

August 2019 Issue

Welcome to the August 2019 issue of *Value Added*. The Center for Value-Based Care Research (CVCR) conducts research on novel interventions that improve value in healthcare by increasing quality and/or decreasing costs. With a mission of making quality healthcare possible for all Americans by conducting research to identify value in healthcare, CVCR seeks to deliver the right care, at the right time, to the right patients, at lower cost.

In this issue, you will report on two of our recent research initiatives. Aaron Hamilton MD, MBA, FACP, SFHM, and Michael Rothberg, MD, MPH, discuss the impact of dedicated mobility technicians on ambulation in older hospitalized patients. Their study "Increasing Mobility via In-Hospital Ambulation Protocol Delivered by Mobility Technicians" was funded by the Research Program Committee and recently published in the *Journal of Hospital Medicine*. Elizabeth Pfoh PhD, has received a grant from the Health Delivery Science Center to investigate the effects of weight management services across Cleveland Clinic. We also congratulate some of our staff, residents, and medical students on their successful presentations and award recognition.

We hope you enjoy this issue of *Value Added*.

Increasing Mobility via In-Hospital Ambulation Protocol Delivered by Mobility Technicians

Patients who are hospitalized for acute medical problems often become deconditioned very quickly. Lack of mobility among hospital inpatients can lead to functional decline, especially in older patients. Ambulation is important to patient health and may improve their outcomes by decreasing risk of complications such as falls, delirium, and skin breakdown. However, assisted ambulation is not consistently practiced across hospitals in the United States. This practice falls heavily on nurses to carry out the intervention, and although nurses embrace the need to mobilize patients early in their hospital stay, they may not have time to get patients out of bed and walk them in the hallways. What steps could be taken to increase ambulation in this population? With funding from the Research Program Committee, Drs. Aaron Hamilton and Michael Rothberg have been studying the effects of dedicated mobility technicians on ambulation in older inpatients.

What made you want to study in-hospital ambulation?

The idea for this study came to me about 15 years ago when I visited by brother-in-law's veterinary hospital. He gave me a tour of the facility, including the outdoor area where the dogs can run after surgery. I thought to myself, why don't we do that for people? Instead, we tend to put them in bed. Then we deal with all the complications of that.

Why is this practice so important?

Bed is a dangerous place. Especially for older patients, bed rest hastens functional decline, and it is associated with serious complications. Loss of mobility in the hospital can lead to long-term loss of independence. Ambulation is the antidote to bed rest.

Why is this practice so often overlooked?

Ambulating patients is a task that traditionally fell to nurses. Physical therapists typically evaluate patients and recommend exercise, but there aren't enough physical therapists in the hospital to walk all the patients who need help. But nurses are also short on time. Unfortunately, ambulating patients often falls to the bottom of their to-do list. This problem is widespread, with ambulation orders the most frequent overlooked nursing task. Our solution was to create a new employee type—the mobility technician (MT)—and to embed them on medical floors at Main Campus.

What were the effects of implementing this new protocol?

It took a while for the MTs to learn how they fit into the care team. Because they were trained as PCNAs, there was always a temptation for nurse managers to pull them away to help with other pressing tasks. Of course, that was the whole reason that we created the position. With appropriate communication, we were able to get everyone on the same page. As the study went on, we found that patients ambulated a median of 6 times with the MTs, for approximately 30 minutes each time. As a result, they took almost 50% more steps than the control group. They were also slightly more likely to go home rather than to a skilled nursing facility, but that finding was not statistically significant.

How will your findings impact clinical care of the Cleveland Clinic?

Cleveland Clinic is already committed to a culture of mobility, but the implementation of MTs across the enterprise would be costly. Before doing that, we need better evidence that the extra steps will translate into better patient outcomes, potentially at lower overall cost, considering that our intervention might reduce the need for post-acute care. We have applied to the NIH for funding to conduct a large, multicenter randomized trial based on this pilot study. Hopefully, in a few years, we will have a definitive answer, not just for Cleveland Clinic but for the whole country.

This [study](#) was published in the *Journal of Hospital Medicine*, May 2019

Featured Publication

JAMA Network | Open™

Original Investigation | Infectious Diseases

June 7, 2019

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Association Between Alcohol Use Disorders and Outcomes of Patients Hospitalized With Community-Acquired Pneumonia

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Featured Study

Cleveland Clinic Patients' Uptake of Weight-management Services and Their Subsequent Weight-trajectories

Principal Investigator: Elizabeth Pfoh, PhD

Co-Investigators: Michael Rothberg, MD, MPH

Overview:

Over a third of American adults are obese and obesity raises the risk of other diseases like diabetes. Obesity is a leading cause of preventable death and major contributor to the rising cost of health care. Attaining and maintaining weight loss is a long-term process since weight is often regained. However, most weight-management programs are brief (4-6 months). Currently, Cleveland Clinic offers numerous weight-management programs ranging from nutritional counseling to bariatric surgery. Yet, patients' uptake of these services and their overall weight-trajectory after using these services is unknown. Dr. Pfoh, an investigator in the Center for Value-Based Care Research has received a grant from the Healthcare Delivery Science Center to better understand the quality of weight-management services at Cleveland Clinic. Specifically, the goal of the project is to identify which patients are receiving weight management services, how individuals may transition across weight-management programs and what are the long term (up to 3-years) outcomes associated with use of weight management services.

