



# **4L & PRO PROVIDER MATERIALS**

# In-Service Training Guide

FOR USE WITH MODELS XYC100B-PRO & XYC100B-P4L

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*Providers should use this document as a guide when providing an in-service to patients using a LifeChoice Activox Portable Oxygen Concentrator (POC). It should be used in conjunction with the Patient Training Checklist.*

## GETTING STARTED

1. Read the Quick Start Guide and Operator's Manual.
2. Review the accessories.
  - AC & DC Power Supplies
  - 4-way Carry Case with Adjustable Straps
  - Accessory Bag
  - Cannula
  - External Battery (if purchased)
3. Review the Control Panel.

## TECHNOLOGY OVERVIEW

### Auto Mode Technology

- Device automatically adjusts breath trigger sensitivity to support shallow breathing during periods of rest.
- Device will switch between modes automatically.
  - Pro: Active-High and Sleep-Low LEDs
  - 4L: Active Mode and Rest Mode display on the screen
- It is possible the device will remain in Active Mode/Active-High Mode during sleep and/or Rest Mode/Sleep-Low Mode during activity (depending on model).

### PULSE-WAVE® Delivery

- Oxygen is delivered at a rate that is congruent with the patients breath rate.
- Gentle and effective dose delivery; the patient may not feel the dose directly.
- Side effects from retrograde flow are minimized with this type of delivery; will not dry out nose.

### Mute Feature

- Disables all audible alarm sounds; the Alarm LED will still flash. On the 4L, the alarm title will appear on the display.
- Powering off the device will reset the Mute feature.

### Repressurization Technology

- To prolong the life of the sieve bed, the device will automatically repressurize itself if not used in a period of one or more days.
- Compressors will run for a few seconds; no action is required.

## ALARM INDICATORS

Alarm	Model	Indicator	Cause/Action
No Breath Detected	Pro	On and off beep/ Amber Alarm LED	<p>This alarm can be triggered by a kinked cannula, unattached cannula or shallow and/or mouth breathing. Check the cannula connection and hose for kinks and fix if found. If the cannula was not impaired and is also attached properly, the alarm could be caused by shallow and/or mouth breathing. Breathe deeply through your nasal cannula and the alarm should stop. If the alarm persists, switch to another source of oxygen and contact your equipment provider.</p> <p>If using the Activox 4L model, the PULSE-WAVE Breath Detection Symbol will flash as you breathe. This is confirmation the device detects your breath to deliver a dose of oxygen. If you stop breathing through the nasal cannula (mouth breathing) the unit will begin delivering doses of oxygen automatically without the PULSE-WAVE symbol. After 75 seconds, the unit will provide a “NO BREATH DETECTED” alarm and will continue to automatically provide doses of oxygen until normal breathing resumes. When the unit detects normal breathing, the “NO BREATH DETECTED” alarm will cease and the PULSE-WAVE symbol will indicate detection of your breath.</p>
	4L	On and off beep/ Red Alarm LED, “No Breath Detected” on the display	
Low Battery	Pro	Long tone every minute, Amber INT LED flashes slowly	<p>Triggered when the Internal Battery has approximately less than 15% charge remaining. Connect your POC to the AC or DC Power Supply. Ensure all your charger connections are secure and the green LED is blinking next to the Battery Check button. The device will begin charging and the alarm should stop.</p> <p>Triggered when the Internal Battery has approximately 5% charge remaining. Connect your POC to the AC or DC Power Supply. Ensure all your charger connections are secure, the External Power symbol and “Charging Internal” appear on the display. The device will begin charging and the alarm should stop.</p>
	4L	On and off beep/ Red Alarm LED, “Low Battery” on the display	
Critical Low Battery	Pro	Short rapid tones	<p>Occurs immediately before the battery runs empty. Connect your POC to an external battery source. Ensure all of your charger connections are secure and the green LED is blinking next to the Battery Check button.</p> <p>A countdown timer of the final 180 seconds will appear on the screen and an “X” will appear over the INT Battery Bar.*</p>
	4L	Countdown timer, X over INT Battery Bar	
High Temperature	Pro	Fast audible tone/ flashing amber Alarm LED	<p>This alarm is triggered when the internal temperature of the device exceeds 140 F (63 C). The device will power off so change to another source of oxygen. Move the device away from any potential heat source. Allow the unit to cool until the alarm LED (Pro) and/or “High Temperature” alarm title (4L) turn off. Once the device has sufficiently cooled, you may power the unit back on. If the alarm does not return, it is safe to use. If the alarm persists, remain on your alternate source of oxygen and contact Inova Labs Customer Care.</p>
	4L	On and off beep/red Alarm LED, “High Temperature” on the display	
Low Oxygen Purity	Pro	Continuous tone after a few minutes of use	<p>Triggered when the oxygen purity falls below 82%. This can occur if you are breathing at a high breath rate that exceeds the oxygen production capacity of the device or if the device requires sieve bed replacement. Take slow deep breaths until your breath rate recovers. This allows the device time to restore purity levels. If the alarm stops, the device is safe to use.</p>
	4L	On and off beep/ red Alarm LED, “Low Oxygen Purity” on the display	
Power Interruption	Pro & 4L	Two second tone	<p>Switch to another source of oxygen unless your unit has switched to battery and has sufficient charge. Check your AC/DC charger to ensure all connections are secure and the plug has power. If an issue is found, solve as appropriate.</p>

