Integrating Patient Voice into Quality Improvement

Background & Aims: The objective of this study was to prototype a methodology for integrating the consumer perspective into quality and process improvement. There is increasing emphasis on patient centeredness in health care delivery systems. This is especially important in safety net settings that have challenges in patient experience including access, continuity, wait and cycle time, and interpersonal communication. Quality improvement in these settings requires approaches that are easy to implement, increase provider and staff skills in change management, and directly impact the patient. In existing quality improvement methods, patients may be involved as members of improvement teams, providing perspectives in a design phase, and/or as the voice of the process through patient surveys. However, patients are rarely the immediate focus of quality improvement initiatives. This prototype seeks to adapt the single-patient trial (n of 1) approach in clinical research trials for quality improvement purposes in which the clinic staff prioritize and select improvements to undertake.

Methods: This prototyping was undertaken in the Harbor UCLA Family Medicine and Internal Medicine clinics. In the N=1 approach developed for this quality improvement research, clinical teams selected one patient and sought to design the perfect visit for this individual. As the issues are resolved for the first patient, the clinic expands the activity to design the perfect visit for 5 patients. The team designed a scale-up strategy of 1:2:5:25.

Results: Two clinical teams (one Family Medicine and one Internal Medicine) successfully engaged patients in the N=1 approach. The teams identified change ideas that led to changes in the clinic, using plan-do-study-act rapid cycle testing. This approach yielded a series of clinic improvement opportunities that the clinics had not previously identified.

Conclusions: Adapting the N=1 approach to focus improvement activities on patient priorities, through a structured patient-as-partner model, has the potential to accelerate QI initiatives, energize and engage providers and staff, and spread throughout delivery systems. The N=1 design may offer a sustainable, scalable and spreadable method for health delivery systems, including safety net and residency education clinic settings.

The Impact of Patient Centered Medical Homes on Healthcare Utilization in a Medi-Cal Population
Chu LH, Joyce G, Kally Z, Tu M, Turner E, Sayles JN

Background & Aims: Patient centered medical homes (PCMH) have been shown to improve clinical quality and reduce healthcare utilization in some settings, but there is little evidence of their effectiveness in a Medicaid population. The objective of this study is to evaluate the impact of PCMH practice transformation on healthcare utilization in the nation’s largest publicly operated health plan.

Methods: A quasi-experimental, pre-post study design with a comparison group (difference-in-difference design), using data twelve months before and after the implementation of the PCMH model in a sample of safety net providers. The study sample captures claims and eligibility records from 2011-2012 from 10 practices adopting a PCMH model (PCMH group) representing more than 25,000 Medicaid members, and a comparison group of 11 practices without PCMH representing over 15,000 Medicaid members. The comparison sites were selected to match the PCMH sites by practice type, patient volume.
and geographic diversity. Primary outcomes included acute hospitalizations, emergency room (ER) visits and avoidable ER visits. Changes in utilization were assessed based on Poisson regression models with adjustment for over-dispersion. Given the dynamics of Medicaid program enrollment and eligibility, a sensitivity analysis was conducted using only beneficiaries continuously enrolled over the study period.

**Results:** The difference in difference analysis demonstrated statistically significant reductions for the PCMH group in rates of acute hospitalization, overall ER visits, ER visits without admission, and avoidable ER visits by 4.3, 27.4, 25.8 and 9.4 per thousand members per year (PTMPY) respectively after adjusting for age, gender and race/ethnicity. A sensitivity analysis restricted to subjects that were continuously enrolled confirmed the findings from the full sample.

**Conclusions:** Our study results from a large urban Medicaid population suggest that adoption of the patient centered medical home model in safety net practices can effectively reduce rates of acute hospitalization and ER related visits among Medicaid patients. Further studies are needed to better understand and define the specific PCMH components and best practices that impact utilization and improve key health outcomes. The findings may inform payors, plans, providers and policymakers in their efforts to deliver cost-effective and coordinated care to Medicaid patients.

[3] Identifying Strategic Opportunities for Collaboration: The Role of Public Health and Health Services in Improving School Attendance in Los Angeles County
Gase LN, DeFosset A, Perry R, Kuo T

**Background & Aims:** School truancy is associated with a variety of negative behavioral and health consequences. In addition, health factors may contribute to why students miss school. Despite efforts to understand the causes and consequences of school truancy, relatively little is known about the role of the public health and health services sectors in helping youth and their families improve school attendance.

**Methods:** In collaboration with a multi-disciplinary group of stakeholders, the Los Angeles County Department of Public Health and the Department of Health Services launched a project to gain better understanding of the characteristics and needs of truant youth. This work included three research questions: 1) What are the characteristics and needs (e.g., academic, social, health) of truant youth?; 2) How do youth who cut or skip class encounter different school- community- and law-enforcement based systems?; and 3) What public health programs and policies can help meet the needs of truant youth?

**Results:** The research team conducted a) an analysis of a cross-sectional observational study of adolescents in Los Angeles County during 2010-2011 and b) in-person semi-structured interviews with 39 youth who regularly cut or skip class and had experience with different community-based school truancy “diversion” programs in Los Angeles County.

