CONTINUOUS FLOW CAPABLE PORTABLE OXYGEN CONCENTRATORS AND THE SEQUAL ECLIPSE 3— APPLICATIONS AND BENEFITS

White Paper

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Introduction: Portable Oxygen Concentrators

Portable oxygen concentrators (POCs) are gaining wider acceptance as both an ambulatory and stationary source of low flow oxygen therapy. In the last three years alone several new POCs have been introduced to the market. Each new device is typically marketed with features and claims that are of interest to both the patient and the clinician, yet poorly understood as it relates to the POC's actual clinical benefits.

The purpose of this white paper is to outline the performance capabilities and clinical benefits of one type of POC—the continuous flow capable portable oxygen concentrator (CFO POC). Continuous flow capable POCs are able to provide oxygen patients both intermittent flow (IF) and continuous flow (CF) modes, allowing for greater utilization potential in clinical use and applications compared to IF-only POCs. While there are numerous IF-only POCs available today, there are currently only four CFO POCs available to patients. While all of these products merit discussion, this white paper will focus on one of these units, the Eclipse 3, a third generation CFO POC manufactured by SeQual Technologies in San Diego, California.

Continuous flow capable POCs are able to provide oxygen patients greater utilization potential in clinical use and applications compared to IF-only POCs.

Background

Patients today who are prescribed long term oxygen therapy (LTOT) are being diagnosed and treated earlier in their disease than patients who were prescribed LTOT just 15 years ago. These new LTOT patients are realizing the benefits of reduced complications and co-morbidities associated with chronic, untreated hypoxemia, and are more active and mobile than at any time in the past. In addition, these LTOT users and their families are becoming more of a consumer than a patient as information on diseases and oxygen therapy devices are readily available on the internet and in social networks. Most often these "LTOT consumers" desire products and services that can help provide a better quality of life without the undue hindrances of excessive weight, limited operating times, and other factors historically associated with the use of stationary and portable oxygen systems.

LTOT patients are prescribed oxygen therapy that is intended to effectively treat their lung disease, yet there is often conflict between the methods available to provide clinically effective therapy and the products and services that the patient-as-consumer desires to utilize for their therapy. An ideal oxygen delivery system must meet the needs of the patient at all activity levels—rest, exercise, sleep, and at altitude—while also being functionally stable, easily portable, and visually appealing. In other words, the oxygen system needs to have the capability to meet all of the patient's oxygenation requirements AND be as mobile and durable as the patient. If mobility is not able to be maintained, the patient is at risk of becoming sedentary and would lose all of the benefits of exercise and activity, which could then further exacerbate their disease.

CFO POCs—Basic Functions

Current CFO POCs on the market combine the output of a 3LPM continuous flow stationary concentrator with the portability of IF-only oxygen delivery systems into one all-inclusive unit. An ideal oxygen delivery system balances clinically effective oxygen therapy at all activity levels with the patient's ability to be mobile with a lightweight, long lasting oxygen system. Significantly lighter than stationary concentrators, CFO POCs allow patients to utilize the benefits of CF in a smaller, lighter package. CFO POCs also allow patients greater flexibility in IF therapy options and settings than current IF-only POCs.

Continuous Flow Capabilities and Limitations

Continuous flow (CF) oxygen has been the gold standard in oxygen therapy for many years. One reason for this is the clinician's familiarity with basic CF systems and their capabilities. Many patients are still prescribed the "standard" 2LPM of supplemental oxygen without regard to changing activity levels. Current CFO POCs can provide up to 3LPM of CF oxygen delivery, making them viable options for most new and existing oxygen prescriptions.

However, CF has its own limitations and can sometimes be as variable as intermittent flow (IF) oxygen systems in terms of the ability to provide therapeutic benefits. The effectiveness of fixed, continuous delivery of oxygen will change based on changes in the patient's breath rate. As a patient inhales faster, inspiratory time will shorten and a lower volume of oxygen is provided during that time.

One school of thought is to compensate for the shorter inspiratory time by increasing the CF flow rate when the patient is exercising. This concept is not used very often as clinicians are usually concerned about the effects of increasing oxygen flow too much and/or the patients forgetting to increase or decrease their CF rate as their activities change. CF continues to be the perceived standard of care for LTOT even though newer technology and delivery systems can be more efficient, effective and valuable for patient care.

