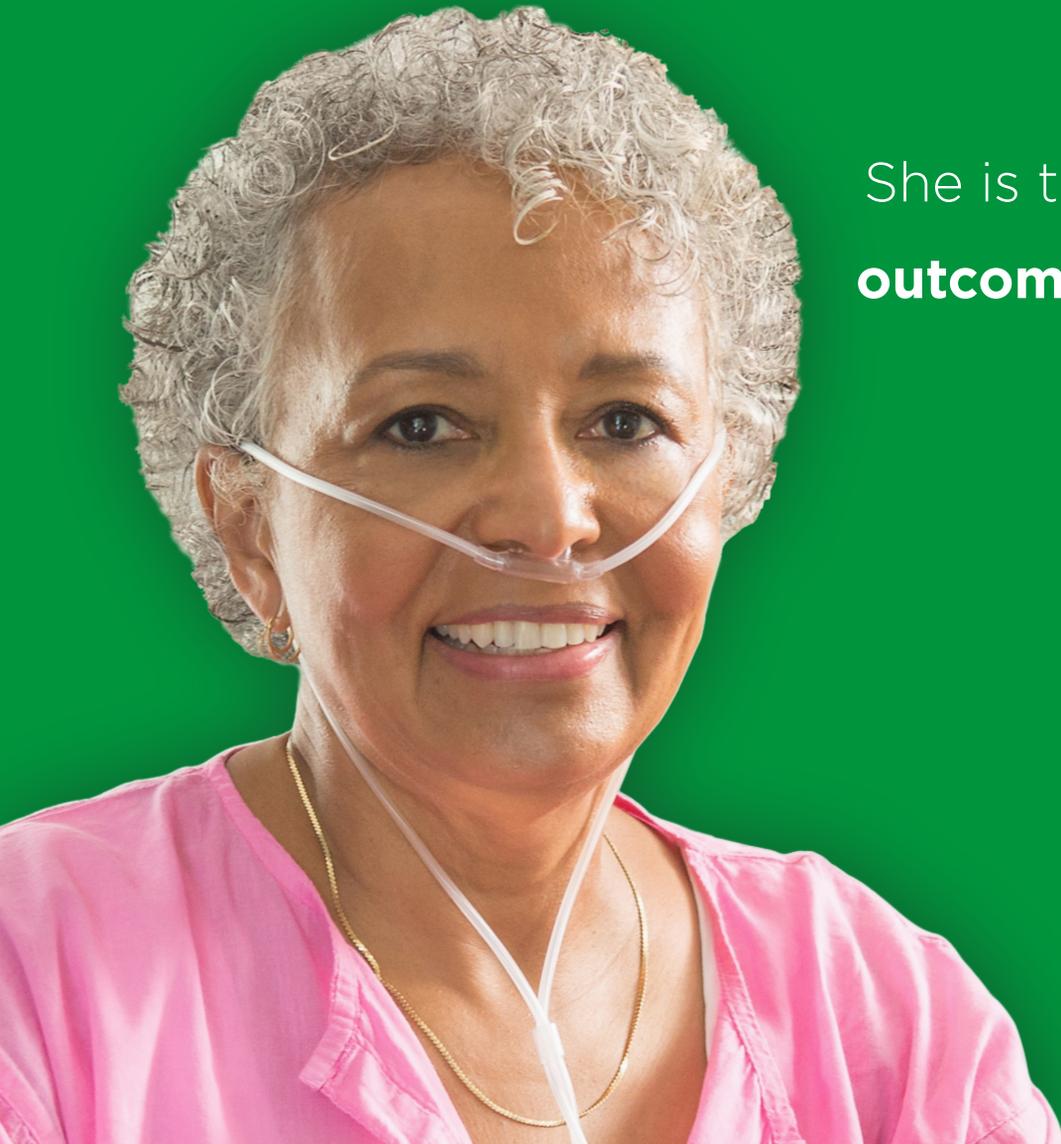


# OXYGEN THERAPY



She is the reason  
**outcomes matter**



**OUTCOMES**  
BY DESIGN™



# Oxygen Therapy

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Your community prides itself on providing resident-centered care and advanced up-to-date medical equipment for residents. Oxygen therapy should be no exception.

