# responding to HEALTH



# a call for action EQUITY

## The Rodnick Colloquium

Innovations in Family & Community Medicine

Golden Gate Club, San Francisco June 2, 2016

#### JACK RODNICK MEMORIAL FUND

Dr. Jonathan (Jack) Rodnick served as Chair of the UCSF
Department of Family & Community Medicine from 1989 to 2003
and was a vital member of our faculty until his passing in
January 2008. To honor his legacy as a leader and scholar, our
department has created the Jack Rodnick Memorial Fund.
These funds support the Rodnick Colloquium on Innovations in
Family & Community Medicine and Rodnick Research Grant
Program, providing pilot funding for research projects by
medical students, residents, fellows, and junior faculty. Such
grants are instrumental in giving these "rising stars" a head
start in their scholarly pursuits and positioning them to
compete more successfully for larger research grants.

We would like to take this opportunity to thank the past year's donors for their generous contributions.

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Jack dedicated his life to improving medical education and patient care through intellectual inquiry and innovation. With the Rodnick Colloquium and Rodnick Research Gran Program, we invite you to join us in celebrating and continuing Jack's legacy.

For more information, please visit: http://fcm.ucsf.edu/about-us/support-us

#### CONTENTS



#### Golden Gate Club

- 4 Site Map
- 5 Event Schedule
- 6 Concurrent Talks Detail
- 8 Poster Presentations Detail
- 12 Abstracts-Concurrent Talks
- **28** Abstracts—Poster Presentations
- 63 Abstracts-Works Not Presented

#### COLLOQUIUM ORGANIZERS

#### COMMITTEE

Paula Braveman, MD, MPH • Susan Hughes, MS

Alexa Lindley, MD • Wolf Mehling, MD • Charlyn Paradis

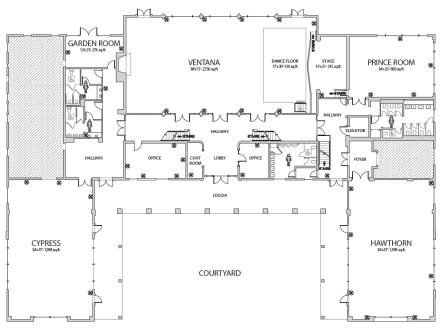
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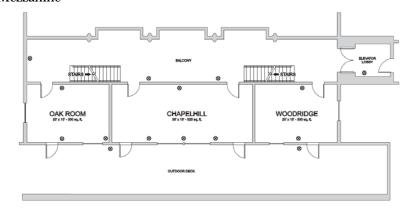
#### **VOLUNTEERS**

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Hannah Emple · Erin Hammer · Roy Johnston · Brian King
Kara Lugtu · Albert Marquez · Pat Mejia
Sandy Ng · Aisha Queen-Johnson · Rachel Willard-Grace
Amanda Sell · Adrienne Shatara · Alicia Velasquez · Connie Yu

#### First Floor



#### Mezzanine



<sup>\*</sup> The Woodridge room is a designated lactation lounge.

	EVENT	SCHEDULE
11:00 – 11:30	Registration and Lunch	Lobby & Courtyard
11:30 – 11:45	Welcome and Introduction *Please pick up provided lunch ahead of time	Ventana Room
11:45 – 12:45	Plenary Sessions	Ventana Room
	"From Words to Actions: Lessons Learned While Addressing Diversity and Equity in Residency" Diana Coffa, MD Residency Program Director UCSF-SFGH Family and Community Medicine Residency Claudia Diaz Mooney, MD Associate Residency Program Director UCSF-SFGH Family and Community Medicine Residency Aisha Scherr-Williams, MD PGY3 Resident Physician UCSF-SFGH Family and Community Medicine  "Documenting for Justice" Coleen Kivlahan, MD, MSPH Professor, UCSF Family and Community Medicine Executive Medical Director UCSF Health, Primary Care Services  "Embedding Health Equity in a Safety Net System" Concepcion Trevino James, MA Health Equity Manager, Contra Costa Regional Medical Center Health Centers & Detention, Contra Costa Health Services	
1:00 - 2:15	<b>Concurrent Breakout Session #1</b> <i>Cypress, Hawthorn, &amp; Prince Rooms</i> *See concurrent talk listing for specific room assignments	
2:30 – 3:40	<b>Poster Viewing Session</b> <i>Cypress, Hawthorn, &amp; Ventana Rooms</i> *See poster listing for more specific room/area assignments	
3:55 – 5:10	<b>Concurrent Breakout Session #2</b> <i>Cypress, Hawthorn, &amp; Prince Rooms</i> *See concurrent talk listing for specific room assignments	
5:10 – 5:25	Break	
5:25 - 5:45	Keynote Address "Overcoming the Hype Curve to Achieve Sus FCM Department Chair, Kevin Grumbach, MD	
6:00 - 6:45	Wine and Cheese Reception	Lobby & Ventana Room

#### CONCURRENT TALKS: Session 1

ORGANIZATION OF PRIMARY CARE/MEDICAL HOME

PRINCE ROOM

Moderator: Michael Potter. MD

Assessing capacity in medical patients with behavioral illness: How do you know?

Marc Tunzi, MD, MA

Abstract: p. 27

A clinic's pulse: Predictors of employee engagement

Margae Knox, MPH

Abstract: p. 15

Implementation of the CCC Substance Use Warmline: A new resource for primary care

Erin Lutes, RN, PHN, CNS and Carolyn Chu, MD, MSc

Abstract: p. 18

Hepatitis C in the 'Medical Home' - A new learning and care collaborative

Betty Dong, PharmD, FCCP, FASHP, FAPHA, AAHIVP

Abstract: p. 19

SOCIAL DETERMINANTS

**HAWTHORN ROOM** 

Moderator: Madeline Deutsch, MD

Integrating a medical-legal partnership into a county health center in West Contra Costa County

Alan Siegel, MD and Raegan Joern, Esq.

Abstract: p. 25

Integrating legal services into the Family Health Center

Lealah Pollock, MD, MS

Abstract: p. 20

Implementing a financial empowerment program to improve maternal and infant health

Mercedes Dekker, MPH

Abstract: p. 13

Addressing social determinants of health: A key component of a health equity framework

Rohan Radhakrishna, MD, MPH, MS, Concepcion James, MA & Mary Carl Abstract: p. 21

HEALTH DISPARITIES

CYPRESS ROOM

Moderator: Coleen Kivlahan, MD, MSP

Income inequality and health disparities among adults in California between 2001 and 2011

Eva Raphael, MD, MPH

Abstract: p. 22

Increasingly poor hospital data quality adversely affects the ability to identify race/ ethnic disparities

Jennifer Rienks, PhD

Abstract: p. 22

**CEDAWG: Community Engagement and Diversity Action Workgroup** 

Mariah Hansen, PsyD, Kareen Espino, MD, MPH, Daniel P. Whitesides, MD, MPH, Enrique Gonzalez-Mendez, MD, Kasey Deis, and Andre Mills

Abstract: p. 14

The Photovoice Project: Black mothers in California share their stories

Miranda Brillante, MPH

Abstract: p. 12

#### CONCURRENT TALKS: Session 2

**HEALTH CARE FOR UNDESERVED COMMUNITIES** 

PRINCE ROOM

Moderator: Laura Gottlieb, MD, MPH

Synergy Curriculum: Practice transformation, reducing health inequity one resident at a time

Steve Harrison, MD and Walt Mills, MD, MMM

Abstract: p. 20

Supported decision making: Enabling self-determination for people with disabilities

\*Clarissa Kripke, MD, FAAFP\*\*

\*Abstract: p. 16

Equity as quality: Reducing breast cancer screening and hypertension control disparities in San Francisco Health Network Primary Care

Ellen H. Chen, MD, Lisa Golden, MD and Kimmy Puccetti

Abstract: p. 12

Implementation of inpatient buprenorphine inductions at San Francisco General Hospital

Sky Lee, MD and Katherine Wei, MS4

Abstract: p. 17

**EDUCATION & TRAINING** 

**HAWTHORN ROOM** 

Moderator: Michael Reyes, MD, MPH

Neuroscience of teamwork

Jeremy Fish, MD

Abstract: p. 14

Integrating medication abortion services into resident family medicine clinics Christine Henneberg, MD, MS, Tamara McBride, MD, & Mana Pirnia, MD Abstract: p. 15

Does an anti-oppression curriculum increase the level of confidence in healthcare professionals to recognize unconscious bias and address it through allyship?

Lamercie Saint-Hilaire, MD and Diana Wu, MD

Abstract: p. 23

The road to excellence in primary care teaching clinics

Marianna Kong, MD

Abstract: p. 16

YOUTH OUTREACH & ADOLESCENT HEALTH

CYPRESS ROOM

Moderator: Margaret Stafford, MD

Addressing maternal mental health in California: Trends, disparities, and local challenges

Adrienne Shatara, MPH

Abstract: p. 24

Reallocation of residency training, resources and community action projects to more equitably address youth violence

Eric Sanford, MD

Abstract: p. 24

Summer Urban Health & Leadership Academy: Promoting youth leadership, wellness, and educational attainment through a community-academic health center partnership Manuel Tapia, MD, MPH

Abstract: p. 26

Coordinating the Summer Urban Health & Leadership Academy (SUHLA) Fellowship

Nathan Stern, MD

Abstract: p. 25

(Un)documented Asian and Pacific Islander health: Building community and raising immigrant youth voices in northern California

Irving Ling, BS, BA
Abstract: p. 18

#### POSTER PRESENTATIONS

ADDICTION MEDICINE & BEHAVIORAL HEALTH

CYPRESS ROOM

Integrative exercise reduces post-traumatic stress symptoms in war Veterans: the VGX Study

Wolf Mehling, MD

Abstract: p. 50

Expressive arts therapy opens the door to recovery in buprenorphine treatment groups

Kenneth Saffier, MD

Abstract: p. 53

Behavioral medicine skills and procedures curriculum project

Edward Macias. EdD

Abstract: p. 48

**CONTRACEPTION & REPRODUCTIVE HEALTH** 

**CYPRESS ROOM** 

Cluster randomized control trial of a contraception decision support tool

Judith Fitzpatrick, BA

Abstract: p. 37

Overcoming barriers to integrating abortion into practice: Results from an advanced abortion training program follow-up study

Alison Block, MD

Abstract: p. 30

Shared decision making in contraceptive counseling

Alexa Lindley, MD

Abstract: p. 47

Apple's abortion stigma: Holding our technology accountable for medical misdirection