**Conclusions:** This presentation will describe preliminary results of the analyses, with a specific focus on identifying potential program and policy interventions that can be implemented by public health professionals to help meet the needs of youth and their families. We will also describe lessons learned in working with a multi-disciplinary group of stakeholders from different sectors to conduct community-partnered research.
[4] Implementing a Rapid HIV Testing/Linkage to Care Project Among Homeless Individuals in Los Angeles County: A Collaborative Effort between Federal, County, and City Government
Anaya HD, Knapp H, Esquivel M, Rumanes SF, Butler JN, Crough B, Simon S
Background & Aims: Homeless individuals are at increased risk for negative health outcomes. HIV rates are high among the homeless, and are of special concern, given the transient nature of the homeless population, coupled with traditional HIV testing methods which impose a significant gap between testing and receipt of results. Same-day HIV rapid testing can mitigate this gap. We organized and implemented an HIV rapid testing/linkage-to-care initiative in homeless shelters via a multi-agency collaboration between federal and local government in Los Angeles County.
Methods: Mixed methodology; HIV testing data was collected on-site; qualitative data was collected by telephone. Post-intervention interviews conducted with stakeholders evaluated barriers and facilitators.
Results: A total of 817 homeless individuals were tested as part of this effort. Seven HIV-positives were identified; five of seven were linked to long-term care. Mean testing cost was $48.95 per client; cost per-positive was $5,714.
Conclusions: Costs were highest initially, and declined over time. This effort was viewed positively by participants. Results suggest that the high HIV seropositivity found among homeless shelter residents warrants project costs. This collaboration was successful, both programmatically and based on key stakeholder responses.

[5] Research-Operations Partnerships to Improve the Quality and Affordability of Care
Gould MK, Nguyen HQ, Sharp AL, Hahn EE, Tang T, Mittman BS, Jacobsen SJ, Kanter MH
Background & Aims: A learning health care organization requires visionary leadership to achieve the triple aim of better health, better care, and improved affordability. Effective research-operations partnerships (ROPs) can facilitate improvement efforts. Although ROPs are not novel, the process of establishing sustainable collaborations and overcoming challenges to achieve shared objectives is not well described.
Methods: In 2012, the executive leadership of Kaiser Permanente Southern California (KPSC) made a multi-million dollar investment by creating the Care Improvement Research Team (CIRT) within the Department of Research and Evaluation. Members of this team developed and refined ideas about ROPs by reviewing published literature, conducting semi-structured interviews with key operational leaders, consulting with experts, and sponsoring an all-day retreat on this theme.
Results: Key elements of the initiative include: (1) recruitment of health care researchers with complementary clinical and methodological experience, supported by an expert consultant in implementation science; (2) selection of research questions that are clearly aligned with organizational priorities; (3) development of strong, sustainable relationships with key stakeholders across multiple levels of the organization, through outreach and embedding of researchers in operational work groups; (4) dedication of internal funds to cover effort of research support staff; (5) creation of a strategic plan to define roles, responsibilities, and goals that allow for measurement of the program’s success. Key challenges to overcome include: (1) limited availability of external funds to support research that addresses operational imperatives; (2) mismatched timelines and incentives; (3) legal constraints that
hamper data sharing between research and operations; and (4) balancing research rigor with operational relevance.

**Conclusions:** Prioritizing competing initiatives, identifying opportunities for early success, and aligning operational priorities with research opportunities will require continued effort. Given the austere external funding environment, novel ways to support delivery system science are needed. The creation of the CIRT at KPSC represents a strategic investment from visionary leaders who embody the credo to “be the best at getting better” and who recognize that the development of strong and sustainable ROPs will be invaluable if we are to achieve the triple aim.

Inkelas M, Kahn R, Margolis P, Bowie P, Provost L

**Background & Aims:** A complex system of services and supports shapes the early formation of health behaviors and outcomes. The health care system is unable to address the full continuum of adverse family and community conditions that shape children’s outcomes. The study team developed a prototype of a learning system designed to convert a constellation of independent services and supports into an organized, reliable “community learning health system”. The prototype targets a diverse population with significant risks and poor care processes, and involves a voluntary network of 70 organizations serving 35,000 children within a 500 block low-income area of Los Angeles County. The network includes community clinics; county departments; regional organizations including the school district, WIC, and child care resource and referral; and community-based organizations providing child care, mental health, family support, and economic development services. The team designed a learning system methodology tailored for a community-wide application.

**Methods:** The study team created a driver diagram for practice change across multiple sectors and disciplines. Process improvement methods were used to adapt and implement care design elements in the network. A modified collaborative learning process, geared toward large-scale and spread, enabled organizations from multiple sectors to work together to re-design and standardize care processes that respond to the continuum of family needs. The study team developed a measurement system including a community data dashboard with long- and medium-term child outcomes and family conditions, run charts of monthly measures reported by organizations from multiple sectors, and measures of population reach.

**Results:** The network designed and tested innovations including a common prompting system (checklist) to identify needs; care pathways for maternal depression, social isolation and child development concerns; and scripts to facilitate effective “hand-offs” between organizations. Several lead user organizations produced large care process improvements in eliciting needs and linking families to resources.

