



CIRT 2018 Annual Report

Care Improvement Research Team *Boldly Transforming Care*



Message from the Director *Michael K. Gould, MD, MS*

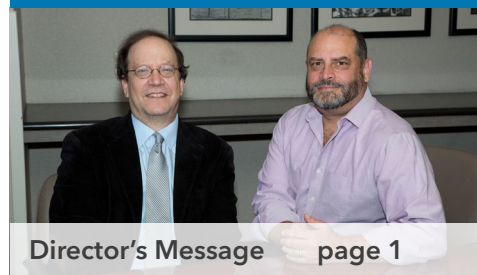
Now in its 7th year, the CIRT program continues its evolution as an enviable model of embedded research in the learning health care system. Keys to success include the availability of comprehensive data from electronic health records, a dynamic integrated health care system that serves as an laboratory for improvement, a substantial hard money investment to support program development and operational projects, and, most importantly, strong relationships between members of the research team and medical group and hospital leadership. We look forward to working with our executive sponsors and other valued stakeholders in the coming year.

Purpose

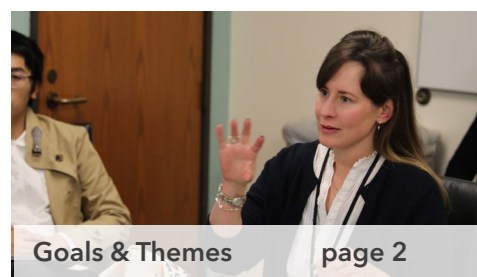
Vision: To be the model for embedded research within a learning health care system.

Mission: To enhance the health of individuals and populations through systematic study of ways to improve health care delivery.

inside...



Director's Message page 1



Goals & Themes page 2

CIRT Seminars page 3

Metrics page 4

Project Highlights page 5

Dissemination page 9



Research Team page 13



Executive Sponsors

Our team has executive sponsors from Kaiser Foundation Hospitals, Kaiser Foundation Health Plan, and Southern California Permanente Medical Group to ensure our projects meet the needs of our stakeholders. We are grateful for the continual feedback and collaboration from our partners.

Benjamin I. Broder, MD, PhD
 Nancy Gin, MD
 Patti Harvey, RN
 Steven J. Jacobsen, MD, PhD
 Michael H. Kanter, MD
 Lawrence D. Lurvey, MD
 Jerry Spicer, RN

Goals



Research Themes



CIRT collaborates with clinicians, patients, operational leaders, and other stakeholders to identify gaps in care delivery and apply rigorous research methods to understand and close these gaps within the KPSC system.





CIRT Seminars occur weekly and provide an opportunity for collaboration and knowledge sharing. CIRT team members, partners, and others throughout the country join the meeting in person or virtually for journal clubs, lecture series, and messages from speakers. Speakers and topics from 2018 are below.

Invited Speakers

Andrew Bindman, MD
University of California,
San Francisco

Paul Chung, MD, MS
KP School of Medicine

Jann Dorman, MBA, MA PT
Value and Clinical Operations
Support

Tad Funahashi, MD
SCPMG Health Innovations

Eve Kerr, MD, MPH
University of Michigan

Heather Kitzman, PhD
University of North Texas
Health Science Center

Elizabeth McGlynn, PhD
Center for Effectiveness and
Safety Research

John Ovretveit
Karolinska Institute, Sweden

Hal Yee, MD
Los Angeles County
Department of Health Services

David Belson, PhD
Shinyi Wu, PhD
USC Health Systems Engineers

Work in Progress Topics

David Glass, PhD
End of Life Concordance Study:
How Well does KP Meet the End
of Life Wishes of its Members?

Michael Gould, MD, MS
Individualized Risk Assessment
to Reduce Hospital-Associated
Venous Thromboembolism
following C-Section

Erin Hahn, PhD, MPH
Clinical Care Gaps and Unmet
Needs in Adolescent and Young
Adult (AYA) Cancer Survivors: a
P01 Program Project Application

Aniket Kawatkar, PhD, MS
Do ACPA-positive Rheumatoid
Arthritis Patients Represent a
Homogeneous Phenotype of
Severe Disease?

Brian Mittman, PhD
Comparing Alternative
Care Delivery and Practice
Improvement Strategies for
Improving KPSC HPV Vaccination
Rates and Updating Regional
Cervical Cancer Screening
Practices.

Huong Nguyen, PhD, RN
Updates on the Walk On! and
TLC-PCI Studies

Implementation Science Lecture Series by Brian Mittman, PhD

Models, Frameworks, Strategies and
Context

Improving Patient Care, Outcomes
and Value

Implementation Science Theories,
Frameworks and Models: Guidance
for Designing and Evaluating
Implementation Strategies and
Processes

Study Designs and Methods for
Implementation Science: Explaining
Implementation Outcomes and
Mechanisms of Effect

Sustainment, Scale-up/Spread,
Economic Analysis and
De-Implementation



The CIRT team participates in workgroups and committees at the international, national, inter-regional and regional levels.