Alexis Hoffman

Abstract: p. 43

Development of a decision support tool for postpartum contraceptive counseling

Judith Fitzpatrick, BA and Cara Hall, BA, MD Candidate

Abstract: p. 40

Learning from someone who knows: Teens' preferences for social communication

about contraception Whitney Wilson, MPH

Abstract: p. 59

MATERNAL CARE CYPRESS ROOM

Group prenatal visits: A resident run curriculum to promote community enrichment Rebecca Raymond, MD and Christina Zaro, MD

Abstract: p. 61

Reasons women report for not having a birth defects during pregnancy

Kristen Marchi, MPH

Abstract: p. 49

YOUTH OUTREACH & ADOLESCENT HEALTH

Cypress Room

Integration of topical fluoride varnish application in well child visits at Family Health Center

Claudia Mooney, MD

Abstract: p. 51

Community interventions to foster parental communication regarding adolescent sexual health

Rebecca Raymond, MD and Victoria Williams, DO

Abstract: p. 58

8

Partnering with a community organization to evaluate physical fitness of children in an afterschool program

Michelle Cohen, Erica Gagliardi, and Caitlin Higginbotham

Abstract: p. 28

Assessment of health care access and clinical care use patterns among Family health **Center Teen and Young Adult Clinic patients** 

Karina Yu and Tianyi Zhang Oxnard

Abstract: p. 61

Novel approach to screening sports physicals: Incorporating socio-emotional screening, intervention and education

Victoria Williams, DO and John E. Silva, MD

Abstract: p. 59

**EDUCATION & TRAINING** 

**HAWTHORN ROOM** 

From kvetching to curing: Assessing students' perceptions of primary care challenges and cultivating passion for change

Margo Vener, MD, MPH

Abstract: p. 55

Development of HIV consultation skills through interprofessional training for early career professionals

Erin Lutes, CNS

Abstract: p. 47

**Integrated Mobile Health Teaching Clinic** 

Kishore Nath, MD, Jeremy Fish, MD, and Diana Camacho

Abstract: p. 52

UCSF/Contra Costa/ Stanford/Aga Khan family medicine residency collaborative: An innovative model of medical education in family medicine

Neil Jayasekera, MD

Abstract: p. 44

Patient Partners and L-CHAMP: Student involvement in two early clinical exposure courses at Stanford Medical School

Victoria Boggiano, BA and Steve Ko

Abstract: p. 31

In our hands: A primary care procedures elective teaches students the scope and role of family medicine

Sara GaleWyrick, MD and Margot Vener, MD, MPH

Abstract: p. 38

A scholarly track in the medical humanities

Christine Henneberg, MD, MS

Abstract: p. 42

Teaching virtual medicine to residents: Expanding accessible, quality, patientcentered care with a telephone and secure messaging curriculum

Julia Shaver, MD and Matthew Symkowick, MD

Abstract: p. 53

A continuous curricular improvement process to address gaps in resident outpatient knowledge and training

Karen Alingog, MD

Abstract: p. 28

Interprofessional preceptorships in an ambulatory care clinic for student pharmacists Kirsten Balano, PharmD and David Schneider, MD Abstract: p. 29

Aligning system improvement with resident education: Creating a quality improve-

ment residency curriculum Brea Bondi-Boyd, MD

Abstract: p. 31

From learners to leaders: The Advocacy, Community Engagement, Quality Improvement and Leadership Academy (ACQILA) at the University of California, San Francisco Laura Gottlieb. MD. MPH Abstract: p. 39

HEALTH EDUCATION

**HAWTHORN ROOM** 

Patient perspectives on hypertension management at Potrero Hill Health Center

Jennifer Sneden, MS

Abstract: p. 55

Is the patient still using it?: A statistical method to understand patterns of mobile health device use

Lenard I Lesser, MD, MSHS

Abstract: p. 46

Health literacy and mass media communication for chronic diseases

Judi Wong, DO, MPH

Abstract: p. 49

Baseline characteristics of patients in a randomized controlled trial of health coaching for patients with COPD

Chris Chirinos, BA

Abstract: p. 33

GLOBAL HEALTH **HAWTHORN ROOM** 

Perceptions of family medicine in Malawi: A pilot survey among medical students Emily Cotter, MD, MPH Abstract: p. 34

Family medicine in China: Lessons for US family medicine residency training

Brian Johnson, MD

Abstract: p. 45

HEALTHCARE FOR THE UNDERSERVED

VENTANA ROOM

Closing the loophole: A case study of the Chinese Progressive Association organizing for more equitable access to health care in San Francisco

Susan Fang

Abstract: p. 36

The San Francisco Muslim fellowship: Using faith based groups to foster a community of healing for marginalized Muslims

Suzanne Barakat, MD and Nazneen Uddin, MD

Abstract: p. 29

Systematic review on the impact of patient advisory councils on healthcare delivery

Victor Mleczko Abstract: p. 65

Improving the health of urban immigrant communities in Oakland using the Street **Level Health Project model** 

Meggie Woods, MD

Abstract: p. 60

From a mobile van to a medical home: Bringing medicine into the community Abstract: p. 57

Mariah Hansen, PsyD and Daniel P. Whitesides MD, MPH

Success of a minority aids initiative in training minority and/or minority-serving providers

Nancy Warren, MPH, MA

Abstract: p. 56

ORGANIZATION OF PRIMARY CARE/MEDICAL HOME

**VENTANA ROOM** 

Primary care provider perceptions of patient engagement in an eReferral system: Lessons learned from a safety net system

Margae Knox, MPH

Abstract: p. 52

Home-based primary care: A dynamic and evolving model for delivering care to complex and high-risk homebound patients

Health Systems & Leadership Pathway, UCSF and Caroline Morgan, MD Abstract: p. 41

Telehealth: A pilot of realtime video appointments in a family medicine clinic Laura Hill-Sakurai, MD Abstract: p. 42

Scratching each other's backs: How a Medical-Legal Partnership can complement and enhance existing services to address patients' social-legal needs

Lealah Pollock, MD, MS and Georgia Sleeth, BA

Abstract: p. 54

Design, implementation and initial outcomes of a hospital-based patient navigator Jack Chase, MD, FAAFP Abstract: p. 32

#### **RESEARCH QUALITY & IMPROVEMENT**

VENTANA ROOM

Implementation of a pilot telemedicine program for the provision of gender affirming hormones

Madeline B. Deutsch, MD, MPH Abstract: p. 36

Integrating primary care transformation principles into resident quality improvement curriculum

Claudia D. Mooney, MD Abstract: p. 50

Impact of race on pain management outcomes in a community-based teaching hospital following inpatient palliative care consultation

Duc Chung, MD Abstract: p. 34

Recruitment challenges in a randomized control trial for patients with COPD in a safety net setting

Beatrice Huang , BA Abstract: p. 44

A first year medical student's experience conducting a quality improvement project assessing smoking status documentation in vulnerable populations

Lydia Leung, MD and Justin Williams Abstract: p. 57

Implementation of a resident clinic-based quality assurance program using the AAFP METRIC tool: Year two

Chelsea Chung, DO and John E. Silva, MD

Abstract: p. 33

Defining a hypertension protocol at the University of California, San Francisco Lakeshore clinic

Lauren Hennein, BA and Sean McCarthy, BA Abstract: p. 41

#### WORKFORCE DEVELOPMENT

VENTANA ROOM

Mentoring tomorrow's healthcare leaders: The Summer Urban Health Leadership Academy mentoring program

Jillian Geissler, RN, MS Abstract: p. 38

Initial practice sites of graduating Family Medicine residents in the San Francisco Bay Area 2005-2014: Trends in working with vulnerable populations

Emilia H. De Marchis, MD

Abstract: p. 35

Using a change management approach to implement medical screening examination and provider-nurse pairing workflows in an urban urgent care center

Carmen Wah Liang, DO, MPH

Abstract: p. 46

Mentoring diverse students through the Future Faces of Family Medicine program
Francheska Gurule, MD
Abstract: p. 39

#### ABSTRACTS: Concurrent Talks

BRILLANTE M\*, DEKKER M, EMPLE H, BUTLER A, EGERTER S, BRAVEMAN P. The Photovoice Project: Black mothers in California share their stories

**CONTEXT & OBJECTIVE:** Current science provides a strong basis for interventions that target social factors, including racism-related stress and disempowerment, to improve maternal and child health. The Photovoice Project uses photography and writing to enable women to reflect on and communicate their experiences in their communities, and to have positive impacts on factors related to self-efficacy, empowerment, and stress. Photovoice supplements California's Black Infant Health Program (BIH), a statewide community-based program promoting black maternal and infant health.

**SETTING/POPULATION:** During August 2015-January 2016, four groups of women participated in Photovoice at two BIH sites in San Diego and San Francisco counties. 8-10 current or former BIH clients (pregnant or parenting black women) participated in each group series.

**INTERVENTION/STUDY DESIGN:** The Photovoice Project consists of 5 weekly 2.5-hour group sessions. The curriculum is culturally-relevant (including a history of African American photography) and includes camera and ethics training. Participants use a structured process to share their photos, write accompanying stories, identify common themes, and plan a Community Event to exhibit selected photos for community members. Qualitative and quantitative data were collected from participants to assess program impact on participants' sense of empowerment, stress, and connectedness to others. Participants completed pre/post assessment forms and provided feedback about their experiences in a final 6th group session following the Community Event. BIH staff at each site participated in a two-day training prior to conducting Photovoice and used standardized curriculum materials and procedures during implementation.

**OUTCOMES/RESULTS:** Based on preliminary data, findings suggest that participants' involvement in Photovoice fostered feelings of pride in themselves, their families, and communities. Exhibiting their photos in a public forum validated their personal stories of perseverance in the face of challenging circumstances. Attendees at the Community Events appreciated seeing photos and hearing stories of loving black motherhood. One attendee wrote, "This project can serve as an outlet for community members to tell stories about where they come from, what their challenges in life have been, and also highlight the beauty in their community."

**CONCLUSIONS:** Photovoice should be implemented at additional BIH sites to promote women's well-being and to build awareness of issues related to black motherhood in California communities.

