

# CPI PROJECT SPOTLIGHT

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## Inpatient Lab Reduction led by Dr. Farhood Farjah

Laboratory medicine services are a ubiquitous aspect of hospitalization. In FY2017, more than \$62 million was spent on inpatient and outpatient lab testing at UW Medical Center (UWMC) and Harborview Medical Center (HMC). This represented an average 5% of direct inpatient costs across all service lines at both facilities.

While critical to care, there can be overuse, particularly at teaching hospitals. This is often due to lack of awareness of the burden of lab testing and ordering behaviors. A team led by Farhood Farjah, MD MPH, saw the opportunity to promote system-wide reduction of unnecessary lab testing. With the help of Kathryn Harris, MSN ARNP; Patrick Mathias, MD PhD, and Suzanne Wood, PhD MS, the team went to work to explore the potential benefits. “Reduction in testing can lead to cost savings, more efficient care, resource maximization and improved patient satisfaction,” said Farjah.

***“Both patients and the system can benefit from lab reductions.”***

-- Farhood Farjah, MD MPH



From a patient perspective, unnecessary lab testing can affect satisfaction and outcomes. Sleep disruption from early-morning lab draws, discomfort secondary to needle sticks, an increased risk of infection from accessing vascular catheters, and iatrogenic anemia are all potential risks of testing. From a system perspective, unnecessary lab testing consumes staff time and other system resources. Aligned with UW Medicine's goal of providing high-value care, the team went on to pilot an approach to reduce lab testing in the inpatient setting.

As a first step, they developed and tested a generalizable framework for reducing lab use. The framework -- a modification of an evidence-based conceptual model for behavior change -- was comprised of five key components: 1) stakeholder engagement; 2) provider education; 3) computerized order entry modification; 4) provider feedback, and 5) deliberate culture modification. An eight-month pilot launched in February 2017 across two UWMC service lines – cardiac and thoracic surgery.

The impact was impressive when comparing year-over-year results. The two service lines ordered approximately 12,000 fewer tests, resulting in a significant overall lab utilization decrease of 10% and 17%, respectively for cardiac and thoracic surgery. This translated to approximately \$209,000 in direct cost savings with no evidence of changes in inpatient mortality rates or lengths-of-stay, as identified through the patient safety net and morbidity and mortality conference. Next steps are to evaluate scaling to additional service lines within UW Medicine in order to deliver the highest-value care and achieve the best patient outcomes.