[illegible]

4





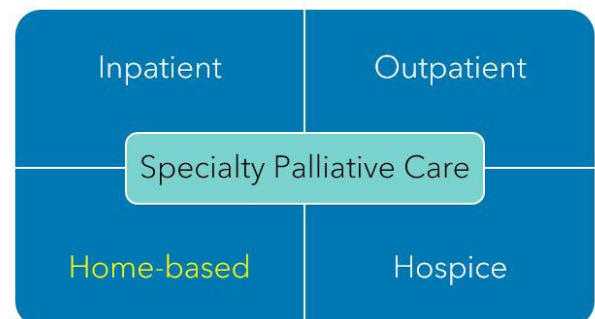
Improving Palliative Care at KPSC

Huong Nguyen, PhD, RN

Palliative care focuses on improving the quality of life for patients with serious illness and their caregivers by preventing and treating suffering. Home-based palliative care (HBPC) provides patients with severe symptoms and functional limitations an easier way to get care and may help relieve caregiver burden. Our team is using a cluster randomized controlled trial to compare two ways of providing HBPC: in-home physician visits vs. physician video consultation across 14 KP locations in Southern California, Oregon, and Washington State. Thus far, the HBPC clinical teams have expanded member access with the completion of over 300 physician video consultations from January to July 2019. Our team partners closely with regional and local home care agency nursing leaders, Geriatric-Palliative Care Chiefs, specialty care chiefs, and the Readmission Steering Committee to optimize identification of patients for and delivery of palliative care services across the care continuum.

**Kaiser Permanente
Specialty Palliative Care Services**

Palliative Care = ↑ Quality of life



...for individuals with serious illness and their family

Evaluating Pulmonary Nodules

Michael Gould, MD, MS

Lung cancer is the leading cause of cancer deaths in the United States. Early detection is critical and it is recommended that people who smoke or have a history of heavy smoking are regularly screened for lung cancer. Building on earlier work and using data collected in the Watch the Spot pragmatic trial of pulmonary nodule evaluation, our team designed a clinical trial to compare more intensive pulmonary nodule evaluation strategies to less intensive ones. We developed a natural language processing (NLP) tool to facilitate the monitoring of patients with nodules and improved the reach of regional SureNet to identify patients with pulmonary nodules who require follow-up (from fewer than 1,000 to over 7,000 patients each year). We found that pulmonary nodules are very common with increasing incidence over time and that there was poor adherence with the regional significant findings tool.



Venous Thromboembolism

Michael Gould, MD, MS

Venous thromboembolism (VTE) is a common, potentially fatal and somewhat preventable complication of hospitalization, especially following surgical procedures such as cesarean section deliveries. Our team, in collaboration with KPSC Regional VTE Steering Committee, conducted a retrospective study which looked at VTE risk factors, prevention and outcomes among 27,000 women who underwent Cesarean section delivery between 2012 and 2015. We also used data from 250,000 hospitalizations to validate existing risk assessment models to improve prevention of blood clots in hospitalized patients, and subsequently implemented the simplest and most accurate model in KP HealthConnect, to enable individualized risk assessment at the point of care. This CIRT project highlights the benefits of embedded research to improve care both within KPSC and more broadly, by helping to shape clinical policy and best practices.



Improving Evaluation of Acute Chest Pain: Implementing HEART

Adam Sharp, MD, MS

Extensive resources are allocated to the urgent risk stratification of patients presenting to emergency departments (ED) with chest pain. Our team performed a prospective interrupted-time-series study of adult encounters for patients evaluated for suspected acute coronary syndrome across 13 KPSC EDs between 2015 and 2017. Using a History, ECG, Age, Risk Factors, and Troponin (HEART) care pathway, we saw a decrease in chest pain admissions (1%) and non-invasive stress testing within 30 days (3%), without an observed increase in missed myocardial infarction or increased 30-day mortality. This confirmed our hypothesis that implementation of HEART as a standardized risk-stratification tool and clear care recommendations for low-risk patients can safely decrease hospital care and stress testing, thus reducing costs and administrative burden associated with hospital admissions.

