



The Madonna Minute

A briefing about the programs and innovations at Madonna Rehabilitation Hospital

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Interdisciplinary approach to treatment of patients requiring mechanical ventilation

Patients with respiratory failure and distress are now surviving with the help of medical advances, including tracheostomy tubes and mechanical ventilation. These patients often are medically fragile with underlying complex medical and rehabilitation diagnoses, including respiratory failure, cardiac complications, spinal cord injury, brain injury, stroke, or other neurological conditions.

Madonna Rehabilitation Hospital provides a unique multidisciplinary approach to care of individuals who have these conditions, with the overall goal of helping them achieve the

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highest level of independence and quality of life possible. While many of the individuals served in Madonna’s respiratory program focus on total weaning from the ventilator, this is not the only successful outcome. Reaching a point where mechanical ventilation is necessary only at nighttime, provides individuals with far more independence and reduces risk of complications. Even when weaning is not possible, goals relating to a person’s ability to communicate, control their environment, move about on their own, and manage their lives in their home and community are very meaningful.

Each member of the team plays an active role in the ventilator weaning process by addressing issues, such as strengthening muscles required for ventilation, teaching energy conservation techniques, building seating and activity tolerance, introducing cough, feeding and swallowing strategies, addressing communication and environmental control, insuring adequate nutrition and helping the persons served cope with stress.

One of the reasons Madonna’s Pulmonary Program has been so successful, with more than half of all patients weaning completely, is the cross disciplinary assessment and treatment, which ensure consistent rehabilitation is provided 24 hours per day, 7 days per week. Key interdisciplinary interventions include:

Skin integrity

Everyone on the team works to keep skin clean, dry and without breakdown by repositioning the patient every two hours and reinforcing pressure relief techniques every 15-20 minutes while seated. Specialized pressure mapping helps team members locate risk areas and leads to utilization of pressure relieving mattresses and wheelchair cushions.

Communication

One of the first items in the program is to help the patient establish a means for communication. Ultimately, the goal is to use a one-way speaking valve, which allows the patient with a tracheostomy tube to speak while still



Pam Daly, licensed respiratory care practitioner, evaluates the lungs of Madonna patient Donna Slack while Donna practices her breathing exercises.

on mechanical ventilation. At Madonna, the respiratory therapist and speech language pathologist work together to make this happen.

Mary Massery techniques

Individuals who rely on mechanical ventilation often have limitations in chest wall mobility and weakness or even paralysis of the muscles used for ventilation. The Madonna team uses Mary Massery Techniques, which increase range of motion of the rib cage and strengthens both primary and accessory muscles used for breathing and coughing. These techniques have shown to have a significant impact on the success of ventilator weaning. (*Visit www.masserypt.com*)

Activity tolerance

It is important to increase activity for persons on mechanical ventilation in order to reduce risks of pneumonia, as well as improve functions. Often patients who come to Madonna have very poor activity tolerance because

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of the extended period of illness and/or time in acute care hospitals. The goal is for individuals on LTACH to be up in a chair for 1-2 hours per day. An abdominal binder and TED hose are used, particularly with persons who have SCI. While up, patients are encouraged to participate in self-care and other therapies, which increases their overall activity tolerance.

Mobility

The ability of individuals who rely on mechanical ventilation to move about not only provides them with a sense of freedom and independence, but it also has tremendous health benefits. Madonna has a wide variety of specialty wheelchairs and assistive technology which make it possible for those who are even severely impaired to get outside their rooms and into the community.

Feeding, swallowing & nutrition

Coordinating breathing and swallowing can be a challenge when using mechanical ventilation. Madonna's speech language pathologists are trained to perform swallowing assessments, as well as a variety of swallowing techniques. Nutrition therapists are also involved, ensuring patients receive the combination of nutrients necessary for healing, energy, and health.

Psycho-social

Many individuals who rely on mechanical ventilation benefit from professional services to assist with coping. At Madonna, a rehabilitation psychologist is available to work with the patient and family members on relaxation techniques, as well as coping and adjustment skills. Recreation therapists provide patients with diversional activities and help them experience community activities. In addition to professional support, Madonna offers a Peer Volunteer Program, where individuals who are dependant upon mechanical ventilation, but functioning independently, visit patients to share experiences, encourage and coach.

Education for patients and family members is also critical for the success of persons who require mechanical ventilation. For some individuals, this includes a brief stay in an apartment within Madonna, where the family or other identified care takers practice their skills prior to discharge home.

A success story

Derek Rea has Duchenne Muscular Dystrophy, a degenerative neuromuscular disease. Prior to coming to Madonna, Derek's family expected him to remain



Derek Rea (center) is shown with his Madonna team who successfully weaned him from his day dependency on the ventilator.

ventilator-dependent full-time. The interdisciplinary team at Madonna was able to successfully wean Derek off the vent for 12 hours per day and trained his family and other caretakers, making it possible for him to return to his home with more independence.

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