

Welcome to this quarter's issue of Value Added!

The Center for Value-Based Care Research (CVCR) conducts research on interventions that improve value in healthcare. 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 costs. In this issue, we report on recent studies regarding healthcare delivery.

In our first story, CVCR investigator Anita Misra-Hebert, MD discusses the benefits of post-discharge home visits by advanced practice registered nurses and paramedics.

In our second story, CVCR investigator Abhishek Deshpande, MD, PhD explains his upcoming work in understanding how rapid diagnostic testing and antibiotic stewardship can improve outcomes for patients with community-acquired pneumonia.

We hope you enjoy this quarter's newsletter!

CVCR Celebrations

Elizabeth Pfoh, PhD's poster entitled Long-Term Outcomes of a One-Year Hypertension Quality Improvement Initiative in a Large Health System, won the award for best in theme, 'Improving Safety, Quality, and Value' at AcademyHealth.

Fourth year medical student, Priscilla Kim, was awarded the Grants for Emerging Research/Clinician Mentorship (GERM) Award which supports medical students for a longitudinal, mentored research project for up to a year on infectious diseases-related topics.

Phuc Le, PhD, MPH was awarded the Travel Award to attend the 2022 Translational Satellite Meeting at the Research Society on Alcoholism on June 25th, 2022.

Recently Published: Healthcare utilization and patient and provider experience with a home visit program for patients discharged from the hospital at high risk for readmission

Anita Misra-Hebert, MD, MPH

What prompted you to study the experiences of those interacting with this home visit program?

I became very interested in studying care transitions from hospital to home after my experiences with a family member. When I learned about the post-discharge home visit program, I thought as a health services researcher with a focus on studying implementation of care delivery changes, that this would be an incredible opportunity to study how the program was being delivered and whether the program would be associated with any change in healthcare utilization after discharge.

What did you find?

We found that the post-discharge home visits by advanced practice registered nurses and paramedics working together were associated with reduced 30-day readmissions to the hospital. We also did qualitative work (patient and provider interviews) where themes of improving medication understanding, and overall patient knowledge gap about the medical issues post discharge, understanding of medical complexity of this patient population, importance of social context, and patient needs for engagement and for reassurance were found.



Healthcare utilization and patient and provider experience with a home visit program for patients discharged from the hospital at high risk for readmission

Healthcare

Misra-Hebert, AD, Rothberg, MB, Fox, J, et al.

Was there anything unexpected or novel about the program and its impact on those who interacted with it?

I thought it was very important that we analyzed our data in 2 phases- because the way the program was delivered evolved during our study. An important part of studying care delivery is to be able to analyze the observed outcomes accounting for any adaptations that are made during the care delivery process. In our study, the outcomes were different in the initial program and the adapted program and that was important to understand and report.

What do your findings indicate for future work either in your research or within the clinical setting?

The qualitative themes define areas for potential enhancement of the program and to inform other transitional care initiatives.

You can access this publication [here](#).

Ongoing Work: Reducing Antimicrobial Overuse Through Targeted Therapy for Patients with Community-Acquired Pneumonia

Abhishek Deshpande, MD, PhD

What prompted this investigation? What is unique about the topic?

Community-acquired pneumonia (CAP) is a leading cause of hospitalizations and inpatient morbidity and mortality in the United States. It's important to study because the causative pathogen can't be identified in most cases. One way to

determine the causative pathogen is via rapid molecular diagnostic assays, however, these point-of-care tests are rarely used in diagnosis and when they are, their results are often ignored. An additional obstacle to judicious use of antibiotics is that providers hesitate to take a targeted therapeutic approach due to concerns that it will fail if other organisms are present. In this study, we will randomize physicians to routinely order rapid diagnostic tests. At the same time, we will randomize hospitals to have a pharmacist assist with antibiotic de-escalation after negative cultures.

This topic is relevant in the clinical setting because the current ATS/IDSA recommendations, which are to administer extended spectrum empiric antimicrobial therapy only to those adults who are at risk for resistant pathogens and to de-escalate once a negative culture is obtained, are infrequently followed. Our randomized trial will observe the difference in antibiotic complications, such as *C. difficile* infection and acute kidney injury, when the ATS/ IDSA guidelines are strictly implemented compared to a control group which will continue with current practice. Our study will be the largest randomized trial (12,500 patients across 12 hospitals) to determine the impact of rapid diagnostic testing on antimicrobial stewardship and patient outcomes.

What are your major goals? What outcomes do you anticipate, if any?

The overarching goal of our study is to reduce the exposure of broad-spectrum antimicrobials by establishing the rapid detection of CAP pathogens and improving rates of de-escalation following negative cultures. Our randomized trial design will allow us to establish causality and determine whether broad spectrum antibiotics can be safely de-escalated in stable patients. It will also allow us to establish the relationship between prolonged exposure to broad-spectrum drugs and important adverse outcomes such as *C. difficile* infection and acute kidney injury.

Is there anything unusual/unexpected about your findings in the work you've done so far?

The study is still in a pilot phase so our trial results will not be available for at least another two years. We are encouraged by caregivers' enthusiasm to participate.

How will your work impact scientific literature and, if applicable, clinical practice?

Findings from our clinical trial can inform and, on a long term scale, increase awareness of pathogen targeted therapy and antimicrobial de-escalation

practices. Specifically, knowledge gained from this study can eventually be used to guide clinicians in limiting the use of broad-spectrum antimicrobials and initiating targeted therapy.

Be sure to look out for updates on this project in the near future!

Recent Publications to Check Out

- [De-escalation of Empiric Antibiotics Following Negative Cultures in Hospitalized Patients With Pneumonia: Rates and Outcomes](#)
- [Urinary Antigen Testing for Respiratory Infections: Current Perspectives on Utility and Limitations](#)
- [Association of fluoroquinolones or cephalosporin plus macrolide with Clostridioides difficile infection \(CDI\) after treatment for community-acquired pneumonia](#)
- [Prescribing of anticoagulation for atrial fibrillation in primary care](#)
- [Patient and physician factors contributing to polypharmacy among older patients](#)
- [Patient Perspectives on Self-Monitoring of Blood Glucose When not Using Insulin: a Cross-sectional Survey](#)
- [Linking Primary Care Patients to Mental Health Care via Behavioral Health Social Workers: A Stepped-Wedge Study](#)
- [Impact of Metabolic Syndrome on Severity of COVID-19 Illness](#)
- [Trends in Use of High-Cost Antihyperglycemic Drugs Among US Adults with Type 2 Diabetes](#)
- [Adherence to the American Diabetes Association's Glycemic Goals in the Treatment of Diabetes Among Older Americans, 2001-2018](#)
- [Volume and Outcomes of Joint Arthroplasty](#)

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