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Vibra Healthcare
Builds Massachusetts'
Premier Long-term
Acute Care Centers
of Excellence

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By Thomas Crocker

VIBRA HEALTHCARE IS CREATING AN INTEGRATED CENTER OF CLINICAL EXCELLENCE IN CENTRAL MASSACHUSETTS, FEATURING INTENSIVISTS AND HOSPITALISTS DIRECTING PATIENTS' MEDICAL CARE AND REHABILITATION, AND A VARIETY OF SPECIALISTS MANAGING THE COMPLEXITIES OF LONG-TERM ACUTE ILLNESS.

VIBRA'S CENTER OF EXCELLENCE model emphasizes integration of care, the use of specialized skill sets, standardization across multiple facilities for measurable success and a focused mission bent on serving the needs of Vibra's patients. These patients include individuals who have been in an acute-care hospital intensive care unit and require further treatment and management following

discharge before they can transition to a lower level of care.

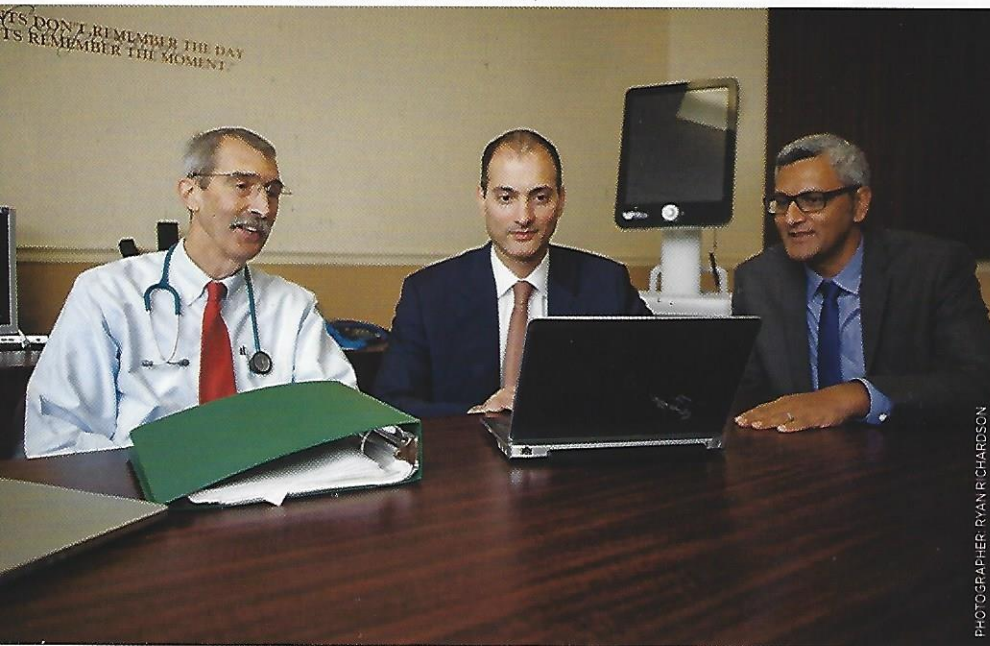
"Many of our patients have survived a catastrophic illness but still lack the ability to breathe on their own, and also have organ failures, such as kidney failure requiring dialysis," explains Peter Bagley, MD, who serves as Co-medical Director at Vibra as well as Associate Director of the Division of Pulmonary and Critical Care Medicine

at UMass Memorial Healthcare. "In order to return to their normal lifestyle, these patients need most of the same high-level medical care as they received in the ICU, as well as rehabilitation."

"These individuals have respiratory, cardiovascular or infectious conditions that, once stabilized, need continuation of care, and Vibra is uniquely positioned in this region to help them recover and regain functional abilities," says Payam Aghassi, MD, FCCP, pulmonary and critical care physician, Assistant Professor of Medicine at the University of Massachusetts Medical School, and President of Mass Lung & Allergy, PC. "It is easy for my colleagues and me to collaborate with Vibra because its clinical and operational leadership share our goal of providing the highest quality, value-based care at the lowest cost to patients."

Vibra, a national leader in LTAC and rehabilitation with facilities in 19 states, has facilities in western, central and southeastern Massachusetts: Vibra Hospital of Western Massachusetts in Springfield, Vibra Hospital of Western Massachusetts – Central Campus and The Meadows transitional care facility in Rochdale, and Vibra Hospital of Southeastern Massachusetts

Dr. Bagley, Dr. Aghassi and Dr. Mistry conduct a review of patient outcomes.



PHOTOGRAPHER: RYAN R. CHARLSON

(formerly known as New Bedford Rehabilitation Hospital).

