VOCSN

Clinician Training Packet

VOCSN Clinician Training Checklist

Photocopy and complete this checklist as a record. Provide a hands-on demonstration of each item, and ensure the clinician understands how to perform the functions related to it. If possible, obtain a list of staff members and track each facility employee's training progress.

VOCSN Overview

- ☐ How to determine VOCSN configuration, and what therapies each provides (V+O+C+S+N+Pro, V+C, etc.)
- ☐ Critical Care Ventilator
- ☐ Oxygen Concentrator Capable of 6 L/min Flow Equivalent
- ☐ Touch Button Cough Assist

- ☐ Hospital Grade Suction
- ☐ High Performance Nebulizer
- ☐ For Patients 5 kg and Above
- ☐ 2 to 8 Hours of Battery Power
- ☐ Customizable Therapy Configurations
- ☐ Using the Clinical and Technical Manual (VentecLife.com/VOCSNmanual)

Buttons, Indicators, and Features

- ☐ Demonstrate Powering VOCSN On/Off (Including forced shutdown by holding the power button for 10 seconds and then pressing the Alarm Silence button)
- ☐ External Power/Charge Status Indicator
- ☐ Removing/Installing Batteries
- ☐ Charge Status Button on Batteries
- ☐ External Battery Charger

- ☐ Alarm Silence button
- ☐ Using the Clinician Access feature and entering the Passcode
- ☐ Importance of Air Inlets and Vents
- ☐ Connecting A/C or D/C Power
- ☐ Wheelchair Cable
- ☐ Auto Adapter

Touchscreen Overview

- ☐ Recent Alarms
- ☐ Active Therapy Icons
- ☐ External Power Icon
- ☐ Battery Power Status Icons
- ☐ Clinician Lock/Unlock Icon

- ☐ Screen Lock/Unlock Icon
- ☐ Pressure Monitor
- ☐ Navigation Tabs
- ☐ Therapy Screen Icons
- ☐ Patient Effort Icon

The Home, Therapy, Monitors and Menu Tabs

- ☐ The Home screen
- ☐ Night Mode and Day Mode

- ☐ Overview of Therapy Screen
- ☐ Menu options

Connecting Patient Circuits

- ☐ Pre-Use Test: Importance of Measuring Circuit Compliance and Resistance
- ☐ Bacterial Filters (Push in and Twist to Remove)
- ☐ Ventec One-Circuit Overview
- ☐ Oxygen Tube (Must Be Fully Connected)
- ☐ External High and Low-pressure Oxygen Use and Monitoring

- ☐ Active Circuits: Multilumen Tube with flow sensor must be fully connected to ensure Vte stability and accuracy
- ☐ Passive Circuit
- ☐ Valveless Circuit
- ☐ Mouthpiece Circuit
- ☐ Heated Circuit and Humidifier Bypass
- ☐ Nebulizer Port and use of External Nebulizers
- ☐ Replace Bypass with Heated Circuit

Ventilation Therapy

- ☐ Active Preset
- ☐ Switching Between Presets (Pre-Use Test required unless Circuit Type and Humidification Type match)
- ☐ Changing Settings
- ☐ Changing the Mode and Circuit Type Settings on an Active Preset

- ☐ Ventilation Modes: VOCSN and Competitive Equivalents, including PRVC (Volume Targeted)
- ☐ Patient Comfort Settings (Rise Time, Flow Termination, etc.)
- ☐ Leak+ Performance
- ☐ Setting the Patient Circuit Disconnect Alarm

High Flow Therapy

- ☐ Connect and configure a Valveless circuit type
- ☐ Set Mode to SIMV-Pressure or SIMV-Volume
- ☐ Turn High Flow on and then configure desired Flow
- ☐ Connect external high-pressure oxen and turn on Oxygen therapy (FiO2)

Oxygen Therapy

- ☐ Oxygen Sources (O2 Concentrator, External High-Pressure, and External Low-Pressure)
- ☐ Starting and Switching Between Presets
- ☐ Turning Off the Active Preset
- ☐ O2 Flush
- ☐ Settings and Alarms
- ☐ Setting FiO2 and Alarms
- ☐ FiO2 delivery includes 'clicking' noise from O2 regulator
- ☐ Using External High-Pressure Oxygen
- ☐ Using External Low-Pressure Oxygen (including the Check O2 Source alarm)
- ☐ Oxygen Sensor / FiO2 Monitor Warmup upon start (5 min), and monitor display delays (set FiO2 will be delivered on next breath, though the monitor may take several minutes to display the updated value)
- ☐ Oxygen Direct therapy Using the O2 Concentrator or External High-Pressure Oxygen
- ☐ Ceramic Oxygen Sensor Replacement
- ☐ Using External Low-Pressure Oxygen (with Adapter)