**Conclusions:** This learning system prototype enabled diverse organizations to design, test and scale innovations that make optimal use of existing resources. Approaching improvement in a complex system is a critical innovation for addressing upstream determinants of health, given multiply determined outcomes that require a collective response.
[7] Developing the Value Proposition by Measuring the Cost of Care: Application of a Novel Costing Strategy in Men with BPH
Kaplan AL, Agarwal N, Setlur N, Tan HJ, Klein M, Steinberg K, Litwin MS, Saigal CS

Background & Aims: ‘Value’ is defined as health outcomes per unit cost. Determining value in healthcare demands accurate measurement of both numerator (outcomes) and denominator (cost) in the value equation. As a part of our departmental value initiative, we employed a novel costing strategy to measure the cost of care in benign prostatic hyperplasia (BPH) across the entire care pathway. We hypothesized that we would identify significant cost discrepancy between guideline-recommended and guideline-optional components of BPH care.

Methods: Time-driven activity-based costing (TDABC) is a robust, novel strategy designed to determine both direct and indirect costs and has been implemented in myriad healthcare settings. By relying on managerial estimates of resource demands imposed by each encounter, product or patient, TDABC better estimates indirect costs (i.e. physician time) than traditional costing strategies. Expert stakeholders created detailed process maps, determined space and product costs, and calculated personnel capacity costs. A model BPH care pathway was derived from American Urological Association (AUA) guidelines.

Results: Invasive diagnostic testing in BPH, which are listed as guideline optional, can incur up to 76% added cost to the urology clinic visit. Of the five different surgical options for BPH, there is a 43% cost discrepancy between the most and least expensive treatments. Personnel cost – including assistants, nurses, and physicians – vary by up to 80%.

Conclusions: We employed a novel costing strategy to determine the cost of BPH care across an entire pathway. We identified sizable cost variation between guideline-recommended and guideline-optional components of care. We also identified significant personnel cost discrepancy. TDABC is a useful tool for determining the cost – and value – of clinical care. As financial risk is shifted toward providers, knowing the cost and value of care will be crucial for care organizations. Further elucidation of the outcome-cost relationship is needed to define value in BPH care.

[8] Implementation of VHA-IHS Collaborations for Home Based Primary Care (HBPC) on American Indian Reservations
Katz M, Cote S, Kramer J

Background & Aims: The Veteran Health Administration (VHA) and Indian Health Service (IHS) entered into Memoranda of Understanding in 2003 to improve access to care and clinical collaborations, in recognition that American Indian and Alaska Native Veterans report greater unmet health needs than other Veterans. One effort to meet these goals was to fund 14 VHA medical centers to pilot collaboration projects to deliver Home Based Primary Care (HBPC) to Veterans on American Indian reservations. Our aims are to use the “natural laboratory” of these pilot projects to identify emerging models of collaboration or co-management and barriers and facilitators to broader implementation of healthcare programs between VHA and IHS.

Methods: One-hour semi-structured open-ended telephone interviews were conducted with a purposeful sample of VHA key respondents (n=37) to describe the structures and processes of the HBPC pilot programs and the experiences of collaborating with the IHS/Tribal healthcare organizations. The
interviews were recorded and transcribed for analyses within the Consolidated Framework for Implementation Research (CFIR). Since this framework assumes an intervention within a single institution, we adapted the CFIR to address our multi-organizational intervention and its collaborative context.

**Results:** We identified new HBPC models including streamlined staffing patterns and integrated co-management practices. Barriers to implementation included expected (e.g., recruitment and hiring of staff to isolated rural areas, lack of a shared electronic health record) and unexpected (e.g., the difficulty of establishing trusting relationships, lack of awareness about the population’s health needs and available resources, and inexperience in cultural competency) challenges. Facilitators included investing in relationship-building between VHA and IHS/Tribe, VHA following through on promised services, effective communications between organizations and key staff at each organization, and involvement of leadership at each organization in collaborative planning.

**Conclusions:** Clinical collaborations between VHA and IHS/Tribes are feasible. In addition, program structure and processes may vary in relation to available resources. Lessons learned in these programs will be used to implement additional collaborative clinical programs and to disseminate models of collaboration more broadly. Moreover, the CFIR is adaptable to multi-organizational, collaborative interventions.

Koster MA, Schottinger JE

**Background & Aims:** Too-frequent screening for cervical cancer can increase costs, lead to unnecessary invasive procedures associated with overtreatment, and shift resources away from the one in five women who do not receive recommended routine screening. A large, U.S.-based integrated healthcare system with centralized evidence services and eight independent regions developed and implemented an evidence-based guideline for cervical cancer screening. Novel implementation strategies and performance monitoring in one region led to significant improvements and are described below.

**Methods:** Graded systematic reviews were conducted by a centralized analytic unit, and recommendations developed by a guideline team with representation from each region. In one large region with more than 3.5 million patients, interventions aimed at the practitioner, patient and systems levels were implemented for routine Pap and HPV cotesting. Practitioner interventions included electronic distribution of guidelines, point-of-care electronic prompts, and workflow support. Patient-level interventions included point-of-care education, and inreach/outreach activities. System-level interventions focused on centralized patient outreach letters and reminder calls, computerized decision support, and unscreened cancer lists for panel management. Monthly performance monitoring on a measure of “overpopulation” was reported at medical center, department and provider levels.

**Results:** In a 5-year period, over 100,000 fewer unnecessary Pap tests were performed, while screening rates increased by 7%.