If an alarm persists after troubleshooting efforts are made, the device may require service. Contact Inova Labs Customer Care Team at 1.512.617.1744 for help.

\*Applies to software version R4.2 and up.

## BATTERY LIFE TIMETABLE

Battery Type	Pulse Setting			
	1 LPMeq	2 LPMeq	3 LPMeq	4 LPMeq
<b>Internal Battery*</b>				
Pro Model	12.5 Hours	7.25 Hours	6.25 Hours	N/A
4L Model	10.25 Hours	8.25 Hours	5 Hours	4 Hours
<b>External Battery*</b>				
Pro Model	3 Hours	3 Hours	2 Hours	N/A
4L Model	4.75 Hours	3.75 Hours	2.75 Hours	2.25 Hours

## BATTERY RECHARGE TIME

Battery Type	Hours
<b>Internal Battery*</b>	
Pro Model	4.5 Hours
4L Model	4 Hours
<b>External Battery*</b>	
Pro Model	3 Hours
4L Model	2 Hours

\* Hours are approximate. Based on breaths per minute.

## USING THE POC ON TRIPS

### Local Trips

- Use the DC Power Supply to and from the destination.
- Pack the AC Power Supply and extension cord if a power supply is available at your destination.

### Extended or Overnight Trips

- Pack Accessory Bag with power supplies, Operator's Manual and extension cord.
- Keep the device plugged into a power source when possible to keep the unit charged.

### Flying with the LifeChoice Activox POC

- Device is FAA-approved for in-flight use.
- Device must be brought onboard the aircraft as carry-on baggage only.
- Call the airline at least two weeks in advance for specific requirements for use during the flight.
- Depending on flight time, an External Battery may be required by the airline.
- Download the Physician's Statement to be used as documentation at the airport from [www.inovalabs.com/resources/traveling-with-oxygen/](http://www.inovalabs.com/resources/traveling-with-oxygen/). Have a physician complete the form prior to the trip.

## CHARGING THE LIFECHOICE ACTIVOX POC

Model	Action	Indicators
Pro	Charging the <b>Internal (INT)</b> Battery	<ul style="list-style-type: none"> <li>Battery Check INT LED will illuminate solid green while the Internal Battery is charging and will turn off when the charging is complete.</li> <li>Confirm the Internal Battery is fully charged by pressing the Battery Check Button</li> <li>Battery Check Button will show the Internal (INT) Battery charge only when the INT LED is solid or blinking (charging or being used).</li> </ul>
	Charging the <b>External (EXT)</b> Battery	<ul style="list-style-type: none"> <li>If an External Battery was purchased, connect it to the device and charge for a minimum of 3 hours.</li> <li>Battery Check EXT LED will illuminate solid green while the External (EXT) Battery is charging and will turn off when the charging is complete.</li> <li>Battery Check Button will show the External (EXT) Battery charge only when the EXT LED is solid or blinking (charging or being used).</li> </ul>
4L	Charging the <b>Internal (INT)</b> Battery	<ul style="list-style-type: none"> <li>When connected into an external power source (AC or DC), the External Power symbol will display and “Charging Internal” will appear on the display. If “Charging Internal” does not display, perform an electronic reset on the unit (page 8).</li> <li>The INT Battery Bar will show the charging level of the battery.</li> </ul>
	Charging the <b>External (EXT)</b> Battery	<ul style="list-style-type: none"> <li>When connected into an external power source (AC or DC), the External Power symbol will display and “Charging External” will appear on the display.</li> <li>The EXT Battery Bar will show the charging level of the battery.</li> <li><b>If the External Battery Bar doesn't illuminate after the Internal Battery charge is complete, the External Battery isn't communicating with the POC.</b> To enable communication: a) Power off the POC and connect the POC to the AC or DC charger. b) Use two fingers to push and hold down both the MUTE and OK buttons at the same time; When the External Battery Bar starts flashing, immediately release the buttons. If communication is established, the External Battery Bar will appear, the External Battery will begin charging and “Charging External” will appear. If this procedure doesn't work for you, please call Inova Labs Customer Care at 512.617.1744 for assistance.</li> </ul>