Portable Invacare solutions in Oxygen Therapy can help Post-Acute Care communities shed cumbersome, wasteful and expensive e-tanks for more convenient, portable options that promote mobility and resident dignity, or self-filling tanks which allow you to manage oxygen as needed without depending on costly deliveries and storage requirements.

- Clinical Benefits of Ambulation ..... 3**
- Oxygen Purity and Clinical Outcomes..... 4**
- Does “Continuous Use” = Continuous Flow..... 5**
- Portable Oxygen Concentrators (POCs) vs. E-Tanks ..... 6-7**
- Clinical Studies Matrix ..... 8**
- Financial Outcomes Estimator ..... 9**
- Oxygen Therapy Webinars ..... 10**
- Preventive Maintenance ..... 11**
- Product Overview ..... 12-13**



# The importance of Ambulation combined with Continuous Oxygen Therapy

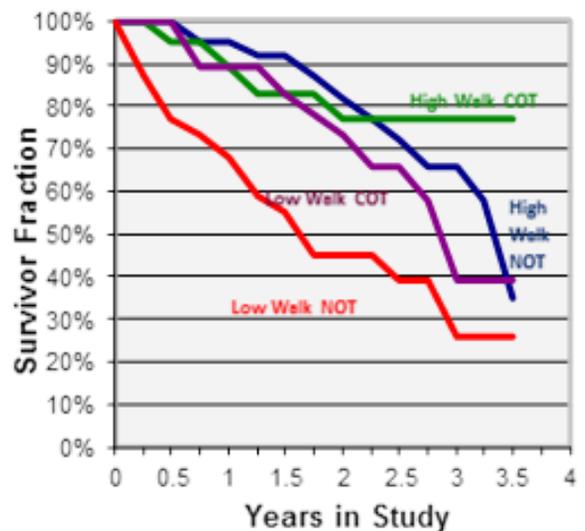
## Ambulation among Oxygen Patients can positively affect Survival Rate over time<sup>1</sup>

Helping patients stay active and compliant with their O<sub>2</sub> prescription can be achieved by providing a portable solution that conveniently aids ambulation and helps them feel empowered to do the things they like to do.

- The majority of Long Term Oxygen Therapy (LTOT) users require oxygen during ambulation

- Ambulatory oxygen is important as it:

- Relieves dyspnea and promotes everyday activities<sup>1</sup>
- Increases exercise tolerance<sup>1</sup>
- Reduces hospitalization<sup>1</sup>
- Improves survival in individuals with stable hypoxic chronic obstructive pulmonary disease (COPD)<sup>2</sup>
- Patients overwhelmingly prefer portable and compact delivery systems over large cylinder systems for ambulation<sup>1</sup>



Petty TL, Bliss PL.<sup>2</sup>

<sup>1</sup>Strickland, S. L., Med RRT-NPS, Hogan, M. T., PhD, & Petroski, G. F., PhD. (2009). A Randomized Multi-Arm Repeated-Measures Prospective Study of Several Modalities of Portable Oxygen Delivery During Assessment of Functional Exercise Capacity. *Respiratory Care*, 54(3), 344-349.

<sup>2</sup>Petty TL, Bliss PL. Ambulatory oxygen therapy, exercise, and survival with advanced chronic obstructive pulmonary disease (The nocturnal oxygen therapy trial revisited). *Respir Care* 2000;45(2):204-21.



# Oxygen Purity and Clinical Outcomes

## Concentrator O<sub>2</sub> vs. USP 99.6% O<sub>2</sub>

One of the primary perceived benefits of oxygen in e-tanks is its purity. If the ideal is 100% pure, then is the 99% from an e-tank necessarily more clinically effective than a lower purity achieved by an oxygen concentrator that creates its own oxygen from room air?

In 2003, researchers Lewarski and Chatburn published a prospective, randomized, cross-over design study<sup>3</sup> examining the effect of oxygen purity on factors related to physical activity.