Mental Health in Cancer Care

Erin Hahn, PhD, MPH

National evidence-based guidelines from the American Society of Clinical Oncology, the American Cancer Society, the Oncology Nursing Society and others strongly recommend routine distress screening with risk-stratified referral for adult cancer patients. However, there is very little guidance about implementing such guidelines or processes. Our team conducted a cluster randomized control trial at six KPSC medical centers over three years to test the effectiveness of an adaptive workflow program with breast cancer patients. We found that 80% of eligible patients completed guideline-recommended PHQ-9 screening, and 94% received an appropriate referral. The adaptive workflow program had minimal impact on clinical workflow processes for nursing, department administration, and physician teams. Our results demonstrate the feasibility of a large-scale distress screening program in KPSC oncology. As this is an important quality goal for KPSC, we are currently designing the strategy for implementation across the region.



Breast Screening Decisions

Erin Hahn, PhD, MPH

Current breast cancer screening guidelines from the United States Preventive Services Task Force, the American Cancer Society, and our own internal KPSC regional clinical guidelines all recommend that an individual, informed decision should be made by the patient for women age 40-49 at low-to-average risk. Breast Screening Decisions (BSD) is an online, patient-facing decision aid designed to provide a scalable solution that allows women to engage in informed decision making. Our team designed a randomized, hybrid effectiveness-implementation study to evaluate BSD in a community setting across KPSC. We found that a significantly higher proportion of women who used BSD reported decisional satisfaction (72% vs. 60%), strongly agreed that they have a choice to regarding mammography initiation (50% vs. 39%), and correctly estimated their personal risk of developing breast cancer in the next ten years as low (31% vs. 11%). The study found that BSD provides an effective solution for informed decision making and provides valuable insights when facing conflicting recommendations. A large-scale implementation of BSD will also allow our region to meet an important KPSC quality goal.

Care Pathways for Rheumatoid Arthritis Patients

Aniket Kawatkar, PhD, MS

Understanding clinical pathways in Rheumatoid arthritis (RA) could help to better disentangle whether patients with poor prognoses are being managed more aggressively. Our team implemented a retrospective cohort study between 2006 and 2017 to define clinical pathways and identify potential care gaps, learn components necessary to implement a standardized care pathway in an integrated healthcare system, and guide quality of care initiatives by identifying patients who may benefit most from care management interventions. Using latent class analysis techniques, the team found that age, ACPA (anti-citrullinated peptide antibodies) positivity, treatment patterns, and select comorbidities were suitable observable measures to characterize latent clinical pathways.

Use of Novel Patient-facing, Self-directed Health Information Technology to Improve Patient Engagement in Preventive Care: Focus on Colorectal Cancer Screening

Erin Hahn, PhD, MPH



Colorectal cancer (CRC) screening is our most effective tool for reducing CRC incidence and mortality, with a grade A recommendation from the United States Preventive Service Task Force. Unfortunately, over a third of U.S. adults are not up to date on CRC screening, despite multiple campaigns and availability of several screening modalities including home-use fecal immunochemistry (FIT) kits. We have a robust multi-component CRC screening outreach program in KPSC which includes direct-mail of FIT Kits to patients when they are due for screening; this approach has resulted in screening rates of approximately 80% for the KPSC region. However, we still have members who are not up-to-date on their screening. Advances in health information technology, including growing use and sophistication of online patient portals, represent new opportunities to engage with patients to influence uptake of preventive care services such as CRC screening.

In this innovative study we evaluated the impact of a novel patient-facing interactive interface on kp.org, built by the KPSC Online Personal Action Plan (oPAP) team led by Andre Ajura and Wahid Wakach. This new CRC screening outreach tool allowed eligible patients to directly order a FIT kit with the click of a button, just like ordering products from online retailers like Amazon. The oPAP team hypothesized that patients who ordered the kit might feel more committed to completing CRC screening. To determine the impact of this new outreach tool, we compared those who used the button to those who did not; those who did not use the button were mailed a FIT Kit as part of the usual KPSC outreach strategy. We evaluated completion of the kit, number of days to completion, and completion of recommended follow-up for positive results. We also evaluated proxy measures of patient engagement, including use of the patient portal, missed appointments, and total utilization of outpatient care, as well as past FIT kit use.

We identified 177,209 eligible members. Of those, 9% (N=16,941) used the order button. Button users had a significantly higher rate of completions: 83%

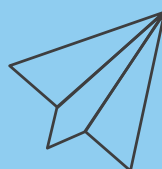
versus 37% of non-button users ($p<0.0001$). The mean number of days to completion was faster in button users: 56 days versus 90 days in the non-button users ($p<0.0001$). Additionally, of the 16,941 button users, we increased screening uptake from the prior year by 24%: 2,856 members who had not completed their recommended screening in the prior year completed their screening after participating.

Button use appears to reflect patient engagement, with significantly greater number of contacts with the healthcare system. For example, a greater proportion of button users logged in to their kp.org account (90% versus 67%) and utilized outpatient services (90% versus 84%) in the prior year.

