Research As A Change Agent

BY ALAN S. GO, M.D.

One of the most unique advantages of working within Kaiser Permanente Northern California (KPNC) is the ability to conduct a wide spectrum of research that can lead to change. While we often think of change applying only to affecting clinical practice, the research conducted through the Division of Research (DOR) in collaboration with our stellar clinician researchers also can lead to changes in our understanding of disease etiology and contributing factors, epidemiology, and optimal methods to answer key questions. The multidisciplinary research we do within KPNC can be truly transformative. Toward that end, on behalf of my colleagues, I am pleased to share the first of our quarterly updates sponsored by the DOR Cardiovascular and Metabolic Conditions Research Section. We look forward to informing you of the great work being done and expanding our collaborations within KPNC!
Highlights from the 3rd Annual KPNC Regional Cardiovascular Research Symposium

BY ALAN S. GO, MD

It was great to see many of you at the 3rd Annual KPNC Regional Cardiovascular Research Symposium held in Oakland on March 23, 2019! Even if you were unable to make it this year, we wanted to share a few highlights and encourage you to plan to attend next year’s symposium which will be in Oakland in March 2020.

Dr. Ralph Brindis, retired TPMG cardiologist as well as past President of the American College of Cardiology, opened the symposium describing the history of major cardiovascular disease, risk factors, and procedure-based registries. He outlined various KP, regional, and national efforts that are refining the way these types of registries can be used to help drive better quality of care, improve risk prediction, and promote more efficient randomized trials.

Dr. Drew Ambrosy discussed the innovative Reduced Red Blood Counts in older Heart failure patients: Evaluation And Related Treatment (RBC HEART) Study that is being piloted in two KP regions. The RBC HEART pilot study is evaluating the feasibility of a pragmatic, systems-level intervention to screen for iron-deficiency anemia in older heart failure (HF) patients followed by a single course of IV iron (ferric carboxymaltose). Dr. Keane Lee presented The Heart Failure Readmission Intervention by Variable Early Follow-up (THRIVE) pragmatic trial that was funded, in part, by the TPMG Delivery Science Program. THRIVE showed that a structured telephone protocol by a non-physician HF Care Manager led to outcomes that were at least as good as patients scheduled for a physician in-person clinic visit within 7 days after HF hospitalization. Dr. Hershey Avula, Chief Fellow in the KP Cardiology Fellowship Program, described results from the HIV HEART Study, which found that HIV infection independently increased the risk of developing HF, and particularly HFpEF, among ~380,000 matched patients in three KP regions.

Dr. Matthew Solomon presented insights from TPMG Physician Researcher Program-sponsored work on experiences in leveraging our clinically rich electronic health records, including the use of natural language processing (NLP) on unstructured data for research and improving clinical care. Dr. Gabriel Escobar also described his experiences in developing a range of predictive models using “big data,” along with learnings about challenges in the process within KP to implement and maintain these algorithms in real practice.
Dr. Jamal Rana highlighted the variability in the availability and utility of different imaging modalities for suspected ischemic heart disease within KPNC, along with planned pilot efforts through a TPMG Delivery Science research grant to standardize reporting of cardiac CT angiography testing and associated decision support. Dr. Mai Nguyen-Huynh spoke on the results from the highly successful regional Telestroke program which included a multidisciplinary effort involving TPMG Neurology, Emergency Medicine, and Radiology, as well as nursing and EMS to reduce the time-to-diagnosis and treatment of acute ischemic stroke. KPNC is now a national leader in door-to-needle time for thrombolytic therapy and improving clinical outcomes after acute stroke. Dr. Steve Sidney summarized the main results from two recently published retrospective studies involving multiple KP regions and HealthPartners which observed favorable associations of bariatric surgery on targeted macrovascular and microvascular outcomes among severely obese adults.

Following the lunchtime poster session that featured research projects involving KPNC fellows and residents, Dr. Joe Young provided a timely update on existing evidence for systolic and diastolic blood pressure targets, which set the table for a robust discussion of issues and knowledge gaps in hypertension screening and treatment, overall and in key patient subgroups, with Drs. Young, Nailah Thompson and Alan Go.

There is increasing recognition about the importance of more useful risk prediction tools to help guide therapy and provide accurate prognostic information for patients. TPMG Delivery Science Research Postdoctoral Fellow, Samuel Savitz, PhD, shared preliminary data on different methodological approaches to creating a more accurate risk calculator for predicting individual risks of various clinical outcomes at 1– and 3-year after undergoing percutaneous coronary intervention, as well as challenges for identifying higher vs. lower risk patients. Carlos Iribarren, MPH, PhD described recently completed findings about the potential value of a genetic risk score for coronary heart disease events in the presence or absence of different clinical cardiovascular risk factors. Finally, Dr. Go updated the group on the external validation of the KP Atherosclerotic Cardiovascular Disease Risk Estimator (KPARE) in several KP and Ontario, Canada populations and to demonstrate its superiority to the 2013 ACC/AHA Pooled Cohort Equation, which supports the ongoing implementation efforts in KP.

The symposium was also a great opportunity for networking between DOR researchers and TPMG clinicians and clinician-researchers that will hopefully yield new collaborations.