The study of 9 oxygen-dependent COPD patients analyzed the effect on ambulatory patients of 99.6% pure Oxygen from an e-tank vs. 93±3% O<sub>2</sub> via EasyPulse Oxygen Conserving Device.

### After completing the 6-minute Walk Test, researchers measured:

- Distance walked
- Pre & post SpO<sub>2</sub>
- Pre & post Heart Rate
- Dyspnea (sensation of being 'out of breath')
- SpO<sub>2</sub> & Heart Rate Recovery times

**The conclusion indicated that “There was no effect of device on SpO<sub>2</sub> or heart rate... or Borg score.”** The Borg Rating of Perceived Exertion (RPE) is a way of measuring physical activity intensity level. It is based on the physical sensations a person experiences during physical activity, including increased heart rate, increased respiration or breathing rate, increased sweating, and muscle fatigue (Borg, 1998).

<sup>1</sup>Lewarski, Chatburn. *Respir Care*, 2003; Vol 48, No 11; 1115



## Does “Continuous Use”= Continuous Flow?

Many prescriptions for long-term oxygen therapy indicate Continuous Use. This may lead to some confusion around another set of terms within oxygen therapy: continuous flow and pulse dose.



### PERCEPTION

If continuous use is indicated, that means pulse dose therapy devices such as cylinders with oxygen conservers or portable oxygen concentrators are not an option.

### REALITY

**Continuous use refers to 24/7 use of supplemental oxygen, not the flow of the delivery device.**

Just as the continuous flow setting is determined by using a pulse oximeter, so too the pulse dose setting is determined the same way. All that is needed is a physician order to adjust the pulse dose setting to achieve a desired oxygen saturation ( $SpO_2$ ). A common oxygen saturation that is targeted is 90%.

The advantages of pulse dose therapy, when clinically appropriate, include less oxygen wasted since delivery is suspended during exhalation; increased patient comfort due to possibility of continuous flow drying out patients' nasal passages; and more smaller, lighter portable options than traditional continuous flow e-tanks for increased patient activity.



## POCs vs. E-Tanks

### **Convenience, patient dignity and lower cost are just the beginning.**

Taking into consideration the evidence that constant oxygen therapy and ambulation play a role in extending survival rates over time and can help prevent hospital readmission due to patient non-compliance<sup>4</sup>, providing a source of oxygen that encourages compliance and facilitates easy mobility is key.

Portable oxygen concentrators can help accomplish these objectives by removing the stigma, and inconvenience, of hauling a heavy tank around on a cart; and ease of use makes the Invacare Platinum Mobile Oxygen Concentrator a great choice for allowing residents to be as active as they want to be, whether leaving the facility for an appointment or going for a walk outdoors.



Providing a concentrator that produces its own oxygen can eliminate the need for costly e-tank deliveries and the need to maintain an oxygen tank storage room, among other financial benefits.

User-friendly, discreet and convenient for resident and patient alike: portable oxygen concentrators can help improve both clinical and financial outcomes when compared to traditional e-tanks<sup>5</sup>.

<sup>4</sup>Murphie P, Hex N, Setters J, et al. Self-fill oxygen technology: benefits for patients, healthcare providers and the environment. *Breathe* 2016; 12: 113-119.

<sup>5</sup>Murphie P, Little S. Homefill: better for your patient, better for your pocket? *Prim Care Respir J* 2011; 20(2): 223-224 (Letter to the editors).



## POCs vs. E-Tanks

Benefit of Portable Oxygen	For Facility	For Resident
Don't worry about running out of oxygen		✓
Aesthetics/not ashamed of appearance		✓
Encourage compliance with oxygen prescription/reduced readmissions	✓	✓
Less storage space required	✓	✓
No special transport required for out-of-facility trips	✓	✓
No wasted/unused oxygen	✓	
Easier mobility		✓
Control of oxygen supply/no third party supplier	✓	

Which would you rather use?