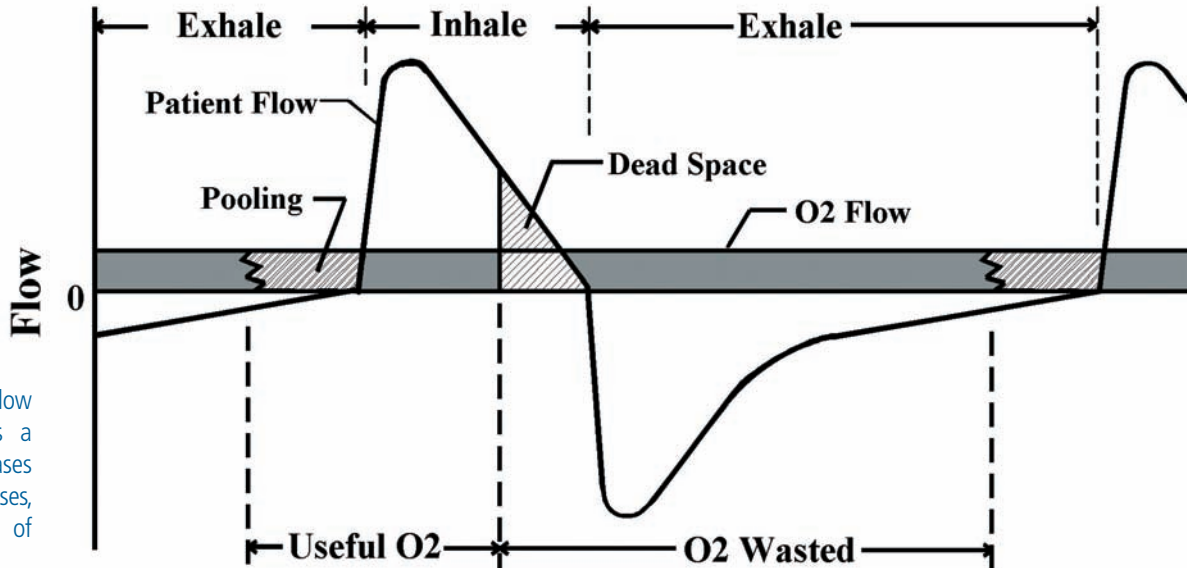

Fig. 1: During continuous flow (CF) oxygen therapy, as a patient's breath rate increases their inspiratory time decreases, decreasing the amount of useful O_2.

CF does have its place as an alternative to intermittent flow. If intermittent flow settings are not functioning on a device, or if the patient has a difficult time triggering flow from the device, CF is an acceptable option, provided the patient is able to stay oxygenated. However, if the patient is using the device on battery power, they should expect a shorter operating time.

There is some evidence to support the use of IF-only POCs during sleep, yet a concern exists that that the clinician cannot be certain that the device is triggering accurately during the shallow breathing associated with sleep. CF is necessary for oxygen therapy when used in conjunction with continuous positive airway pressure (CPAP) or other PAP systems. PAP systems utilize too much flow for pulse dose to be effective, and pulse dose triggering during IF therapy would be erratic.

If a patient desires to mobile away from their device, CF is recommended for distances greater than 25ft. CFO POCs in the IF mode will not be able to detect patient breaths and trigger effectively through long oxygen supply tubing. The pressure drop created by an increased length of tubing will delay the triggering of a IF system, plus the delay in getting oxygen to the patient through the large length of tubing may cause the bolus of oxygen to be delivered in the late half of inspiration. The suggested maximum length of tubing is determined by each manufacturer and is typically between 7 and 25 feet.

Intermittent Flow Capabilities and Limitations

The basics of continuous flow oxygen therapy are typically understood by most clinicians. Unfortunately many clinicians are not familiar with intermittent flow systems and some may have had a "bad" experience with a system that was not capable of oxygenating their patient. Many clinicians perceive that all IF systems are alike and if one doesn't work then they all will not work. This is a very common misconception and could cause more harm to the patient if the clinician only prescribes a CF system when an effective IF system could have worked. Intermittent flow gives the patient the ability to use oxygen efficiently, reducing oxygen waste and the need for heavier oxygen systems that do not last as long as efficient systems.

IF delivery, including that from CFO POCs, is typically associated with delivering a fixed volume of oxygen during inhalation with no oxygen delivery during exhalation. Unlike CF therapy, as the respiratory rate increases, most IF delivery systems will give the same volume of oxygen no matter the breath rate. This means that, in comparison to CF, as respiratory rates increase, more oxygen is being delivered to the patient per minute than at an "equivalent" CF setting (equivalent meaning identical volume at a specific rate; equivalence will not be maintained as the breath rate increases). This isn't always the case, as some IF delivery systems will decrease the dose volume as respiratory rates rise, usually to ensure the device does not exceed production capabilities or to prolong oxygen conservation. On fixed-dose IF devices, though, the patient typically will be better oxygenated at a higher rate because there is no reduction in dose volume at a given setting, whereas there is a decrease in volume when on fixed CF.

CFO POCs have the ability to treat a wide range of oxygen patients due to their higher oxygen output capabilities compared to IF-only POCs—a CFO POC's oxygen production