**Conclusions:** Centralized systematic evidence review and guideline development, coupled with coordinated implementation and performance monitoring, can reduce unnecessary screening and invasive procedures, focus resources on appropriate routine screening in underscreened populations, improve patient access and reduce costs.
Laing BY, Dixit RK, Steers N, Ryan G, Berry S, Brook R

Background & Aims: In September of 2011, in order to transform Los Angeles County Department of Health (LAC DHS) into a provider of choice, LAC DHS and Service Employees International Union (SEIU) implemented a performance improvement program based on Unit-Based Teams (UBTs), initially developed by Kaiser Permanente in collaboration with their unions. These teams were defined as natural working groups of physicians, managers, and frontline staff who work collaboratively to solve problems and improve performance. LAC DHS and SEIU developed Care Improvement Teams (CITs) across different units in one large urban multi-specialty safety net health clinic. Our goal is to understand how front line staff (including clerks, nurses, physicians) think about their clinic’s performance, how they address problems in their clinic and their impressions of the CIT intervention.

Methods: We evaluated the effectiveness of the CITs in two phases. The first phase consisted of an adaptive reserve survey which was administered to staff at the facility in Los Angeles County which launched several CITs in 2012. We compared baseline and six month follow-up surveys of ten units that implemented CITs to five control units at the same facility that did not implement CITs. Our outcome measure was the units’ self-reported ability to make and sustain change as measured by their adaptive reserve. The second phase, which is ongoing, consists of 40 semi-structured interviews with staff from units exposed to the CIT intervention with comparable staff in non-CIT clinics. During the interviews, staff will be asked to describe specific aspects of clinic performance, problem solving, and their impressions of the CIT intervention.

Results: The survey response rate was 63% (158 of 252) at baseline and 75% (172 of 231) at six months. 108 individuals completed the survey at both time points. We found a significant difference-in-change between CITs and non-CITs at six months with CITs showing greater increases in adaptive reserve scores (+0.11 vs. -0.13, p = 0.018). The CITs with the highest increases in adaptive reserve completed successful improvement projects related to access and patient experience. The results of the interviews are forthcoming, preliminary results will be presented.

Conclusions: Our expectation is that the results from this research should provide a better understanding of how county healthcare employees view their own performance, where they see room for improvement and how they view the CIT intervention. Both LAC DHS and SEIU leadership are interested in these findings, which could also be generalized to other large, multidisciplinary safety net practices.

[11] Applying GRADE Methodology to Evidence-Based Health Technology Assessment within a Managed Care Setting
Lam J

Background & Aims: Health technology assessment (HTA) within the context of a large managed care organization requires rigorous evidence assessment completed in a timely and efficient manner to inform technology acquisition and implementation strategies. A modified version of the GRADE evidence grading system was piloted in a long-standing HTA program to evaluate new and existing medical technologies with high-cost, high-volume impact.
**Methods:** A modified GRADE approach was used to assess the quality of evidence for six health technologies over a 6-month period.

**Results:** Although the application of GRADE required additional analytical time, evidence assessments were completed within a reasonable timeframe. Application of the GRADE framework allowed technology committee members to more easily understand the quality of a body of evidence, weigh the benefits and harms, account for patient values, and assess potential resource and operational implications.

**Conclusions:** Prior to adopting GRADE, many new technologies were assessed as having “insufficient” evidence. The GRADE approach provided greater clarity, and evidence that would previously have been classified as “insufficient” was graded as either “low” or “very low” quality, allowing for greater flexibility and transparency in decision-making when moving from evidence to recommendations. Diagnostic and prognostic tests or devices continued to present unique challenges as well as technologies for which limited comparative evidence was available, and more guidance for in these areas is needed. Additional elaboration on resource and operational concerns specific to evaluating new technologies would be useful to HTA programs.

[12] “Worth the Walk”: The Community-Based Application of DII Science to Develop and Test a Culturally-Tailored Behavioral Stroke Risk Reduction Intervention in Senior Centers

Lee I, Bharmal N, Mittman BS, Reyes C, Araiza D, Trejo L, Sarkisian C

**Background & Aims:** Dissemination, Implementation and Improvement (DII) Science aids implementation of research results into everyday clinical practice. Successful adoption of research in routine settings requires thoughtful efforts to “design for dissemination,” i.e., to develop programs that are feasible, acceptable, culturally-tailored and compatible with other features and constraints of target care settings. We applied DII Science principles to develop a behavioral health intervention for senior centers and to design an evaluation utilizing a Type I effectiveness-implementation hybrid study design. Our aims were to 1) develop, culturally-tailor and test the effectiveness of a stroke risk factor reduction/walking intervention for high-risk Korean, African American, Chinese, and Latino seniors, and 2) collect critical data on intervention delivery and its potential for sustainability. This project seeks to expand the scope and impact of DII Science.

**Methods:** Our L.A. CAPRA Center - a unique partnership between UCLA, the City and County of Los Angeles, and the aging services network - provides infrastructure for this work; our mission is to support dissemination of high-impact programs that improve quality of life of lower income and minority seniors.

The current project, “Worth the Walk” (WTW), consists of 4 weeks of twice-weekly 1-hour group sessions delivered at senior centers by trained in-house case managers; it combines stroke knowledge with theoretically-grounded behavior change techniques and focuses on reducing stroke risk by increasing physical activity (walking). We adapted existing physical activity programs with extensive community partner input, including 12 focus groups, and are working with Community Action Panels to culturally tailor the intervention.
Using a randomized wait-list controlled trial (n=240) at 3 senior centers we will test the hypothesis that WTW increases mean steps/day (pedometer) at 1 and 3 months, and that the increase will be mediated by changes in stroke knowledge and self-efficacy. Stakeholder interviews will evaluate general and sitespecific factors associated with successful implementation of the intervention and will measure key variables such as feasibility, acceptability and costs.