Cough Therapy

- ☐ Cough Settings
- ☐ Cough Cycles
- ☐ Breath Sync
- ☐ Manual Cough Configuration (1 Cycle without Breath Sync)
- ☐ Mobilizing Secretions by Setting Cough Cycles to 10 and Pressing Cancel When Appropriate
- ☐ Cough+Suction Technique and Suction time

Suction Therapy

- ☐ Setting Vacuum Pressure
- ☐ Setting the Suction Default Vacuum Pressure
- ☐ Suction Performance Above 300 mmHg
- ☐ Connecting and Disconnecting the Travel Suction Canister, and Capacity (300 mL)
- ☐ 1/4" Suction Tubing for Optimal Performance

Nebulizer Therapy

- ☐ Connecting the Nebulizer Filter and 6 L/min Nebulizer Cups (Use Sunset Nebulizer Cups for Optimal Performance)
- ☐ Nebulizer Powered by Air Compressor or Oxygen
- ☐ Ventilation Compensates for Increased Flow from Nebulizer
- ☐ Connecting External Nebulizers and Using External Neb. Compensation
- ☐ Setting the Nebulizer Duration and Starting Therapy
- ☐ Nebulization Pauses with High Pressure Alarm for Patient Safety
- ☐ Disconnecting the nebulizer after therapy

Switching Between Therapies

- ☐ 5-second Delay When Switching Therapies
- ☐ Suction and Nebulizer Pause Pulse Dose and FiO2 Oxygen
- ☐ Options for Patients Requiring Oxygen During Other Therapies (External Low-Pressure Oxygen or an External Nebulizer)

Alarms

- ☐ Setting Low and High Alarms: 1) Press High/ Low Icon, 2) Turn Alarm On/Off, 3) Change Setting
- ☐ High Priority (Red Banner with 10 Tones Every 3 Seconds), Medium Priority (Yellow Banner with 3 Tones Every 7 Seconds), and Low Priority (Blue Banner with No Audible Sound) Alarms
- ☐ Very Low FiO2 Alarm
- ☐ Alarm and Event Logs
- ☐ Battery Use (Medium Priority) with external power disconnect or switch to internal battery. Press Clear List twice to clear
- ☐ Clearing and Double Clearing Alarm Logs
- ☐ Internal Battery Low Alarm (Medium Priority at <50% Charge) and Internal Battery Critically Low Alarm (High Priority at <33% Charge)
- ☐ Alarm Delay Options
- ☐ Setting Alarm Volume to Low, Medium, or High

- ☐ Set Low Pressure, Low Minute Volume, Patient Circuit Disconnect, and Apnea Alarms to Detect All Circuit Disconnects
- ☐ Review Chapter 6 of Clinical and Technical Manual (Alarms)
- ☐ System Inop Alarm (Verify Double Beep on Startup and Immediately Provide Alternate Ventilation in Case of Flashing Red On/Standby Button and Beeping During Therapy)
- ☐ Remote Alarm/Nurse Call Port and How VOCSN Interfaces with Remote Alarms (Delays)
- ☐ Frequent High Pressure Alarms May Not Trigger Remote Alarms with >10 Second Delays
- ☐ Battery Use Alarm with Nurse Call Systems
- ☐ Maintenance Required Alarm: Contact Ventec Life Systems for Service
- ☐ Using the Troubleshooting Quick Reference Guide, and Check Patient Circuit alarms

Monitors

- ☐ Monitors and Screen Customization
- ☐ Home Screen Monitors Customization
- ☐ Waveforms

- ☐ Review Chapter 7 of Clinical and Technical Manual (Monitors)

Multi-View

- ☐ Exporting Mulit-View data to USB
- ☐ USB drive requirements: USB 2.0 formatted to FAT32.