### IMPORTANT CHARGING TIPS

- The Internal (INT) Battery will always charge before the External (EXT) Battery is charged. However, the External (EXT) Battery is consumed before the Internal (INT) Battery is used.
- The fans will run to cool the batteries and will turn off after the internal battery reaches full charge.
- Charging uses very little electricity.
- It is safe and recommended to keep the device plugged in and charging while not in use.

# Provider Mode Instructions

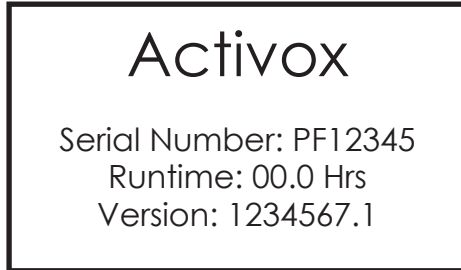
FOR USE WITH MODEL XYC100B-P4L

The LifeChoice Activox 4L Control Panel allows for simple operation and clearly stated status and alarm conditions for the patient. Additional features are available to the provider for maintenance and technical support. This guide provides instruction for accessing these features.

## BASIC UNIT INFORMATION

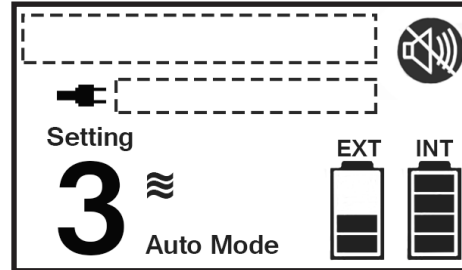
There are two patient-facing screens available on the Activox 4L model.

### Greeting Screen



Press and hold down the “OK” button to display the Serial Number, Patient Runtime and Software Version.

### Home Screen



This screen will be visible to the patient after start-up.

## PROVIDER MODES

The Activox 4L model includes additional Provider Modes to enable device maintenance and technical support. These modes are accessed by pressing unique combinations of buttons to prevent patients from accidentally entering the mode.

**Maintenance Mode:** This mode allows the provider to set, view and/or adjust the System Time Clock, Total Run Time and Patient Run Time.

**Auto Pulse Mode:** This mode allows the provider to test the purity of the device.

## MAINTENANCE MODE

To enter Maintenance Mode, press the “OK”, left arrow “←” and plus “+” buttons simultaneously on the Control Panel.

There will be five screens you can access using the right arrow “→” button. The screens will appear in the following order: 1. Language Selection, 2. Run Time, 3. Set Time, 4. Clear Patient Run Time and 5. Exit.

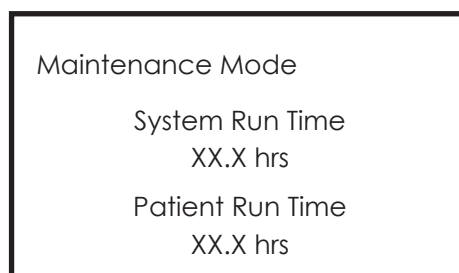
### 1. Language Selection Screen

This screen allows you to choose the language you want displayed on your Activox 4L screen. The default language is English. To continue in English, press the right arrow “→” button to move to the Run Time Screen.

