Switching from the PLV-100 or 102 to the Trilogy
Objectives

• Dealing with change
• Product comparison
• Introduction to Trilogy
• Transition example
Change
Change has a considerable psychological impact on the human mind. To the fearful it is threatening because it means that things may get worse. To the hopeful it is encouraging because things may get better. To the confident it is inspiring because the challenge exists to make things better.

King Whitney Jr.
Transitioning Considerations

- Follow any transition protocol established by physician or DME
- Everyone will respond differently to mechanical ventilators
- Obtain necessary approval from physician to adjust settings as needed
- May not be able to set exact settings on both devices; be prepared to spend some time making adjustments to settings
Transitioning Considerations

• Leak compensation (passive circuit) and bias flow on Trilogy will make the delivery of gas “feel different”

• You may need to modify ventilator settings; especially if you are switching to a passive circuit

• Be patient; identify the desired parameters to achieve therapeutic goals and plan how you will best meet these parameters given the change in device
Trilogy to PLV
Feature Comparison
## Comparison

<table>
<thead>
<tr>
<th></th>
<th>Trilogy100</th>
<th>PLV -100 and PLV-102</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>11 lbs</td>
<td>28 lbs</td>
</tr>
<tr>
<td>Intended use</td>
<td>&gt; 5kg thru adult</td>
<td>Pediatric to adult</td>
</tr>
<tr>
<td>Ventilation type</td>
<td>Volume, pressure and bi-level</td>
<td>Volume Pressure with a pressure limiter</td>
</tr>
<tr>
<td>Modes</td>
<td>AC, SIMV, CV CPAP, S, ST, T, PC, PC/SIMV</td>
<td>AC, SIMV, Control AC, SIMV with Sigh (PLV-102)</td>
</tr>
<tr>
<td>Trigger (Sensitivity)</td>
<td>Flow, Digital Auto-Trak</td>
<td>Pressure</td>
</tr>
</tbody>
</table>
## Comparison

<table>
<thead>
<tr>
<th></th>
<th>Trilogy100</th>
<th>PLV-100 and PLV-102</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bias Flow</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Circuit</td>
<td>Passive and Active</td>
<td>Active</td>
</tr>
<tr>
<td>Battery</td>
<td>3 hr internal, 3 hr detachable</td>
<td>1 hour internal</td>
</tr>
<tr>
<td>FAA Cleared</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Flow Generator</td>
<td>Blower driven</td>
<td>Piston driven</td>
</tr>
</tbody>
</table>
Introduction to Trilogy
Trilogy 100

- **Portable Volume** and **Pressure** ventilator
- Proven BiPAP technology, **Auto-TRAK** algorithm and **AVAPS** feature
- **Non Invasive** and **Invasive** capabilities
- For both **children** (≥ 5 kg) and **adults**
- **Passive** and **Active** Circuit configurations
Trilogy100 is

Easy to Use  Portable  Versatile

Sophisticated Technology  Simple ventilation
Easy to Use interface

Simple Screen
Remarkably Portable

- Weighs 11 pounds
- 3 hour internal battery
- 3 hour detachable battery
- Ability to connect to external battery
- In use bag for transport
Additional Features

- Duel Prescription Option
- Alarm and Event Alarms
- Keypad Lock
- Replaceable Airpath
- Color Monitor Intuitive Interface
- Internal PEEP
Easy to Learn and Maintain

- Clean grey foam filter at least every 2 weeks
- Replace every 6 months
- Preventative maintenance every 2 years or 10,000 hours
## Settable Alarms

<table>
<thead>
<tr>
<th>Settable Alarms</th>
<th>Pressure Modes</th>
<th>Volume Modes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CPAP</td>
<td>S</td>
</tr>
<tr>
<td>Circuit Disconnect</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Apnea</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Apnea Rate</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>High + Low Tidal Volume</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>High + Low Minute Ventilation</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>High + Low Respiratory Rate</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>High + Low Peak Inspiratory Pressure</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

All settable alarms can be disabled (OFF)
System Alarms and Messages

- High/Low Pressure Alarms (Pressure modes only)
- Circuit Occlusion
- Low Leak (passive circuit configuration)
- Power/battery Alarms
- Check Circuit
- Ventilator Inoperative
- Service required

High Priority – Red
Medium Priority – Yellow
Informational – No Indication
PHILIPS