CHEN E.\*, PUCCETTI K, GOLDEN L, AGGARWAL S. Equity as quality: Reducing breast cancer screening and hypertension control disparities in San Francisco Health Network Primary Care

**CONTEXT & OBJECTIVE:** In April 2014, the San Francisco Health Network Primary Care (SFHN PC) found an 11% gap in breast cancer screening between Black/African Americans (BAA) women and the general eligible population. In January 2015, the disparity gap in blood pressure control between hypertensive BAA and the total population was 7.6%. Aligned with network "True North" priorities and the SF Department of Public Health Black African American Health Initiative (BAAHI), SFHN PC has initiated efforts, specific to breast cancer screening and hypertension control, to reduce racial disparities in healthcare using a Quality Improvement (QI) framework across 15 primary care clinics.

**SETTING/POPULATION:** SFHN PC serves 70,000 patients, 15% (11,000) of whom are BAA patients. Equity interventions focused on the health needs of 1800 BAA patients eligible for breast cancer screening and 4,000 BAA patients with hypertension.

**INTERVENTION/STUDY DESIGN:** In 2014-15, the SFHN PC incorporated QI methodology to improve clinic QI team-based workflows with input from clinic staff and patient focus groups. The initiative

incorporated panel outreach phone calls, defined standard workflow for referrals and drop-in mammograms, and leveraged use of the MammoVan. In parallel to 2015 QI efforts to improve PC-wide hypertension control, the Hypertension Health Equity initiative reviewed monthly data by race, engaged staff from PC clinics with the highest numbers of BAA patients, and partnered with patient advisors and the Population Health Division to identify primary contributing factors and prioritize possible interventions for 2016.

**OUTCOMES/RESULTS:** SFHN PC improved mammogram screening rates between April 2014 and Sept 2015 from 68% to 73%. At the same time, screening rates for BAA women increased from 61% to 68%, decreasing the gap from 11% to 5%. Hypertension control rates for SFHN PC patients improved from 61% to 65% in 2015. While control rates for BAA patients improved from 53% to 57% over the year, the disparity gap between BAA and the total population increased from 7% to 10% in 2015.

**CONCLUSIONS:** SFHN PC has reduced the disparity among breast cancer screening rates and is actively working to reduce disparities in hypertension control through clinic workflows that support culturally sensitive education, home BP monitoring and medication adherence.

### DEKKER M\*, BRILLANTE M, EMPLE H, BUTLER A, EGERTER S, BRAVEMAN P. Implementing a financial empowerment program to improve maternal and infant health

**CONTEXT & OBJECTIVE:** Current science provides strong support for interdisciplinary interventions focused on addressing social and economic disadvantage to improve maternal and infant health and reduce persistent racial disparities in birth outcomes. Drawing on the fields of financial capability and maternal health, we developed, implemented, and evaluated a Financial Empowerment Program (FEP) to promote the health and wellbeing of black women and their families by strengthening their financial capacities. FEP supplements California's Black Infant Health Program (BIH), a statewide community-based program that promotes black maternal and infant health.

**SETTING/POPULATION:** Six FEP group series were implemented with BIH clients at two sites between 2014 and 2015; 70 pregnant or postpartum African-American women participated.

**INTERVENTION/STUDY DESIGN:** FEP is a group-based intervention comprising six sessions focused on improving financial knowledge and skills, reducing stress related to finances, and promoting behaviors that could positively influence the health of participants and their families. FEP helps women better understand their financial histories and values, create visions for their families' financial futures, and set and become accountable for personally meaningful financial goals. Facilitator training includes activities to help staff gain insights into their own financial attitudes and behaviors and enhance their capacity to create an environment where participants can openly communicate about finances. We collected qualitative and quantitative data to assess changes in participants' understanding of key financial topics, confidence in managing their finances, and their financial practices.

**OUTCOMES/RESULTS:** More than 80% of participants reported annual incomes less than \$25,000, over 30% had more than \$10,000 in debt, and 88% reported stress over finances at baseline. Preliminary results indicate that participants experienced improvements in multiple positive financial practices (e.g., tracking spending and using budgets), greater sense of control over their finances and reduced financial stress, and greater confidence in their abilities to provide for their children.

**CONCLUSIONS:** Our experiences support both the importance and feasibility of using an empowerment-focused approach for integrating financial capability services in maternal health programs. Training staff to effectively facilitate financial conversations is key for effective implementation.

#### FISH J\*. Neuroscience of teamwork

**CONTEXT & OBJECTIVE:** Inter-professional teamwork is at the heart of PCMH. Recent evidence from Grumbach et al indicate the relationship between residents and their MAs is essential to the overall performance of the Residency Practice. Building teamwork can be challenging in environments where staff are employed within rigid silos that inhibit trust and flexible job descriptions. Emerging evidence in Neuroscience indicate that Oxytocin and Mirror Neurons play an important role in the development of high-performance teams through improved vulnerability-based trust, empathy, and collaborative behaviors. Lencioni et al have also indicated that trust is the foundation of all effective teamwork. This presentation will integrate emerging Neuroscience of social behaviors and inter-professional teamwork building to give participants effective ways to enhance and expand teamwork in their educational environments.

**SETTING/POPULATION:** Residency and Medical School primary care practices.

**INTERVENTION/STUDY DESIGN:** Integrate Neuroscience of Social Behavior and Teamwork model of Lencioni into a Neuroscience of Teamwork within a Healthcare Educational practice environment.

**OUTCOMES/RESULTS:** Simple, cohesive model for teaching medical students, residents, and other healthcare professionals how to recognize key elements of teamwork and enhance teamwork through cultivation of team-oxytocin and mirror-neuron exercises and awareness.

**CONCLUSIONS:** Integrating emerging Neuroscience of social behaviors by cultivating team-oxytocin and enhancing activation of mirror neurons could improve the culture of teamwork by building two essential ingredients of teamwork, vulnerability-based trust and empathy within the team.

## HANSEN M\*, ESPINO K\*, WHITESIDES D\*. CEDAWG: Community Engagement and Diversity Action Workgroup

**CONTEXT & OBJECTIVE:** Mahatma Gandhi tells us "You must be the change you wish to see in the world." To this end, our residency formed an extracurricular workgroup of residents, faculty, and staff dedicated to exploring and promoting social justice within our residency and beyond.

**SETTING/POPULATION:** Our Community Engagement and Diversity Action Workgroup (CEDAWG) is an extra-curricular workgroup of residents, faculty, and staff that meet regularly throughout the academic year. The group has a faculty advisor and two resident chairs. The resident chairs hold the position for two years and are allocated administration time. During regular business meetings, the group focuses on supporting the growth and development of the residency's Cultural Responsive Medicine Curriculum. Our social events occur off-site and provide opportunities to reduce bias and stereotypes through getting to know one another more intimately. CEDAWG also produces a quarterly newsletter that is dispersed throughout the residency.

**INTERVENTION/STUDY DESIGN:** CEDAWG operates as a steadfast advocacy group promoting equality and justice within our institution and fostering ongoing discussions and responses to local and world issues. We serve as a hub for many other community activism efforts such as mobile van and pipeline mentoring. Each year we develop specific recruitment strategies targeted at diversifying our residency. We act as champions to highlight implicit biases that affect all aspects of our residency, both in extra-curricular and more formal curriculum.

**OUTCOMES/RESULTS:** CEDAWG offers a safe and constructive environment for members of our residency community to come together for personal development, promotion of diversity, and community engagement. Our group has helped to increase the residency's presence in our community, solidified in our curriculum dedicated didactic slots for diversity topics, and alter recruitment/selection practices. Recently, FQHC partners have created a workgroup of their own modeled after CEDAWG.

**CONCLUSIONS:** We're inundated with stories and images of violence and racial intolerance on a daily basis. This often becomes overwhelming and can lead to a sense of powerlessness. Working within a community that tackles these issues together allows individuals to develop their voice and take stronger action together.

#### HENNEBERG C\*, PIRNIA M\*, McBRIDE T\*. Integrating medication abortion services into resident family medicine clinics

**CONTEXT & OBJECTIVE:** Every year, residents at our community family residency program express a desire for formal training in first-trimester abortion care. Most of this training currently takes place in high-volume off-site abortion clinics, because the barriers to providing abortions in the family medicine clinic setting are numerous. As third-year residents, we recognized an opportunity to meet two needs: 1) increase training opportunities for residents who wish to provide MABs in their clinics and 2) improve patient access to integrated medication abortion (MAB) services.

**SETTING/POPULATION:** Our initial project is intended to reach residents working at the Martinez Family Medicine Clinic (one of four resident clinic sites in our program) and their patients (specifically, women of reproductive age with unintended pregnancies who seek options counseling).

**INTERVENTION/STUDY DESIGN:** The CREATE program supports residents who wish to receive additional abortion training and implement an independent project in the area of reproductive health. We worked with our CREATE mentors, stakeholders within our residency program, the departments of family medicine and OB/Gyn, and residents at similar family medicine programs to develop a working system in which residents can provide our patients with integrated MAB services during a normal clinic day. The system includes a written handbook for resident providers, written materials for patients, a standardized work flow for obtaining laboratory tests and administering MAB medications, real-time preceptor support for residents providing MABs during clinic, and a backup call system for after-hours emergencies.

**OUTCOMES/RESULTS:** The project is in its final stages of planning and troubleshooting. Currently, we anticipate residents will begin using our MAB training system at the start of the 2016-2017 residency year.

**CONCLUSIONS:** In the past, residents have encountered numerous barriers to providing medication abortion services as part of their regular family medicine clinic. A rigorous, standardized system for providing MABs in resident clinics may help improve patient access to these services, as well as resident training opportunities.

## KNOX M, WILLARD-GRACE R, OLAYIWOLA JN, GRUMBACH K. A clinic's pulse: Predictors of employee engagement

**CONTEXT & OBJECTIVE:** The Pulse Survey, also known as the Net Promoter Score® or Friends and Family Test, is touted as a quick, efficient assessment of employee engagement. Despite widespread interest, there is little research about factors that influence Pulse results in clinic settings. We examine the extent to which clinic processes/capabilities, team culture, and behavioral health resources are associated with Pulse measures.

**SETTING/POPULATION:** We surveyed 358 primary care providers (PCPs) and 533 staff at 13 county-based and 6 university-run primary care clinics in San Francisco between November - December 2015.

**INTERVENTION/STUDY DESIGN:** This cross-sectional survey examined two Pulse measures as outcome variables: a) likelihood to recommend clinic as a place to work and b) likelihood to recommend clinic as a place to come for care. The three predictor variables examined included staff capacity to conduct panel management, team culture, and perceived clinic resources to address behavioral health. Control variables included PCP half-day sessions or staff hours per week as well as PCP and staff num-

ber of years worked at the clinic. Associations were examined separately for PCPs and staff using multiple linear regression models with clustering by clinic.

