

## **Abstract**

This senior capstone project explains the use of pediatric sedatives to acquire Computed Tomography (CT) images of diagnostic quality. Stages and types of pediatric sedatives, risk versus benefit, pros and cons, potential side effects, parental/guardian consent, general statistics, administration and monitoring requirements, indications and contraindications, and an example of motion artifact are also discussed. Sedatives are essential when pediatric patients are anxious and restless prior to receiving a CT scan. The failure rate of acquiring a diagnostic image while using sedatives for pediatric patients has been indicated as 1 to 3% and 10 to 20% through different conducted studies. Parental/guardian consent is important to obtain due to potential side effects of pediatric sedatives, as it ensures that caregivers are fully informed about risks and benefits, allowing them to make the best decision for the safety and health of the child. Not all forms of pediatric sedation are pharmaceutical, some include non-pharmaceutical methods. The use of pediatric sedation reduces stress and allows for an accurate diagnosis.

*Keywords:* pediatric sedation, computed tomography, anesthesia, pediatric imaging, motion artifact, monitoring