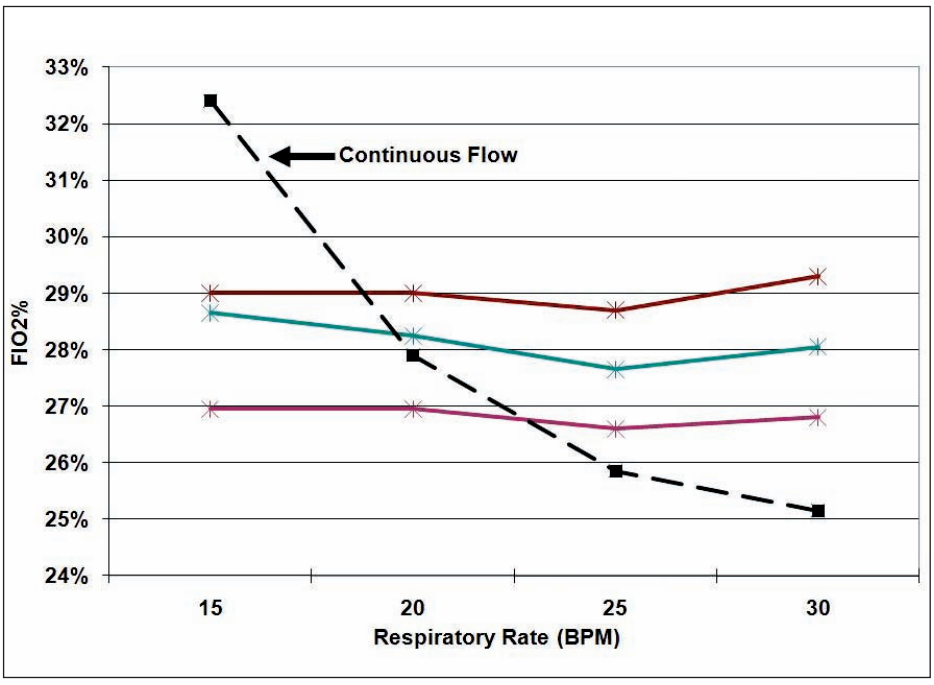

Fig. 2: This chart shows inspired FIO2% of 3 IF devices at their "2" setting compared to CF at 2LPM on a test lung operating at 500mL tidal volume. In CF therapy, the amount of oxygen reaching the lungs decreases as respiratory rate rises, causing a drop in FIO2%. During IF oxygen therapy, as a patient's breath rate increases their inspiratory time decreases, but the oxygen dose typically does not vary, helping to maintain FIO2% and oxygen saturation.

capability is typically three times that of the highest producing IF-only POCs. Greater oxygen production capacity equates to larger dose volumes, more IF and CF setting options and, if the patient's condition deteriorates and oxygen needs increase, the ability to remain useful to the patient for a longer period of time.

Top end dose volumes on many IF-only devices range from 30mL of oxygen per dose to 60mL of oxygen per dose. In contrast, CFO POCs are often capable of producing 90mL of oxygen or more per dose at their maximum IF settings. This allows a wider variety of LTOT patients to utilize the system during periods of increased need for oxygen. Additionally, some IF-only devices reduce oxygen output purity as the device is run at its maximum settings for long periods, reducing the effectiveness of the oxygen therapy. Because of their greater production capacities, purity reduction at maximum settings is typically not an issue for CFO POCs.

Many IF-only systems have 3-5 available dose settings on the device. CFO POCs can feature a wider variety of settings, sometimes up to 10-12 individual dose settings, allowing for greater oxygen dose flexibility when using the device. Additionally, CFO POCs can deliver their oxygen at higher peak flow rates for short durations, ensuring effective oxygen delivery during the early part of the patient's inhalation cycle. The downside to high flow is the sound that is produced within the cannula and potential discomfort in the nasal cavity. The optimal flow is one that delivers the oxygen as efficiently and effectively as possible without undue sound or turbulence.

As an LTOT patient's condition deteriorates, CFO POCs have the ability to remain as a viable oxygen delivery system for longer than typical IF-only systems. As the patient's oxygen needs increase over time, the ability of current IF-only devices to provide adequate oxygenation at all activity levels decreases dues to their maximum output capabilities. CFO POCs will have a longer "useful life" for their users due to the range of oxygen volumes the devices are able to output.

Stationary vs. Portable Use

For patients with oxygen prescriptions of 3LPM or less, CFO POCs can operate in the home as stationary concentrators, allowing the patient to plug into a wall for power and battery (re)charging, connect tubing extensions for greater in-home mobility, and a humidifier bottle for oxygen delivery comfort. The unit is able to stay in one position while the patient is free to move about the house. The potential exists for patients with oxygen prescriptions greater than 3LPM to use the CFO POC in an IF mode at higher settings, but they will be limited by the length of tubing they can use (typically 7' to 25' max for IF) and will not be able to utilize a humidifier bottle.

The ability for a POC to be as active and mobile as the patient is a POCs greatest asset. CFO POCs are not the lightest POCs on the market, but they are light enough to be utilized by most patients who desire to lead active lifestyles. Typically the patient will pull the 15-18 pound unit in a luggage-style cart along with AC and/or DC power supplies, cannulas, and a spare battery (or more, if needed). The addition of accessories often adds 3-5 pounds of additional weight, but most manufacturers supply storage bags that can be secured to the luggage cart so that these essential items do not need to be carried.

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All CFO POCs are provided with rechargeable battery packs to help bridge the gap between power sources. Battery run out times vary depending on the mode of operation and flow setting, so users will need to understand how their use of the device impacts battery life. The ability of a POC to operate for up to several hours on one battery can give patients the confidence needed to be mobile with the device without worry of shutdown. Batteries automatically begin to recharge when the unit is plugged into a power source, ensuring that, as long as the unit is plugged in, there will be a charge on the battery.

Being mobile is not necessarily the same as being active. Being mobile occurs when one is in a car, airplane, or wheelchair, traveling from the home. Ambulatory mobility includes walking, climbing, and other exercise, but it also includes going to the grocery store, visiting family and friends, and traveling for the holidays. Most CFO POCs have been approved for use on airlines by the majority of major carriers. All carriers require the unit to be run on battery power only, so users need to bring

enough batteries to last the duration of the flight. Also, altitude air pressure factors will affect all patients as well as device operation. Patients should expect to use more oxygen than usual during flight.

CFO POCs—Patient Benefits from Ambulatory Use

CFO POC's oxygen production capability is typically three times that of the highest producing IF-only POC. Greater oxygen production capacity equates to larger dose volumes, more IF and CF setting options and, if the patient's condition deteriorates, the ability to remain useful to the patient for a longer period of time. There is a trade-off, of course, as CFO POCs (and their accessories) can weigh 10-15 pounds more than the smallest IF-only POCs, making the CFO POC a slightly less desirable option for portability than an IF-only unit. But CFO POCs still remain 10 to 15 lbs less than a standard stationary concentrator.

