

Missouri Department of Health and Senior Services
Missouri State-wide Ventilator Cache Program
Management, Training and Deployment Plan

PURPOSE

The purpose of this document is to provide a guide to support the Missouri Disaster Management Assistance Team (MO DMAT-1) in the management, training and deployment of mechanical ventilators from the Missouri State-wide Ventilator Cache Program. The Missouri State-wide Ventilator Cache Program is a repository of mechanical ventilators purchased by the Missouri Department of Health and Senior Services (DHSS) to be used to augment the state's local public health and healthcare systems in the event of a natural or man-made public health emergency including pandemic influenza. The funds for the Missouri State-wide Ventilator Cache Program were available to DHSS through U.S. Department of Health and Human Services/Assistant Secretary for Preparedness and Response (DHHS/ASPR) Pandemic Influenza Healthcare Preparedness Improvements for States.

BACKGROUND

In 2006, the Pandemic Influenza Health Care Systems Readiness Subcommittee was established and given the task of providing a Health Care planning guidance involving a pandemic influenza event for hospitals and other health care facilities. Subsequently, during the novel coronavirus, COVID-19, outbreak of 2020, the need for and continuity of this plan and state-owned ventilator cache was emphatically underscored. The goal of this plan was to prepare health care systems to provide medical care in the event of pandemic influenza, as well as other large-scale disasters while maintaining other essential medical services in the community during and after the event.

During the planning, it was noted that certain critical incidents, either regionally or statewide, may generate large numbers of patients requiring mechanical ventilation. It was recognized that Missouri does not have the reserve ventilators that may be needed and the medical community would soon expend any local or regional ventilator caches. Thus, DHSS established a ventilator planning group including external partners and DHSS staff to develop a Missouri State-wide Ventilator Cache Program.

The goals of the Missouri State-wide Ventilator Cache Program are:

- increase the number of mechanical ventilators available for a respiratory surge event,
- establish an allocation process and management plan for stockpiling and deploying available ventilators state-wide in a transparent process developed during a time of non-emergency,
- establish a training plan to ensure that respiratory patients receive safe and effective care from qualified professionals upon deployment of mechanical ventilators from the Missouri State-wide Ventilator Cache Program.

In 2010, 247 mechanical ventilators (26 with pediatric capabilities) were purchased by DHSS and a contract was established with MoDRS (now MO DMAT-1) to store the ventilators and to develop a Management, Training and Deployment Plan for the Missouri State-wide Ventilator Cache Program.

In 2020, these mechanical ventilators were recognized near end-of-life, but determined to be available and appropriate for patient care having received preventative maintenance with battery replacement in 2019 and 2020. Of these, 217 Newport/Medtronic HT 50 pediatric/adult

ventilators (≥ 10 kg) and 24 Eagle Impact II-731 Series pediatric/adult ventilators (≥ 5 kg) are available for use.

The state has since purchased an additional 500 adult/pediatric ventilators, 150 of which have neonatal capabilities. These new ventilators are currently being received, programmed and inventoried. They are expected to all be in service by December 31, 2020.

PROCEDURES

I. Storage, Inventory and Maintenance of Ventilators and Ancillary Equipment

- a. The Ventilator Cache will be stored in the MO DMAT-1 Jefferson City regional warehouse.
- b. Ventilators will be stored in accordance with the manufacturer's requirements. A map of the Jefferson City warehouse will be maintained and updated as necessary that identifies the location of the ventilators.
- c. The MO DMAT-1 Jefferson City Regional Logistics will maintain an inventory log that includes detailed information on supplies and equipment to include:
 - i. Type of resource
 - ii. Model number
 - iii. Serial numbers
 - iv. Maintenance history
 - v. History of use and subsequent resupply of consumable supplies, as well as restoration of mechanical ventilators
 - vi. Expiration of resource
- d. MO DMAT-1 Jefferson City Regional Logistics will conduct regular inspection and maintenance of inventory in

accordance with DHSS Hospital Preparedness Program (HPP) Scope of Work and Manufacturer's recommendations.

