EARLY REHABILITATION IN THE PEDIATRIC CRITICAL CARE UNIT: A PILOT STUDY
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Introduction: Critically ill children are often bed-ridden and immobile for prolonged periods of time. Immobility is an independent risk factor for the development of muscle weakness and wasting among PICU patients. There is evidence demonstrating that early rehabilitation and mobilization of critically ill adults is safe, feasible, cost effective, and improves short and long-term outcomes. In contrast, there is a paucity of research in pediatrics. Current prospective studies in critically ill adults have used cycle ergometer, mobilization teams and interactive video gaming to implement early mobilization. Acute rehabilitation in critically ill children requires a combination of innovative active and passive approaches that are tailored to the needs and cognitive and functional abilities of each child.

Objectives: To evaluate the safety and feasibility of implementing early physical rehabilitation using a combination of individualized mobility interventions in critically ill children admitted to the McMaster Children’s Hospital Pediatric Critical Care Unit (PCCU).

Methods: Design: Pilot prospective cohort Methods: Admissions to the PCCU were screened for eligibility. Passive (cycle ergometer) and/or active (video-gaming) rehabilitation was applied to eligible patients. Type of rehabilitation was based on patient’s functional and cognitive ability. Main outcome measures: The primary outcome of this pilot study is feasibility, as defined by the ability to screen, enrol and apply the study procedures within 24 hours of approaching eligible patients. The secondary outcomes included a) safety (the rate of adverse events attributable to the rehabilitation intervention), b) change in activity from baseline, during and following the intervention as measured by Actigraph GT3X accelerometers, c) patient and caregiver satisfaction and d) various clinical outcomes. The results and conclusions of this pilot project are still pending.

Results: Not applicable. Study in data analysis phase however final results will be available at the time of presentation