



Case Study: 8-year-old Pediatric Patient Avoids Line Breaks & Dislodgements with Central Line Vest

Gus Gear's® Central Line Vest reduced line trauma and hospitalizations while improving quality of life for patient and family.

A perennially top-ranked children's hospital in the Rocky Mountain region provides nutritional therapies to pediatric patients suffering from conditions requiring intravenous total parental nutrition (TPN). They're committed to seeking solutions to central venous device (CVAD) damage or removal caused by line trauma.

Challenge

As much as 30% of pediatric patients who require TPN suffer CVAD trauma, reducing their quality of life and burdening them — and the healthcare system — with undue financial burden. Their active lives and curious fingers cause damage in the form of breakage and dislodgement, requiring repair or replacement. Current standards of care do not adequately address full securement of CVAD's from exit site to the hub.

Patient

This eight-year old patient was diagnosed shortly after birth with failure-to-thrive, gastroparesis, and pseudo-obstruction. Keeping them sedentary did not avoid line trauma episodes. Over the course of three months, while using the current standard-of-care, they suffered two CVAD replacements and 15 CVAD breaks resulting in three hospitalizations — including a two-week stay in the ICU due to an episode of sepsis. For the family, the emotional trauma was devastating, and the cost burden to the institution exceeded \$300,000.

Solution

Following numerous trauma episodes and unsuccessful attempts at CVAD securement, the hospital staff utilized the Gus Gear® Central Line Vest, an FDA-registered Class I Exempt medical device, which employs a unique patent-pending securement technology. This technology uses flexible strapping contained within a covered vest-like device. It secures the device from the CVAD exit site to the hub.

Outcome

After 12 months using the Gus Gear® Central Line Vest to secure their CVAD, the patient reported no CVAD line damage episodes, even during activities like riding a bike, jumping on a trampoline, riding all-terrain vehicles, and climbing trees. Their mother said, "The Central Line Vest gave us our life back."