Benefits of mobility for an oxygen patient while using a CFO POC can include:

• **Exercise and conditioning:** Many patients do not continue to exercise when prescribed oxygen. This could be a result of an inappropriate perception of the limits of their disease. A general feeling among many patients is that, when they require supplemental oxygen, they are dying. The old school of thought was that oxygen was the last intervention before a patient died. This still common misconception also causes patients to avoid going out in public fearing that everyone would see them and know that they are dying. These patients often do not equate their reluctance and/or refusal to using oxygen with mobility as a cause that can lead to premature death.

Regular exercise and mobility can improve most bodily functions and can condition the patient to use oxygen more efficiently. This is true for most diseases, yet cardiopulmonary disease requires supplemental oxygen to compensate for the loss of lung function due to the disease. Oxygen and exercise is the best combination of therapy for COPD patients that need LTOT.

The NOTT study revisited identified the benefits of exercise while on LTOT. "High walkers" on 24 hour supplemental oxygen had the highest survival of all categories at over 75% survival after 3.5 years. Interestingly, patients that were "high walkers" on 12 hours of oxygen had better survival at 2 years than patients that were "low walkers" on 24 hours of oxygen. This statistic alone puts a great deal of emphasis on the value of exercise for LTOT patients. This study also identified that "high walkers" on 24 hours of oxygen had a significantly lower hospitalization rate compared to low walkers.

• **Deep breathing:** Exercise will cause an LTOT patient to breathe faster and deeper. A deep breath will open airways that have not been utilized, mobilize secretions and increase surface area for improved gas exchange. Many LTOT patients who receive pulmonary rehabilitation services are instructed that stacking of breaths and air trapping can occur and needs to be addressed with proper use of bronchodilators and pursed lip breathing.

• **Maintenance of ideal weight:** Chronic obesity is often labeled an American problem, but is becoming a global issue as well. Lack of exercise and poor diet choices has created significant health issues for many people. Overweight LTOT patients with chronic lung disease can compound their lung problems with obesity related co morbidities such as diabetes and obstructive sleep apnea (OSA), plus excess weight can interfere with lung function by pushing the stomach up into the chest. Regular exercise and proper nutrition can help maintain an ideal weight and can reduce complications associated with chronic lung disease and other problems associated with obesity.

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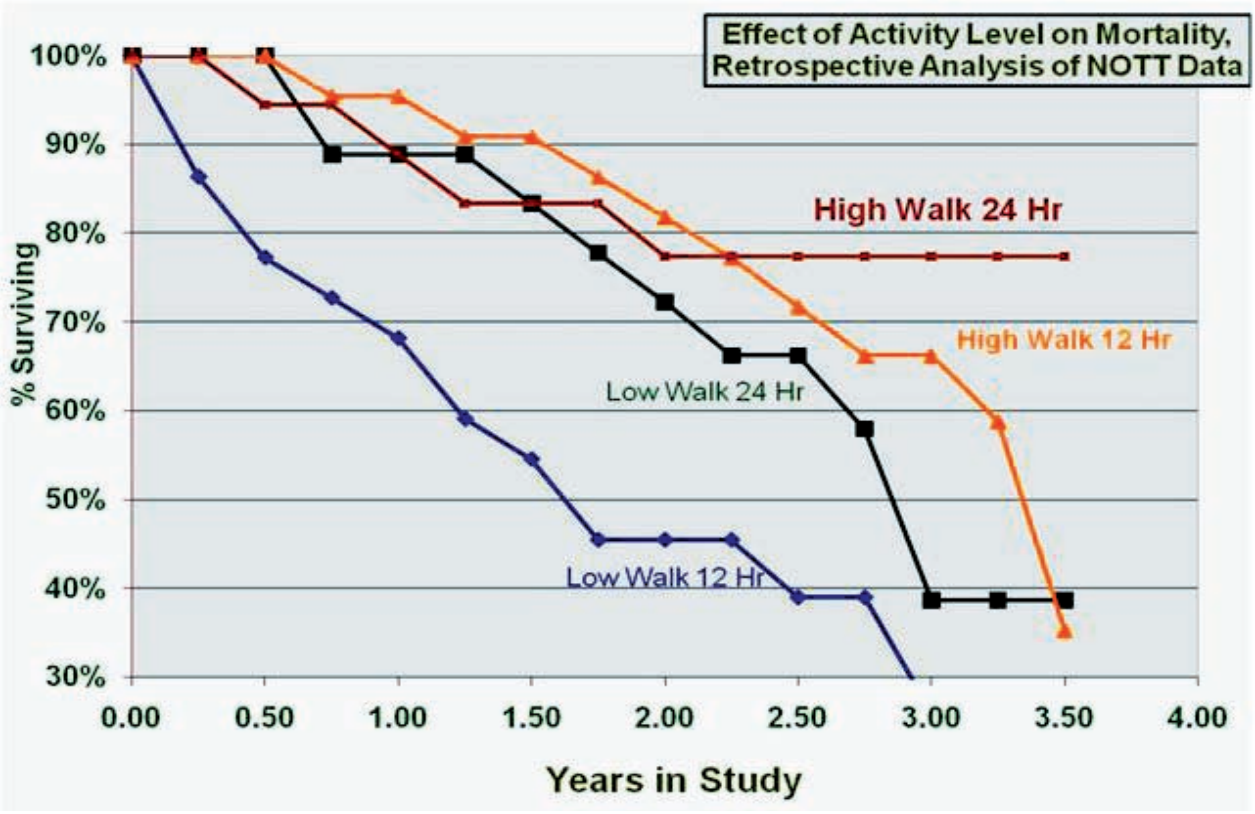