**OUTCOMES/RESULTS:** Team culture among PCP respondents was positively and significantly associated with both "place to work" (?= 0.95, p< 0.001) and "place for care" (?= 0.12, p< 0.001) Pulse measures. Perceived behavioral health resources among PCPs was positively and significantly associated with "place to work" (?= 0.10, p< 0.05). Panel management among PCPs was positively and significantly associated with "place for care" (?= 0.20, p< 0.05). Among staff respondents, team culture was also positively and significantly associated with both "place to work" (?= 1.24, p< 0.001) and "place for care" (?= 1.03, p< 0.001). Perceived behavioral health resources among staff was, in contrast to PCPs, positively and significantly associated with "place for care" (?= 0.20, p= 0.001). Panel management among staff was not significantly associated with Pulse measures.

**CONCLUSIONS:** Both PCP and staff Pulse measures were positively and significantly associated with team culture and behavioral health predictors. Clinics seeking to improve employee engagement may want to assess team development efforts and resources to be able to address behavioral health.

#### KONG M\*, DUBÉ K, WILLARD-GRACE R, BODENHEIMER T, OLAYIWOLA JN, GUPTA R. The road to excellence in primary care teaching clinics

**CONTEXT & OBJECTIVE:** Primary care teaching clinics face unique challenges in reconciling the dual missions of training future clinicians and providing clinical care. The presence of many part-time providers and inconsistent scheduling in teaching clinics often leads to difficulties with continuity, access, and stable teams, creating disorganized clinic environments that discourage trainees from careers in primary care. We sought to identify best practices in existing teaching clinics in order to define the key elements necessary to transform primary care teaching clinics into high-performing practices that provide the optimal experience for trainees, staff, and patients alike.

**SETTING/POPULATION:** We conducted site visits at twenty-three primary care teaching clinics nationwide, which included teaching clinics in family medicine, internal medicine, and pediatric residencies.

**INTERVENTION/STUDY DESIGN:** Site visits were completed using a structured site visit guide and semi-structured interviews with clinic leadership, providers, trainees, and staff. Two independent researchers coded and analyzed site visit reports using an iterative process, and the research team collaborated to identify major themes from the visits.

**OUTCOMES/RESULTS:** A number of these clinics were high-performing with respect to continuity of care, patient access, cohesive care teams, and resident experience. Six major principles were identified as important in building high-functioning primary care teaching clinics: 1) design resident schedules that prioritize continuity of care and eliminate tension between inpatient and outpatient duties, 2) develop a small core of clinic faculty. 3) Create operationally excellent practices, 4) build stable clinic teams that give residents, staff, and patients a sense of belonging, 5) increase resident time spent in primary care clinic to enhance ambulatory learning and patient access, and 6) engage residents as coleaders of practice transformation.

**CONCLUSIONS:** In contrast to the traditional teaching clinic paradigm of hospital first/clinic second, these features constitute a new teaching clinic paradigm: Clinic First. By using these principles, teaching clinics created high-functioning practices in which residents learn how to become future leaders in primary care by experiencing well-functioning clinics and truly engaging in practice improvement. The Clinic First model provides a roadmap for transformation for primary care teaching clinics seeking to achieve the synergistic "double helix" of providing both high quality care and high quality primary care training.

#### KRIPKE C\*. Supported decision making: Enabling self-determination for people with disabilities

**CONTEXT & OBJECTIVE:** Like everyone, people with disabilities may need support to access medical care. They may need help making appointments; communicating, making informed consent decisions, and following through on their plan of care. Supported health care decision making empowers adults with disabilities to name supporters to help them so they can direct their own lives.

**SETTING/POPULATION:** Supported health care decision making targets people who can manage their own care with proper support even if they cannot do so independently. It also helps people whose capacity is overlooked because of their appearance, communication style, or way of learning. Unlike a power of attorney or conservatorship, with supported decision making, the person with the disability retains the ability to make all final health care decisions.

**INTERVENTION/STUDY DESIGN:** Proponents of supported decision making have developed model agreements to formalize the support relationship in the health care setting. These agreements enable patients, supporters, and health care providers to work together to share confidential information, develop plans of care, explain choices, and act on decisions the patient makes with support. The Office of Developmental Primary Care developed three, short videos explaining and modeling supported decision making in the health care setting for three audiences: professionals , families, and self-advocates. Accompanying training materials were developed and disseminated. http://odpc.ucsf.edu/supported-health-care-decision-making

**OUTCOMES/RESULTS:** Supported decision making is gaining legal recognition and acceptance. Model legislation was developed by the Autistic Self Advocacy Network. It is being advanced by the American Civil Liberties Union and the Arc of California. It includes protections for clinicians who share confidential information, and who act on informed decisions made or communicated with support. Efforts are currently underway to pilot supported health care decision making in the Bay Area.

**CONCLUSIONS:** Family Physicians have a key role in advancing the rights of people with disabilities to direct their own lives. Supported health care decision making agreements are a way for physicians to help their patients, while improving the process, quality and cost effectiveness of the care we can provide.

#### LEE S\*, WEI K\*, COFFA D. Implementation of inpatient buprenorphine inductions at San Francisco General Hospital

**CONTEXT & OBJECTIVE:** To create a protocol for inpatient buprenorphine inductions (IBI) at San Francisco General Hospital (SFGH). In 2013, the National Survey on Drug Use and Health found 4.8 million people with opioid use disorder in the United States, however only 7.2% received treatment. Hospitalizations can provide an impetus for change and an opportunity for support. Buprenorphine is a medication that primary care providers (PCPs) can prescribe to treat opioid use disorders. In 2014, Liebschultz and Crooks published a study showing that buprenorphine induction in hospitalized patients lead to improved addiction-related outcomes after discharge. In 2014, a needs analysis on the Family Medicine Inpatient Service (FMIS) estimated that one patient a month would be both eligible and willing to undergo IBI at SFGH.

SETTING/POPULATION: Hospitalized patients with an opiate use disorder on FMIS at SFGH.

**INTERVENTION/STUDY DESIGN:** We designed an IBI protocol for patients at SFGH involving a multidisciplinary team of pharmacists, social workers, physicians and a local clinic specializing in officebased buprenorphine treatment (OBIC). First, we worked with hospital leadership and specifically with pharmacists to add buprenorphine to the inpatient formulary and establish protocols for prescribing in both the inpatient setting and at discharge. We then created an algorithm for IBI to help physicians identify eligible patients and to guide the induction process. A family medicine doctor with addiction experience holds a pager for any questions regarding the process. Upon discharge, patients are transitioned to OBIC to finish their inductions, receive psychosocial support, and establish contact with an X- licensed PCP.

**OUTCOMES/RESULTS:** We launched the protocol in December 2015. Approximately one patient per month has started buprenorphine for opiate addiction treatment. We are tracking these patients' retention in both substance use treatment and primary care after discharge.

**CONCLUSIONS:** Thanks to the collaborative effort of our interdisciplinary team, hospitalized patients with opiate use disorders now have an additional treatment option. We hope this will have downstream effects on health outcomes. We plan to evaluate our IBI protocol for effectiveness and efficiency, and eventually aim to implement IBI for all eligible hospitalized patients at SFGH.

## LING I\*, SUDHINARASET M. (Un)documented Asian and Pacific Islander health: Building community and raising immigrant youth voices in northern California

**CONTEXT & OBJECTIVE:** While the Affordable Care Act worked towards expanding health coverage to over 32 million individuals, it has purposefully excluded 11.7 million undocumented immigrants. Despite making up 28.5% of the California's undocumented population, Asian and Pacific Islanders (APIs) are rarely included in larger conversations on immigration and healthcare reform. This study is the first to investigate the health status and utilization patterns of undocumented APIs living in Northern California.

**SETTING/POPULATION:** In-depth interviews (IDI) and focus group discussions (FGD) were conducted with Asian and Pacific Islander youth between the ages of 18 and 31, who currently live in Northern California and are undocumented. IDIs and FGDs were conducted at the UC campuses as well as community based organizations.

**INTERVENTION/STUDY DESIGN:** First, formative interviews were conducted with 17 key informants regarding the challenges that undocumented API youth face and how they access mental health services and medical care. Participants were recruited to take part in a FGD, IDI, or both. FGDs and transcriptions are currently being coded and analyzed through an iterative-grounded theory methodology using the qualitative software Atlas ti.

**OUTCOMES/RESULTS:** Preliminary data includes three FGDs and 16 IDIs, with a total of 25 participants recruited. The average age of the participants was 22.8 years old and 24% were undocumented and DACA-ineligible. Several themes emerged: 1) Participants reported that they and their families have a very high threshold to seeking formal medical services, often waiting until the situation becomes critical; 2) Policies that bar undocumented immigrants from accessing affordable healthcare contribute to that high threshold, as financial burden is a major barrier to care; 3) When participants did utilize healthcare services, they often expressed frustration with providers who did not understand, and sometimes even belittled, the challenges that face undocumented immigrants.

**CONCLUSIONS:** There are a number of programmatic and policy implications for undocumented API youth and their families: 1) Policies preventing access to affordable primary care and mental health, result in high cost and critical health situations arising from largely preventable causes; 2) There is a critical need in increased training and education for providers surrounding the best practices for serving undocumented API youth.

#### LUTES E\*, STEIGER S, GOLDHAMMER B, EVELAND J, GASPER J, CHU C, GOLDSCHMIDT R. Implementation of the CCC Substance Use Warmline: A new resource for primary care

**CONTEXT & OBJECTIVE:** Substance use contributes enormously to morbidity and mortality, yet a tiny fraction of patients receive medical treatment. Primary care providers may benefit from real-time clinical decision support to deliver patient-centered, evidence-based care for this complex patient population.

**SETTING/POPULATION:** The Substance Use Warmline (SUW) was developed as a pilot between the Clinician Consultation Center (CCC) and Bureau of Primary Health Care (BPHC). Consultation is free, and targets clinical providers across the U.S. working in Community Health Centers. The CCC also aims to link SUW callers to expanded consultation opportunities for HIV prevention and management as indicated.

