

IHI/NPSF Lucian Leape Institute Medtronic Safety Culture & Technology Innovator Award

Sponsor: **Medtronic** Inaugural funder of the Lucian Leape Institute

Panel of Judges

Barbara Balik, EdD, MS, RN

Co-Founder, Aefina Partners
Senior Faculty, Institute for Healthcare Improvement

Dave Giarracco

Vice President, Global Market Development, Medtronic

Gregg S. Meyer, MD, MSc, CPPS

Chief Clinical Officer, Partners HealthCare

Suzanne Mintz, MS

Founder, Family Caregiver Advocacy

Eric Poon, MD

Chief Health Information Officer, Duke Medicine

Doron Schneider, MD

Chief Safety and Quality Officer
Abington Jefferson Health

The IHI/NPSF Lucian Leape Institute Medtronic Safety Culture & Technology Innovator Awards recognize teams that have demonstrated extraordinary and innovative initiatives to drive successful implementation of technology or process improvement through culture change. The LLI gratefully acknowledges Medtronic as the Inaugural Funder of the LLI and supporter of this award program and extends special thanks to the panel of judges.

About the 2018 Honorees

Regenstrief National Center for Medical Device Informatics REMEDI Pump Collaborative

Regenstrief National Center for Medical Device Informatics was started in 2009 by the Regenstrief Center for Healthcare Engineering at Purdue University. The purpose was to partner with clinicians (primarily pharmacists and nurses), infusion pump manufacturers, researchers, and national medication safety organizations to advance infusion pump safety.

In an effort to increase effective use of smart infusion pump software, the team developed a web-based, vendor-neutral platform for sharing infusion pump data and best practices and accessing tools for benchmarking and analyzing data.

Since 2010, the REMEDI collaborative has grown from 8 hospitals and health systems to 355 facilities in 28 US states and Costa Rica. Membership is free of charge, with a core goal being the sharing of knowledge and best practices.

The collaborative measures improvement by assessing compliance percentage and the volume of programming alerts. With a higher

Team Members

Daniel Degnan, PharmD, CPPS
Pharmacist

Poching DeLaurentis, PhD
Researcher

Bryan Graves, BS
Developer

Damion Junk, BS
Developer

Jenna Moretti, MS
Developer

Alissa Nedossekina, MS
Developer

Rich Zink, MBA
Team Lead

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About the 2018 Honorees *continued*

compliance percentage, there is a lower chance of overdosing or underdosing patients. Similarly, reduced alerts mean a lower risk of alert fatigue for clinicians.

The success of the REMEDI Pump Collaborative led the engineering group to replicate the evidence-based community of practice model for ventilators and physiological monitors.

REMEDI Collaborative Results

Smart pump software compliance percentage	Alerts per device
2010: 74%	2010: 113
2017: 88%	2017: 49

Memorial Rehabilitation Family-in-Training Fall Prevention Program

Memorial Rehabilitation Institute is an 89-bed inpatient program for adults recovering from car accidents, stroke, amputations, or other trauma. Family members are permitted to stay with their loved one 24 hours per day. Because these caregivers observe therapists and nurses transferring or walking the patient, some feel they can successfully perform these tasks, despite being counseled to request staff help.

In 2017, the program recorded 10 family-related falls over a 16-month period. To counter this trend, the Fall Prevention Committee developed a program in which a willing family member is partnered early in the patient's stay with a physical therapist to receive hands-on training in five tasks: 1) bed-to-chair transfers; 2) walking; 3) wheelchair management; 4) toilet transfer; and 5) toileting. Family members who achieve competence in all five areas are issued a bright orange band labeled "Family in Training," letting staff know that they are able to assist with these activities.

In the first eight months of the program, 101 family members enrolled and only 1 family-related fall occurred. Additionally, though not the focus of the program, length of stay declined during this period, and fewer patients needed to be discharged to a skilled nursing facility.

The components of this initiative critical to its success were to collect real-time data; involve staff and patients/families in identifying potential solutions; create a standardized form of education/communication with emphasis on partnering with the health care professional; and share the outcome data with stakeholders.

Family-in-Training Program Results

Number of falls	Rehab patients discharged to a skilled nursing facility	Effect on length of stay (LOS)
January 2016 – May 2017: 10	National Average: 10%	Average LOS prior to falls initiative: 13.1
June 2017 – April 2018: 1	Memorial Rehab (June 2017 – April 2018): 1%	Average LOS June 2017 – April 2018): 11.1

Team Members

Meilani Mapa, MD
Medical Director of Quality

Denise Maillet, OTR/L
Director of Quality and Clinical Effectiveness

Dawn Broksch, DPT
Administrative Director of Rehabilitation Services

Becky Boyle, OTR/L
Director of Rehab Services

Leslie Schlang, CRRN
Rehab Nurse Manager