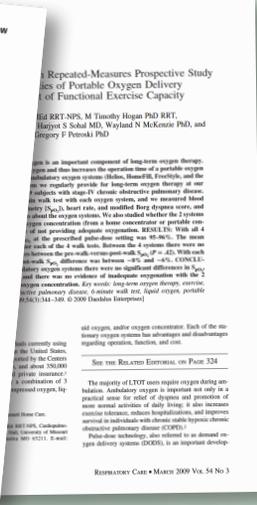
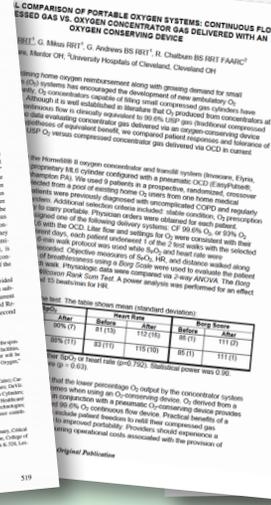
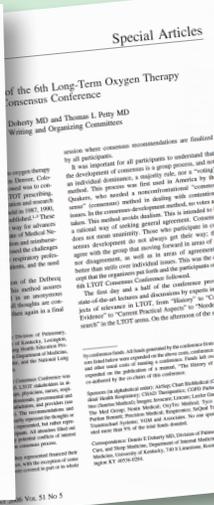


# Clinical Studies Matrix

## Clinical evidence for informed decision making

Whether you are interested in the financial benefits of switching from e-tanks to the Invacare® HomeFill® Oxygen System but are looking for clinical support to mitigate your concern that oxygen purity may affect clinical outcomes, or to understand how ambulation can dramatically impact survival rates over time, Invacare offers a compendium of studies to help make informed clinical decisions regarding supplemental oxygen for your residents.

Depending on your desired outcomes, your Invacare Post Acute Care Solutions Specialist can share relevant studies with you.



 **Discuss your desired outcomes with your Invacare Post Acute Care Solutions Specialist**

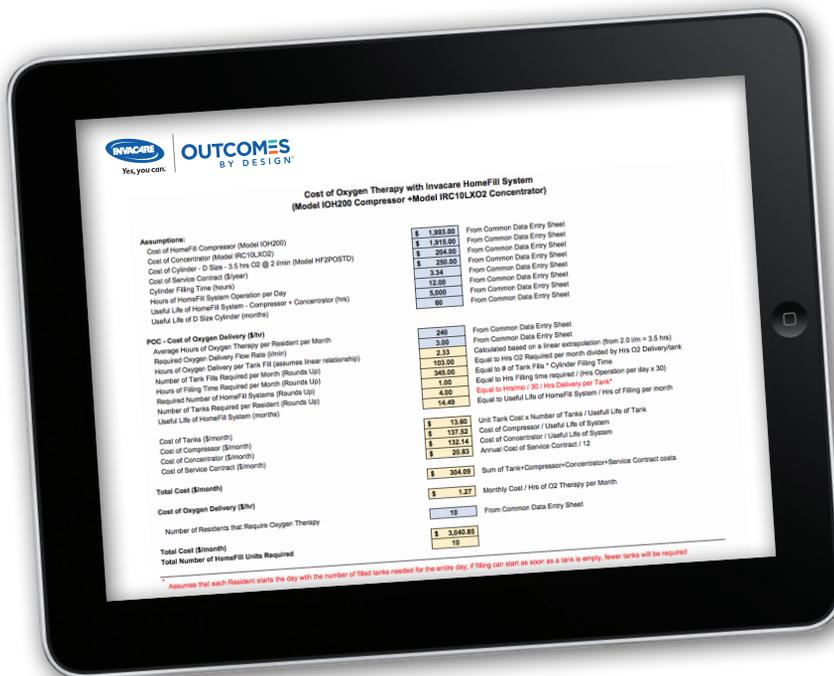


# Financial Outcomes Estimator

## The intersection of outcomes and income

If a portable or self-filling option is right for your patient, our Financial Outcomes Estimator App can show you in dollars and cents what switching from e-tanks may mean for your bottom line.

Your Invacare Post Acute Care Solutions Specialist will consult with you and model, using data you provide, an estimation of potential savings in converting from e-tank delivery to Invacare options.