II. Training (MO-1 DMAT)

- a. MO DMAT-1 will identify appropriate team members to participate in the maintenance and training in the use of the ventilators.
- b. The training shall consist of: on-line tutorial; hands-on demonstration; competency checklist.
- c. Annual training will be required.
- d. Documentation of team members' successful completion of initial and annual trainings will be on file.
- e. Website where ventilator spec sheets and training links can be found is <https://sema.dps.mo.gov/operations/modmat-momort.htm>

III. Training (Hospitals) or the MO-1 DMAT

- a. The MO DMAT-1 members who successfully completed the training requirement will be responsible to provide training on the operation and care of the ventilators via various methods including group trainings, on request, in various settings and just-in-time training at the receiving hospital or the MO DMAT-1 when ventilator(s) are deployed.
- b. Just-in-Time training is mandatory at the time of delivery of the ventilator(s) to a hospital or the MO DMAT-1.
- c. Just-in-Time training will be given to at least one staff member from the receiving hospital or the MO DMAT-1 and will include, but not be limited to:
 - 1. Power point presentation
 - 2. Demonstration Video on use of the ventilator

3. Hands-on demonstration

- d. Documentation of training and signature(s) of personnel completing training at the receiving hospital or the MO DMAT-1.

IV. Ventilator Deployment Request

- a. Ventilators may be requested by a hospital or the MO DMAT-1 after all other ventilator resources have been expended.
- b. A request must be made by a senior hospital administrator or the MO DMAT-1 Commander or designated representative.
- c. The requesting hospital or the MO-1 DMAT must meet the criteria in the *Criteria for Allocation of Mechanical Ventilators from the Missouri State-wide Ventilator Cache Program*.
- d. A formal request, using the *Online Ventilator Request* form, will be submitted by the hospital or the MO DMAT-1 following normal Incident command procedure of LEOC-SEOC-DHSS, if the LEOC and SEOC are activated. If the LEOC-SEOC incident command structure is not fully activated, the hospital or MO DMAT-1 may request a ventilator by submitting the request directly to the DHSS ERC.
- e. The DHSS will make the recommendation regarding which requesting organizational entity will receive mechanical ventilators, in consultation with an allocation committee consisting of DHSS leadership, as well as other parties designated as necessary by DHSS based upon the circumstantial needs of the request.
- f. The State Emergency Operation Center (SEOC) will authorize deployment of mechanical ventilators based on DHSS recommendation.
- g. DHSS Hospital Preparedness Program (HPP) will notify MO DMAT-1 Duty Officer to deploy the resource.

- h. MO DMAT-1 Duty Officer will contact MO-1 DMAT Jefferson City Region.

V. Ventilator Deployment

- a. MO DMAT-1 Jefferson City Regional Logistics personnel will deploy authorized resources to the requesting hospital's destination as approved by SEMA and DHSS.
- b. Just-in-time training will be provided by MO DMAT-1 personnel trained in the use of mechanical ventilators as outlined on page 4, Section II to the receiving hospital or the MO DMAT-1 designated personnel.
- c. Receiving hospital or other health care facility will sign *Resource Request Form and Utilization Agreement*. (3 copies with following distribution: requesting facility, MO DMAT-1 and DHSS)

VI. Ventilator Return

- a. Receiving hospital or the MO DMAT-1 will notify, through the normal Incident Command process, that mechanical ventilator(s) are ready for return. If the Local Emergency Operations Center (LEOC) and/or State Emergency Operations Center (SEOC) are not activated at the time of mechanical ventilator return, the receiving hospital should contact DHSS directly at the Emergency Response Center (ERC) at DRMS@health.mo.gov or via fax to 573.526.8389. The DHSS ERC may be contacted via phone for confirmation of return notification at 800.392.0272. ERC will notify MO-1 DMAT Duty Officer.
- b. MO DMAT-1 Duty Officer will contact MO-1 DMAT Jefferson City Region.

- c. MO DMAT-1 Jefferson City Region Logistics will arrange for pick-up of the resources.
- d. At time of pick up, MO DMAT-1 Jefferson City Regional Logistics staff will inspect and inventory resources (3 copies with following distribution: facility, MO DMAT-1, and DHSS)
- e. MO DMAT-1 Jefferson City Regional Logistics staff will conduct maintenance on equipment, including assuring disinfection of the resource(s), and return to state of readiness.
- f. Consumable supplies will be replaced or replacement costs reimbursed by the receiving hospital, as per the signed *Resource Request Form and Utilization Agreement*.