The DOR Cardiovascular & Metabolic Conditions Research Section and TPMG Cardiac Service Line look forward to seeing you at next year’s Regional Cardiovascular Research Symposium in March 2020!
Introducing the Regional Clinical Trials Program (CTP)
BY VICTOR CHEN & PHENIUS LATHON

As clinical trials evolve and grow in importance to Kaiser Permanente members, developing comprehensive and state of the art infrastructure to support these studies is critical. Building from the success of the Comprehensive Clinical Research Unit (CCRU) over the past decade, TPMG and KFH leadership supported the reorganization and expansion of services to launch the new and more integrated Regional Clinical Trials Program (CTP) based out of the DOR. The CTP is a regional entity that provides consultation and comprehensive operational and logistical support as well as assistance in financial planning and monitoring for clinical trials and clinical research projects conducted by clinicians within KPNC. By working with the CTP, you’ll receive support and guidance on the following:

- Optimizing study design and research methods
- Evaluating project feasibility and recruitment and data collection strategies
- Developing clinical study budgets, negotiation with sponsors, invoicing, and financial monitoring
- Staff planning and resourcing
- Project implementation and progress tracking
- Regulatory support and quality monitoring and improvement

To receive consultation on an idea, request support for a clinical trial or clinical research project, or initiate a research project, submit a request to the KP Research Collaboration Portal (RCP) at rcp.kaiserpermanente.org.

New & Notable:
Honors, Publications, & Collaborations

Congratulations to Alan Go on being named one of the Most Highly Cited Researchers in Clinical Medicine by Clarivate Analytics. This honor is based on having multiple highly cited publications that rank in the top 1% by citations in a field and year. This distinction was awarded to less than 500 researchers in clinical medicine worldwide.

Erica Gunderson and Steve Sidney also received a 2018 Gary D. Friedman DOR Outstanding Paper Award for a JAMA Internal Medicine paper on lactation duration and risk of subsequent diabetes in the CARDIA Study. Finally, congratulations to Drs. Kevin Kheder, Andrew Ambrosy, Joan Lo and Alan Go for winning the 2019 Health Care Systems Research Network (HCSRN) Best Poster Award for their work from the KP CHAMP Study showing a modestly increased risk of developing diabetes with statin therapy.

We would also like to recognize the following grant recipients:
- Erica Gunderson - PI for an R01 from NHLBI for her project on “Prenatal Blood Pressure Patterns to Predict Pregnancy-Related Hypertension and Later Life Cardiovascular Risk.”
- Alan Go - Multiple PI for an R01 from NHLBI for a Cardiovascular Research Network (CVRN) multi-institutional project titled, “Optimizing Atrial Fibrillation Management in Chronic Kidney Disease.”
- Carlos Iribarren - PI for R01 from NHLBI for a project titled, “Population-Based Pharmacogenomic Assessment of VT Prolongation.”
- Steve Sidney - Site PI for a renewed contract from NHLBI for the “Coronary Artery Risk Development in Young Adults (CARDIA) Study” to support a new core in-person exam cycle for CARDIA participants based in Oakland.
Finally, kudos to the following authors on their recent publications between January to March 2019!


If you believe your research idea could have a high impact on health care delivery within KPNC, consider applying for funding with the TPMG Delivery Science Research Program. The goal of this program is to foster projects that could have a positive impact on areas of strategic priority for KP and to provide an opportunity to promote productive collaborations between TPMG physicians and DOR researchers.
Additional Resources for KPNC Clinician Researchers

When we asked 2019 KPNC Regional Cardiovascular Research Symposium attendees what would be most helpful to them, we received multiple requests for more information about who to contact for potential collaboration opportunities and updates on research projects happening at the DOR and throughout the region. While we do our best to describe up-to-date information through channels such as this quarterly newsletter, we would also like to provide details on additional key resources for supporting existing clinician researchers and those interested in learning more about the research process within KPNC.

For general information about the KPNC DOR, its' research faculty, collaboration opportunities, or updates from current studies, visit us at divisionofresearch.kaiserpermanente.org. The DOR’s Cardiovascular and Metabolic Conditions Research Section also provides an excellent opportunity to collaborate with highly experienced investigators and teams. Feel free to contact Section members below directly or learn more about our Section’s research portfolio at divisionofresearch.kaiserpermanente.org/Cardiovascular. Finally, for resources on planning and conducting research projects as well as ways to request help, visit the DOR Virtual Research Office at vro.kaiser.org.

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If your project is selected, you may receive funding of up to $250,000 in direct costs, with an expected duration of 12 to 24 months. To qualify, you must meet the following criteria:

- Projects must be led by a TPMG physician as the principal investigator with a DOR researcher as the co-principal investigator, or vice versa
- Study results are likely to change clinical practice or care delivery within three years
- Topic is viewed as high priority by regional leaders, e.g., chairs of chiefs and/or executives
- Inclusion of technology and/or generalizable methods for data system use
- Potential to spread to other operational topics or areas

The Delivery Science Executive Review Committee will begin accepting Letters of Intent in October 2019 soon. For more information on how to apply for this program or others like Community Benefit, visit us at divisionofresearch.kaiserpermanente.org/deliveryscience/deliveryscience/deliveryscienceprogram or contact Program Manager Suzanne Furuya at Suzanne.Furuya@kp.org.