

CASE STUDY

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Child's Symptoms Mask Disease State & Diagnosis

Masimo Perfusion Index (PI) Helps Identify Seizure Disorder & Prompts Proper Treatment

Location	Loma Linda, California
Clinician Reporting	Mitchell Goldstein, MD
Patient Event	Toddler's Nightly Seizures Identified

> The Situation

A 3-year-old suffers from central apnea accompanied by repeated, noticeable heart rate accelerations and desaturations. The toddler's mom sought out various specialists to help identify the source of her son's condition, but despite multiple tests and detailed blood analyses, there was no conclusive reason for the toddler's condition. She was repeatedly told that the subtle heart rate changes captured on ECG tests were not sufficient to make a diagnosis or initiate treatment.

> The Problem

The toddler's nightly apnea, heart rate accelerations and desaturations placed his health in grave danger. As his mom struggled to rest peacefully—knowing that at any moment, her son's life could be at stake—Dr. Goldstein, a pediatrician/neonatologist at Loma Linda University Children's Hospital, reviewed the 3-year-old's medical records for clues. As a newborn, the child suffered from both apnea and bradycardia, so Dr. Goldstein recommended nightly monitoring with the Masimo Radical-7™ Pulse CO-Oximeter.®



Quaid Boal and his family are finally resting comfortably thanks to Masimo PI.

> The Masimo Difference

After receiving data gathered from the Radical-7, Dr. Goldstein noticed that in addition to the heart rate and saturation changes, there were also subtle but consistent changes in PI, which has been shown to correlate with regional blood flow. Because regional blood flow can increase by as much as 70-80% after seizures, Masimo PI helped to identify and quantify the blood perfusion changes occurring during and after the toddler's peculiar nightly episodes—forcing specialists to re-evaluate the toddler's neurological status and providing sufficient evidence to diagnose his condition as a seizure disorder. Soon after initiating treatment with an anti-epileptic prescription drug the toddler's condition improved considerably. As a result, his seizure disorder is now well-managed and under control.

“When all other medical avenues failed to enable diagnosis and treatment for this little boy, Masimo PI provided the evidence needed to properly diagnose and treat his unusual seizure disorder, which would have otherwise gone untreated.”

— Dr. Mitchell Goldstein

“I not only owe my son's safe return to normalcy and health, but also my peace-of-mind and sanity to Masimo. Today, my son is a happy-go-lucky five-year-old and our family is not only thriving, but well-rested now thanks to Masimo.”

—Raina Boal, Quaid's mom