 **Explore the possibilities with your Invacare Post Acute Care Solutions Specialist**



## Oxygen Therapy Webinars



Outcomes by Design offers several webinar options to accommodate your needs: live webinars with Invacare Oxygen Therapy Experts or on-demand archived presentations.

Topics cover oxygen therapy considerations within Post Acute Care and include:

- Long-Term Oxygen Therapy: Improving Patient Outcomes
- Understanding Oxygen Conserving Devices
- Training the COPD Patient: Getting it Right the First Time



**To learn about upcoming webinars contact your  
Invacare Post Acute Care Solutions Specialist**

**For on-demand webinars, visit  
[OutcomesByDesign.Invacare.com](https://OutcomesByDesign.Invacare.com)**



# Preventive Maintenance

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## Breathe Easy

Properly maintaining oxygen concentrators that residents requiring supplemental oxygen depend on is imperative for communities. Equipment downtime as a result of preventable product issues can be not only disruptive but also impact patient/family satisfaction.

However, your maintenance department does not need to be tasked with working on unfamiliar equipment—leave the maintenance and service of oxygen equipment to the experts at Invacare.

Count on Invacare Biomed Service Solutions to keep your oxygen therapy equipment in compliance with manufacturers' recommended maintenance schedules and documentation requirements.

**Whether the equipment is an Invacare product or not**, skilled Biomed Solutions technicians can help keep your critical oxygen therapy equipment performing for your patients who depend on supplemental oxygen.

- Preventive Maintenance (PM) Program
- On-demand Repair Services
- Concentrators
- Ventilators



**Contact your Invacare Post Acute Care Solutions Specialist to schedule a PM consultation**



# Invacare HomeFill Oxygen System

## Eliminate costly delivery of e-tanks

Never rely on third-party oxygen delivery again, with this refillable, unlimited supply of oxygen. Safely fill your own oxygen cylinders at your staff's convenience with the Invacare HomeFill Oxygen System.

This revolutionary self-filling oxygen system is the longest-selling system of its kind on the market and allows you to fill Invacare oxygen cylinders in a wide range of sizes over and over. The cylinders can be fitted with a standard, continuous flow regulator or an oxygen conserving device to convert from continuous flow to pulse dose as required by the patient's prescription.



Give your residents the freedom to go where they want, when they want. Whether it's leaving the facility for an appointment, or rehab in the therapy gym, the HomeFill Oxygen System helps to give ambulatory oxygen patients control of their lives, while enhancing their ability to stay active.





# Invacare HomeFill Oxygen System

## HomeFill System vs. E-Tanks

Benefit of HomeFill System	For Facility	For Resident
Variety of cylinder sizes	✓	✓
No tracking of oxygen tank lots	✓	
No wasted/unused oxygen	✓	
Easier mobility (straps vs. carts)		✓
Less storage space required	✓	
No special transport required for out-of-facility trips	✓	✓
Fill tanks when needed	✓	
Oxygen independence	✓	

Which would you rather use?





# Invacare Platinum Mobile Oxygen Concentrator



**Promote ambulation and compliance with a convenient, discreet portable oxygen concentrator**

## Staying Active: Helping patients go



### Lightweight and Durable

Compact, lightweight and rugged design let your patients go about their day in a variety of conditions



### Extended Battery Time

The comfort and peace of mind of up to 10 hrs of oxygen\*



### Stylish 3-Way Convertible Bag

Convertible to backpack, messenger or purse style, so patients can match their bag to their activity

## Staying compliant: Helping patients be confident and in control, even with supplemental O<sub>2</sub>



### Easy to Use

Large buttons, simple user interface, top-load battery help users operate the Platinum Mobile Oxygen Concentrator with utmost ease



### Quiet and Discreet

Quiet performance helps the Platinum Mobile Oxygen Concentrator blend into the background (<= 40dBA)

### No O<sub>2</sub> interruption

Hot Swap capability helps patient change batteries without interrupting oxygen supply

*\*With 2 batteries.*

**Provide a solution beyond just oxygen for patient satisfaction**