At the end of the tunnel: physical therapy as safe and effective pain management

By MEG HANSEN **Executive Director of VHFC**

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hile gliding down the powdery slopes of Okemo on a frigid February morning this year, Sandra Trounce* slipped and fell onto a patch of ice. Suddenly, any bodily movement brought excruciating pain in her lower back and caused her to suspect that the fall had broken her back.

When the paramedics arrived, they positioned Sandra on a sup-

porting backboard, and secured damaged. a neck-collar, before transporting her to the nearest hospital. The triage nurse saw Sandra screaming because of the intolerable pain and started an intravenous line with morphine. An emergency physician then conducted a physical examination and neurological tests to determine if the accident had injured her spinal cord. He ordered a spinal X-ray and CT scan, which revealed fractures in the T12 (thoracic or mid-back) bone. Fortunately, Sandra's spinal cord had not been

After she was discharged, she received strict instructions to limit all movements (e.g. bending, lifting, twisting) to prevent worsening of the fracture. "Can you imagine going through the day like a stiff robot without using your back muscles or joints? I felt robbed of my humanity," Sandra said.

Forced to rely on her family for all daily activities, Sandra battled despair and unbearable pain as she spent the next several weeks bedridden. Nonetheless. Sandra

chose to take Advil (ibuprofen) over oxycodone. According to a recent Washington Post article by Dan Keating and Samuel Granados, the analgesic strength of ibuprofen is 1/222 that of morphine, while oxycodone is 50 percent stronger than morphine. She made this decision to protect herself from the perils of opioid addiction.

The Pharmaceutical Complex and Politics of Pain

Opiates like morphine (alkaloids from the opium poppy) and See EFFECTIVE Page 7

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opioids like oxycodone and hydrocodone (synthetic drugs that act like opiates) effectively diminish severe pain in short-term conditions. A recent paper by Erin Krebs of the Minnesota Veterans Affairs Healthcare System and colleagues finds there is little support for the efficacy of opioids in treating longterm, persistent pain. Moreover, chronic opioid use leads to addiction, physical dependence, drug tolerance, and opioid-induced hyperalgesia or increased pain sensitivity.

In the 1990s, however, patient advocacy lobbyists like the American Pain Society – underwritten by Purdue Pharma, which had launched a new drug called OxyContin (oxycodone) – overhauled American medicine's view of pain from a subjective symptom to the "fifth vital sign." Pulse rate, temperature, respiration rate, and blood pressure form the four vital signs or clinical measurements of a patient's essential body functions.

These groups claimed that doctors had unreasonable fears regarding opioid addiction and as a result. Americans had been unnecessarily enduring pain. Medical seminars and marketing campaigns, also funded by Purdue, deliberately touted OxyContin's low abuse liability and advised doctors to prescribe it for chronic and mild-to-moderate pain (e.g. after wisdom teeth removal). In reality, OxyContin's effects in the brain mimic that of heroin. No wonder it became a blockbuster drug, bringing Purdue \$1.6 billion in annual sales within five years of its launch, according to STATnews. com, and turned a generation of Americans into addicts.

Since Purdue's deceitful tactics came to light a decade ago, legislators and physician groups have changed federal and state laws, and clinical practice guidelines to ensure stringent prescribing of opioid drugs. For example, as a result of the 2014 federal policy, the rate of prescriptions given for any opioid decreased by 11 percent, according to a recent paper in the journal Pharmacoepidemiology and Drug Safety.

The resulting decrease in access to prescription opioids, however, is driving thousands of non-medical prescription opioid users to the black market. Cheap heroin and illegally manufactured fentanyl, smuggled from China and Mexico, are fueling the present carnage. According to the CDC, nearly 50 percent of heroin users today began by abusing prescription opioids, and since 2014, heroin overdose deaths have increased at an annual average of 19 percent.

Redefining Pain Care with Physical Therapy

In 2017, New Hampshire Office of the Chief Medical Examiner counted 466 overdose deaths, while the state department of health documented 101 opioid-related fatalities in Vermont. These statistics have galvanized the healthcare community to highlight non-pharmacological approaches to pain care of which physical therapy holds the most promise.

Dr. Andre Machado, chair of the Neurological Institute at Cleveland Clinic, has been pioneering efforts to redefine treatment goals from the complete masking of pain to the restoration of functionality. In an August 2016 Time magazine op-ed, he emphasized how physical therapy reduces pain by improving muscle strength and tone, balance, and overall range of movement. In addition, he advocates for mental health counseling to reframe our perception of pain "because not everything that hurts harms."

Sandra learned about the national #ChoosePT campaign, which provides resources for safe, effective, and team-based alternatives to pain care (www.moveforwardpt.com/ choosept). She enrolled in aquatic physical therapy at PT360, a physical therapy cooperative with three centers in Vermont. Regionally, the Dartmouth Hitchcock Medical Center (1 Medical Center Drive, Lebanon) offers a multitude of options for collaborative pain care with physical therapists and pain management specialists.

Physical therapist Paula Geigle of the University of Maryland Medical Center explained the benefits of aquatherapy, "The pool is nature's body weight support system where one can unload 90 percent of his/ her body weight." Without the risk of falling, patients are able to balance better, move with ease, and participate in individualized cardiovascular exercises.

"I had lost my ability to balance," Sandra said, "and decreased muscle mass made me dizzy when I exerted myself. Erin Micelli Adams [Sandra's physical therapist] was very patient and supportive. She designed water exercises that taught me to walk again."

Sandra's treatment program also includes regular massages of the thoracolumbar fascia (TLF). The TLF stabilizes the forces required for walking and thus plays an important role in recovering from musculoskeletal injury. Skillful manipulation of this soft tissue alleviates lower back pain. In addition, customized yoga, abdominal and weight-bearing exercises, which strengthen core muscles and improve posture, help reduce overall pressure on the backbone.

Four months after the accident, Sandra increasingly enjoys lowpain (and even occasional painfree) days. A comprehensive physical rehabilitation regimen, aimed at improving joint movement and bone strength, has equipped Sandra with various tools to manage pain and improve the quality of her life. "Physical therapy restored hope. It was the light at the end of a long, harrowing tunnel."

*Name changed to respect patient's privacy.