A Collaborative Team

No element of LTAC exists in a vacuum. LTAC patients require complex courses of care involving a wide range of specialists and ancillary providers. The cornerstone of Vibra's centers of clinical excellence is the multidisciplinary team of medical professionals the organization has assembled and continues to strengthen. At the center of this team are intensivists, hospitalists, nurse practitioners and physician assistants with expertise in LTAC who provide 24-hour coverage at Vibra hospitals and oversee the entire course of patient care.

"We are involved in managing pain and underlying comorbid conditions, such as hypertension and diabetes, as well as directing patients' rehabilitation programs," says Joseph Litwak, MD, PhD, hospitalist and Chief Medical Officer at HMS, a staffing and consulting organization for hospitalist programs that supplies hospital medicine providers for Vibra Hospital of Central Massachusetts. "A complement of specialists from local academic centers and tertiary care facilities, including UMass Memorial Medical Center and Saint Vincent Hospital, deliver specialty care.

"We provide continuity in care — our providers see patients and families on a regular basis and get to know them. These providers build familiarity with patients' cases, and their intimate knowledge of patients' courses of treatment makes them excellent resources for primary care physicians," Dr. Litwak concludes.

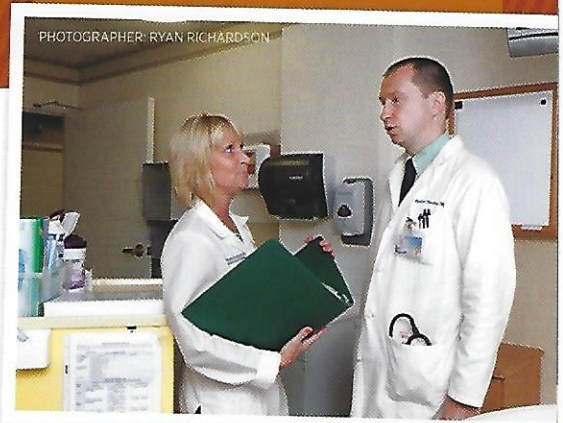
The Vibra team of specialists includes cardiologists, an infectious disease specialist and a wound care/surgical specialist. A pulmonologist with critical

care medicine training conducts daily rounds at Vibra hospitals, and a respiratory care specialist is available to provide breathing-related therapy around the clock.

One of Vibra's specialties is liberating patients from the ventilator.

"Vibra has always been committed to ventilator weaning as a hallmark of care," Dr. Litwak says. "For example, Vibra uses a technology that is uncommon at other facilities called volumetric capnography [VCO₂ monitoring]. Vibra Hospital of Southeastern Massachusetts has been a national leader in the liberation of patients from mechanical ventilation using this technology. Vibra Hospital of Southeastern Massachusetts, on average, weans 92 percent of patients in a 14-day period, according to 2014 data. VCO₂ monitoring allows for instant feedback on how a patient is weaning. VCO₂ monitoring measures the kinetics of carbon dioxide [CO₂] elimination on a breath-by-breath basis. A volumetric capnogram contains extensive physiological information about metabolic production, circulatory transport and CO₂ elimination within the lungs. VCO₂ monitoring is also the best clinical tool to measure dead space, allowing detailed analysis of the functional components of each tidal volume, thereby providing valuable detailed clinical information about the lungs' efficiency of gas exchange. If a patient is having trouble weaning, VCO₂ monitoring lets the clinicians know in real time whether the difficulty is due to a pulmonary or a cardiovascular issue."

"Vibra has a strong rehabilitation division staffed by physical, occupational and speech therapists," Dr. Bagley says. "Provision of an intensive rehab program is central to achieving our goal of helping patients regain maximum functional independence. Our nurses are equally essential to patient



Dr. Novikov and Michelle Dorey, Wound Care Coordinator, discuss treatment plans after a procedure.

PROVIDING EXCEPTIONAL WOUND HEALING SERVICES

NONHEALING WOUNDS ARE a frequent reason for acute-care hospitalization. Wound care physician-surgeon Mikhail Novikov, MD, CWSP, diagnoses and treats patients with a variety of chronic wounds, including pressure sores and diabetic foot ulcers, at facilities across Massachusetts, including the Vibra Healthcare family of hospitals.

"As patients recover from acute medical events in the hospital — and nutritional status, blood circulation or heart function improves — we often see good healing of wounds that may have developed during hospitalization, such as pressure ulcers," Dr. Novikov says. "Sometimes, however, these wounds become significant medical issues in their own right. They keep patients in the hospital environment by prompting their transfer to long-term acute care facilities. I assess patients in these facilities and treat them myself or establish the treatment plan and coordinate care with other specialists."