- ☐ Generating reports: VentecLife.com/Multi-View
- ☐ Undestanding report content
- ☐ Downloading and emailing reports

Cleaning and maintenance

- ☐ Demonstrate Device Cleaning
- ☐ To Clean Touchscreen, Use Touchscreen Lock to Prevent Accidental Touches

- ☐ Air and Fan Filters

Safety Information

- ☐ Air Flow around VOCSN

- ☐ Review all VOCSN Patient Safety Reminders on the next page

Patient Safety Reminders

Before providing therapy to the patient, read the *Clinical and Technical Manual*, available at VentecLife.com/ VOCSNmanual, including all warnings and cautions. Additionally, when providing therapy to the patient, keep the following patient safety reminders in mind.

General Safety Reminders

- ☐ If critical to patient care, always have an alternative means of ventilation, oxygen, cough, nebulization, and secretion management available.
- ☐ Unplug VOCSN from external power before cleaning it. Pay close attention to the VOCSN touchscreen during cleaning to ensure controls on the touchscreen are not unintentionally pressed.
- ☐ Only use spare parts and accessories recommended by Ventec Life Systems. Only Ventec One-Circuits are approved for use with VOCSN.
- ☐ Do not use VOCSN if it has evident signs of damage.

VOCSN Placement Warnings

- ☐ Do not cover VOCSN, place it in an area in which the vents may become obstructed (such as on its back or on top of compliant bedding), or use it in hazardous environments (such as atmospheres containing pollutants). If necessary, discuss a showering protocol with clinicians.
- ☐ Do not use VOCSN within magnetic resonance (MR) environments.
- ☐ Keep VOCSN out of reach of children or use the screen lock feature.

Patient Circuit Safety Reminders

- ☐ Do not use heated wire Ventec One-Circuits on, within, or under localized heat sources or insulating materials such as blankets or thermal chambers.
- ☐ Any components added to the breathing circuit between the patient circuit exhalation valve and the patient will increase the amount of gas the patient rebreathes with each breath.

Ventilation Therapy Warnings and Tips

- ☐ Inspect all patient circuit filters frequently for signs of increased resistance or blockages, and ensure alarms are set appropriately to verify the accuracy of delivered Ventilation therapy.
- ☐ Delivered and monitored ventilation therapy may be affected by large leaks around the patient interface.
- ☐ When using the Volume Targeted feature, set the High Pressure and Low Pressure alarms appropriately for the patient condition, and set the Low Minute Volume alarm to protect against decreases in patient lung compliance.
- ☐ When using a speaking valve, volume ventilation modes with a passive Ventec One-Circuit are not recommended. For the best results, turn off Leak Compensation. If the Low Minute Volume and/or Patient Circuit Disconnect alarm cannot be used, use an alternate respiratory monitor such as an oximeter or cardio-respiratory monitor to detect hypoventilation.

Oxygen Therapy Warnings and Tips

- ☐ The internal O2 Concentrator is not intended for life support. Where the prescribing healthcare professional has determined that an interruption in the supply of oxygen, for any reason, may have serious consequences to the user, an alternate source of oxygen should be available for immediate use. The O2 Concentration alarm may take more than five minutes to activate, depending on VOCSN therapy settings.
- ☐ The O2 Flow Equivalent control setting may not result in a flow that corresponds exactly to bleeding a continuous flow of oxygen into a ventilator.
- ☐ Do not bleed oxygen into the Ventec One-Circuit from an external source without connecting it to one of the VOCSN oxygen input ports.
- ☐ Pay attention to the language on the screen to see which Oxygen therapy preset is running. Turning off a Preset will also turn off its associated alarms.
- ☐ The Low FiO2 alarm activates when the monitored FiO2 falls below the set low FiO2 alarm limit. The O2 Concentration alarm activates when the internal O2 Concentrator produces less than 82% oxygen, when there is a fault with the oxygen sensor, or when the monitored oxygen tank pressure is too low (such as when an external high-pressure O2 source is depleted or not attached).

Cough, Suction, and Nebulizer Therapy Warnings and Tips

- ☐ Before delivering Cough therapy when using a heated humidifier, verify a Ventec Humidifier Bypass is installed.
- ☐ Work with a clinician to develop a plan for Cough therapy, specific to each patient.
- ☐ Set a slow Rise Time (high number) for Cough therapy to reduce the amount of secretions pushed back into the patient during insufflation.
- ☐ Use only 6 L/min nebulizer cups with VOCSN. Ventec Life Systems recommends using Sunset nebulizer cups for optimal performance.
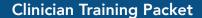- ☐ Periodically check the suction system for leaks by blocking the end of the suction tubing. Verify that the monitored suction vacuum value matches the setting.

