Health System Leadership and Improvement Research at KPSC: Care Improvement Research Team (CIRT)

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KPSC

- Pre-paid, capitated health plan (non-profit)
- Independent medical group (SCPMG)
- Integrated delivery system
- Comprehensive electronic health records

Values:
  - Quality
  - Affordability
  - Physician autonomy
  - Small “m” managed care
KP Southern California

3.76 Million Members
209 Medical Offices
14 Hospitals
6,035 Physicians
20,393 Nurses
61,897 Employees
Department of Research and Evaluation

- 30 full-time research scientists
- Over 300 support staff
- Located in Pasadena, CA
- Employed by SCPMG
  - Report to Medical Director for Quality and Clinical Analysis
- Comprehensive Research Data Warehouse (RDW)
- Researchers embedded in health system
Care Improvement Research Team

- Created by KFH/HP leadership in 2013
- Help improve care and increase affordability for KPSC members
- Weave research into existing fabric of clinical care and quality improvement at KPSC
- Help to realize the potential of the learning health care system
- Create and share generalizable knowledge about improvement
CIRT Mission and Vision

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

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

**Vision:**
To be the model for embedded research within a learning health care system.
CIRT Strategy and Tactics

- Develop sustainable partnerships between researchers, clinicians and operational leaders
- Help to transform organizational culture around innovation, implementation and improvement
- Create virtuous cycle of internally focused and externally funded research
  - Goal: ~50-50 distribution
- Use variety of research methods and select efficient designs to improve feasibility of practice-based research
  - Observational studies to identify gaps in care
  - Qualitative approaches to understand barriers and facilitators to change
  - Quasi-experimental studies to evaluate new interventions
  - Pragmatic trials to use health system as laboratory
CIRT Sponsors

- Kaiser Foundation Hospitals and Health Plan
  - Benjamin K. Chu, MD, MPH
  - Nirav R. Shah MD, MPH
  - Angela Coron (Managing Director, KPSC Community Benefit)

- Southern California Permanente Medical Group
  - Michael H. Kanter, MD

- Department of Research and Evaluation
  - Steven J. Jacobsen, MD, PhD
CIRT Members

Scientists
Michael Gould, MD, MS
Erin Hahn, PhD, MPH
Brian Mittman, PhD
Huong Nguyen, PhD, RN
Adam Sharp, MD, MS
Shayna Henry, PhD (post-doc)

Research Support
Tania Tang, PhD, MPH
Corrine Munoz-Plaza, MPH
Ellen Rippberger, MPH
Kim Miller, MPH
Mayra Macias, MS

Biostatistics
Ernest Shen, PhD
Amy Liu, MS
Janet Lee, MS
Brian Huang, MPH
Yi-Lin Wu, MS
Jianjin Wang, MS
Key Contributions of Leadership

- Made hard-money investment in program development
- Provide researchers with unprecedented access to operational decision-makers
- Provide advice regarding pitfalls
- Facilitate relationships with operational work groups
  - Clinical Chiefs of Service: Oncology, Pulmonary, Nephrology
  - KPSC technology assessment and guidelines program
  - KP Improvement Advisors (scale up and spread)
  - HCIT (VTE, pneumonia, readmissions)
### CIRT Projects

#### Documenting Overuse, Underuse, & Misuse
- Use of antibiotics and head CT for acute sinusitis
- Pulmonary rehabilitation in COPD
- Use of intravesicular adjuvant chemo for bladder CA
- Knee arthroscopy for meniscal damage in OA
- Use of biomarkers for surveillance in early stage breast CA
- CT use in eval of traumatic head injury
- Post treatment screening in Hodgkin lymphoma survivors

#### Evaluating Current Practice
- Use of lung function tests to monitor Amiodarone use
- Advanced medical home for complex patients
- Care transitions
- Optimizing colon and lung CA care
- Timeliness of care for lung CA
- Atrial Fib/pneumonia care in the ED
- Observation medicine
- Co-management: physician communications

#### Changing Practice
- Develop VTE risk models
- Physical activity coaching for COPD
- Reduce ATB use for acute sinusitis
- De-implementation of biomarker tests for surveillance in early stage breast CA
- Cancer survivorship care
- Changing d-dimer threshold for PE eval
- Remote monitoring and visits for members with gestational diabetes

#### Evaluating Care Innovations
- Hem-Avert to reduce c-sections
- Lung CA screening; nodule eval safety net
- Bronchial thermoplasty for severe asthma
- Activity sensors to promote ambulation in hospital
- Palliative care for advanced lung CA
- Online action plan to close care gaps
- Telestroke
- On call nurse video visits

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**Completed Projects: 6**  
**Active Projects: 24**
CIRT Research Themes

- Cancer care and survivorship
- Chronic disease management and self-management
- Overuse of imaging and other low-value care
  - Leveraging Choosing Wisely campaign of ABIM Foundation
- Health system as laboratory for improvement
- KP Priorities
  - One KP (reducing unwarranted practice variation)
  - Affordability
  - Care transformation
Ongoing Challenges

- Limited bandwidth: how do we scale up effectively?
- Project selection:
  - How to choose among competing priorities?
  - How to balance external and internal funding opportunities?
- Suboptimal infrastructure for rapid-cycle research
- Organizational culture
  - Physician autonomy
  - Informal communication channels for decision making
  - Difficult to reach consensus
Thank You!

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