**Results:** A culturally-tailored stroke risk-factor reduction/physical activity intervention with demonstrated efficacy that can be disseminated and sustained throughout the national aging services network.

**Conclusions:** Findings will inform future operationalization of this new DII Science model.

[13] Implementation of Short-Term Complementary Alternative Medicine Projects in the Veterans Health Administration

Marshal NJ, Robertson S, Altman L, Taylor SL

**Background and Aims:** Several types of complementary alternative medicine (CAM) (e.g., meditation, yoga, acupuncture) have been shown to be moderately effective for a variety of health outcomes. Also, Veterans have been asking to receive CAM. Accordingly, the Veterans Administration (VA) has responded by making several types of CAM available and has interest in expanding the delivery of CAM into daily patient care. To do this, the VA Greater Los Angeles funded several short-term clinician-initiated CAM pilot projects in 2013, ranging from energy healing for pain and aromatherapy/massage to yoga in post deployment clinics. We guided the implementation and effectiveness of these CAM projects.

**Methods:** We first suggested project modifications to be achievable in three months and sustainable after project conclusion. To guide the implementation, we used a Plan, Do, Study, Act (PDSA) quality improvement framework. We used the number of CAM sessions delivered and patients reached to assess innovation spread. We suggested patient outcome measures based on the clinical setting (e.g. inpatient vs. outpatient), the length of exposure, (e.g. single vs. multiple classes) and condition acuteness.

**Results:** Of the 15 projects, eleven completed their implementation in three months and delivered 555 CAM sessions to 483 Veterans and ten staff members. Almost all (96%) Veterans receiving energy healing reported improved pain and 94% reported improved anxiety. Veterans receiving massage reported mean reductions in pain (6 points on 0-10 scale), anxiety (7 points on 0-10 scale) and blood pressure (systolic 10-15 points and diastolic 8-10 points). Veterans receiving dance and movement therapy reported a reduction in short-term perceived stress (5 points on 0-10 scale). Yoga found a 3-point improvement in PHQ-9 depression scores and a 7-point improvement in GAD-7 anxiety scores. All reported to be able to sustain their projects into 2014.

**Conclusions:** Most of the clinician-driven projects were able to be implemented and be evaluated during the three-month time frame and showed short-term effectiveness for a variety of health outcomes. The majority of projects will continue into 2014 and we will continue to guide their implementation and evaluation to help demonstrate their effectiveness and improve their sustainability as longer-term projects.
[14] Adapting and Implementing Guidelines for Chronic Obstructive Pulmonary Disease (COPD)
Pham K

Background & Aims: Adaptation of high-quality external guidelines can be an efficient and effective means to develop guidance more rapidly, allowing for shifting of resources to knowledge transfer and health system implementation efforts. The aim of this poster presentation is to describe successful guideline adaptation and implementation strategies used by a large U.S. health care organization to improve the quality of care for adults with chronic obstructive pulmonary disease (COPD).

Methods: A multidisciplinary guideline team evaluated and adapted a guideline on Chronic Obstructive Pulmonary Disease (COPD) developed by the American College of Physicians, American College of Chest Physicians, American Thoracic Society, and European Respiratory Society (ACP/ACCP/ATS/ERS). Recommendations were evaluated and modified for implementability based on several dimensions of the GLIA tool. Implementation strategies targeted to physicians included electronic distribution of guidelines, interactive online continuing medical education, and point-of-care encounter support. Implementation efforts targeted to patients included point-of-care education booklets, online resources for COPD self-management, and proactive outreach for spirometry testing. Systems-level interventions included development of patient outreach lists and computerized decision support. Monthly reporting and review on three measures was conducted to monitor performance.

Results: Ongoing implementation efforts resulted in increased rates of spirometry testing and management of COPD exacerbations with systemic corticosteroid and bronchodilator medications over a four-year period.

Conclusion: Challenges arise when externally developed guidelines lack the specificity necessary for recommendations to be successfully implemented. Systematic evaluation and modification of recommendations is necessary to enhance implementability at the patient, provider and systems levels, as well as to improve performance.

Ridgely MS, Hussey P

Background & Aims: One of the leading alternatives to fee-for-service payment is bundled payment, which provides payment for all of the care a patient needs over the course of a defined clinical episode, instead of paying for each discrete service. To determine whether bundled payment could be an effective payment model for California, Integrated Healthcare Association (IHA) convened a group of stakeholders (health plans, hospitals, ASCs, physician organizations) in a consensus process to develop the methods and means to implement bundled payment.

Methods: A case study approach was used because of the complexity and stage of the intervention and the primary interest in questions of implementation. We conducted interviews by telephone with health plan administrators, hospital administrators, medical staff management, and frontline physicians. We employed a number of strategies to decrease the possibility of bias, including the use of a detailed methodology to serve as a guide; interview protocols across the organizations and types of respondents;
a multidisciplinary team of senior investigators (rather than single observer) for interview data collection; and external review by the organization being studied.