VOCSN Alarm Warnings

- ☐ Set the Alarm Volume loud enough to be heard over expected ambient noise. Connect VOCSN to a nurse call system if necessary.
- ☐ Do not set alarm limits to values that render the alarm system useless.
- ☐ Set the Low Pressure, Low Minute Volume, Patient Circuit Disconnect, and Apnea alarms appropriately to detect patient circuit disconnections. If appropriate for the patient condition, run the decannulation checkout test procedure described in chapter 8 of the *Clinical and Technical Manual* to ensure disconnects are detected.

Power Safety and Tips

- ☐ Check the batteries and external power supply regularly.
- ☐ If the internal battery is run to a low or critically low state, it may take several minutes to begin charging after external power is applied.
- ☐ Do not damage the rechargeable Lithium-ion batteries. Do not use or charge the battery if it appears to be damaged. Signs of damage include, but are not limited to, discoloration, warping, and leaking battery fluid. Do not expose the battery to fire or high temperature. Do not immerse the battery in water. Do not use or store the battery inside a vehicle during hot weather. Do not drop or puncture the battery. Do not open the battery or short-circuit its contacts.
- ☐ Replace VOCSN batteries when the absolute charge (visible on the My VOCSN screen) is less than 50%.

Maintenance Reminders

Follow your healthcare institution's protocol as well as all guidelines in the VOCSN *Clinical and Technical Manual* for component maintenance and replacement. The manual is available for view and download at *VentecLife.com/ VOCSNmanual*.

The low-priority Maintenance Due alarm will activate when the Sys. PM Required monitor falls below 0, indicating that VOCSN is due for maintenance.

The low-priority Service Concentrator Soon alarm will activate when maintenance on the internal O2 Concentrator should be scheduled.

Knowledge Check

After providing training, ask the clinician to perform each of the following tasks, and record the result. Provide additional training in the competency area associated with any task that is not performed correctly.

Task	Pass	Fail	N/A
Finding and using the Clinical and Technical Manual (VentecLife.com/VOCSNmanual)	☐	☐	☐
Attaching, securing, and removing the VOCSN power cord.	☐	☐	☐
Turning VOCSN On and Off.	☐	☐	☐
Removing and replacing the batteries.	☐	☐	☐
What is the projected battery life of VOCSN when running only Ventilation therapy?	☐	☐	☐
What is the projected battery life of VOCSN when using all therapies?	☐	☐	☐
Identifying and describing the importance of the air inlets and vents.	☐	☐	☐
Identifying and entering the Clinician Access passcode.	☐	☐	☐
Locking and unlocking the touchscreen.	☐	☐	☐
Replacing the external bacterial filter.	☐	☐	☐
Replacing the patient circuit, including connecting an active valve and an integrated oxygen tube.	☐	☐	☐
Running a Pre-Use Test.	☐	☐	☐
Switching Ventilation therapy presets.	☐	☐	☐
Clearing the Alarm Log.	☐	☐	☐
Changing Ventilation therapy controls (such as Breath Rate and PEEP).	☐	☐	☐
Providing Volume Targeted ventilation.	☐	☐	☐
Providing CPAP ventilation.	☐	☐	☐
Changing Ventilation alarms (such as Low and High Inspiratory Pressure), and turning an alarm on/off.	☐	☐	☐
Delivering oxygen from the internal O2 Concentrator.	☐	☐	☐
Connecting and configuring external high-pressure oxygen (if applicable to the facility), and monitoring the delivered therapy.	☐	☐	☐
Which therapies cause Oxygen therapy to pause?	☐	☐	☐
Connecting and configuring external low-pressure oxygen (if applicable to the facility).	☐	☐	☐
Changing the Vacuum control and starting Suction therapy.	☐	☐	☐
Configuring a Cough therapy preset and starting Cough therapy.	☐	☐	☐
Using Cough + Suction therapy both during and after Cough	☐	☐	☐
Connecting a Nebulizer Filter and nebulizer cup to VOCSN, and using internal Nebulizer therapy.	☐	☐	☐
Connecting a nebulizer cup to an external drive, using VOCSN External Neb. Compensation, and describing which situations might require an external nebulizer. Recommended nebulizer cups.	☐	☐	☐

Trainer Name:_____**Date:**_____

Trainee Name and Title:_____

Trainee Signature: