Health plan administrators and clinicians have pre-existing ideas of research that necessitate ongoing education and dialogue to address concerns. Using a framework of change native to the health system promotes navigation of potentially disruptive change. Given rapid changes within health systems, the research team must be aware of competing contextual factors. Finally, a true health system/research partnership when staffing the intervention facilitates sustainability of intervention related services. **Conclusions:** A pragmatic trial approach, although better suited for embedded research in the healthcare system, presents challenges not typically encountered in standard explanatory/efficacy trials. Lessons learned by this team that accommodate both healthcare operations and research can promote embedded research in other health settings.

Keywords: Pragmatic clinical trial; Chronic pain

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A3-5:

Research-Operations Partnerships to Improve the Quality and Affordability of Care

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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.

Keywords: Partnerships; Care improvement

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PS1-20:

Understanding Patient Barriers and Preferences to Completing Advance Directives (AD) in the Primary Care Setting

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Background/Aims: Advance Care Planning (ACP) is a complex process that allows individuals to contemplate and document end of life decisions using tools such as an Advance Directive (AD). The proportion of patients who

have an AD on file remains low both nationally and at Geisinger. To date, little research has focused on healthy populations' attitudes towards ACP and AD completion. We describe the design and implementation of a web-based application to collect patients' preferences for and barriers to AD completion in a large, non-diseased primary care population. **Methods:** We developed a simple web application and questionnaire (denoted "eACP") designed to educate patients about completing an AD. The eACP application was automatically presented on a touchscreen computer to all patients aged 50-64 who were seen in one of 5 Geisinger Clinic locations for a routine appointment. The questionnaire introduced ACP as a part of good healthcare and asked patients if they were interested in learning more. Patients who chose not to learn more indicated why they declined. Patients who elected to learn more selected topics of AD completion for which they would like more information and indicated how they wished to review the information.

Results: A total of 2169 patients completed the questionnaire using the eACP application in 5 practice sites between 07/31/13 and 10/30/13. Nearly 40% (852/2169) of patients were interested in learning more while 49.8% (1080/2169) were not. The primary reasons for declining to learn more included lack of time, a preference for leaving the choice to others, or prior AD completion. Among the patients who elected to learn more, the most common topics of interest were related to the process of completing an AD (e.g., what goes into an AD and how/when to complete it). Patients had a strong preference for printed materials (70%) versus using a website (30%) or talking to a healthcare professional (<10%). **Conclusions:** Our findings suggest that patients desire more education on ADs but prefer to receive it in a paper format versus online or via a discussion with their provider. Strategies for increasing AD completion in practice should account for these patient preferences.

Keywords: Patient-reported data; Advance care planning

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PS1-21:

Development and Dissemination of Quality Review Tools for Data Management and Analysis

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Background/Aims: Within embedded HMO research groups, analytic teams are heavily involved with many key stages of research studies. Individual analytic team members use a variety of processes for ensuring work quality. Identification and standardization of analytic quality review best practices may lead to greater efficiencies and fewer errors. The objective of this quality improvement project was to develop and implement tools to enhance the quality and consistency of analytic work within a HMO-based research group. **Methods:** We used a multi-modal approach to develop and assess analytic quality review tools. We first conducted four in-depth interviews with principal investigators to collect experiences and suggestions for improving analytic processes. Using an online survey, we collected best practices from analytic team members. We also interviewed analytic leads with 6 HMO and academic partner research groups on their best practices. We integrated all information and developed analytic quality review best practice documentation and tools. We tested and revised the tools, estimated time requirements, and provided basic training to our analytic team. Nine months later, we conducted an anonymous online survey to gauge uptake of these tools and to collect initial feedback from early adopters. **Results:** Four analytic quality review tools were developed to help formalize best practices for cohort-building/data pulls, data preparation (code review), analytic dataset preparation and documentation, and manuscript methods and results review. In initial assessments, implementing the code review was the most resource-intensive, taking upwards of 14 hours. Nine months after introducing these tools, the most commonly reported challenges to using the tools included lack of time/funding, using other processes to ensure work quality, and lack of knowledge on when or how to use the tools. Early adopters gave qualitative feedback that the tools helped structure analytic processes and encouraged documentation of analytic decisions. **Conclusions:** Identification and standardization of best practices may have the potential to improve analytic work processes for HMO research groups. Future efforts should focus on quality review tool revisions, policies for tool use, data collection

on errors found using review tools, and strategies to overcome identified barriers to using the tools.