To select a language other than English, press the minus “-” button to search available languages. Once you have found the language you want to use, press the right arrow “→” button to move to the Run Time Screen.

### 2. Run Time Screen

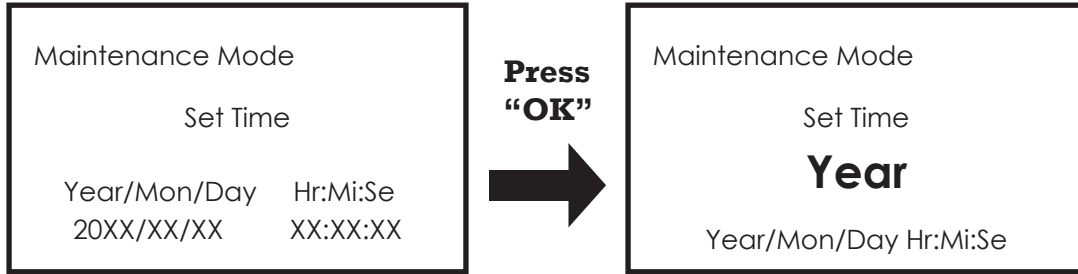
This screen displays both the total System Run Time and the Patient Run Time. Only the Patient Run Time can be cleared (reference #4 below for instructions to clear this value). Press the right arrow “→” button to move to the Set Time Screen.



### 3. Set Time Screen

This screen allows the time and date to be set on the device. Follow the steps below to set.

With “Set Time” displayed, press “OK” to access “Year”. Use the plus “+” and minus “-” buttons to change the value of the selected field (“Year”) up or down. Use the right arrow “→” to sequence to the next display screens (Year, Month, Day, Hour, Minute, Second) and use the plus “+” and minus “-” buttons to change the values. Once complete, press the “OK” button. Press the right arrow “→” button to move to the Clear Patient Run Time Screen.



### 4. Clear Patient Run Time Screen

To reset the Patient Run Time, press the “OK” button. The display will then show “0.0 hrs”. **If you do not want to reset the Patient Run Time, do not press the “OK” button.** Press the right arrow “→” button to move to the Exit Screen.

### 5. Exit Screen

To exit Maintenance Mode, press the “OK” button.

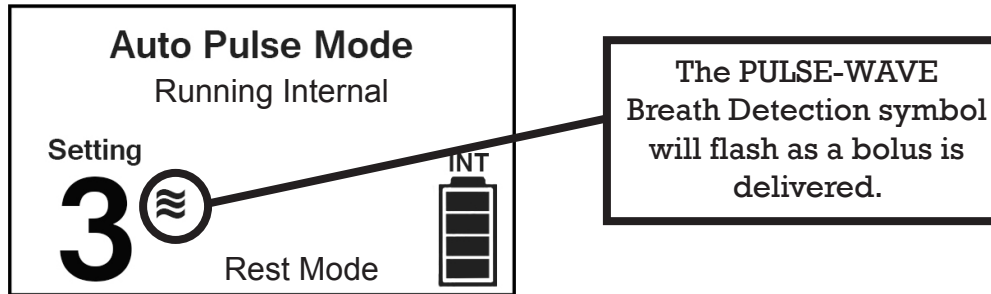
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## AUTO PULSE MODE - OXYGEN PURITY MEASUREMENT INSTRUCTIONS

Placing the device into Auto Pulse Mode will initiate the automatic delivery of pulse doses so oxygen purity can be checked. This mode is only accessible to the provider by pressing a combination of buttons on the Control Panel. Follow the steps below to check the device’s purity level.

**Recommended Oxygen Purity Measurement Device:** PRO2 Check Elite Multifunction Oxygen Indicator by Salter Labs

1. Power on the device.
2. Press and release the “OK”, right arrow “→” and plus “+” buttons simultaneously. The Control Panel will display the following:



3. Select the desired Pulse Setting.  
**NOTE:** This mode delivers a bolus of oxygen at 15 BPM across all Pulse Settings (1, 2, 3 or 4).
4. Connect 1/8” silicon tubing to the oxygen flow port of the measurement device and the Cannula Nozzle Fitting on the POC.
5. Allow approximately five minutes for the device to reach full oxygen concentration and to stabilize. If you change the Pulse Setting, allow the device time to stabilize at the new setting before recording readings.  
**NOTE:** It is normal for oxygen concentration values to cycle up and down. The highest value should be considered final for the device. If the swing is more than 2%, the unit is not yet stable enough to measure.
6. To exit Auto Pulse Mode, press the “OK” button or hold down the “Power” button until the unit turns off. When powered back on, the device will be in normal operating mode.