We used a propensity score analysis, a statistical method to help control for unbalanced groups in observational studies such as this, to determine the likelihood of button users completing a FIT Kit compared to those who logged in to kp.org but did not use the button. Button users were 3.7 times more likely to complete the kit compared to the non-users, adjusting for the following variables: gender, race/ethnicity, age, interpreter needs, recently utilized medical center, prior KP logins, prior missed appointments, prior total utilization, and weighted Charlson comorbidity index.

We also looked at what happened to button users vs. non-users who had a positive FIT Kit result. A positive result means the member should have an additional screening, such as a colonoscopy. By the end of the study period, only 11% of button users had not followed up on their additional screening compared to 22% of the non-user group. Finally, we examined CRC cancer diagnoses. As a result of CRC screening, 19 button users were diagnosed with colorectal cancer, with over half of cases diagnosed at an early stage with an excellent prognosis: 37% stage 1 (N=7) and 21% stage 2 (N=4).

This innovative intervention to activate patients through KP.org resulted in a higher proportion of screening completion compared to our regional mailed strategy, reduced the number of days to screening test completion, and increased screening uptake compared to FIT Kit completion in the prior year. Novel self-directed health technology such as embedded buttons may offer significant opportunities to leverage patient engagement in preventive health care services. This intervention is now being rolled out in KP Georgia, and we are testing other applications such as use for medication reconciliation during outpatient office visits.



One-click ordering for FIT Kits on KP.org improved screening completion rates.



Dissemination

The CIRT Team published over 40 peer-reviewed publications and delivered oral presentations, poster presentations, and invited lectures at national conferences, thus demonstrating the relevance of our work outside of KPSC. Selected publications are listed below, highlighting areas of impact in 2018.

Balekian AA, Wisnivesky JP, **Gould MK**. Surgical disparities among patients with stage I lung cancer in the National Lung Screening Trial. *Chest*. 2018.

Birken SA, Urquhart R, **Munoz-Plaza C**, Zizzi AR, Haines E, Stover A, **Hahn EE**, et al. Survivorship care plans: are randomized controlled trials assessing outcomes that are relevant to stakeholders? *Journal of Cancer Survivorship*. 2018;1-14.

Canales MT, Hagen EW, Barnet JH, Peppard PE, **Deroose SF**. Sleep apnea and kidney function trajectory: results from a 20-year longitudinal study of healthy middle-aged adults. *Sleep*. 2018;41(1).

Davis AC, **Shen E**, Shah NR, Glenn BA, Ponce N, Telesca D, et al. Segmentation of high-cost adults in an integrated healthcare system based on empirical clustering of acute and chronic conditions. *Journal of General Internal Medicine*. 2018;33(12):2171-9.

de Leon E, Duan L, Rippenberger E, **Sharp AL**. Impact of standardizing management of atrial fibrillation with rapid heart rate in the emergency department. *The Permanente Journal*. 2018;22.

Detterbeck FC, **Gould MK**, Lewis SZ, Patel S. Extending the reach of evidence-based medicine: a proposed categorization of lower-level evidence. *Chest*. 2018;153(2):498-506.

Duan L, **Kawatkar AA**. Comparative effectiveness of surgical options for patients with ductal carcinoma in situ: an instrumental variable approach. *The Permanente Journal*. 2018;22.

Fu MC, Belza B, **Nguyen HQ**, Logsdon R, Demorest S. Impact of group-singing on older adult health in senior living communities: a pilot study. *Archives of Gerontology and Geriatrics*. 2018;76:138-46.

Gabayan GZ, **Gould MK**, Weiss RE, Chiu VY, Sarkisian CA. A risk score to predict short-term outcomes following emergency department discharge. *Western Journal of Emergency Medicine*. 2018;19(5):842.

Ghobadi A, Van Winkle PJ, Menchine M, Chen Q, **Huang BZ**, **Sharp AL**. Reduction of parenteral opioid use in community emergency departments following implementation of treatment guidelines. *Academic Emergency Medicine*. 2018;25(8):901-10.

Gould MK. Precision screening for lung cancer: risk-based but not always preference-sensitive? *Annals of Internal Medicine*. 2018.

Grant S, Mayo-Wilson E, Montgomery P, Macdonald G, Michie S, Hopewell S, **Mittman BS**, et al. CONSORT-SPI 2018 Explanation and elaboration: guidance for reporting social and psychological intervention trials. *Trials*. 2018;19(1):406.

Hahn EE, Gould MK. Drivers of low-value care. *JAMA Internal Medicine*. 2018;178(3):433.

Hahn EE, Gould MK. Lung cancer screening and smoking cessation: never too early or too late. *Oxford University Press*; 2018.