**Results:** In spite of a high level of enthusiasm and effort, the pilot did not success its goal to implement bundled payment for orthopedic procedures across multiple payers and hospital physician partners. As was the case for the pilot sites implementing PROMETHEUS Payment (Hussey, Ridgely & Rosenthal, 2011), initial ambitious goals were unable to be realized. The evaluation documented a number of barriers, such as disagreements about bundle definition, assumption of risk, administrative burden, and state regulatory uncertainty. Ultimately, few contracts were signed resulting in insufficient volume (<40 cases) to test hypotheses about the impact of bundled payment on quality and costs.

**Conclusions:** Participants continue to see promise and value in the bundled payment model, but the pilot results suggest that the desired benefits of this and other payment reforms may take time and considerable effort to materialize. Simulations of the impact of bundled payment using secondary data are easy to do, but implementation of payment reform “in the real world” is slow and non-linear process. Participants, policymakers and researchers should plan accordingly.

[16] Developing Health Information Infrastructure for Accountable Care: Lessons from a Natural Experiment in California
Ridgely MS, Meeker D, Damberg C

**Background & Aims:** The accountable care organization is a novel payment and delivery system innovation. Despite the scale and complexity of the changes required of an organization in transition, there is little known about how to optimally structure an ACO to achieve value in health care. Blue Shield of California awarded $20 million in ACO development grants to 18 health care organizations to enhance their ability to participate in ACOs. Nine of the grantees used their grant monies either partially or exclusively for health IT infrastructure development.

**Methods:** We used case study methods to evaluate this natural experiment. Respondents (i.e., CEOs, CMOs, CIOs, physicians, IT specialists and care managers) were asked about initiatives designed to leverage new or existing health information technology at the point of care. In an analysis of interview notes and related documents, we abstracted themes related to: (1) strategies that emergent ACOs take to integrate [high value] information into clinical workflow and operations; (2) how these strategies vary across organizations; and (3) what strategies seem to be successful in addressing barriers to information integration.

**Results:** Healthcare reform has increased pressure on organizations to deliver coordinated, value-based care. A critical component is the management of health information. Data integration across provider organizations and care settings is necessary for the key tasks of accountable care, such as managing care transitions, care coordination for high-risk patients, and measuring quality of care. We discuss how providers used grant funding to support health IT infrastructure development and strategies utilized in the areas of admission/discharge data, medication and lab data; data warehousing; and health information exchange.

**Conclusions:** With the right incentives in place, the U.S. healthcare system may ultimately achieve an ideal implementation of health information flow. In the meantime, health care organizations have created a number of important information “patches” and “workarounds” that manually “pull” important clinical information into the workflow. The ability to scale the ACO concept will require the
move from costly manual data integration solutions that are now being deployed to automated health IT-based solutions. The lessons learned from the Blue Shield grant experience will undoubtedly apply to other organizations building ACOs.

[17] The Just Do It Playbook for Implementation Science
Sharp AL, Nguyen HQ, Hahn EE, Tang T, Mittman BS, Jacobsen SJ, Kanter MH, Gould MK

Background: There are over 60 published implementation science frameworks, and despite the advantages of each, none were designed to help clinicians and administrators to standardize and prioritize initiatives, implement programs efficiently, and evaluate with sufficient rigor.

Methods: In order to address these limitations, the Care Improvement Research Team (CIRT) at Kaiser Permanente Southern California blended implementation and behavior change frameworks into a structured process to help clinicians, operations leaders and researchers to standardize their approach and accomplish collaborative goals. To develop the “Just Do It Playbook,” we performed a pragmatic literature review, compared and synthesized published frameworks, and iteratively refined a set of steps for identifying, diagnosing and correcting gaps in care.

Results: The Just Do It Playbook can be simplified into four distinct steps: 1) describe the topic that needs improvement, 2) identify what or who needs to change, 3) develop an implementation strategy to facilitate change, and 4) evaluate the effectiveness of the strategy. The first step helps to prioritize the topic of interest and identifies whether there is a gap between current and best practices. Second, describing what or who needs to improve will enable identification of barriers or facilitators to change. The third step identifies strategies to promote best practices by using established behavior change theories as well as clearly defined and measurable outcomes. The final step evaluates the outcomes, costs and sustainability of the strategy, as well as the need to discontinue efforts, modify and re-evaluate, or disseminate to other settings.

Conclusions: In a learning health care system, there are many potential targets for improvement, and many strategies for implementation and evaluation. One way to simplify the complexities that inherently exist in health system improvement is to adopt a standardized approach. As clinicians, administrators and researchers forge meaningful collaborations, a standard process can improve the understanding of competing priorities, define roles and responsibilities, and integrate established scientific frameworks in a way that is efficient and sustainable. The Just Do It Playbook will need to be tested and adapted to individual projects, but will provide a platform to build embedded research into a functional operational standard.

[18] Are Hospitals and Nursing Units Organized to Support Pressure Ulcer Prevention?
Findings from a 6-Site Qualitative Case Study
Soban L, Finley E

Background & Aims: Pressure ulcers (PrU) are a major concern for hospitals. Despite the presence of evidence-based guidelines and substantial quality improvement activity in this area, implementation of processes of care for PrU prevention is highly variable. Our understanding of how to incorporate these processes of care into clinical care routines is very limited. Organizational context—the local conditions within the setting in which care is delivered—can be critical to the uptake of quality improvement
interventions. This study aims to identify and describe hospital and unit-level contextual features that support and impede nursing processes of care for PrU prevention.