**INTERVENTION/STUDY DESIGN:** The SUW was introduced in December 2015. CCC consultants include clinical nurse specialists, Addiction Medicine-certified physicians, and clinical pharmacists experienced in substance use and psychiatry. The team developed a standardized data collection tool on which each consultant records the nature of consultation provided. Caller satisfaction is assessed via a 5-item survey, sent out a week after each completed consultation. In this study, we collated preliminary data and analyzed for trends.

**OUTCOMES/RESULTS:** Over its first 2 months, the SUW received 10 calls. 40% of callers were physicians (50% Family Medicine, 50% Internal Medicine); 50% nurse practitioners; and 10% physician assistants. Most cases involved comorbid conditions, with the greatest percentage attributed to chronic pain and psychiatric issues (31.25% each). 17.4% of consultations included discussions on opioid safety including overdose prevention. The majority of cases involved prescription opioids (27.3%) while cocaine and sedatives/hypnotics/anxiolytics comprised 13.6% of calls each. Preliminary caller feedback indicates 100% were pleased with consultation quality, rating the service a 5.0 (Likert scale of 1-5). 100% of callers felt the clinician whom they spoke with was knowledgeable, and felt their questions were answered thoroughly, rating each a 5.0. All callers felt the information was useful in managing their case (rating: 5.0), and would use the service again as well as recommend it to colleagues.

**CONCLUSIONS:** Remote, telephone-based substance use consultation appears to be a feasible and acceptable point-of-care resource for primary care clinicians of varied training backgrounds. Common consultation topics include management of chronic pain and psychiatric co-morbidities. Early adopters have been highly pleased with the service.

#### MACKENZIE K, CHU C, DONG B\*. Hepatitis C in the 'Medical Home' - A new learning and care collaborative

**CONTEXT & OBJECTIVE:** Successful hepatitis C (HCV) management shares core principles with primary care and practice transformation, namely patient engagement, "task sharing" and care coordination. With recent availability of simple, effective medications, primary care-based HCV treatment has become a viable alternative to specialty-limited treatment.

**SETTING/POPULATION:** UCSF's Department of Family and Community Medicine (DFCM)/Family Health Center (FHC) assembled an inter-professional "Hepatitis C Team" in 2015-2016 to integrate HCV care into Department educational activities and FHC clinical services. This was closely aligned with the San Francisco Department of Public Health's efforts to increase primary care HCV capacity.

**INTERVENTION/STUDY DESIGN:** The Hepatitis C Team's preliminary work included building a patient registry using a population health management analytics tool applied to FHC's electronic health record. Providers were surveyed to assess HCV confidence and identify preferences regarding personal HCV practice and educational needs. HCV teaching was formally introduced to the DFCM residency through multiple didactic and case-based sessions, and a new HCV curriculum is also underway.

**OUTCOMES/RESULTS:** As of February 2016, FHC's HCV registry includes ~250 patients, with ~70% possibly ideal for primary care-based treatment. 53 providers completed the survey. Self-identified strengths included identifying "priority patients" for treatment (38.5% moderately to very confident) and medication adherence counseling (41.5% moderately to very confident). Respondents indicated less confidence regarding pre-treatment readiness assessment (24.5% moderately to very confident, 39.6% somewhat confident, and 35.9% minimally to not confident). Respondents were least confident

in selecting regimens and navigating prior authorizations (92.3% and 90.6%, respectively, indicated they were minimally to not confident in these areas). 47.2% preferred to actively co-manage with an HCV-experienced provider. 7.6% preferred an on-site team to completely manage their patients' HCV. No respondents wanted to manage HCV independently with minimal consultation. All respondents indicated interest in additional HCV training.

**CONCLUSIONS:** HCV provides new, rewarding opportunities for expanded clinical education and skills -building for primary care providers. FHC has a sufficient panel size and provider interest to implement on-site services and training on a greater scale. Next steps include identifying best practices and workflows to deliver effective HCV care at FHC. Opportunities for greater and direct resident exposure to HCV management can help solidify clinical teaching concepts.

#### MILLS $W^*$ , PARSONS E, HARRISON, S. Synergy curriculum: Practice transformation, reducing health inequity one resident at a time

**CONTEXT & OBJECTIVE:** We believe that Residency transformation is crucial to reducing health inequity. Natividad Family Medicine Residency Center (FMC) is based in an FQHC. It has no certification as a Patient Centered Medical Home. Resident and faculty experience in the clinic has often been rated poorly. The Center for Excellence in Primary Care's (CEPC) building blocks describe Transformed Residencies that already exist. There has been no prospective study we know of demonstrating that these building blocks can transform an existing poorly performing, under-resourced FMC into a high performing one. This prospective study is designed to test the hypothesis that curriculum can be designed to "transform" a Residency Clinic, despite being under resourced.

**SETTING/POPULATION:** Faculty, Clinic Leadership, and FM Residents collaborated in curriculum design in our FMC.

**INTERVENTION/STUDY DESIGN:** We designed a prospective study of innovative curricular interventions phased in over three years modeled upon CEPC's more expanded set of building blocks foundational for high performing "transformed" family medicine residency teaching practices (1). Phase 1 pilot curriculum was launched in January 2014, Phase 2 in January 2016, with full Phase 3 three year integrated curriculum scheduled for July 2016.

**OUTCOMES/RESULTS:** Resident and graduate surveys on practice choice, knowledge of the building blocks, clinical disease management data, and comfort working in teamlets managing panels of patients are being measured. Resident surveys and interviews have demonstrated improved satisfaction, knowledge, skills and attitudes around clinical education and experience in the FMC.

**CONCLUSIONS:** In January 2014 the Residency initiated new curriculum based on the CEPC's Building Blocks. 1) Early results in Phase 1 and 2 have been favorable regarding resident experience and acquisition of knowledge, skills, and attitudes predictive for better preparation to succeed in contemporary family medicine. 2) If Phase 3 curriculum can succeed in a resource poor environment serving the most vulnerable, underserved patients, then such residency transformation curriculum could legitimately be implemented in similarly challenged training environments nationally, even globally. 3) Most importantly, prospective study designs, like this inform FM educators how to develop more effective practice transformation curriculum, even in environments not operating as transformed clinical practices.

## POLLOCK L\*, SLEETH G, CHEUK T, ECHIVERRI A, KIRSCH A, PULLEN L, CHENG J, GOTTLIEB L. Integrating legal services into the Family Health Center

**CONTEXT & OBJECTIVE:** Medical legal partnerships (MLP) are unique partnerships that bridge the divide between health care and legal teams, integrating legal services into a holistic clinic-based approach to addressing social determinants of health. Medical providers at the Family Health Center

(FHC) at San Francisco General Hospital (SFGH) recognize the impact of social circumstances on health, but often feel ill equipped to help patients change these circumstances. Integrated legal services can complement the robust social services available to patients through the Behavioral Health Team (BHT).

**SETTING/POPULATION:** Implementation of an MLP in the FHC involved collaboration between faculty medical providers, residents, BHT providers, legal partner leadership, FHC and Department of Family and Community Medicine (DFCM) leadership and staff, and the existing SFGH Children's Health Center (Pediatrics) MLP.

**INTERVENTION/STUDY DESIGN:** Over the course of 18 months, we met monthly as a core group. We met with key stakeholders to gain buy-in and plan MLP integration with existing medical services. We analyzed the structure of MLPs around the Bay Area and nationally, mapping out other programs' workflows and weighing pros and cons of different integration models.

**OUTCOMES/RESULTS:** Based on our analysis of other MLPs and the success of our colleagues at the Pediatrics MLP, we forged a collaboration with Bay Area Legal Aid (Bay Legal), a local legal aid organization with a target population and mission that closely parallel those of the FHC. The FHC-based MLP is structured around referral-based legal services, with an attorney on-site part-time and a pilot that includes proactive screening for legal needs in one target clinic. We received start-up funding from the DFCM, in-kind support from Bay Legal, and a one-year implementation grant from the SFGH Foundation. In our first three months, we had 31 referrals and 19 cases opened, related to a wide variety of issues, including income support, housing and habitability, and employment.

**CONCLUSIONS:** Implementing an MLP requires careful planning to identify an appropriate legal partner, gain the investment of key stakeholders, and model the integration of MLP services into clinical workflows. Once implemented, MLPs provide an important service to enable medical and behavioral health providers to address patients' social determinants of health.

## RADHAKRISHNA R\*, JAMES C, ZUKIN H, RUGER K, CARL M. Addressing social determinants of health: A key component of a health equity framework

**CONTEXT & OBJECTIVE:** Four out of five medical providers believe patients' unmet social needs lead to worse health outcomes and are as important to address as medical conditions according to a Robert Wood Johnson Foundation survey. In 2013, a Contra Costa West County Health Center (WCHC) survey with 250 patients identified food as the top resource (65%), followed by housing, employment and utility bill assistance. In response, our system partnered with Health Leads to design an upstream intervention to identify and link patients to resource supports to address basic social needs. Addressing the social determinants of health is a key component of our larger Health Equity Framework.

**SETTING/POPULATION:** Our county safety net system of a hospital and ten clinics cares for 140,000 lives annually with a majority of MediCal eligible patients living in poverty. Many represent racial populations with significant health disparities. WCHC, a federally qualified health center caring for 11,000 patients in San Pablo California was the location of the Health Leads pilot.

**INTERVENTION/STUDY DESIGN:** Diverse stakeholders engaged in strategic planning and implementation serving on the steering and operations committees. Patient partners and design innovation exercises guided project development: customizing the screening process, identifying a workforce (U.C. Berkeley students), optimizing workflows, training staff, developing a resource database with Salesforce technology, implementing baseline and one year medical provider and patient satisfaction surveys, implementing improvement cycles, reviewing data, and planning a formal evaluation.

**OUTCOMES/RESULTS:** Since June 2014, Health Leads Advocates have worked with 1534 families with 638 successful resource connection linkages. One outcome was a dashboard to monitor screening, linkages and resource needs. Early integration with the electronic health record has been key. Top

resource requests stayed the same. To match supply to demand, we must expand through utilizing existing workforces which has started.

**CONCLUSIONS:** Leadership awareness and engaged commitment to health equity is critical to launch a successful social needs/resource linkage intervention. Collaboration with a resource linkage partner such as Health Leads, that has already tested and proven processes and models, is critical. Research, testing and evaluation of social need interventions are needed in order to validate the efficacy of social need interventions.