Hahn EE, Gould MK, Munoz-Plaza CE, Lee JS, Parry C, Shen E. Understanding comorbidity profiles and their effect on treatment and survival in patients with colorectal cancer. *Journal of the National Comprehensive Cancer Network*. 2018;16(1):23-34.

Hahn EE, Jones J, Syrjala KS (2018): Delivery of cancer survivorship care: An overview and future opportunities. In Feuerstein et al (Eds.) *Handbook of Cancer Survivorship*, Second Edition. New York; Springer Press.

Hahn EE, Munoz-Plaza CE, Schottinger JE, Brasfield FM, Gould MK, Parry C. Developing innovative models of care for cancer survivors: use of implementation science to guide evaluation of appropriateness and feasibility. *Supportive Care in Cancer*. 2018;27(5):1737-45.

Hahn EE, Wu Y-L, Delgadillo JG, Munoz-Plaza CE. Use of recommended post-treatment services for adolescent and young adult Hodgkin lymphoma survivors. *Journal of Clinical Oncology*. 2018;34(3_suppl):107.

Hamilton AB, **Mittman BS**, Campbell D, Hutchinson C, Liu H, Moss NJ, et al. Understanding the impact of external context on community-based implementation of an evidence-based HIV risk reduction intervention. *BMC Health Services Research*. 2018;18(1):11.

Iyer NP, Reddy CB, Wahidi MM, Lewis SZ, Diekemper RL, Feller-Kopman D, **Gould MK**, Balekan AA. Indwelling pleural catheter versus pleurodesis for malignant pleural effusions. A systematic review and meta-analysis. *Annals of the American Thoracic Society*. 2018;16(1):124-31.

Kawatkara AA, Hay JW, Stohl W, Nichol MB. Consistent estimation of polychotomous treatment effects with selection-bias and unobserved heterogeneity using panel data correlated random coefficients model. *Health Services and Outcomes Research Methodology*. 2018;18(2):75-95.

Khang PS, Wang SE, **Liu I-AL**, Watson HL, Koyama SY, Huynh DN, **Nguyen HQ**, et al. Impact of inpatient palliative care on quality of end-of-life care and downstream acute and postacute care utilization. *Journal of Palliative Medicine*. 2018;21(7):913-23.

Lee JS, Nguyen HQ, Jarrett ME, Mitchell PH, Pike KC, Fan VS. Effect of symptoms on physical performance in COPD. *Heart & Lung*. 2018;47(2):149-56.

Mane KK, Rubenstein KB, Nassery N, **Sharp AL**, Shamim EA, Sangha NS, et al. Diagnostic performance dashboards: tracking diagnostic errors using big data. *BMJ Quality & Safety*. 2018;27(7):567-70.

Mitchell SE, Laurens V, Weigel GM, Hirschman KB, Scott AM, **Nguyen HQ**, et al. Care transitions from patient and caregiver perspectives. *The Annals of Family Medicine*. 2018;16(3):225-31.

Montgomery P, Grant S, Mayo-Wilson E, Macdonald G, Michie S, Hopewell S, **Mittman BS**, et al. Reporting randomised trials of social and psychological interventions: the CONSORT-SPI 2018 extension. *Trials*. 2018;19(1):407.

Nair VS, Sundaram V, Desai M, **Gould MK.** Accuracy of models to identify lung nodule cancer risk in the National Lung Screening Trial. *American Journal of Respiratory and Critical Care Medicine*. 2018;197(9):1220-3.

Nguyen AK, Girgis A, Tekeste T, Chang K, Adeyemo M, Eskandari A, **Kawatkara A**, et al. Effect of a region-wide incorporation of an algorithm based on the 2012 international consensus guideline on the practice pattern for the management of pancreatic cystic neoplasms in an integrated health system. *World Journal of Clinical Cases*. 2018;6(13):624.

Nguyen HQ, Gelman EJ, Bush TA, **Lee JS**, Kanter MH. Characterizing Kaiser Permanente Southern California's experience with the California End of Life Option Act in the first year of implementation. *JAMA Internal Medicine*. 2018;178(3):417-21.

Nguyen HQ, Moy ML, Fan VS, **Gould MK**, Xiang A, Bailey A, et al. Applying the pragmatic-explanatory continuum indicator summary to the implementation of a physical activity coaching trial in chronic obstructive pulmonary disease. *Nursing Outlook*. 2018;66(5):455-63.

Nguyen HQ, Ruel N, Macias M, Borneman T, Alian M, Becher M, et al. Translation and evaluation of a lung cancer, palliative care intervention for community practice. *Journal of Pain and Symptom Management*. 2018;56(5):709-18.

Sharp AL, Fendrick AM. Delivery of acute unscheduled healthcare: who should judge whether a visit is appropriate (or not). *American Journal of Managed Care*. 2018;24(5).

