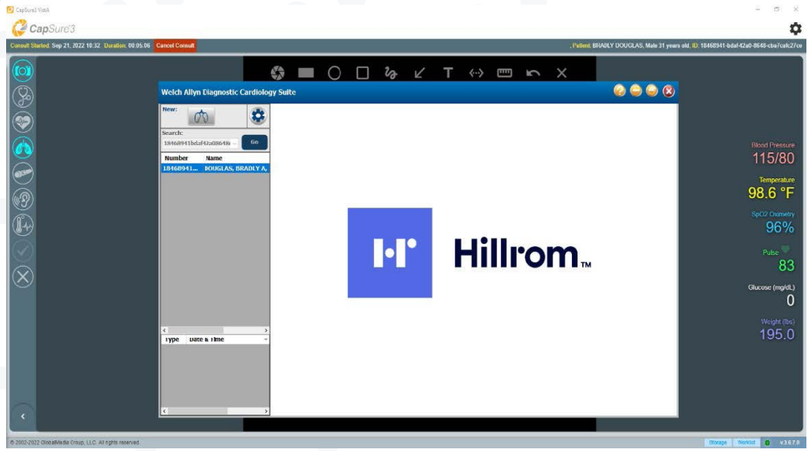
15. Once exported, the report will appear in the Evidence Tray for inclusion in the Consult Report.



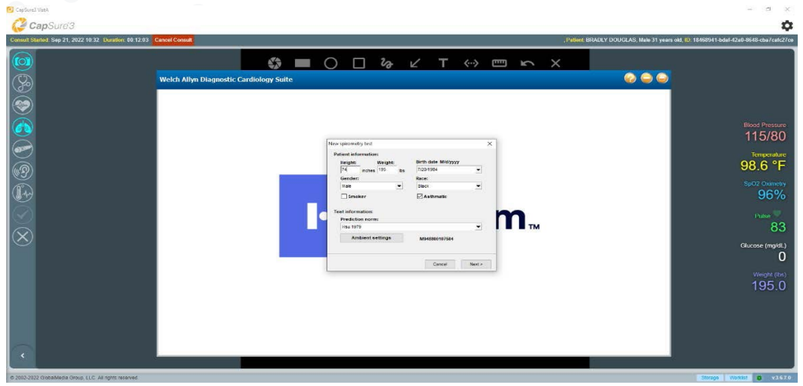
Welch Allyn Diagnostic Cardiology Suite (Spirometry)

1. **Insert the spirometer cable** into a USB port.

2. **Click the Spirometry icon** in ENcounter to run the spirometry software.

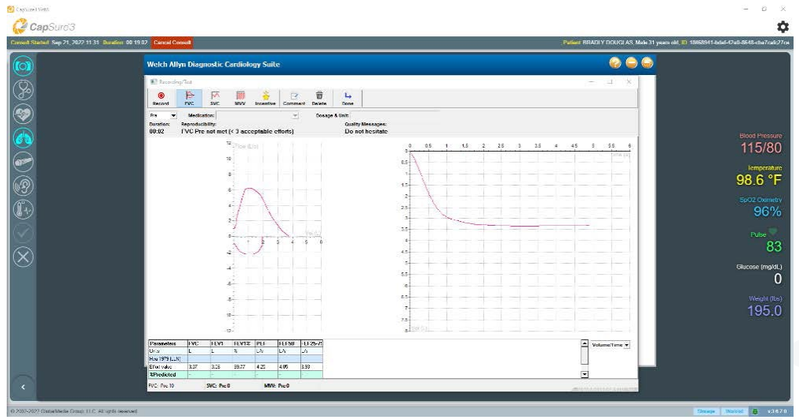


3. **Select the Spirometry icon** at the top of the window that appears and enter the required patient information.

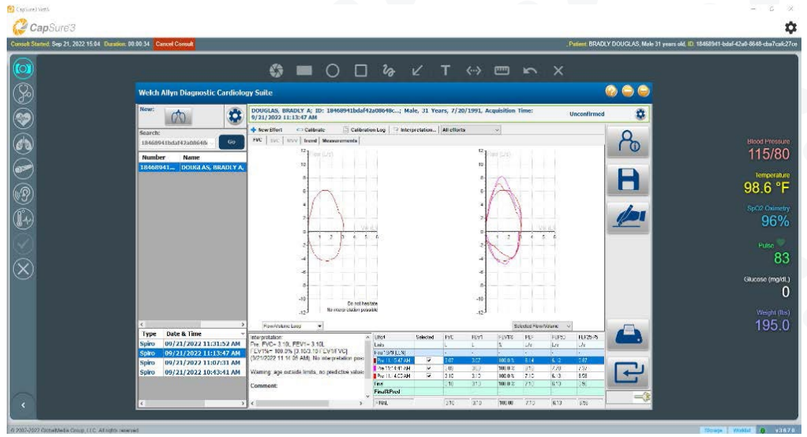


Welch Allyn Diagnostic Cardiology Suite (Spirometry)

4. **Click Record** and instruct the patient to inhale deeply and exhale as hard as possible.

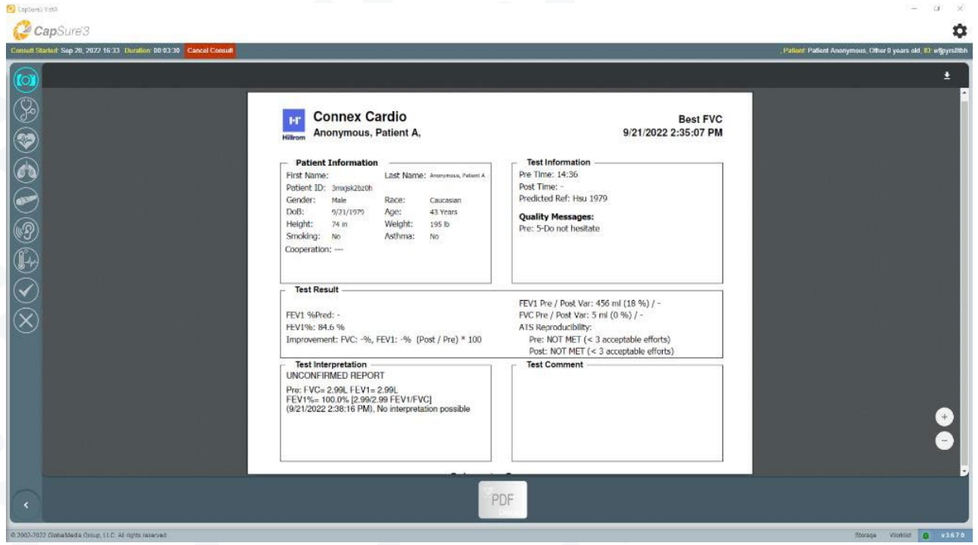


5. After three satisfactory efforts, **click Done**. Then **click the Save icon** to export the report to ENcounter.



Welch Allyn Diagnostic Cardiology Suite (Spirometry)

6. Once complete, the spirometric data automatically uploads to the Consult Report and can be viewed as a thumbnail in the evidence tray.



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