Fig. 3: This chart displays the survival rate of four types of oxygen patients as classified in the NOTT study revisited: High Walkers on 24hrs CFO, Low Walkers on 24hrs CFO, High Walkers on 12hrs CFO and Low Walkers on 12hrs CFO. High Walkers (i.e. active patients) on 12 and 24hr CFO had higher survival rates after two years than Low Walkers, suggesting the importance of routine activity in prolonging life while on oxygen.

• **Mobilization of secretions:** Retained secretions are an issue for most patients with chronic lung disease. Exercise not only causes deep breathing it can also loosen secretions that have clogged an airway. The movement associated with exercise and mobility vibrates the airway with jarring motions. Chest physical therapy and other methods of mobilizing secretions are used when a patient cannot move, yet basic exercise is a very effective method of secretion mobilization.

Socialization: Depression is often associated with the need for LTOT. As indicated previously, there is a perception that LTOT is the last step before dying. If a patient is encouraged to be mobile and has an oxygen system that will maintain oxygenation at all activity levels, they are more likely to get out of the house and participate in their normal activities, socialize with friends and neighbors, and travel.

Reduction of medications: The evidence is not available to verify that a patient will use less medication if they exercise with oxygen, yet the potential for this benefit is real. If a patient exercises, all the statements above come into play. Regular exercise, proper weight management, mobilization of secretions and a positive mental attitude have the potential to reduce the amount of medications used to counter these issues.

Reduced overall healthcare costs: The NOTT study revisited documented the reduced hospitalizations associated with "high walkers" on continuous oxygen therapy vs. low walkers. Given the daily cost of a hospital stay, if a patient does not go to the hospital as frequently using 24 hour oxygen, the economic impact would be significant. Appropriate oxygenation at all activity levels is the key to this potential, so the oxygen system a patient uses is important.

The ability for the patient to remain mobile while using a CFO POC is the CFO POCs biggest asset. Current CFO POCs are not for everyone, but the potential for them to be accessible to an even wider range of oxygen patients is there.

The SeQual Eclipse 3-A Third Generation CFO POC

The first SeQual Eclipse CFO POC was introduced to the market in 2005 and has since gone through two revisions. While performance and design is largely similar amongst all three generations of the Eclipse, it is currently the only CFO POC on the market that is beyond generation one. With each revision SeQual has taken both clinician and patient feedback into consideration when upgrading the Eclipse, and the company has added several features to expand the capabilities of the device.

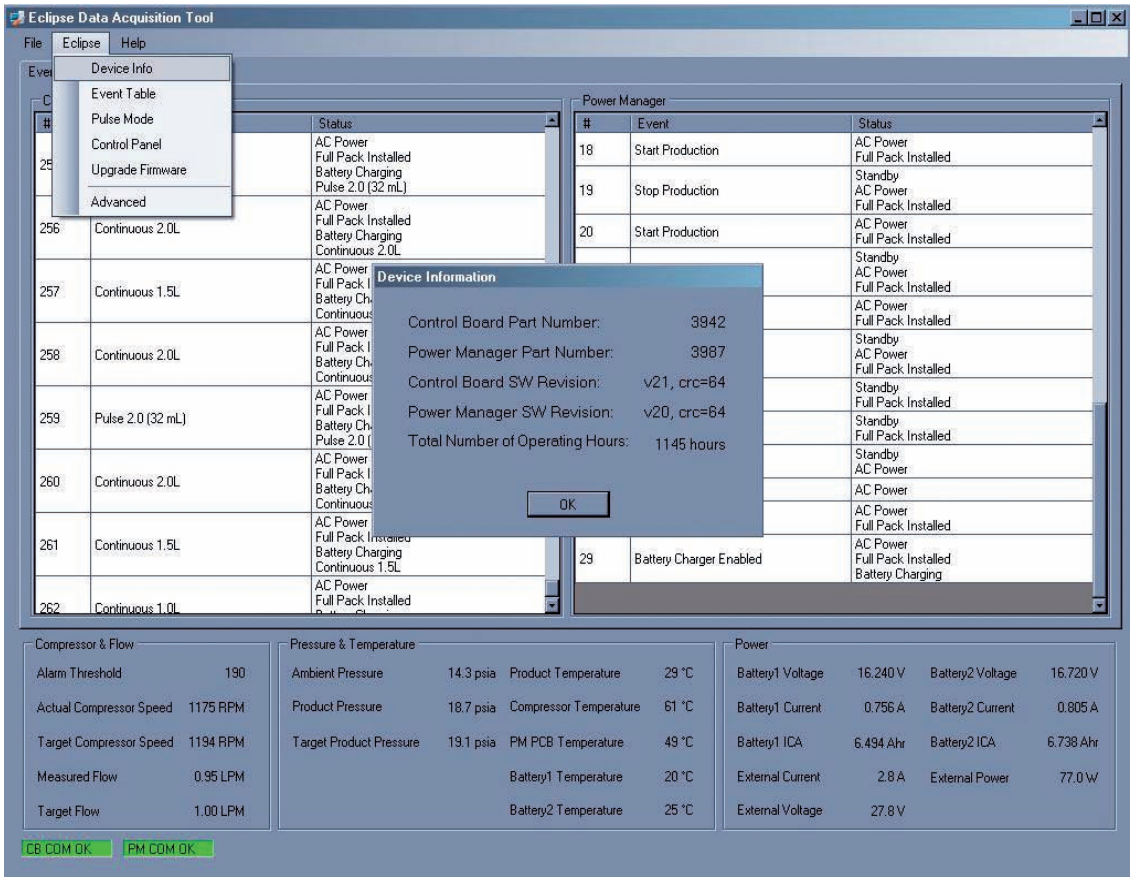
Eclipse 3 Basic Functions and Accessories

