The Center for Machine Learning and Health invites you to participate in an Innovation Session: Exploring Higher Performing Care Coordination for Post-Critical Illness Recovery from the PICU at UPMC Children’s Hospital

The Innovation Session seeks to level set then ‘unpack’ the Challenge. Discussion and Q&A is intended to reveal deeper context, underlying processes, availability and characteristics of data. These insights are then used to test the scope and value of solution elements/technologies that resolve key elements of the challenge.

Below is the Challenge Statement for your review.

The goal of the session is to enhance discovery to stimulate and enhance solution building.

Engage with Challenge owners from UPMC Children’s Hospital of Pittsburgh:

Ericka L. Fink, MD, MS, Associate Professor
Division of Pediatric Critical Care Medicine
UPMC Children’s Hospital of Pittsburgh

Jodie Vento, MGC, LCGC, Manager, Center for Rare Disease Therapy
Gene Counseling Supervisor, Laboratory Services
UPMC Children’s Hospital of Pittsburgh

Agenda
- Post Critical Illness Recovery: the ICU at Children’s Hospital of Pittsburgh
- Towards a Comprehensive Care Program to achieve better outcomes/cost
- Open discussion of challenges in this space

Benefits of Attending
- Interested PIs may find a basis for proposing research projects that may be funded by the CMLH
- The discussion may define opportunities to propose student work that may be supported by a CMLH Fellowship
- Networking that may enrich your network of collaborators, on and off-campus

Date + Time + Location
September, 17th  5:30pm – 7:00pm  CMLH Office at 4615 Forbes Avenue
(refreshments provided)

RSVP By 9/15 to CMLH@cs.cmu.edu include your name, title and department.
Upon your RSVP, CMLH will email you additional information regarding the Challenge prior to the session.

Stay Connected!
Follow us on Twitter: @HealthDataCMU and @HealthDataPGH

Subscribe to the PHDA newsletter to get the latest Alliance news, event invitations and updates, and behind-the-scenes spotlights on our researchers, projects, and team members. Subscribe
Background: Pediatric intensive care unit (PICU) mortality has improved to 2%, but survival with new disability is increasing. Children (ages 2 weeks-26 years) and their families are at increased risk of new cognitive, physical, emotional/psychological, and social functional disabilities that negatively impact health-related quality of life following critical illness due to conditions including respiratory failure, sepsis, and trauma. Recovery from critical illness is further complicated by the 1) lack of standardized early and longitudinal assessment of critical illness morbidity and prescription of rehabilitative care, 2) fragmented care across in and out of hospital locations (e.g., communication of conditions to primary care providers/teachers, need for equipment and school assistance, 3) minimal support for social determinants of health that affect recovery outcomes, 4) personalized education to family and providers, 5) and unmet needs to maximize recovery potential in the long-term.

The Challenge: Comprehensive care coordination for post-critical illness recovery is thus the ICU’s most important challenge today and may lead to improved patient and family centered care and outcomes, cost, and satisfaction.

The current state of technology across settings prohibits data harnessing to facilitate programs to capture and support long-term recovery outcomes. Creating new technology innovations to assist care coordination and recovery for the 480,000 children and their families who experience critical illness (due to many conditions including respiratory failure, sepsis, and trauma) in the US annually – and millions globally - is the pediatric ICU’s most important challenge today. Solving this patient and family centered problem may lead to improved health outcomes and satisfaction and reduced healthcare utilization and cost, ultimately benefitting families, healthcare organizations, and the public.

The Goal: The clinical Whole Child program’s goal is to disrupt the status quo: to coordinate and optimize long-term recovery outcomes of children and their families affected by critical illness. Components of this program that can benefit from technological innovation include:

1) A PICU-based screening tool that identifies children and families at high risk of needing recovery support/readmission that triggers service consultation

2) Long term delivery of outcomes assessment questionnaires across hospital-home settings

3) Delivery (and EMR integration) of outcomes trajectories with interpretations and recommendations to providers and families along with personalized educational information

4) Coordination of efforts and harnessing of data across settings into a Whole Child database to facilitate quality improvement

Families of children at high risk of readmission and new disability will have a one-time 4 week post hospital discharge in-person or telehealth visit with the Whole Child multidisciplinary clinic to assess for opportunities to improve health outcomes.