Approach:

This retrospective study will rely on Cleveland Clinic's rich electronic health record data. Dr. Pfoh has collected a cohort of ~183,000 adult patients who had at least one primary care visit between 2015 and 2018 and at least one body-mass index measurement ≥30.

How will your findings improve care?

This study can help inform the redesign of weight-management programs at Cleveland Clinic by identifying three important pieces of information. First, how often patients use more than one weight-management program and the order in which programs are used. Second, how patient characteristics differ across programs. Third, patients' long-term weight trajectories after use of weight-management services. This knowledge can inform personalized weight-management program recommendations for patients based on prior weight-management service use and success (e.g. percent weight lost). This is particularly important given that attaining and maintaining weight loss requires a long-term approach.

CVCR CELEBRATIONS

CCCC Shines at SGIM 2019

The Society for General Internal Medicine annual meeting, held in Washington, D.C. May 8-11, was well represented by Cleveland Clinic Community Care and the CVCR.

We had 25 members in attendance, including: 18 staff members, 4 residents, and 3 CCLCM students.

Highlights included 27 posters, 6 workshops, 1 breakout session, 1 symposium, 1 oral abstract, and 1 oral clinical vignette. This year's TEACH Program was facilitated by Dr. Abby Spencer and included Drs. Jessica Donato and Richard Cartabuke as graduates.

CVCR Student Wins the Chris Crain Student Research Award

Kaitlin Keenan was awarded the 2019 Chris Crain Student Research Award for her abstract "Characteristics of Patients who Receive Opioids in an Acute Medical Hospitalization" with her mentor Dr. Katie Martinez. Kaitlin is a fourth year CCLCM student conducting her research year with the CVCR. She also presented her abstract as a poster presentation at the 2019 Society for General Internal Medicine annual meeting.

Recent Publications

[Acute Ischemic Stroke Therapy in Infective Endocarditis: Case Series and Systematic Review](#). RJ Marquardt, SM Cho, P Thatikunta, A Deshpande, D Wisco, K Uchino.

[Assessing Patient Interest in Individualized Preventive Care Recommendations](#). GB Taksler, MB Mercer, A Fagerlin, MB Rothberg.

[Coding Bias in Respiratory Tract Infections May Obscure Inappropriate Antibiotic Use](#). KA Martinez, M Rood, MB Rothberg.

[Cost-Effectiveness of Bridging Anticoagulation Among Patients with Nonvalvular Atrial Fibrillation](#). MA Pappas, GD Barnes, S Vijan.

[Derivation and Validation of a Model to Predict 30-Day Readmission in Surgical Patients Discharged to Skilled Nursing Facility](#). LD Kim, ER Pfoh, B Hu, L Kou, LM Knowlton, K Staudenmayer, MB Rothberg.

[Educational Targets to Reduce Medication Errors by General Surgery Residents](#). A Chaitoff, AT Strong, SR Bauer, A Garber, JP Landreneau, J French, MB Rothberg, JM Lipman.

[Effectiveness of Daily Chlorhexidine Bathing for Reducing Gram-Negative Infections: A Meta-analysis](#). A Patel, P Parikh, AN Dunn, JA Otter, P Thota, TG Fraser, CJ Donskey, A Deshpande.

[Modifiable Factors Associated with Quality of Bowel Preparation Among Hospitalized Patients Undergoing Colonoscopy](#). A Garber, S Sarvepalli, CA Burke, M Ibrahim, J McMichael, G Morris-Stiff, MK Rizk, JJ Vargo, MB Rothberg.

[Resuming Anticoagulation following Upper Gastrointestinal Bleeding among Patients with Nonvalvular Atrial Fibrillation-A Microsimulation Analysis](#). MA Pappas, N Evans, MK Rizk, MB Rothberg.

[Testosterone Replacement Therapy and the Risk of Adverse Cardiovascular Outcomes and Mortality](#). KM Pantalone, J George, X Ji, MW Kattan, A Milinovich, JM Bauman, B Burguera, RS Zimmerman, AD Misra-Hebert.

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