Dr. Novikov provides a wide range of treatments to Vibra patients, including minor bedside surgery, debridement, biological skin substitutes, advanced dressings, compression therapy, negative pressure wound therapy and autologous skin grafting. Hyperbaric oxygen therapy is available as an adjunct treatment on an outpatient basis following patient discharge. More than 89 percent of wounds under Dr. Novikov's care heal in 16 weeks, and only 5 percent of his patients require readmission to a hospital.

care — they are skilled in managing individuals who need mechanical ventilation and dialysis. Only a facility like ours can match the rehabilitation resources to the medical and critical care that these complex patients need to improve.”

Measurable Successes

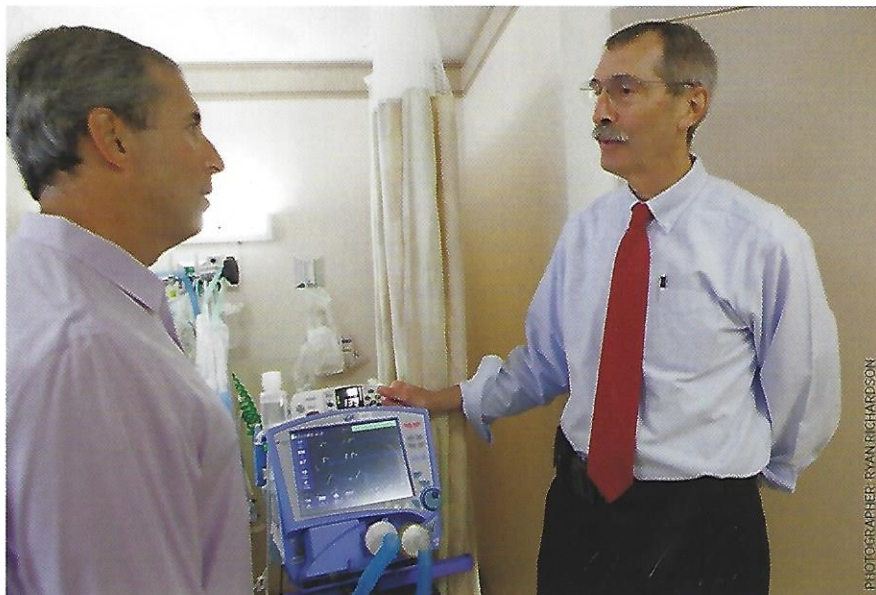
One of Vibra’s specialties is weaning patients from ventilators. On average, 75 percent of Vibra Central’s patients are able to abandon use of a ventilator by the end of their care, Dr. Bagley says.

Currently, Vibra is developing additional clinical pathways to enhance and track a variety of quality and safety metrics.

“We have adopted antibiotic stewardship principles and continue to strengthen our sepsis and deep vein thrombosis prevention protocols,” Dr. Litwak says. “We conduct multidisciplinary rounding, and this has had a dramatic impact on reducing falls with significant injury. Rounding with other specialists has also contributed to a dramatic increase in patient satisfaction.”

As Vibra creates LTAC centers of clinical excellence, the organization is developing the ability to provide a higher level of care consistent with that offered by intensive care units.

Dr. Bagley and Dr. Litwak review a patient-specific plan of care.



PHOTOGRAPHER: RYAN RICHARDSON



Patient on a ventilator working with physical therapy

PHOTOGRAPHER: RYAN RICHARDSON

“We are building centers where patients with advanced lung disease can receive state-of-the-art treatment and technology as well as physical rehabilitation which allows them to return home,” Dr. Bagley says.

“This capability would reduce the frequency with which we need to return patients to referring institutions,” he adds. “At present, if an individual with advanced respiratory disease comes to Vibra without a tracheostomy tube and develops worsening respiratory distress, many times we have to return the patient to the referring hospital for

endotracheal intubation. As we continue to develop higher levels of care at Vibra, we will be able to intubate and provide mechanical ventilation, as well as treat some forms of hemodynamic collapse, without returning many of these patients to the referring hospital. This benefits the patient as well referring institutions, as the transition from one hospital to another puts patients at risk”.

Vibra’s vision for the future of its centers of clinical excellence in Massachusetts includes strengthening integration between and standardization of protocols and clinical pathways throughout its hospitals in the state, as well as adding more clinicians with LTAC experience and skills to its team.

“We continue to bring in hospitalists who are adept at handling the unique set of problems that the LTAC patient population poses,” Dr. Litwak says. “We are also engaging more specialists and developing additional protocols aimed at delivering quality-driven outcomes.”

When clinicians and institutions refer to Vibra, they can be confident their patients will receive medical care and rehabilitation from an interdisciplinary group of providers that is focused on one goal: helping individuals overcome the greatest challenges of their lives.

For information about the Vibra family of hospitals in Massachusetts, visit vibrahealthcare.com and click on “Locations.” ■