## **ELECTRONIC RESET**

If the display screen does not appear as described in the Operator's Manual or if the Reset Required alarm is activated, follow the instructions below to reset the device to default factory settings:

1. Power the device off.
2. Push and hold down the Power button for about 15 seconds and release the button at the tone. The unit will cycle then turn off.
3. Power the device back on. Verify that the display screen is appearing as described in the Operator's Manual. If this reset does not resolve the issue, contact Inova Labs Customer Care at 1.512.617.1744 or your Inova Labs Sales Representative.

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## **MAINTENANCE FAQ**

### **1. Does the Activox 4L model have scheduled maintenance?**

Like all POCs, the Activox 4L will eventually require a sieve bed change. In the Service Life section of the Operator's Manual, it is suggested that the patient run the device weekly for a few hours if it has not been used on a regular or daily basis. Frequent Low Oxygen Purity and High Temperature alarms may indicate that the system requires service.

### **2. What type of rechargeable batteries are in the LifeChoice Activox 4L and what are the recommendations to extend the overall service life of the rechargeable batteries?**

All Inova Labs POCs use Lithium-Ion rechargeable batteries. The characteristics of Lithium-Ion rechargeable batteries include: high voltage/light weight, no memory effect, and flat discharge voltage.

- A partial discharge reduces stress and prolongs battery life. It is recommended the battery be recharged, if possible, prior to total discharge. The Operator's Manual informs the patient to "recharge the battery, even if only partially depleted as often as possible.
- Extreme temperature swings effect the battery's cycle life. Leaving the device or external battery in a hot car, especially if exposed to the sun, is very stressful and can damage the cells.
- When not in use, store the device and/or External Battery in a cool, dry place. For long-term storage, we recommend keeping the device on a charger full-time so the it will retain sufficient charge to perform Re-pressurization. This will help extend sieve bed life. For long-term storage of the External Battery, we recommend keeping about a 40% charge on the battery. This allows for some self-discharge while still retaining sufficient charge to keep the protection circuit active.

### **3. What is the standard warranty of the LifeChoice Activox 4L?**

The basic description of the warranty is that from date of shipment from Inova Labs, the device's internal hardware is covered for three years while the batteries, sieve bed and accessories are covered for one year. Please refer to the Limited Warranty that is included in the Sales Agreement and in every Operator's Manual for a complete description.

### **4. How do I initiate a return for service to Inova Labs?**

Prior to requesting a return, please troubleshoot over the phone with Inova Labs Customer Care Team at 1.512.617.1744 or your Territory Manager. You may request an RMA by phone to Customer Care or by email to [rmarequest@inovalabs.com](mailto:rmarequest@inovalabs.com). Include the serial number of the unit, a detailed description of the problem, your contact information and the return shipment address.

**READY RMA** - You can also request and immediately receive a RMA online at:  
<http://portal.inovalabs.com:81/reportrma/index>



# Product Prep Checklist

FOR USE WITH MODEL XYC100B-P4L

*Follow the steps below to examine an Activox 4L unit before placement on a new patient.*

Completed	Action
	1. Examine contents and confirm receipt of all accessory items.
	2. Connect the AC Adapter to the unit and the Charger to an electrical outlet. The fans will activate and the External Power Symbol and “Charging Internal” will display on the screen.
	3. Fully charge the Internal Battery before first use. (4 hours minimum)
	4. Confirm the INT Battery Bar shows full charge. If available, attach an External Battery and confirm the EXT Battery Bar appears.
	5. Press the Power button to turn on the unit. Connect a cannula to the O2 port but do not place the cannula in your nose.
	6. Observe the message on the screen change from “Active Mode” to “Rest Mode”.
	7. Allow approximately 75 seconds for the No Breath Alarm to sound and confirm that “No Breath Detected” appears on the screen.
	8. Check the Mute feature by pressing the Mute button to disable the audible alarm and then press again to turn the Mute feature off.
	9. Place the cannula in your nose and confirm the Pulse Wave symbol flashes on the display screen as you breathe and that the “No Breath Detected” message turns off.
	10. Check for the following: <ul style="list-style-type: none"><li>• Power (solid green) LED</li><li>• “Rest Mode” or “Active Mode” displays on the screen</li><li>• Setting 1, 2, 3 or 4 displays on the screen</li></ul>
	11. Refer to page 7 of this document to test the oxygen purity.