**Methods:** This qualitative study used a multi-site, comparative case study design. Six diverse VA hospitals participated in the study. Qualitative data were collected using in-person, semi-structured interviews with 49 key informants whose responsibilities involved PrU prevention: nursing executive leadership, wound care team staff, nurse managers, and frontline staff nurses (RNs). Data analysis included: systematic coding and performance of content analysis, the development of case narratives, and cross case comparisons.

**Results:** All facilities had wound care specialists who were central to PrU prevention activities, yet their staffing and workload varied considerably across facilities. The initiation of public reporting of VA data for hospital-acquired pressure ulcer rates was frequently cited as a motivator for drawing nursing leadership attention to this issue. As a result, recent educational offerings specific to PrU prevention were commonly reported, yet plans for ongoing staff education were rare. There was a striking absence of unit-level systems to support communication around PrU prevention (e.g., use of hourly rounds; interdisciplinary rounds; use of handoff tools). Inconsistent staffing of nursing assistants was consistently reported as a unit-level barrier to PrU preventive care.

**Conclusions:** Systems for PrU prevention consistently revolved around the wound care specialists. Development of ongoing staff education programs and unit-specific systems to support nurses’ delivery of care and communication about PrU risk appear to be areas for improvement.

[19] Initial Deployment of an Online, Biopsychosocial Patient Self-Assessment Tool to Facilitate Timely, Appropriate Care

Soll AH, Keefer LA, Lee ML, Streiner DL, Buxbaum J, Barksy A, Freedman SD

**Background & Aims:** Targeting care to needs is challenging, especially in busy clinics. Multiple symptoms, often with superimposed psychosocial issues and substance misuse, occur in 20% of primary care patients, leading to poor outcomes despite high utilization. We developed a comprehensive, online biopsychosocial assessment (CarePrep) to facilitate timely individualization of care.

**Methods:** CarePrep was deployed for routine care in two university GI clinics, attempting to enroll consecutive referrals. Patients did the assessment over the Internet from home before the clinic visit. Data collected by CarePrep were analyzed.

**Results:** FEASIBILITY. When dedicated nursing staff set patients up, success at getting patients to start CarePrep was 100% of 13 patients referred for pancreatectomy for pain presumably due to chronic pancreatitis and 87% of 55 patients referred to one GI clinic. With a pool of clerks, success was lower (about 50% of 224 patients). Of the 173 patients who started CarePrep, 85% finished and another 5% completed core sections. SYMPTOM PATTERNS: In 155 consecutive patients 14% had no or mild physical symptoms and another 14% had typical symptom patterns (e.g., heartburn and acid regurgitation for acid reflux). The remaining 72% had multiple GI symptoms. Increasing GI symptom severity was associated with increased severity of non-GI symptoms; sleep disturbances and fatigue; psychological symptoms; stress; and health concerns (p < 10^-5 for all comparisons). Preliminary factor analysis indicated that physical symptoms and health concerns loaded on a “symptom distress” factor, whereas psychological symptoms and stress loaded on a “psych distress” factor. IMPACT: Clinicians
(n=7) indicated that CarePrep discovered issues that impacted decision-making in 72% of patients and that use promoted the physician-patient relationship in 86% of patients. All 13 patients referred for surgery had surgery canceled or postponed based upon this biopsychosocial assessment.

**Conclusions:** With dedicated staffing, patients complete an extensive online biopsychosocial assessment. Patients with severe symptoms in referral populations have high symptom reporting, health concerns, and superimposed psychosocial issues. Comprehensive biopsychosocial data change decision-making, even by surgeons. This implementation pilot (use in routine care) indicates that a comprehensive assessment discovers frequent, relevant biopsychosocial issues in referred patients, changes decision-making, and may improve the timely individualization of care, the fitting topic for implementation research.

[20] Evidence Based Opioids Management of Chronic Non-Cancer Pain in Context of Substance Use Disorder
Tariq SN, Wyatt L, Morisky D, Shoptaw S

**Background & Aims:** Public funded clinics have a patient population who use opioids for non-cancer chronic pain management. These clinics have policies in place such as signed opioid treatment agreements to ensure proper use of opioid medications by these patients. This study aims were to determine the outcomes of implementation and reinforcement of goals and objectives set forth in opioid treatment agreements to decrease opioid misuse.

**Methods:** This was a retrospective observational study with quasi experimental design. The structured clinic and standard management clinic belonged to a Los Angeles County health center. All observations were from adult patients. The study measures included demographic measures and opioid misuse measures defined as following; opioid dose escalation, receipt of opioid prescription from multiple providers and concurrent illicit drug use. Data reviews were approved by Human Subject Review Committees of Los Angeles County Department of Health Services and University of California Los Angeles. Data collection source were medical records of patients from structured clinic and standard management clinic (randomly selected medical records for eligibility criteria). Data were analyzed to compare the measures of opioid escalation, receipt of opioid prescription from multiple providers and concurrent use of illicit drugs among these clinics.

**Results:** Total medical records were 28 (N=28), which were comprised of structured clinic (n=13) and standard management clinic (n=15). The structured clinic reduced opioid dose escalation by 27%, receipt of opioid prescription from multiple providers by 9%, concurrent illicit drug use by 8% (based on increase of 24% in random urine drug screens in structured clinic). Post hoc analysis showed a continued trend of decrease of 59% in receipt of opioid prescriptions from multiple providers as compared to standard management clinic.