Key Differences not available on the PLV’s

• Passive and Active Circuit Configurations

• Bias flow

• Internal PEEP

• Leak compensation and triggering with passive circuit

• Respironics proven technology (AVAPS, Auto-Trak)
More Versatile

Two Circuit Options

1. Single Connection Circuit (Passive)
   - Use Whisper Swivel II for invasive ventilation or mask with integrated leak for noninvasive application
   - Compatible with both pressure and volume modes
   - Lighter weight, fewer connections and simple to use
2. Multiple Connection Circuit (Active)
   - Use a single limb circuit with proximal pressure and active exhalation valve
   - Compatible with both pressure and volume modes
Two Circuit Options

Active Porting Block
Passive Porting Block
Bias flow for comfort

- Bias flow minimizes the work of breathing by tapping into a continuous gas flow rather than initiate flow through a delivery circuit.

- Ventilator-set bias flow flushes exhaled CO₂ and stabilizes temperature, humidity and baseline pressure in the circuit.

- 10LPM Bias Flow during expiration.

- May feel different when breathing with bias flow versus no bias flow.
Internal PEEP versus external
Ease of use and increased efficacy

Internal (Trilogy)
- Built in PEEP; no accessory parts; increased accuracy
- PEEP compensated

External (PLV)
- Accessory PEEP valve attached to the exhalation manifold of the patient circuit
- Not as accurate
- Uncuffed trach tubes and water build up can effect PEEP level
Leak compensation –
Can provide greater synchrony with the ventilator and less WOB

- Auto-Trak identifies leaks by comparing original baseline to the new baseline
- Passive circuit ventilation provides leak compensation in both volume and pressure modes
- *Active circuit ventilation does not provide leak compensation*
Auto-Trak sensitivity
Provides optimum patient/ventilator synchrony

1. Automatically adjusts triggering and cycling

2. Provides advanced leak detection

   - This feature allows the device to recognize and compensate for unintentional leaks and to automatically adjust its trigger and cycle algorithms to maintain optimum performance in the presence of leaks
AVAPS
Averaged Volume Assured Pressure Support

• AVAPS automatically adjusts the pressure support to maintain an average tidal volume
Patient preference settings
Options menu - Screen Saver

Breath

Black

* Off and Dim Screen Savers are also available
Waveform Patterns

• Ramp

• Square
Dual prescription feature –
Greater ease of use and safer with daytime and nighttime settings

Trilogy provides a dual prescription feature that allows you to enter a primary prescription and a secondary prescription for the patient if needed.

*Note: Both prescriptions must use the same circuit type.*
Transition Example
Case Example
Transition to Trilogy from a PLV-100

- 63 year old male with Quadriplegia and respiratory failure
- 24 hour vent dependent, using PLV-100 since 2000
- Resides at home – family members care for him

<table>
<thead>
<tr>
<th>Settings</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>AC</td>
</tr>
<tr>
<td>Vt</td>
<td>1000 cc</td>
</tr>
<tr>
<td>RR set</td>
<td>15</td>
</tr>
<tr>
<td>IT</td>
<td>1.5 sec</td>
</tr>
<tr>
<td>FIO₂</td>
<td>21%</td>
</tr>
<tr>
<td>PEEP</td>
<td>5 cm H₂O</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>- 1 cm H₂O</td>
</tr>
</tbody>
</table>
Option 1
Transition Steps

- Choose circuit type
- Active or passive?

Active
Transition Steps

- Choose circuit type
- Active or passive?

4 lpm
- Set flow trigger
- 1 to 9 lpm

Active

- Set mode

AC
Transition Steps

- Set Vt
  - 1,000 ml

- Inspiratory time
  - 1.5 sec

- Set RR
  - 15 bpm

- Set PEEP
  - 5 cm H$_2$O
Option 2
Transition Steps

- Choose circuit type
- Active or passive?

Passive
Transition Steps

- Choose circuit type
  - Active or passive?

Auto-Trak

- Set flow trigger
  - Flow or Auto-Trak?

Automatically adjusts triggering and cycling

Digital Auto-TRAK™ Sensitivity

- Cycle to FRAP crossover point
- Estimated Patient Flow
- Trigger to IPAP Crossover Point
- Shape Signal
Transition Steps

- Choose circuit type
  - Active or passive?

- Set flow trigger
  - Flow or autoTrak

- Set mode
  - AC
Transition Steps

- Set Vt
  850 ml
Transition Steps

- Set Vt
  - 850 ml

1.5 sec

- Inspiratory time

- Set RR
  - 15 bpm

- Set PEEP
  - 5 cm
With the right preparation, the transition to Trilogy can be seamless, simple and beneficial