

Using the 6MWT App







Background

The 6MWT is probably the most commonly used test of submaximal (and sometimes maximal) endurance in cardiopulmonary rehabilitation. It is easy to administer, better tolerated, and more reflective of activities of daily living than other walk tests. It requires little equipment and can be performed by most clinical populations. It is a measure of how far a person can walk on level ground in six minutes, walking as fast as they can.

Required Additional Equipment

For the test:

- Tape measure
- Two small cones to mark the turnaround points
- One chair that is easily moved along the walking course
- Wrist mounted Nonin 3150 Pulse Oximeter
- Blood Pressure monitoring unit

For safety:

- Telephone and emergency plan in place
- A source of oxygen
- A crash cart with automated external defibrillator

Set-Up

- **1.** Place one cone in a long and wide hallway. Measure out 30 meters (approximately 100 feet) from the first cone and place the second cone.
- 2. Have the patient sit in a chair and place the pulse oximeter on the patient's wrist and locate the sensor on the patient's middle finger and turn it on.
- **3.** Place the blood pressure cuff preferably on the left arm.



Pre-Test Set-Up

1. Select the 6MWT App. Press START TEST button.



2. From the **Baseline** screen select **SETTINGS** icon from the top right corner of the screen.



- **3.** On the **Settings** screen, **press Units** to select the units of measure for your tape measure
- **4.** Select Voice Guidance "**ON**" on if audible instructions are desired.
- 5. If the patient requires language specific instructions, select the **GLOBE** icon at the top right-hand corner of the screen to select the patient's native language.
- 6. Enter the maximum heart rate alarm setting
- **7.** If the pulse oximeter device has not been paired with the 6MWT App:

Ensure the Nonin 3150 turned on. Select **Bluetooth** option on the screen. Then select **Pulse Oximeter.**

The available Bluetooth devices will be listed. Select the Nonin 3150. A confirmation screen will appear. **Press OK** to accept.

- 8. Press BACK button to return to the Baseline screen.
- **9.** The current heart rate (HR) and oxygen saturation (SpO2) will now show on the screen.



Searchi	ng for Bluetooth devices	
Nonin3150_502	2631225	
lest Cam		
	Attention	
	Do you really want to use the sel	ected device?
	Cancel	ОК

1



Pre-Test Steps

1. Blood Pressure Measurement:

Initiate a measurement of blood pressure on the *BP Unit* by pressing the **START • STOP** button on the *BP Unit* **TWICE.**

2. Then **press RECEIVE BP** button on the **GoClinic** screen to collect and show the BP test data.

NOTE: If the BP Unit has not been previously paired with the GoClinic, a pop-up screen will require pairing once the BP measurement has been started.





- **3. RPE Scale: Press** the **RPE SCALE** button and have the patient select their current sense for level of Exertion and level of Dyspnea.
- 4. Press the BACK button to return to the Baseline screen.





5. Study Conditions:

From the **Baseline** screen, enter the Study Conditions including:

- a. FEV1 %Predicted (optional)
- b. If the patient is receiving supplemental oxygen, select the delivery device, flow rate and how the O_2 is being transported during the test.
- c. Walking aids if any.
- d. The lap distance (Twice the distance between the cones).
- 6. Once complete, remove the blood pressure cuff and press the Green double start arrow to proceed to the Testing screen.

Upon entering the **Testing** screen, the instructions to

be read to the patient will appear. If Voice Guidance

is turned on, the App will speak these words to the



Study Conditions



Solvet D: mi-goodine-cod. The aim of this test is to wark as far as possible for diminutes. You will wark along this halfway between the markers, as many times as you can in diminutes. I will be the aim of this test is to wark as far as possible for diminutes. You will wark along this halfway between the markers, as many times as you can in diminute. I will be the aim of the aim of this test is to wark as far as possible for diminutes. You will wark along this halfway between the markers, as many times as you can in diminute. I will be the aim of the aim

Supplemental oxygen

patient.

7.