#### RAPHAEL E\*, GAYNES R, SARKAR U, SCHILLINGER D, RILEY L, RAJAN J. Income inequality and health disparities among adults in California between 2001 and 2011

**CONTEXT & OBJECTIVE:** Aggregate measures of disease are used to determine resource allocation but may not capture important differences in disease burden in populations. The objective of the study is to quantify the interaction between disease burden and socioeconomic status in California.

SETTING/POPULATION: Non-pregnant, non-institutionalized adults in California, 2001 and 2011

**INTERVENTION/STUDY DESIGN:** Cross sectional study. Age-adjusted aggregate and income stratified rates of hospitalization for 19 disease categories were calculated from statewide hospital discharge data.

**OUTCOMES/RESULTS:** There were 6,423 and 6,445 hospitalizations per 100,000 adults-year in California in 2001 and 2011 respectively. Aggregate total disease burden across 19 disease categories increased from 17,346 hospitalizations/100,000 adults-year in 2001 to 25,509 hospitalizations/100,000 adults-year in 2011. Stratified by income, total disease burden decreased steadily, from 30,514/100,000 adults-year in the lowest income group to 11,100/100,000 adults-year in the highest income group in 2001 and from 47,100/100,000 adults-year to 12,105/100,000 adults-year in 2011. For both years and across all income categories, the top five disease categories rate were: diabetes/urogenital/blood/ endocrine (3482/100,000 adults-year in 2001, 4665/100,000 adults-year in 2011), cardiovascular and circulatory diseases (2975/100,000 adults-year in 2001, 3217/100,000 adults-year in 2011), digestive diseases (1735/100,000 adults-year in 2001, 2447/100,000 adults-year in 2011), chronic respiratory diseases (1549/100,000 adults-year in 2001, 1975/100,000 adults-year in 2011), and mental and behavioral diseases (1406/100.000 adults-year in 2001, 2271/100.000 adults-year in 2011), Within each year, the proportion of total disease burden accounted for by each disease category was similar with some exceptions: the proportion of mental and behavioral disorders and the proportion of chronic respiratory disease both decreased with increasing income while the proportion of cardiovascular and circulatory disease and the proportion of cancer increased with increasing income.

**CONCLUSIONS:** Between 2001 and 2011 disease burden rose among adults in California. Stratification by income revealed stark differences in disease burden by income. Understanding the factors driving these differences is a prerequisite for developing more effective public health interventions to stem their continued rise.

## RIENKS J\*, REMY L, SHATARA A, OLIVA G. Increasingly poor hospital data quality adversely affects the ability to identify race/ethnic disparities

**CONTEXT & OBJECTIVE:** The Family Health Outcomes Project (FHOP) analyzes birth certificate, hospital discharge and emergency department data to develop 12-year data summary spreadsheets on key maternal, child, and adolescent health (MCAH) outcomes for California's 61 local health jurisdictions (LHJs). In addition to overall rates and trends, FHOP also analyses the data by race/ethnicity to enable LHJs to identify and address disparities. In recent years, we have noticed an alarming increase in undefined (missing, unknown, or other) race/ethnicity which has a non-random impact on our ability to identify race/ethnic disparities the LHJ level. The federal data quality standard for missing, unknown, or

other race ethnicity is no more than 1%.

**SETTING/POPULATION:** FHOP analyzed data with a focus on California's MCAH population. For this data quality project, we confined our analyses on birth certificate (BC), hospital patient discharge (PD), and emergency department (ER) data to women ages 15-44.

**INTERVENTION/STUDY DESIGN:** Birth certificate, hospital discharge, and emergency department data from 2002 to 2013 were analyzed down to the hospital level to understand hospital level variations in undefined for race/ethnicity (R/E) for each year. Data were also summarized to indicate how many years during the 12-year period rates of undefined R/E exceeded 3%, 5%, and the average rate for 12 years.

**OUTCOMES/RESULTS:** There is wide variation in undefined R/E between hospital level, and wide variations within hospitals across different datasets (birth certificate, emergency department, patient discharge). For example, the 12-year average for undefined R/E in PD data at UCSF Medical Center is 12%, San Francisco General is 2%, and the state is 4%. For ER data, the UCSF average is 22%, San Francisco General is 14%, and CA is 6%. For BC data, the UCSF average is 1%, San Francisco General is 0%, CA is 2% will the Lucile Packard Children's Hospital at Stanford is 23%.

**CONCLUSIONS:** California is becoming increasingly more diverse and greater attention is being focused on R/E disparities, yet the rise in undefined R/E creates serious data quality challenges. Research is needed to determine what is causing the wide variation in R/E data quality across and within hospitals, and how to improve data quality.

SAINT-HILAIRE L,\* WU D\*, NAVARRO R, SALAZAR R, HESSLER D, OLAYIWOLA JN. Does an antioppression curriculum increase the level of confidence in healthcare professionals to recognize unconscious bias and address it through allyship?

**CONTEXT & OBJECTIVE:** Studies show that unconscious bias in medicine affect clinical decision making. This project seeks to create a model of educational training for healthcare professionals that shifts the focus on the intrapersonal exploration of unconscious bias and the interpersonal work of allyship. We evaluated the question: Does anti-oppression curriculum increase the level of confidence for trainees in medicine to recognize unconscious bias and address it through allyship?

**SETTING/POPULATION:** This project is aimed specifically towards medical residents in training however can be applied to all healthcare professionals, and has been expanded to include medical students, NP students, as well as practicing faculty/attendings, RN/MEAs, PAs and NPs.

**INTERVENTION/STUDY DESIGN:** We developed a workshop on unconscious bias and allyship and administered it to healthcare professionals. The workshop focused on exploring unconscious bias, how it relates to the practice of medicine and how it can lead to healthcare disparities, followed by encouraging participants to address health disparities through an active process of allyship. Concepts of privilege, racism/white supremacy, intersectionality, cultural appropriation, microaggressions, religious intolerance/Islamophobia, the model minority myth, impostor syndrome, law enforcement in healthcare, misgendering, and language discordance are also explored during the didactics and vignettes. We conducted pre- and post-surveys that asked participants to rate their ability to understand, assess and address unconscious bias and allyship. We measured the change between pre- and post-survey responses to determine if there was a statistically significant change.

**OUTCOMES/RESULTS:** Thus far 5 workshops have been conducted with a total N of >70. The data from 3 workshops with a total of 28 participants were analyzed thus far. The mean difference showed statistically significant improvement across all indicators.

**CONCLUSIONS:** Although every indicator showed an improvement overall, some individual scores decreased. We postulate that these decreases are due to the workshop's ability to reveal to the trainee

the complex nature of addressing unconscious bias in healthcare, leading them to choose a lower score of confidence post-training. Ultimately, our results show that an anti-oppression curriculum would enhance our training by providing necessary skills to actively address injustices in healthcare.

## SANFORD E\*, TIRADO S, GONZALEZ J, BURSTEDT K. Reallocation of residency training, resources and community action projects to more equitably address youth violence

**CONTEXT & OBJECTIVE:** More than cancer or cardiovascular disease, youth violence disproportionally reduces years of life lived in Salinas, California. The all too frequent physical and emotional trauma erupting in our community has lifetime consequences in our patients. Can our residency more equitably allocate training and resources to address this contagious and chronic disease that disproportionally affects the underserved? Will our Residents become better skilled and develop greater understanding and empathy for their patients struggling with violence and emotional trauma?

**SETTING/POPULATION:** To learn more about youth violence prevention and interventions the residency has built multiple new training collaborations inside and outside the traditional residency training areas. The goal is to impact medical residents, adolescents and the community affected by violence and trauma.

**INTERVENTION/STUDY DESIGN:** By devoting training time for residents to participate in adolescent violence prevention programs, emergency room post trauma secondary prevention services and county coalitions involving Children's Behavioral Health, Probation and other agencies, residents learn more about youth violence prevention and intervention. Residents take part in innovative focus groups with at risk adolescents, visit Juvenile Hall and do one-on-one sessions to better understand the narratives of youths' lives. Emergency Room training has added SBIRT and brief intervention counseling for addiction aimed at youth. Residents undertake high school and local university mentoring with components that include home visits and school presentations. Designing their own community projects, residents and their mentees collaborate on community improvement projects that have included social -emotional educational programs for high-risk and transitional youth, community trainings on domestic violence, sex trafficking, media and violence, bullying, stress management, emotional awareness and mindfulness. Residents educate farm workers and prepare promoters to disseminate information to the community.

**OUTCOMES/RESULTS:** Residents have developed greater understanding, confidence and willingness to engage with high-risk youth and victims of violence.

**CONCLUSIONS:** The presentation will provide multiple examples for how residencies can creatively reallocate resources to address the important community problem of youth violence and what key elements impact positive change in resident knowledge, attitudes and skills in this arena.

## SHATARA A\*, RIENKS J, REMY L. Addressing maternal mental health in California: Trends, disparities, and local challenges

**CONTEXT & OBJECTIVE:** The UCSF Family Health Outcomes Project (FHOP) analyzes patient discharge and emergency department data for maternal and child health outcomes and makes this data available to Maternal, Child and Adolescent Health (MCAH) programs in California's 61 local health jurisdictions (LHJs). The local MCAH programs use this data for their monitoring, assessment, problem prioritization and program planning. FHOP provides training and capacity and hosts learning collaboratives to assist local MCAH programs in addressing MCAH-specific issues that they have chosen to prioritize in their scopes of work.

**SETTING/POPULATION:** The population for this project is adolescents age 15-24, and women of childbearing age (15-44), and pregnant women.

INTERVENTION/STUDY DESIGN: Emergency department and hospital discharge data from 2002 to

2013 were analyzed using SAS software to identify state and local rates, trends and disparities in hospital admissions with a mental health diagnosis, including mood disorders, self-injury, and substance abuse. FHOP has distributed this data to the local MCAH programs and is working with them on identify and implementing program and policy interventions to improve adolescent and maternal mental health.

**OUTCOMES/RESULTS:** In reviewing the 2012 data for the state, we found that there has been a significant upward trend and significant disparities in the number of hospital admissions and ER visits that include a mental health diagnosis for both adolescents and women of childbearing age. Additionally, hospital admissions for pregnant women that also indicate a mental health diagnosis have more than doubled. This data is highly troubling because MMH issues threaten the health of mothers, as well as the cognitive, psychological, social, and physical development of their children. In working with local MCAH programs that have identified MMH as a problem, FHOP has found that many of these LHJs are experiencing barriers to identifying, addressing, and preventing MMH issues. These include a lack of providers willing to screen and/or treat mothers (both prenatally and postpartum), scarce Mental Health (MH) referral networks, and the social stigmatization of MH disorders.