Keywords: Quality improvement; Analytics

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PS1-22:

Final Results from a Study of the Implementation of the Collaborative Care Model for Primary Care of Depression (DIAMOND) in 76 Clinics in Minnesota

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Background/Aims: The collaborative care model for primary care of depression has a very strong evidence base, but has been little implemented. A statewide initiative (called DIAMOND) to implement it widely in Minnesota along with a new payment provided an opportunity for an embedded partnership research study of its implementation and impacts on the use of evidence-based care processes and depression symptoms for patients with depression. **Methods:** All 76 clinics participating in the staggered implementation initiative agreed to cooperate with the study. Potential patient subjects were identified from weekly submission of new antidepressant fills by seven health plans for a baseline and 6 month follow-up survey of care received and PHQ9 scores. Medical and administrative leaders of clinics completed implementation surveys at baseline and 1 and 2 years after implementation. **Results:** 2,348 patients with depression completed baseline surveys and 1,578 (67%) subjects completed 6 month follow-ups. Of those with follow-up data, 245 received DIAMOND care, 466 received usual care in DIAMOND clinics pre-implementation, 559 received usual care post-implementation, and 308 received usual care in clinics that signed up for DIAMOND but never implemented it. We have data on the extent of implementation and depression remission rates for each of these groups and they will be ready for presentation at the conference. **Conclusions:** To be announced at the conference.

Keywords: Depression; Pragmatic trial

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PS1-35:

Transition to Electronic In-clinic Data Capture of Questionnaires Increases Collection Rates

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Background/Aims: Geisinger bariatric surgery patients complete questionnaires at various points throughout the program as part of their standard care. Until recently, this was done using paper copies completed at home, resulting in unacceptably low response rates. Opportunities to capture missed responses exist, but are difficult to identify in a busy medical clinic. The purpose of this study is to improve patient questionnaire completion rate using in-clinic capture while minimizing the impact on clinic efficiency. **Methods:** Planning meetings for implementation of the in-clinic collection process involved various stakeholders including researchers, clinicians, nurses, and front desk staff. Several options were considered for location (waiting room versus patient room) and for collection tool (tablets versus touch screens). The stakeholders agreed to implement a process using touch screens in the patient room. This process was piloted and patient interaction with the tool was evaluated. A 15 minute visit was prepended to the patients regularly scheduled visit to allow time for completion. Specialized software was used to implement and collect the touchscreen responses. Historical collection rates were compared to the pilot results. **Results:** During the pilot, 50 of 52 patients (96%) completed the touchscreen questionnaires. Mean time for completion of 140 questions was 15 minutes, which fell within the estimated time of our prepended visit. Time for the nurse to introduce the tool was under 2 minutes. While 38% of patients described some issue with using the tool, all patients rated the ease of use as 'Easy' or 'Very Easy'. Specific issues included patients understanding of the questions and first time use of

a touch screen. The completion rate during the pilot was significantly higher than the historical completion rate (96% versus 65%, $P < 0.0001$). **Conclusions:** Capture of in-clinic electronic questionnaires is feasible, but requires full support from providers, nurses, and front desk/scheduling staff. Long term integration may provide higher capture rates, which may result in improved patient care (i.e. allow the providers to directly address any issues raised by the responses) and better research.

Keywords: Questionnaire; Electronic capture

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PS1-49:

Comparative Health Systems Research among Integrated Delivery Systems and Managed Care Organizations: A Systematic Review

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Background/Aims: Due to rising health care costs and wide variations in quality, the U.S. health care system is undergoing rapid changes that include payment reform and movement towards integrated delivery systems (IDSs). Well-established IDSs, such as Kaiser Permanente (KP), must begin to identify the specific system-level factors that results in superior patient outcomes in response to policymakers' concerns. Comparative health systems research is one area that can provide insights into what particular aspects of the IDS results in improved care delivery. The objective of this systematic review was to examine the existing published studies on comparative health systems that relate to IDSs and KP to obtain a baseline understanding of the state of comparative health systems research to provide foundational knowledge. We also sought to identify the gaps in the literature on comparative health systems research. **Methods:** We conducted a literature search on PubMed and an internal KP Publications Library. Studies that compared KP as a system or organization to other health care systems, or across KP facilities internally were included. The literature search resulted in a total of 1,605 articles, of which 65 met the study inclusion and were examined by three reviewers. **Results:** The majority of comparative health system studies focused on intra-KP comparisons ($n = 42$). Fewer studies compared KP to other U.S. health care system ($n = 15$) or to international health care systems ($n = 12$). **Conclusions:** Of all studies published by or about KP, only a small proportion of articles were identified as being comparative health systems research. Additional empirical studies that compare the specific factors of the IDS model with other systems of care is urgently needed to better understand the "system-level" factors that result in improved and/or diminished care delivery.

Keywords: Integrated delivery systems; Comparative health systems

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Genetics

PS2-15:

Racial Disparities in Biobank Participation among Men in Southern California

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Background/Aims: Previous research suggests that participation of men in research is particularly low. We sought to identify predictors of participation among men in different racial groups in order to optimize future recruitment strategies. **Methods:** We assessed predictors of participation on randomly selected Kaiser Permanente Southern California male members = 18 years of age ($n = 90,199$) between November 2012 and June 2013. Men were asked to provide saliva samples for a research biobank. Potential predictors of participation were age, long-term membership ($= 5$ years), no significant gaps in health care coverage (< 3 month in last 3 years), physical examination within the last 3 years and neighborhood education and income. **Results:** Overall participation among men was 4.4%. Restricting recruitment to men with at least 5 years of membership, no significant gaps in health care coverage, and at least one physical examination, improved participation from