6MWT Test Procedure Controls

- 1. During the test, there are several controls for the User:
 - a. Each time the patient completes a lap (walks to the far cone and back), **press** the **ADD LAP** button. A vertical line will appear on the screen at the time of the lap completion.
 - b. If there is an adverse event, **press** the **EVENT** button and select an event or optionally enter what happened manually.
 - c. If the heart rate exceeds the **Alarm Limit**, an audible alarm will sound. **Press** the **ALARM** button to silence the alarm.
- If the patient stops walking for any reason, press the PAUSE button and a green "pause" line will appear. Once the patient starts walking again, press the PAUSE-RESUME button again. A second green line will appear with the resume symbol above it.

NOTE: Every 30 seconds during a pause when the saturation is above 85% a message will appear to read to the patient to begin walking again (It will be spoken if Voice Guidance is on).

3. A 6-minute count-down timer will count down the time of the test. To end the test prematurely, **press** the red square **STOP** button to exit the test. If at less than 6 minutes, a confirmation will be required.









6MWT Test Procedure Controls

- **1. Press** the **Green Start** arrow when the patient is ready to start walking.
- **2.** As the patient walks for the six minutes, the instantaneous HR and SpO2 will appear on the graph.





3. At the end of six minutes or if the test is ended prematurely, have the patient stop exactly where they are and bring them a chair to sit in.

- ect ID: mti-goclinic-004 Post-Test Exertion Dyspnea Extremely strong 10 10 Very strong Strong (he) 4) 3 2.5 Weak (light) 2 1.5 Very ○ 1 ○ 0.7 0.7 Extremely 0.5 0.5 Nothing at all Accept
- **4.** The App will proceed to the **Post-Test RPE** screen. Have the patient select their current sense for level of Exertion and level of Dyspnea. **Press Accept** to proceed to the **Recovery** screen.



6MWT Test Recovery

- 1. Upon entering the **Recovery** screen, the last HR and SpO2 during the test will be displayed.
- 2. Place the blood pressure cuff on the patient's arm and initiate a measurement. Press the RECEIVE BP button on the screen.

3. If the patient stopped walking before 6 minutes: a **Reason for Stopping** question with a dropdown menu for why the patient stopped will appear.

Cooline 1		
Subject ID: mti-goclinic-004	Recovery	
Post-Test Data SpO2 97 [%] Heart Rate 75 [bpm] BP Diatotic	spoziki	ня[bp 2 1 1 1 1 1 1 1 1
RPE-Scale Post-Test Exertion 3 Dyspnea 5		11
Reason for Not Walking Faster: Other	600 700 800 900 1000 1100 12 96 = \$p02(%) = HR(bp	100 13.00 14.00 15.00 16.00 ml 76
Recovery Data: 01:00 Sp02 - [%] Heart Rate - [bpm]	Sp02 - [%] Heart Rate - [bpm] BP Systolic - [mmHg] BP Diastolic - [mmHg] Receive BP	00:14
Subject ID: mti-gociinic-004		
Post-Test Data Sp02 100 Heart Rate 60 BP Systolic [mmHg]	Intolerable dyspnea	
BP Diastolic [mmHg] Receive BP RPE-Scale Post-Test Exertion 2	Leg cramps	
Dyspnea 3	Staggering	
Reason for Stopping: Other Add text	Excessive perspiration	
Recovery Data: 01:00	Pale or ashen appearance	
Heart Rate [bpm]	Dizziness	
	Extreme fatigue	
Reason for Stoppir	Subject fell	
	Saturation < 80%	
Собмит		
Subject ID: mti-goclinic-004		
Post-Test Data Sp02 100 [%]	Chest pain	
BP Systolic - [mmHg] BP Diastolic - [mmHg]	Shortness of breath	

4. If the patient stopped walking at 6 minutes because they were instructed to stop: a Reason for Not Walking Faster question with a dropdown menu for why the patient could not walk faster will appear.