# Hour Meter Instructions

FOR USE WITH MODEL XYC100B-PRO

*Hour Meter readings on the LifeChoice Activox POC are displayed by a series of flashing LED patterns. Follow the instructions below to place the unit in Hour Meter Mode and record readings.*

## Placing the Unit in Hour Meter Mode

1. Start with the LifeChoice Activox POC off.
2. Press and hold down the Hour Meter button (approximately two seconds) until the Hour Meter LED illuminates. The Hour Meter LED will remain solid green while the LEDs for Sleep-Low, Active-High, 1 LPM, 2 LPM and 3 LPM begin to flash in sequence.
3. Beginning with Sleep-Low, count the number of times each LED flashes and record the value in the boxes below. If necessary, the process can be repeated to capture the number of flashes for each LED.

## Record Readings

The chart below displays the number of hours associated with each LED. Record the number of flashes observed for each in the boxes below.

LED	Sleep-Low	Active-High	1 LPMeq	2 LPMeq	3 LPMeq	
Time in Hours	10,000 of Hours	1,000 of Hours	100 of Hours	10s of Hours	1s of Hours	
						<b>Total Hours</b>
Examples	1	2	5	8	1	12,581
	0	0	4	3	9	439

LED	Sleep-Low	Active-High	1 LPMeq	2 LPMeq	3 LPMeq	Total Hours
Flashes						

# Oxygen Purity Measurement Instructions

FOR USE WITH MODEL XYC100B-PRO

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Recommended Oxygen Purity Measurement Device: PRO2 Check Elite Multifunction Oxygen Indicator by Salter Labs

1. Power on the LifeChoice Activox POC.
2. Press and hold down the Hour Meter button. While keeping that button pressed, press down the 1 and 3 LPM buttons momentarily, then release all three buttons simultaneously.
3. Verify that the green LED next to the Power button is flashing. If it is flashing, then the unit is operating in Auto Pulse Mode.
4. Wait about five minutes. Connect 1/8" silicon tubing from the oxygen flow port of the measurement device to the cannula nozzle fitting on the unit.
5. **Allow the unit to operate for approximately five minutes to reach full oxygen concentration and to stabilize.** During this time, the measurement device will slowly ramp up to its full concentration reading. Also, allow the unit to stabilize for five minutes if you switch LPM setting before taking measurements.
6. Select the desired Pulse Setting.
7. Wait until the device reaches peak concentration. The highest oxygen concentration reading is considered final for the unit.
8. The Auto Pulse Mode can be turned off at any point by holding down the Power button until the unit powers off.

**Note:** Oxygen concentration in the LifeChoice Activox POC follows a natural cycle that will typically cycle up and down. If the swing is more than 2%, the unit is not yet stable enough to measure.

# Patient Training Checklist

FOR USE WITH MODELS XYC100B-PRO & XYC100B-P4L

\_\_\_\_\_  
*Patient Name*

\_\_\_\_\_  
*POC Serial Number*

Instructed	Topic
	Read Quick Start Guide and Operator's Manual
	Check Accessories
	Review Control Panel
	Auto Mode Technology
	PULSE-WAVE Delivery
	Mute Feature
	Repressurization Technology
	Alarm Indicators
	Battery Life Timetable
	Battery Recharge Timetable
	Using the POC on Trips
	Charging the POC

## Follow-Up Instructions

Date	Instruction

*I have been fully instructed and understand how to operate the LifeChoice Activox Portable Oxygen Concentrator. I have also been informed to follow up as outlined in the "Follow-Up Instructions" section above.*

\_\_\_\_\_  
*Patient Signature*

\_\_\_\_\_  
*Date*

\_\_\_\_\_  
*Provider Representative*

\_\_\_\_\_  
*Date*