

Kaiser Permanente
Research

Bridging research and operations

Care Improvement Research Team (CIRT)



The Care Improvement Research Team. The name says it all.

CIRT was created in 2012 to identify and answer research questions to help Kaiser Permanente achieve our goals of better health, better care, and improved affordability.

The team comprises core scientists, affiliated scientists, post-doctoral scholars, and support staff. It has established close working relationships with a number of clinical and operational partners who are equally committed to innovation, improvement, and encouraging adherence to Kaiser Permanente national guidelines.

Michael Gould, MD, MS, CIRT Program Leader and Director of Health Services and Implementation Research:

I want to emphasize 3 things about CIRT. First, we aim to create a new model of research that is embedded in health systems and mixes externally funded scientific investigation with internally focused care improvement efforts. Second, we want to help our clinical and operational leaders to identify, prioritize, and solve problems related to quality and affordability. And third, we have diverse interests and draw on the strengths of the resources and staff in the Department of Research & Evaluation, along with the strong relationships that we have developed with Kaiser Permanente Southern California clinicians and leaders.

CIRT PROJECT: Measure Kaiser Permanente Southern California adherence to the American Society of Clinical Oncology (ASCO) Choosing Wisely recommendations for reducing low-value practices in cancer care.

Erin Hahn, PhD, MPH, Post-Doctoral Research Fellow*:

We chose to study our adherence to 3 of the 10 Choosing Wisely recommendations, which address use of imaging for staging of early prostate and breast cancer and the use of imaging and biomarker tests for surveillance in asymptomatic breast cancer patients.

Dr. Gould: When we looked at our use of imaging during staging for both prostate and breast cancer, we found that the utilization rates were very low—less than 10% across the region.

Dr. Hahn: In doing chart reviews of these patients we found that approximately 50% of the time there was a documented reason for the imaging. So we are doing a terrific job on these 2 Choosing Wisely recommendations. We are not over-imaging our patients and when an imaging test is ordered, there is a good reason.

*Dr. Hahn was appointed as a Research Scientist I in August 2014.

Dr. Gould: Our study of the breast cancer surveillance piece showed a higher rate of imaging. About 30% of asymptomatic breast cancer patients had received at least 1 imaging test.

Dr. Hahn: But the chart reviews showed that approximately 95% of this imaging was triggered by a symptom, sign, or another abnormal test result, so again—entirely appropriate.

But a study of biomarker testing told a different story.

Dr. Gould: We learned that 35% of our patients got at least 1 biomarker test but virtually none of those tests were prompted by a symptom, complaint, or other sign. They were done purely for surveillance purposes despite the fact that there's little or no published evidence to suggest that the test is helpful. We also saw great variation in the ordering of biomarker tests—some oncologists never ordered the tests, some always ordered them—and everything in between.



Dr. Hahn: We shared these results with Dr. Joanne Schottinger, our regional lead for oncology.

Joanne Schottinger, MD, Regional Assistant Medical Director for Quality and Clinical Analysis:

The imaging results were very reassuring. It was good to know that most of the imaging appears to be driven by symptoms, so that was very appropriate. But the biomarker study was an eye-opener. We don't like to think we're doing unnecessary tests, but when someone presents the data to us, you can only say, "Oh, I see we are."

In following up, Dr. Schottinger arranged for Dr. Gould and Dr. Hahn to share their data with the regional oncology chiefs. Efforts are now underway to reduce routine biomarker testing.

"As a physician, it's frustrating when a patient asks a question and we don't have a good, evidence-based answer. One of the exciting things about our program is that if we find an answer, we can share it with our colleagues and make it happen in practice."

— Joanne Schottinger, MD, Regional Assistant Medical Director for Quality and Clinical Analysis

CIRT PROJECT: Study the link between physical activity and 30-day hospital readmission for patients with COPD.

Huong Nguyen, PhD, RN, Research Scientist:

The Centers for Medicare and Medicaid Services now closely tracks readmission rates for patients with COPD. So we were interested in seeing if there were modifiable risk factors for 30-day readmissions.

Researchers examined the electronic health records of 6,000+ patients who'd been hospitalized with COPD.

Dr. Nguyen: Because Kaiser Permanente documents patients' self-reported physical activity in their electronic health record during routine clinical visits, we could readily see the relationship between physical activity and readmission.

The study showed that patients with COPD who were physically active were less likely to be readmitted within 30 days than patients who were inactive.

On the cover: (front row) Huong Nguyen, Adam Sharp, and Tania Tang. (back row) Carly Parry, Michael Kanter, Brian Mittman, and Michael Gould

Opposite: Corrine Muñoz-Plaza and Erin Hahn

Below left: Joanne Schottinger with Lisa Kort (from behind)

Below right: Huong Nguyen, Carly Parry, and Adam Sharp



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Dr. Nguyen: As a result of this study, we are now referring all hospitalized COPD patients to pulmonary rehab upon discharge, ideally to start a supervised exercise program. We're also working to prevent the initial hospitalization by developing a program for patients to exercise safely at home.

Additional studies are now being planned to help determine if increased physical activity will reduce the risk of future hospitalization.

Dr. Nguyen: Working in the CIRT group allows us to leverage our expertise in an area of particular concern to Kaiser Permanente and conduct research that has an impact and can change the way we practice.

CIRT PROJECT: Measure Kaiser Permanente Southern California adherence to the American Academy of Family Physicians Choosing Wisely recommendations for treating acute sinusitis patients.

Adam Sharp, MD, MS, Research Scientist:

When I started working with CIRT about a year ago, Marc Klau, MD, MBA, the regional chief of head and neck surgery, expressed an interest in looking at acute sinusitis. Hence, this study.

The Choosing Wisely guidelines recommend that clinicians avoid imaging and antibiotics for patients with uncomplicated acute sinusitis.

Dr. Sharp: The bottom line is that most patients have a viral infection, so will not benefit from diagnostic imaging or antibiotics. We found Kaiser Permanente Southern California physicians rarely use CT imaging, but commonly prescribe unwarranted antibiotics for acute sinusitis.

Over 99% of acute sinusitis encounters follow imaging recommendations, but only about one-third follow antibiotic guidelines.

Dr. Sharp: The study showed that the majority of our patients (89%) seeking care for acute sinusitis were prescribed an antibiotic, even though it was unlikely to help them. Based on previous evidence, antibiotics are more likely to harm these patients than help them. Our work gives providers and health systems a good standard to aim for in acute sinusitis performance improvement efforts.



Michael Kanter and Michael Gould

"As CIRT researchers, we're part of the team, but we can't do this without working with the clinical and operational leaders and to get their agreement that a project is worth caring about."

— *Michael Gould, MD, MS, Director of Health Services and Implementation Research*

Dr. Sharp's team is now preparing educational materials for all providers with the current acute sinusitis recommendations. They are also building an alert within the electronic medical record to help providers and patients.

Dr. Sharp: For me, what sets Kaiser Permanente apart is the potential to implement evidence into real-world clinical practice and that's very exciting—it's why I'm here.

Dr. Gould: As CIRT researchers, we're part of the team, but we can't do this without working with the clinical and operational leaders and to get their agreement that a project is worth caring about. We are beginning to meet regularly with medical group and hospital leaders to identify research opportunities. We've embedded several researchers in key operational work groups to participate in the extraordinary quality improvement work that's already going on.