**CONCLUSIONS:** MMH issues are a significant public health concern and addressing these problems will require increased screening, particularly during the perinatal period, and improving access to mental health providers.

## SIEGEL A \*, JOERN R\* Integrating a medical-legal partnership into a county health center in West Contra Costa County

**CONTEXT & OBJECTIVE:** The West County Medical-Legal Partnership (WCMLP) delivered legal services to West County Health Center (WCHC) patients, integrated with patient care, to improve patient health outcomes and satisfaction. Our patients live with a myriad of social problems that negatively impact their health. A 2012 Resource Survey identified legal assistance as one of our patients' top needs. At the same time, our county lacks resources to meet low-income residents' legal needs with only 1 attorney for every 14,274 poor families. The WCMLP addressed patients' needs and the lack of available resources by bringing legal services to the clinic. Providers are in a unique position to identify their patients' legal problems and to refer patients to the MLP before a crisis develops.

**SETTING/POPULATION:** Target population was patients with legal needs that impact their health. Rubicon Legal Services was the legal partner.

**INTERVENTION/STUDY DESIGN:** The WCMLP ran from February 2014 to November 2015. Patient referrals came from WCHC providers, nurses, and residents. The attorney was on-site each week to meet with patients and consult with staff. We held 12 health provider trainings to facilitate referrals for legal services.

**OUTCOMES/RESULTS:** In the first 11 months, the WCMLP served 130 patients. 100 needed brief counsel and 30 required representation. The most common issue was public benefits eligibility and processes. The attorney also addressed questions related to a wide array of other topics, including housing, immigration, employment, and conservatorship. In March 2015, the MLP changed its model to allow for drop-in and focused on disability related public benefits. It counseled 84 patients for drop-in services.

**CONCLUSIONS:** It took several years to launch the WCMLP. Results indicate that patients have a need for and interest in accessing legal services through their primary care clinic. Challenges to sustaining the MLP include funding and finding a new legal partner.

STERN, N \*. Coordinating the Summer Urban Health & Leadership Academy (SUHLA) Fellowship CONTEXT & OBJECTIVE: SUHLA aims to increase diversity in the health workforce pipeline by inspir-

ing local high school students to enter the health professions through a 3 week summer Academy. The goal is to have a health workforce that reflects the diversity of the community in which it serves.

**SETTING/POPULATION:** Starting this year, the summer Academy will serve as the kick-off for rising 11<sup>th</sup> grade students John O'Connell High School participating in the Health Behavioral Sciences Track, which is coordinated by FACES for the Future, an Oakland-based nonprofit. The Fellows are a multidisciplinary team of UCSF health professions students (Medicine, Nursing, Dentistry, Pharmacy, Physical Therapy) who run the day-to-day operations of the Academy. The Fellowship is now in its 2<sup>nd</sup> year.

**INTERVENTION/STUDY DESIGN:** Using data gathered from last year's Fellowship and interviews with the prior Fellows, I evaluated the prior curriculum and created a draft of this year's curriculum. I've also worked to create a timeline for the Fellowship, and an application to be distributed to possible Fellows.

**OUTCOMES/RESULTS:** The biggest change to the Fellowship will be broadening from just taking Medical and Nursing students to also including Dentistry, Pharmacy, and Physical Therapy. This came from Fellow and Academy participant feedback to have a wider array of health professions students. Major changes to the Fellowship curriculum include having more focus on usable teaching and mentoring skills and taking one day off a week during the Academy to allow the Fellows to plan upcoming activities.

**CONCLUSIONS:** Redesigning this Fellowship has emphasized the importance of constantly reevaluating a project to ensure it aligns with the goals of the community being served and the project's participants. It has also highlighted how pleasant it is to work on an already established, sustainable, community-driven project.

# TAPIA M\*, BRODE E, ECHIVERRI A, LUBEGA S, STEIN B, WILSON E. Summer Urban Health & Leadership Academy: Promoting youth leadership, wellness, and educational attainment through a community-academic health center partnership

**CONTEXT & OBJECTIVE:** Underrepresented minority (URM) and disadvantaged students are critical to our future health care workforce. Research suggests URM and disadvantaged students are more likely to serve in health professional shortage areas or work with underserved populations. One approach to workforce diversification is to support educational "pipeline" interventions that focus on pre-health professional students in high school or college. The UCSF Family & Community Medicine department seeks to promote a diverse healthcare workforce by providing local high school students opportunities to learn about healthcare careers and professional development.

**SETTING/POPULATION:** In 2015, the UCSF Department of Family and Community Medicine developed a Summer Urban Health & Leadership Academy (SUHLA), a 3-week summer course for 10th & 11th grade students from O'Connell High School. Two medical students and two family nurse practitioner students were recruited to facilitate the summer academy as SUHLA Fellows. Before the three-week session, Fellows were trained by residents in teaching skills, small group facilitation, program implementation/evaluation, and community assessment strategies. 87% of SUHLA high school students came from underrepresented minority groups.

**INTERVENTION/STUDY DESIGN:** During the academy, Fellows joined residents in leading learning sessions about college preparatory skills, community health, social justice, advocacy, and social determinants of health through the lens of health and human rights, with a particular focus on the San Francisco Mission District. The academy culminated in a youth and community fair where students presented capstone community health projects to participants' friends and families. All participating high school students completed pre- and post-academy surveys to evaluate the academy curriculum, as well as measuring their interest in pursuing a career in healthcare.

**OUTCOMES/RESULTS:** SUHLA participants reported statistically significant increases in perceiving themselves as leaders and as team players. In addition, students reported increases in competencies around anatomy/physiology, social determinants of health and professionalism. Participants increased their confidence in becoming a health professional from 8.8 to 9.5 (10-point scale).

**CONCLUSIONS:** SUHLA is a low-cost, community-based initiative linking resources of academia to local high school students and their families. Findings suggest that the program has the potential to influence students' ability to collaborate, sense of leadership and interest in the health professions.

TUNZI M\*. Assessing capacity in medical patients with behavioral illness: How do you know?

CONTEXT & OBJECTIVE: Assessing medical decision-making capacity in patients with behavioral illness is difficult. Psychiatrists are inclined to give patients the freedom to refuse care even if they do not fully understand the medical facts of their situation and what it is they are refusing, provided they have some understanding of their illness and plans for meeting basic needs. Adult medicine physicians, in contrast, are inclined to require patients to state a more complete understanding of the benefits and burdens of evaluation and treatment before allowing them to refuse care that might result in adverse medical outcomes. How can these two approaches be reconciled and integrated in practice for specific patients?

**SETTING/POPULATION:** Medical patients in hospitals and ambulatory settings who have underlying behavioral illness.

**INTERVENTION/STUDY DESIGN:** Ethics consults were successfully performed on challenging patients who were referred when hospitalists and consulting psychiatrists reached on impasse on how to proceed.

**OUTCOMES/RESULTS:** At the end of this presentation, participants will be able to: explain the difference between capacity and competence, List the four criteria/sub-abilities of assessing medical decision-making capacity, consider whether consistency with past behaviors is a better criterion than "the ability to reason" for patients with behavioral illness, determine when and how to involve the patient's family, personal primary care physician, ambulatory behavioral health staff, psychiatric consultation, and ethics consultation in the assessment process.

**CONCLUSIONS:** Family physicians are the ideal clinicians to assess medical decision-making capacity in patients with behavioral illness. References: Tunzi M. Can the patient decide? Evaluating patient capacity in practice. Am Fam Physician 2001; 64(2):299-306. Tunzi M, Spike JP. Assessing capacity in psychiatric patients with acute medical illness who refuse care. Prim Care Companion CNS Disord 2014; 16(6):doi:10.4088/PCC.14br01666 Tunzi M. Another kind of diversity: honoring—or not—the decisions of people who refuse care. Am J Bioethics 2016; 16(2):78-79.

#### ABSTRACTS: Posters

ALINGOG K\*, ROE T, CHOU C.A continuous curricular improvement process to address gaps in resident outpatient knowledge and training

**CONTEXT & OBJECTIVE:** In 2010, the Contra Costa Regional Medical Center Family Medicine Residency Program (CCRMC FMR) conducted a program-wide needs assessment and identified improving outpatient training as a top priority. The Association of Graduate Medical Education's (ACGME) recent updates have required refocusing some ambulatory curricular components and improving our annual program review. To meet these demands, the Ambulatory Curricular Group (ACG) undertook a 5-step continuous curricular improvement process based on fundamentals of Quality Improvement.

**SETTING/POPULATION:** The CCRMC FMR is a 13-13-13 training program based at CCRMC which is a county safety- net health system. The ACG is composed of outpatient rotation supervisors and resident representatives and is responsible for the evaluation, development and improvement of the residency's ambulatory curriculum.

**INTERVENTION/STUDY DESIGN:** The intervention was a five part process: 1) identify the top challenges in improving ambulatory training through a nominal group method, 2) identify ambulatory core topics to use as the main body of knowledge to teach residents, 3) end of the year annual gap analysis of the core topics since 2011, 4) implementing educational curricula to address these gaps, and 5) repeat the cycle to assess the effectiveness of the interventions implemented. The gap analysis is done through a survey asking residents to rate how prepared they were in managing each of the core topics using a Likert scale. The survey has a comment section for residents to identify any additional gaps in their outpatient training. Analysis was done using paired and unpaired t-test. Additionally, since 2013, the survey has been given to interns at the beginning of the year to establish baseline.

**OUTCOMES/RESULTS:** When this process was first started, we were limited to comparing data between different classes. Once the start and end of the year data were collected annually, we were able to follow progress of the same class from one year to the next. This is a more reliable way of attributing any changes noted to the specific educational interventions implemented.

**CONCLUSIONS:** This 5 part process has been an effective tool for identifying key challenges on which to focus limited resources and allowing collaboration among rotations to meet program needs.

BAKER T, COHEN M\*, GAGLIARDI E\*, HIGGINBOTHAM C\*. Partnering with a community organization to evaluate physical fitness of children in an afterschool program

**CONTEXT & OBJECTIVE:** Childhood obesity rates in the United States range from 14 to 22 percent, and have been doubling every decade since 1970. A decrease in physical activity among youth contributes to the growing epidemic of obesity. The Visitacion Valley Boys and Girls Club (VVBGC) sought assistance in evaluating the physical fitness of their fifth-grade participants compared to the general fifth-grade population of Visitacion Valley.