**Conclusions:** These preliminary findings support that structured clinic has an impact in reducing opioid misuse among patients with chronic non-cancer pain and substance use within a public setting. Such clinic can be a model for training physicians to educate them in responsible opioid prescription. However, limitations of small study size and its design point to the need of replication of these findings in a larger and diverse population.
Heart Failure Transitional Care Program
Watson H, Koyama S, Taitano M, Uhle J

Background & Aims: Nationally, heart failure is the most common hospital diagnosis of patients aged 65 and over. One in five Medicare patients are readmitted to the hospital within 30 days and CMS has identified heart failure as the greatest number of potentially preventable readmissions associated with $903 million in potential savings. KPSC has 39,000 members with heart failure. In 2006, our 90-day any cause readmission rate was 37%. There was high variation in readmission rates across the region. Fifty percent of those readmission occurred during the first 30 days and most of those within the first 7 days post-discharge.

Methods: In 2006, we piloted an evidence-based program focusing on improvement of clinical quality, reduction in hospital days/readmission rates and improvement in quality of life and safe transitions for patients with heart failure. KP SCAL’s readmission rate within 90 days was high with significant variation among medical centers, indicating a need for a systematic, reliable, and coordinated model of care. In 2007, we officially began implementation of the program to all 13 medical centers. Rollout of this program allowed us to get ahead of the curve with the current Medicare readmission payment focus. There are three basic components to the program: Inpatient care management, home health evaluation and outpatient care management. These three elements combine to provide a seamless model of care for our high-risk heart failure population. The inpatient care manager provides patient assessment and screening for the program within 48 hours of admission. Home health contacts the patient within 24 hours of discharge and arranges a visit within 48 hours. The outpatient care manager provides intensive post discharge follow-up—particularly during the first 30 days (when most readmissions occur). By providing improved access to care, we can provide early intervention and reduce risk of readmission.

Results: The program significantly reduced overall readmissions and those related to adverse drug events, and has generated high levels of patient satisfaction. Results include: improved (reduced) readmissions overall: Between 2006 (pilot) and 2010, the 90-day readmission rate decreased by 30%; cost avoidance resulting from reduced readmissions (an analysis indicates that by reducing readmissions by 30% this resulted in approximately 1,000 fewer readmissions since program implementation (January’07) and resulted in a savings of $12,000,000); high patient satisfaction (surveys of patients enrolled in the TCP program reported high levels of satisfaction with the program with 70-80% agree/strongly agree on Care Transition Measures (CTM3)); less variation between high and low medical center performers; improvement in Joint Commission measures (42 points).

Conclusions: Prior to implementation of TCP, the primary strategy for management of patients with heart failure was to rely on medical center individuals (limited to outpatient care management). Inpatient, outpatient and home health worked in isolation without the benefit of a united care plan. There was a lack of consistency or patient-centered approach, which contributed to a patient perception of fragmented care. A formal transitional care program can improve patient safety and reduce unnecessary readmissions.

Community-Based Implementation of an HIV Risk Reduction Intervention: The Impact of Limited Resource Contexts on the Conduct of Implementation Research
Hamilton AB, Williams JK, Mittman BS, Liu H, Eccles AM, Hutchinson C, Wyatt GE
Background and Aims: This NIMH-funded R01 study investigates community-based implementation, effectiveness, and sustainability of “Eban II,” an evidence-based, culturally congruent risk reduction intervention for African-American heterosexual, HIV-serodiscordant couples. This poster reports results from baseline “organizational readiness” surveys and interviews with staff and leaders from participating agencies.

Methods: This 5-year hybrid effectiveness/implementation study employs a randomized dynamic waitlist design in which participating agencies are randomly selected to commence active delivery of the Eban intervention per a designated schedule. The study’s protocol-based implementation approach is guided by the Program Change Model, a model of phased organizational change. At baseline, standardized measures of organizational readiness, burnout, attitudes toward evidence-based treatment, and familiarity with serodiscordance and couples-based treatment were completed via an online survey. In addition, pre-implementation semi-structured interviews were conducted at participating sites.

Results: Staff members (n=100) from 12 community-based agencies in California completed the survey; staff and administrators (n=10) from the first three organizations actively delivering the intervention participated in interviews. Staff who completed the survey were on average 43 years old, 55% were female, 28% were Hispanic, and 52% had a bachelor’s degree or higher. Two-thirds had been working in the HIV/AIDS field for over five years. Staff had positive attitudes toward evidence-based practices, with a mean total score of 2.8 on Aarons’ Evidence-Based Practices Attitudes Scale (EBPAS, scale 0-4). Burnout among staff was low, with only 9% indicating high emotional exhaustion, 10% indicating a low sense of personal accomplishment, and 3% indicating a high sense of depersonalization. Baseline survey results suggest that the organizations are “ready” for implementation, and interviews revealed that staff perceived the intervention to be a useful addition to their current services. However, interviews and our regular communications with the sites indicate that external factors (e.g., regulatory and financing policy changes, transportation and time challenges faced by a low-SES population of service consumers) have significantly impeded execution of our implementation protocol.

Conclusion: Current approaches to assessment of organizational readiness for implementation of evidence-based practice fail adequately to account for external factors that can facilitate and impede implementation. Future work is needed to incorporate these factors in readiness assessment conceptual and measurement models.