Sharp AL, Broder B, Sun BC. Improving emergency department care for low-risk chest pain. *NEJM Catalyst*. 2018;2018.

Sharp AL, Huang BZ, Tang T, **Shen E**, Melnick ER, Venkatesh AK, et al. Implementation of the Canadian CT Head Rule and its association with use of computed tomography among patients with head injury. *Annals of emergency medicine*. 2018;71(1):54-63. e2.

Sharp AL, Shen E, Wu Y, Wong A, Menchine M, Kanter MH, et al. Satisfaction with care after reducing opioids for chronic pain. *American Journal of Managed Care*. 2018;24(6):e196-e9.

Sharp AL, Wu Y-L, Shen E, Redberg R, Lee M-S, Ferencik M, et al. The HEART score for suspected acute coronary syndrome in US emergency departments. *Journal of the American College of Cardiology*. 2018;72(15):1875.

Sumino K, Locke ER, Magzamen S, Gyls-Colwell I, Humblet O, **Nguyen HQ**, et al. Use of a remote inhaler monitoring device to measure change in inhaler use with chronic obstructive pulmonary disease exacerbations. *Journal of Aerosol Medicine and Pulmonary Drug Delivery*. 2018;31(3):191-8.

Tikkinen KA, Craigie S, Agarwal A, Siemieniuk RA, Cartwright R, Violette PD, **Gould MK**, et al. Procedure-specific risks of thrombosis and bleeding in urological non-cancer surgery: systematic review and meta-analysis. *European Urology*. 2018;73(2):236-41.

Van Winkle PJ, Ghobadi A, Chen Q, Menchine M, **Sharp AL**. Association of age and opioid use for adolescents and young adults in community emergency departments. *The American Journal of Emergency Medicine*. 2018.

Zeiger RS, Tran TN, Butler RK, Schatz M, Li Q, Khatry DB, **Kawatkar AA**, et al. Relationship of blood eosinophil count to exacerbations in chronic obstructive pulmonary disease. *J Allergy Clin Immunol Pract*. 2018;6(3):944-54.e5.

Zeiger RS, Tran TN, Schatz M, Li Q, Chen W, Khatry DB, Davis J, **Kawatkar AA**. Drivers of health care costs for adults with persistent asthma. *J Allergy Clin Immunol Pract*. 2018;6(1):265-8.e4.

Invited Presentations

Gould MK. NAMDRC 2018 Annual Conference, National Association for Medical Directors of Respiratory Care presentation: "Pulmonary nodule evaluation: lots of guidelines, but where's the evidence?" San Diego, CA; March 2018.

Gould MK. Mayo Clinic Department of Medicine grand rounds: "Controversies in lung cancer screening." Arizona, Phoenix, AZ; May 2018.

Gould MK. American Thoracic Society International Conference scientific symposium: "Evaluation of screening-detected pulmonary nodules: a tough act to follow." San Diego, CA, May 2018.

Gould MK. Southern California Dissemination, Implementation and Improvement Science Symposium: "Embedded research programs in health systems." Los Angeles, CA; June 2018.

Hahn EE. NRG Oncology Clinical Trials Network Biannual Research Meeting, podium presentation: "Breast cancer screening in younger women: a hybrid implementation-effectiveness approach." Phoenix, AZ; January 26, 2018.

Hahn EE. KPSC Department of Research & Evaluation workshop instructor: "Introduction to Qualitative Research and Interview Guide Development"; Pasadena, CA; March 29, 2018.

Hahn EE. Kaiser Permanente National Oncology Symposium podium presentation: "Implementing embedded patient-facing health information tools"; April 27-28, 2018.

Hahn EE. Fielding School of Public Health, University of California Los Angeles guest lecture: "Dissemination and implementation science: Embedded research in practice." Los Angeles, CA; May 23, 2018.

Hahn EE. Academy Health Annual Research Meeting podium presentation: "Implementation of novel patient-facing health IT tools to improve patient engagement: Focus on Colorectal Cancer Screening." Seattle, WA; June 2018.

Hahn EE. National Institutes of Health/Academy Health Annual Conference on the Science of Dissemination and Implementation in Health, panel chair and discussant, "Contextual Inquiry of Implementation Strategies"; Washington DC; December 3-5, 2018.

Mittman BS. Center for Prevention Implementation Methodology, presentation, "Evaluating complex interventions: Confronting and guiding (versus ignoring and suppressing) heterogeneity and adaptation." Evanston, IL. October 2018.

Sharp AL. Evidence Based Updates: CT Use in Adults with Head Injury. Grand Rounds Los Angeles Medical Center. Los Angeles, CA, May 2018.