Patients desire simple operation from their POC and the user interface needs to be user friendly. Controls need to be intuitive and easy to use. The Eclipse has a large display with

four large buttons to control operation of the device: On/Off, Up, Down, and a flow button to switch between continuous and intermittent flow modes. The Eclipse 3 provides continuous flow settings from 0.5 to 3.0 LPM in 0.5 LPM increments. It also features intermittent flow settings from 1.0 to 6.0 in 0.5 increments, which equate to fixed volume delivery of 16mL to 96mL in 8mL increments, as well as settings for 128mL, 160mL, and 192mL. Advanced features for clinician control are hidden from the patient so they don't accidentally change a setting that was not right for their use.

One battery pack is provided with the Eclipse 3 to help the patient bridge use between available power sources and encourage mobility. Extra battery packs are likely needed for long days away from home, and airline carriers require the patient bring enough battery packs to last the duration of their flight. Battery run out times will vary based on operating mode and setting, but patients can expect the device to last up to 2 hours at 2 LPM CF and up to 5 hours at a 2.0 (32mL) IF setting and a resting breath rate (12 BPM). When connected to a power source, the Eclipse 3 automatically begins recharging the battery pack. An external desktop battery pack charger is also available to charge batteries when they are not in use. Additional accessories include AC and DC power supplies, a storage bag and a large wheel cart for easy portability.

Routine maintenance requirements include annual changing of internal filters and an alarm battery. Providers and servicers of Eclipse 3 POCs are able to test performance output and diagnose and troubleshoot problems using SeQual's Eclipse Data Acquisition Tool (EDAT) software. Using a serial port on the back of the Eclipse 3, a serial-to-USB cable is connected between the device and a computer running the EDAT software. Servicers can control the Eclipse through the software and all device operations are logged, with the last 300 operations available to view. Performance measurements such as accuracy of flow rates, battery voltage, operating temperatures and compressor speeds can be monitored and evaluated in real time. System firmware can easily be upgraded, meaning older units do not need to be shipped back to SeQual for the newest device programming. Remote networking allows for Eclipse units to be serviced in the field while the service technician is at a central facility, meaning Eclipse units do not have to leave the patient's home.



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Examples of upgrades to the Eclipse and its accessories due to clinician and patient feedback include moving the power input further up on the device to help patients avoid tripping over the cord, altering the quick release button on the battery pack to make it easier to insert and remove, and modifying the luggage cart to create an access point for the battery. Larger wheels were added to the luggage cart as a result of patients experiencing difficulty navigating over multiple terrains, limiting their mobility in areas like parks, beaches, and walking trails while using the original cart. While these changes offer no clinical benefits, they have made the Eclipse 3 a much easier device to use.

Eclipse 3 Clinical Benefits and Capabilities

The Eclipse was the first POC on the market to provide continuous flow capabilities. Because of these continuous flow capabilities, sleeping while using a POC became a viable option as the device could be switched to CF mode when going to bed. With the Eclipse 3, the unit was upgraded with a feature that helps address some concerns with sleeping on a POC—if a patient falls asleep while on IF settings and their breathing becomes too shallow to trigger the device, the unit will switch to CF operation if a breath is not detected within 15 seconds. The unit remains in CF mode for 15 seconds before switching back to the original IF setting. This cycle will repeat if another breath is not detected. In addition to this "back up flow" benefit, this process can help preserve battery life over fixed CF operation should the patient be aboard a flight or on a long trip away from a power source.

As noted earlier, the Eclipse 3 features IF settings ranging in fixed dose volumes from 16mL to 96mL in increments of 8mL, as well as settings of 128mL, 160mL and 192mL. No other CFO POC features this wide of range of settings. Additionally, no other CFO POC unit provides settings at 128mL or greater, which can address oxygen needs of more severe COPD patients and those with idiopathic pulmonary fibrosis, pulmonary hypertension or end-stage COPD, though these settings should not be used if the patient's breath rate exceeds device specifications as there may be degradation in oxygen purity.