Not Walking Faster



- 5. At 1 minute, the recovery HR and SpO2 will be displayed (NOTE: 2-min and 3-min data is collected and stored).
- Go6MWT ubject ID: mti-goclinic-004 Recovery • Post-Test DataSpO297Heart Rate75BP Systolic132BP Diastolic74 [%] [bp Receive BP **RPE-Scale Post-Test** Exertion Dyspnea 65 L Reason for Not Walking Faster: 8.00 11:00 97 73 **Recovery Data:** Recovery Data: 01:00 [%] [bpm] SpO2 Heart Rate BP Systolic BP Diastolic 01:17 SpO2 96 [%] Heart Rate 71 [bpm] Receive RP () **ا**لله
- **6.** A 10-minute recovery timer is displayed on the lower right side of the screen. The recovery period can be stopped whenever the patient is considered adequately recovered to walk on their own.

The **Recovery** screen will close after 11 minutes if not terminated earlier.

7. Additional recovery blood pressure measurements may be taken at any time by initiating a measurement on the *BP Unit* and then pressing the **RECEIVE BP** button. Current HR and SpO2 will also be recorded.

ect ID: mti-goclinic-004	Recovery • • •
Post-Test Data Sp02 97 [%] Heart Rate 75 [bpm] BP Systolic 132 [mmHg] RPE-Scale Post-Test Service 2	
Dyspnea 5	70
Reason for Not Walking Faster:	600 700 800 900 1000 1100 1200 1100 1600 1500
Shortness of breath	96 \$
Sp02 96	Sp02 96
[%] [%] Heart Rate 71 [bpm]	70 [%] BP Systolic 130 [mmHg] BP Diastolic 74 [mmHg]



8. Upon exiting the **Recovery** screen, a **Results** screen will be displayed. Measure any distance of a partial lap and manually enter the distance.

Test Results: Lap Count 5 Distance Partial Lap 10 6MWD 310 6MWS 0.8	[m]	Spot Check Data:	D				
6MWD 310 6MWS 0.8	Imi		Baseline	Post-Test	Recovery	Recovery	
6MWS 0.8	fund.				1 Min.	07:34	
	[m/s]	Sp02	98	97	96	96	[%]
Number of Pauses 1		Heart Rate	72	75	71	70	[bpm]
Duration of Pauses 00:22	[mm:ss]	BP Diastolic	132	132		130	[mmH
SpO2 Min. 96	[%]	BP Systolic	72	74		74	[mmH
SpO2 Average 97.4	[%]	Exertion	0.7	3.0			
TSat88 00:00	[mm:ss]	Dyspnea	1.0	5.0			
Heart Rate Max. 91	[bpm]						
Heart Rate Average 74.4	[bpm]						

Additional comments can also be added.
Press the ADD COMMENTS button and type any additional comments needed.



10. Press the SHOW GRAPH button to view a results graph. Press the BACK button to return to the Results screen.





Test Results Upload

11. Press the **FINISH** button to upload the test data to the *MTI CarePortal.*

			Results				• •	• •
Fest Results: .ap Count	5							
Distance Partial Lap	10	[m]	Spot Check Data:	Baseline	Post-Test	Recovery	Recovery	
MWD	310	[m]	0-02	0.0	07	1 Min.	07:34	fe/1
MWS	0.8	[m/s]	Heart Pate	70	75	70	70	[/o]
umber of Pauses	00.00	(manual)	BP Diastolic	132	132	<i>'</i> 1	130	[mmH
Puration or Pauses	00:22	[mm:ss] [9/1	BP Systolic	72	74		74	ImmH
SpO2 Mill.	90	[/0]	Exertion	0.7	3.0			
ISat88	00.00	[mm:ss]	Dyspnea	1.0	5.0			
leart Rate Max.	91	[bom]						
leart Rate Average	74.4	[bpm]						

- **12.** A message indicating a successful upload will appear on the **6MWT Start** screen.
- **13.** If an upload was not successful, the *GoClinic* will store the data until communication with the *MTI CarePortal* is re-established and the data will be uploaded with the patient's ID.
- **14.** Press the BACK button to return to the GoClinic Measurements screen.