Sharp AL. Moving Upstream: Three Regions' Approaches for Addressing Social Determinants and Needs to Improve Health Outcomes. National Quality Conference. San Francisco, CA, June 2018.

Sharp AL. Improving the Acute Evaluation of Patients with Possible ACS. Grand Rounds Los Angeles Medical Center. Los Angeles, CA, July 2018

Sharp AL. Head CT after Trauma: Benefits of using the Canadian CT Head Rule to improve care and decrease imaging. Mid-Atlantic Permanente Medical Group Annual Radiology Conference. Bethesda, MD, September 2018.

Abstracts and Poster Presentations

Estrada E, Silva K, Medina E, Desai S, Fan VS, **Nguyen HQ**. (2018, Poster) Depression and anxiety are associated with COPD patients' lower confidence for increasing physical activity but not with their motivation. American Thoracic Society International Conference. May 18-23, 2018. San Diego, CA.

Gupta S, Gharib S, Matute-Bello G, **Nguyen HQ**, Fan VS. (2018, Poster) Association between COPD disease severity and levels of systemic inflammatory biomarkers. American Thoracic Society International Conference. May 18-23, 2018. San Diego, CA.

Gupta S, Palen B, Parsons E, **Nguyen HQ**, Fan VS. (2018, Poster) Insomnia symptoms in COPD and association with health-related quality of life outcomes. American Thoracic Society International Conference. May 18-23, 2018. San Diego, CA.

Hahn EE, Ghai NR, Schottinger JS, Cooper RM: Implementation of a multi-faceted program to improve uptake of guideline recommendations for adolescent and young adults (AYAs) with acute lymphoblastic leukemia (ALL). American Society for Clinical Oncology Quality Symposium. Phoenix, AZ; September 28-30, 2018.

Hahn EE, Urquhart R, Munoz-Plaza CE, Mayer DK, Birken SA: Real-world strategies for implementing complex interventions: a closer look at survivorship care plan implementation in 3 healthcare settings. National Institutes of Health/Academy Health Annual Conference on the Science of Dissemination and Implementation in Health. Washington DC. December 3-5, 2018;

Jolles MP, **Mittman BS**. Heterogeneity of Features of Patient-Centered Medical Home Models in Published Literature. 2018 Southern California Regional Dissemination, Implementation & Improvement Science Symposium. Los Angeles, CA. June 28, 2019.

Jolles MP, Chao C, **Mittman BS**. Gaining insight on the service arrangements of human papillomavirus vaccination series completion interventions through qualitative data from providers. National Institutes of Health/Academy Health Annual Conference on the Science of Dissemination and Implementation in Health. Washington, DC. December 3-5, 2018.

Kawatkar AA. An J, Cheetham T, Gupta K, Marshall A, Haupt E, Okano G, Curtice T. Does the incremental cost of acpa-positive rheumatoid arthritis patients vary by the care pathway they follow? Arthritis Rheumatol. 2018; 70 (suppl 10); November 2018.

Kawatkar AA, An J, Marshall A, Cheetham TC, **Haupt E**, Okano G, Gupta K, Curtice TG. Characterizing heterogeneous care pathways of incident rheumatoid arthritis patients. 2018 Annual European Congress of Rheumatology. Amsterdam, Netherlands. June 13-16, 2018.

Lee JS, Liu AI, Pounds D, Mahmud F, Flores C, Desai S, Fan VS, Gould MK, Moy M, **Nguyen HQ**. (2018, Poster) Characteristics of COPD patients who agree to participate in a pragmatic trial of physical activity coaching compared to non-participants. American Thoracic Society International Conference. May 18-23, 2018. San Diego, CA.

Mahmud F, Valmonte F, Medina E, **Pounds D**, **Nguyen HQ**. Real-world implementation of a physical activity coaching program. American Thoracic Society International Conference. May 18-23, 2018. San Diego, CA.

Natsui S, Sun BC, **Shen E**, Redberg RF, Ferencik M, Lee MS, Wu Y, Zheng C, **Kawatkar AA**, **Gould MK**, **Sharp AL**. Variation in emergency physician admission rates for chest pain. American Heart Association Scientific Sessions. Chicago, IL. November 2018.

Natsui S, Sun BC, **Wu YL**, **Shen E**, Redberg RF, Zheng C, Ferencik M, **Kawatkar AA**, **Gould MK**, Lee MS, Park SY, Sharp AL. Assessing ED guideline concordance & outcomes after outpatient cardiac stress testing. Society for Academic Emergency Medicine Annual Meeting. Indianapolis, IN. May 2018.

