Kaiser Permanente
Research

Featured grant:

Preventing gaps in care

Chances are, most of us will experience a medical diagnostic error at some point in our lives, according to a 2015 Institute of Medicine report. That's disturbing news to patients and health care providers alike.

Kaiser Permanente is working to change that. The Southern California Permanente Medical Group has made reducing diagnostic errors a top clinical priority. Reducing the occurrence of care gaps, such as overdue tests or lack of follow-up, is one way to prevent diagnostic errors.

A new grant, funded by the Agency for Healthcare Research & Quality (AHRQ), will shed light on the incidence and risk factors for 3 types of care gaps: diagnostic, treatment, and preventive.

"The idea is to use each of these as an exemplar. We can learn about the specific gaps and also take away more general lessons," said Kim Danforth, ScD, MPH, principal investigator for the study.

The examples include:

- Diagnostic: Delayed diagnosis of kidney disease.
- Treatment: Potentially harmful medication interactions among patients with a history of falls.
- Preventive: Lack of annual monitoring for patients on 2 common drugs used to manage high blood pressure—angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs).

Above: Corrine Muñoz-Plaza, Ellen Rippberger (from behind)

Focus on outpatient care

Much of the literature on patient safety focuses on hospital care. For the AHRQ grant, researchers deliberately chose to focus on outpatient safety.

"More than 98% of interactions with patients occur in outpatient settings," said Michael Kanter, MD, regional medical director of Quality and Clinical Analysis, SCPMG, and a co-investigator on the study. "We think it is important to do as much as we can to promote patient safety across all care settings."

Kaiser Permanente Southern California already uses electronic clinical surveillance tools to catch potential errors through its SureNet program.

"SureNet is a very innovative program. It scans electronic health record data routinely and flags potential issues that may need follow up," said Dr. Danforth. "It is meant to be a back up system—it's a second chance to catch errors before they cause harm."

Opportunities to prevent care gaps

Findings from the study may help Kaiser Permanente quality leaders develop interventions that prevent care gaps from occurring in the first place.

Researchers will interview physicians, pharmacists, and patients to gain insights into causes of care gaps and possible interventions.

"Ultimately, we want to make it easier for everyone—our physicians, our staff, and our patients—to do the right thing," said Dr. Kanter. "We plan to use what we learn to enhance our systems and find smarter ways to prevent care gaps."

Other Kaiser Permanente co-investigators include Erin Hahn, PhD, MPH, and Brian Mittman, PhD. Hardeep Singh, MD, MPH, from the Baylor College of Medicine is also a co-investigator.

Researchers will work closely with the SureNet program team, which is led by Kristen Andrews. Clinical collaborators include Mark Rutkowski, MD; John Sim, MD; Eric (Anthony) Lee, MD; Jeffrey Brettler, MD; and Joel Handler, MD.

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Selected grants

External funding provides significant support for the Kaiser Permanente Southern California research program. Here is a small sample of federally funded grants awarded in 2015.

Bariatric Surgery

The National Institute of Diabetes and Digestive and Kidney Diseases awarded 2 Research Project Grants (R01s) to Kaiser Permanente Southern California to investigate how bariatric surgery can benefit people who are severely obese.

The BELONG (Bariatric Experience Long Term) study will determine how the most frequently used bariatric procedures—bypass and gastric sleeve—can be used to benefit people who are severely obese.

Bariatric surgery is the most promising treatment for weight loss for people who are severely obese. Weight loss among people who have the surgery, however, varies significantly and some patients have significant social and psychological changes as a result of the surgery.

This study is designed to fully understand KPSC bariatric patients' experience with weight loss up to 3 years after surgery. This will be done with patient surveys, focus groups, and interviews.

Karen J. Coleman, PhD, MS, is the principal investigator. Co-investigators from Kaiser Permanente Southern California include Cecelia Crawford, DNP, RN; Sameer Murali, MD; and Deborah Rohm Young, PhD, MBA.

The DURABLE (Duration of Bariatric Long Term Effects) study will compare outcomes of 2 groups of patients who are severely obese: those who have had weight loss surgery and those who have not.

Researchers will examine long-term outcomes (5 years or more after surgery), such as improvements in body weight, diabetes, hypertension, and renal disease.

Results of the study will help physicians and patients more accurately assess the long-term risks and benefits of bariatric surgery.

Dr. Coleman and David Arterburn, MD, MPH, from Group Health Research Institute are the principal investigators for this study. Stephen Derose, MD, MSHS, is a co-investigator.

Benjamin Kim, MD, Edward Mun, MD, and Peter Fedorka, MD, are bariatric surgeon advisors on both studies.

Prostate Cancer

The National Cancer Institute awarded a Research Project Grant (R01) to Kaiser Permanente Southern California for a study that will help distinguish between slow-moving and aggressive prostate cancer. Findings may spare many men from unneeded treatments.

Current risk-prediction tools do not distinguish well between slow-moving and aggressive cancers. Uncertainty about whether a cancer is aggressive or not makes treatment decisions more difficult.

Researchers at Kaiser Permanente Southern California will develop predictive algorithms that will assist clinicians in making treatment recommendations.

Chun Chao, PhD, MS, is the principal investigator. Co-investigators include Mary Helen Black, PhD, MS; and Gary Chien, MD.

Vaccine Research

The Centers for Disease Control and Prevention has awarded a grant to Kaiser Permanente Southern California to evaluate the use of Natural Language Processing, or NLP, as part of the Vaccine Safety Datalink project.

The Vaccine Safety Datalink is a collaborative project between the CDC and several health organizations. Together, they monitor and evaluate the safety of vaccines.

NLP can extract useful information from unstructured text in electronic medical records. This study will evaluate how accurate it is in identifying certain medical conditions. If sufficiently accurate, NLP may offer a cost-effective alternative to manual chart review.

Steven Jacobsen, MD, PhD, is the principal investigator. Chengyi Zheng, PhD, MS, is co-principal investigator.

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For more information, contact research-communications@kp.org or visit kp.org/research.