The Eclipse 3 does feature an algorithm designed to maintain oxygen purity during IF operation even as the patients breath rate significantly increases, which ensures that the patient is getting the same oxygen concentration in each dose. Called autoSAT, the algorithm is designed to increase the Eclipse 3's oxygen production by increasing the motor speed to accommodate the increased demand from the patient. Delivered FIO2 by the device will largely remain the same whether the patient is breathing at 12BPM or 25BPM. This means that the patient's oxygen saturation levels should remain relatively unchanged, even with increased activity resulting in a higher breath rate. A good

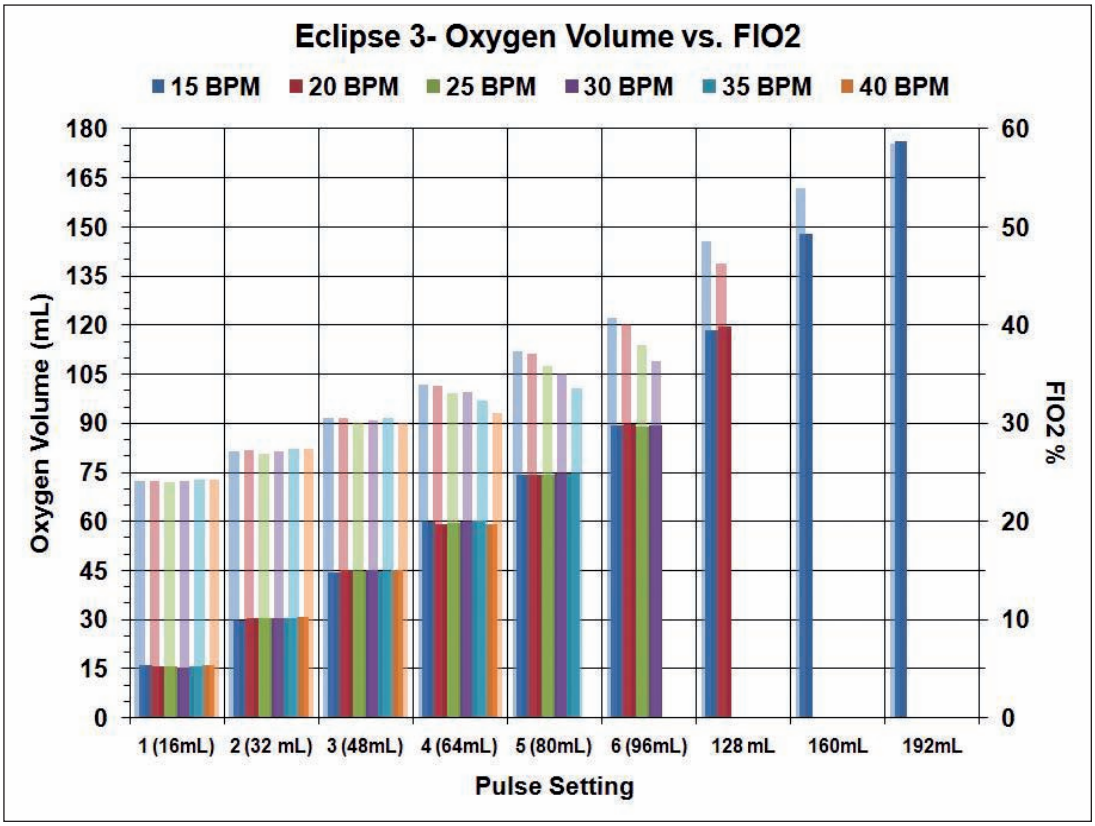

Fig. 4: This chart compares the Eclipse 3 dose volumes at several breath rates (represented by solid colored bars) to the delivered FIO2 at the same breath rates (translucent colored bars) on a test lung volume of 500mL. Note that there is very little change in FIO2 at typical breath rates between 15 and 30 BPM. This is autoSAT at work. FIO2 does decrease at higher settings and rates (30 BPM and above), but this is due to the shorter inspiratory cycle, as the entire oxygen dose may not be reaching the lung.

analogy for the autoSAT feature on the Eclipse 3 is the cruise control feature on an automobile. If the patient is the car, autoSAT is the cruise control that ensures that the patient does not lose speed, even when faced with a long uphill climb.

One feature unique to the Eclipse 3 is the ability to display the intermittent flow setting in numerical or mL modes, meaning the clinician and user will know exactly how much oxygen a given setting delivers. Another feature is the ability to adjust the Eclipse 3's triggering sensitivity—the clinician can choose from three settings to ensure that the patient is able to trigger the device in all of the patient's activities.

New to the Eclipse 3 is a "rise time" setting during IF operation. There are three available settings, Slow, Medium and Fast, with Fast being the default setting. Unlike ventilation rise time settings, where the time to reach peak flow is adjusted, the Eclipse 3's rise time settings adjust the peak flow and delivery duration of the oxygen dose. Some patients experience discomfort when oxygen is delivered at high peak flows, so setting the rise time to a lower setting can alleviate some of this discomfort. Another benefit of a lower peak flow rate is quieter dose delivery, meaning less noise disturbances in public settings like movie theaters and restaurants. It is important to note that adjusting the rise time from the default Fast setting to a lower setting will significantly change the flow delivery characteristics. While the dose volume stays the same at each rise time setting, the way it is delivered changes, meaning that the FIO2 the patient receives could be lower as the rise time setting is lowered. This is especially true of higher IF settings and higher breath rates. Nonetheless, the Eclipse 3's rise time feature is another unique characteristic of the device, and offers the clinician and patient another way to manage oxygen delivery.

Conclusion

Continuous flow-capable portable oxygen concentrators like the SeQual Eclipse 3 have helped improve the LTOT patient's ability to be mobile by providing device capabilities and features that address both clinical and consumer issues. In addition to improving the ability of LTOT patients to complete their daily activities, most CFO POCs have been approved for air travel allowing for trips and vacations to destinations that had been logistically complicated to get to for patients using traditional home oxygen systems.