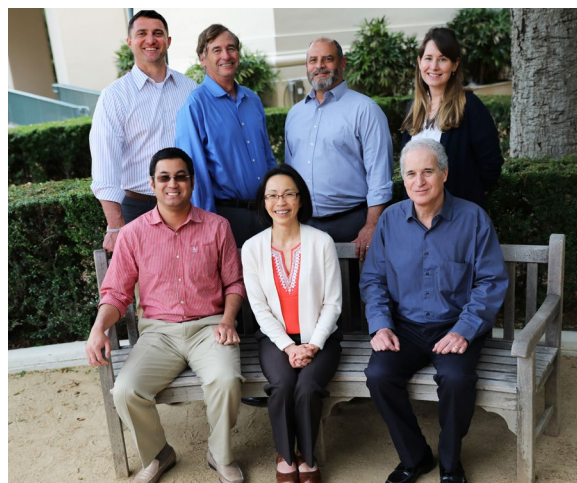
Nguyen HQ, Wang S, Liu A, Lee JS. Longitudinal cohort study of patients with serious illness receiving home-based palliative care in an integrated health system. Academy Health Annual Research Meeting. Seattle, WA. June 2018.

Sharp AL, **Wu YL**, **Shen E**, Redberg RF, Lee MS, Ferencik M, Natsui S, Zheng C, **Kawatkar AA**, **Gould MK**, Sun BC. Prospective validation of HEART score for the prediction of 30-day death or myocardial infarction in community ED patients with possible acute coronary syndrome. European Society of Cardiology Congress. Munich, Germany. August 2018.

Sharp AL, **Baecker AS**, **Shen E**, Redberg RF, Lee MS, Ferencik M, Natsui S, Zheng C, **Kawatkar AA**, **Gould MK**, Sun BC. Impact of a HEART care pathway on chest pain management within an integrated health system. American College of Emergency Physicians Annual Meeting. San Diego, CA. October 2018.

Urquhart R, Birken S, **Munoz-Plaza CE**, Zizzi A, Haines E, Stover A, Mayer DK, **Hahn EE**: Survivorship care plans: discrepancies between what RCTs assess and what stakeholders expect from their use. Cancer in Primary Care Research International Network Annual Research Conference. Groningen, The Netherlands. April 18-20, 2018.

Yee N, Locke ER, **Nguyen HQ**, Fan VS. (2018, Poster) Frailty in patients with chronic obstructive pulmonary disease and risk of acute exacerbations. American Thoracic Society International Conference. San Diego, CA. May 18-23, 2018.





Research Team

Scientists

Michael Gould, MD, MS
(Director)
David Glass, PhD
Erin Hahn, PhD, MPH
Aniket Kawatkar, PhD, MS
Brian Mittman, PhD
Huong Nguyen, PhD, RN
Adam Sharp, MD, MS

Division Research Administrator

Barbara Farrell, MBA

Research Business Administrators

Amy Vo, MBA (Lead)
Lisa Ly, BS, MPA
Mariana Aguila-socho, Bsc, BA

Biostatistics

Ernest Shen, PhD (Lead)
Aileen Baecker, PhD
Benjamin Hong, MS
Brian Huang, MPH
Amy Liu, MS

Programming

Yi-Lin Wu, MS (Lead)
Aiyu Chen, MPH
Eric Haupt, ScM
Bryan Lin, MS
Janet Lee Shinn, MS
David Yi, MPH

Research Administrative Coordinators

Natalie Firmeza, MA
Laura Loftsgaarden, MA
Viviann Soto

Research Support

Angel Alem, MPH, MS (Lead)
Danielle Altman, MA
Byron Batz, RN
Rebecca Biddle, RN
Beth Creekmur, MA
Jasamin Disney, RN
Bhanu Dub, MPH
Erika Estrada, MPP
Kathy Estrada, RN
Carol Flores, BA
Lindsay Joe Lyons, MA
Mayra Macias, MS, CHES
Teresa A. Martinez, RN
Alejandra Montano, BS
Corrine Munoz-Plaza, MPH
Vicky Musigdilok, MPH
Thearis Osuji, MPH
Ari Padilla, MBA
Stacy Park, PhD
Dana Pounds, MS
Rose Roxas, RN
Jessica Vallejo, MS

Kaiser Permanente Research

Care Improvement Research Team
Department of Research & Evaluation
Kaiser Permanente Southern California

100 S. Los Robles Ave.
Pasadena, CA 91101

www.kp-scalresearch.org

Twitter: [@KPSCalResearch](https://twitter.com/KPSCalResearch)

Contact: CIRT-Group@kp.org

This report was produced by the CIRT Communications Team- Angel Alem, Natalie Firmeza, Lindsay Joe Lyons, Laura Loftsgaarden, Salena Preciado, and Jessica Vallejo in July 2019. Photography by Steven Kirk, Zachary Thachet, and KPSC Multimedia.