There are still issues that need to be understood by both clinicians and patients before using POCs as performance capabilities can vary by product and most of the smaller, IF-only POCs do not produce the volumes of oxygen needed by many patients during activity or at altitude. Patient education is the only mediator that can work to accomplish compromise between both the clinical needs and consumer desires. Clinicians, providers and patients should work closely together to find the oxygen delivery system(s) that work best for the patient's clinical and lifestyle needs. CFO POCs like the SeQual Eclipse 3 can balance clinical capabilities with consumer desires and can permit a patient the freedom to perform their activities of daily living and enjoy a full life. The ability to remain mobile is key to prolonging an LTOT patient's life, and CFO POCs offer the most potential for these patients to do just that.

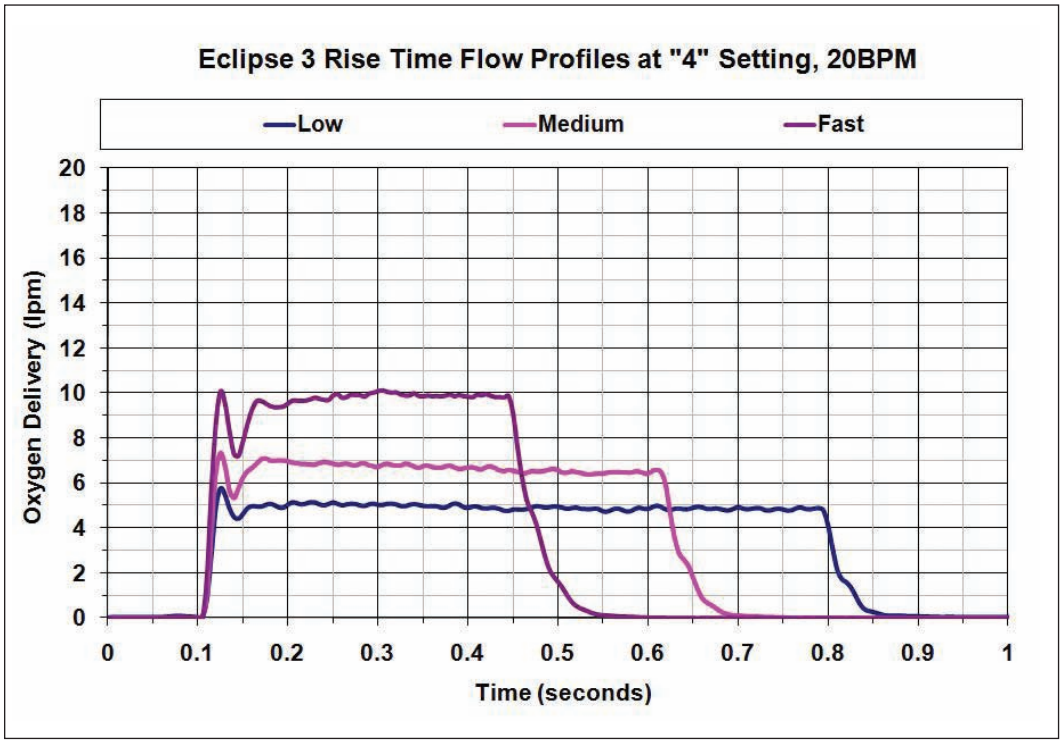

Fig. 5: This chart shows how the rise time setting affects oxygen delivery from the Eclipse 3 on a 4.0 (64mL) IF setting. The Eclipse 3's default rise time setting is Fast, with additional settings for Medium and Slow. Changing the rise time setting will alter the device's flow delivery characteristics, reducing the flow rate and increasing delivery duration as the rise time setting is lowered. It should be noted that, depending on the IF setting and patient breath rate, FIO2 may be impacted when rise time is lowered.

The Eclipse: Jan's Story

Jan's Eclipse POC has helped her to feel empowered to be as mobile as she wants to be and continues to travel as often as possible.

Jan is a very active patient that uses the Eclipse as both her stationary and portable oxygen delivery system. She enjoys the freedom the Eclipse is able to provide her, allowing her and her husband to run regular errands, visit family and friends, and to travel without the worries of coordinating deliveries and equipment rentals with her provider or running out of packaged gas systems while away from her home.

Several years ago Jan took 3 separate vacations using tickets her daughter was able to provide her through her job at one of the local airlines. These trips were to widely different areas of the country—one trip was to Sea World in Orlando where she had a picture taken with her Eclipse that later was used for the cover of the May, 2009, issue of the AARC Times. Jan's Eclipse POC has helped her to feel empowered to be as mobile as she wants to be and continues to travel as often as possible.

Last summer, Jan and her husband traveled to Arizona to purchase a fully restored 1947 Chevy Coupe. They flew to Arizona to pick up the vehicle and drove the car all the way back to Minnesota, and her Eclipse unit was always by her side. The car has been the opportunity for more adventures going to different car shows and networking with other antique car afficianados. Jan's Eclipse, with its new and continually evolving oxygen technology, is an anachronism to the bright yellow antique car she regularly rides in.

Jan has not let her disease define who she is, and her Eclipse POC has helped to provide her with the active lifestyle she desires. New and old oxygen patients alike can look at oxygen users like Jan as a role model for the type of life that can be lead while needing supplemental oxygen.

White Paper

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