**SETTING/POPULATION:** University of California, San Francisco family nurse practitioner graduate students partnered with VVBGC to develop a physical fitness evaluation tool and protocol for their afterschool program. Program participants consisted of 24 fifth-graders from Visitacion Valley Elementary School (VVES).

**INTERVENTION/STUDY DESIGN:** Fitness testing was done using the Fitnessgram, a standardized assessment tool used by California public schools that tests five physical fitness areas: aerobic capacity, abdominal strength, upper body strength, trunk extensor strength, and flexibility. After obtaining the necessary equipment, the children were tested on two afternoons. Additionally, the participants completed a short written survey of their perceptions of physical fitness. The VVBGC scores were compared to the VVES score data found on the San Francisco Unified School District website.

**OUTCOMES/RESULTS:** Compared to the data from the VVES 2014-2015 fifth-graders, a greater percentage of the VVBGC boys tested in the Healthy Fitness Zone (HFZ) in abdominal strength and flexibility but in aerobic capacity, upper body strength, and trunk strength a lower percentage tested in the HFZ. A greater percentage of the VVBGC girls tested in the HFZ in every fitness category when compared to the VVES fifth-graders. The VVBGC girls reported a higher frequency of weekly physical activity yet less enthusiasm for physical activity than the VVBGC boys. In addition, a greater percentage of the VVBGC girls tested in the HFZ in the different physical fitness categories compared to the VVBGC boys.

**CONCLUSIONS:** The VVBGC students tested in the HFZ at high percentages overall. Some improvement could be made in regards to the boys' aerobic capacity, upper body strength, and trunk strength. Improvements in standardization of testing and tester consistencies would be helpful in ensuring more accurate data collection and results.

#### BALANO K\* SCHNEIDER D\*. Interprofessional preceptorships in an ambulatory care clinic for student pharmacists

**CONTEXT & OBJECTIVE:** Interprofessional education includes clinical rotations where preceptors from one profession provide education and feedback to learners from a different profession. At Santa Rosa Community Health Centers, Family Medicine faculty precept UCSF student pharmacists. We wanted to assess the feedback from those faculty to determine if student pharmacists are receiving feedback related to the terminal competencies required for graduates of the UCSF Doctorate of Pharmacy program.

**SETTING/POPULATION:** Santa Rosa Community Health Centers is the ambulatory care setting for the UCSF-affiliated Santa Rosa Family Medicine Residency Program. UCSF student pharmacists spend 6 weeks in these clinics. UCSF School of Pharmacy (SOP) faculty work with students and model HIV clinical pharmacy 2 days/week in the 6 week rotation. For the other 4 days, student pharmacists work with the UCSF Family Medicine residents and faculty in primary care and specialty clinics. Quick feedback notes are completed by the student pharmacists and the preceptors they work with and returned to SOP faculty for review. These feedback notes ask preceptors to comment on student pharmacists' strengths and areas for growth.

**INTERVENTION/STUDY DESIGN:** This study is a retrospective review of the quick feedback notes. Comments from these notes were categorized according to terminal competencies for the UCSF PharmD program: Scientific & Clinical Foundations (SCF), Patient Care (PC), Communication Skills (CS), Systems-Based Practice (SBP) and Professionalism (P).

**OUTCOMES/RESULTS:** Feedback notes from 10/1/12 – 11/6/14 were reviewed. This period provided review for 17 student pharmacists who received a total of 278 feedback notes. 75% of the notes were from primary care clinics, while 25% were from specialty clinics. Preceptors commented on student pharmacists strengths in 261 CS, 7% SBP and 2% P.feedback notes with the following competency distribution: 44% SCF, 43% PC, 44% CS, 29% SBP and 18% P. Areas for growth had the following competency distribution in 192 notes: 44% SCF, 25% PC, 19%

**CONCLUSIONS:** Interprofessional preceptors provide feedback to students regarding their clinical performance. Family medicine faculty provide student pharmacists feedback regarding competencies in scientific and clinical foundations most consistently, both as a strength and area for growth. These data can help develop interprofessional preceptor development programs.

BARAKAT S\*, UDDIN N. The San Francisco Muslim fellowship: Using faith based groups to foster a

#### community of healing for marginalized Muslims

**CONTEXT & OBJECTIVE:** The San Francisco Muslim Fellowship (SFMF) is an initiative to bring together English-speaking Muslim brothers and sisters who feel isolated from the Muslim community, such as individuals who have a current or past history of housing instability, prison or jail time, violence, or drug use. The SFMF is designed to be a safe space for marginalized Muslims to come together and share their personal struggles in a confidential space with support of Muslims leaders to guide the discussion to support faith based healing.

**SETTING/POPULATION:** The Muslim community in San Francisco is very diverse ethnically and linguistically, including many immigrants and refugees. We identified Muslims that are marginally housed, former inmates, or have a history of violence or drug use that have experienced stigma and isolation from the larger community. There remains to be little community engagement and resources to aid this population. It is our goal to create a sense of community again for this population, and use faith as a means to help them overcome their challenges. In order to do this, we partnered with Bay area Islamic organizations, including the Islamic Society of San Francisco (Islamic center in the Tenderloin), Ta'leef Collective (community outreach organization based in Fremont), and Tayba Foundation (provides educational curriculum for incarcerated Muslims based in Union City).

**INTERVENTION/STUDY DESIGN:** We recruited participants primarily by word of mouth from current or past interactions with patients at SFGH, flyers posted throughout the SFGH campus, and announcements after the Friday sermon throughout Bay area mosques.

**OUTCOMES/RESULTS:** We have had three sessions thusfar and have found participants to really benefit from the discussion based on their verbal feedback afterwards. Discussion topics have included coping strategies during times of hardship, how to create mentorship and a support system, and using prayer and remembrance of God as a coping strategy.

**CONCLUSIONS:** This partnership between faith based organizations and healthcare professionals provides a safe forum for Muslims in San Francisco who struggle from isolation and stigma to share their experiences. It enables connecting them to the larger Muslim community by offering culturally appropriate coping strategies and community resources that help promote a holistic approach to healing.

BLOCK A\*, MCNEIL S, BIGGS A, GOODMAN S, DEHLENDORF C. Overcoming barriers to integrating abortion into practice: Results from an advanced abortion training program follow-up study

CONTEXT & OBJECTIVE: Many family medicine graduates who participate in abortion training during residency do not go on to become abortion providers, despite intention to provide at the time of graduation. To address barriers to practice integration following residency, we developed CREATE (Continued Reproductive Education for Advanced Training Efficacy), a structured advanced abortion training and leadership curriculum for third year residents in Northern California. The curriculum involves 1) additional procedural training days, 2) evening sessions focusing on advocacy, practice integration, and complication management, and 3) an independent reproductive health project. In this study, we review the evaluations completed by participants, as well as follow-up data from three years of program graduates.

**SETTING/POPULATION:** All residents who have completed the basic abortion training at 4 Northern California residency programs are eligible for the CREATE program. During the first three years of the program there were 54 program graduates, all eligible for the follow-up study.

**INTERVENTION/STUDY DESIGN:** During the past three years, we have evaluated the CREATE curriculum through end-of-year program evaluations completed by participants. Additionally, we are conducting a follow-up study in which we survey program graduates from all three years to assess current reproductive health service provision and barriers that graduates have encountered in integrating

services into practice.

**OUTCOMES/RESULTS:** At the time of program completion, graduates reported improved knowledge and confidence in areas such as how to build support with key stakeholders, how to manage hemorrhage in first trimester abortions, and how to integrate abortion services into practice. The most highly valued aspects of the curriculum were additional procedural volume and opportunity for networking and mentorship. During the follow-up study, we hope to learn more about graduates' current practices and barriers that they have encountered.

**CONCLUSIONS:** Through evaluation of the CREATE program we learned that motivated residents highly value advanced clinical and interactive training sessions on abortion practice. Additionally, they value leadership development, networking, and guidance on integrating abortion into practice. We hope to use our follow-up data to determine curricular elements that positively influence future reproductive service provision following graduation, with a goal of expanding the CREATE curriculum to Family Medicine residencies throughout the country.

BOGGIANO V,\* McCLINTON-BROWN R, NELLIGAN I, SVEC D, OSBORN K, AARONSON A, KO S. Patient Partners and L-CHAMP: Student involvement in two early clinical exposure courses at Stanford Medical School

**CONTEXT & OBJECTIVE:** Medical students are increasingly looking for opportunities to work with patients during their pre-clerkship years. Patient Partners and Longitudinal Community Health Advocacy Medical Partnerships (L-CHAMP) are two courses at Stanford Medical School that target pre-clerkship medical students. By joining these courses, students work with patients as they transition from being in the hospital to going home (in the case of Patient Partners) or when they visit their primary care provider at a community health center (in the case of L-CHAMP). We were interested in looking at student involvement in these courses since their creation in 2013.

**SETTING/POPULATION:** The study population included Stanford medical students from all class years who enrolled in the Patient Partners and L-CHAMP courses.

**INTERVENTION/STUDY DESIGN:** We looked at student enrollment records for the L-CHAMP and Patient Partners courses from 2013-2015. We also looked at opportunities for scholarship and ways that upper-class students could remain engaged in the courses.

**OUTCOMES/RESULTS:** Patient Partners saw three first-year students and one second-year student enroll in 2013. The following year, seven first-year students, three second-year students, and one third-year student enrolled in the course. In 2015, five first-year students enrolled and second-year students were given the opportunity to join the Patient Partners leadership board. Four students presented at national conferences through Patient Partners. L-CHAMP had two first-year and two second-year students enroll in 2013. Seven first-year students joined in 2014, and two second-year students stayed involved. In 2015, six first-year students enrolled in L-CHAMP, two second-year students stayed involved, and two third year students began a continuity clerkship at their L-CHAMP sites. Three students conducted research projects at their sites.

**CONCLUSIONS:** Participation in Patient Partners and L-CHAMP has grown among first-year medical students. Through these courses, students are able to engage in patient care, health coaching, and quality improvement projects alongside dedicated preceptors. We are continuing to search for ways to engage upper-class medical students in these courses, such as by joining a course leadership board and engaging in long-term continuity of care clerkships that build upon early work.

#### BONDI-BOYD B\*. Aligning system improvement with resident education: Creating a quality im-

**CONTEXT & OBJECTIVE:** Since Institute of Medicine's To Err is Human Report in 1999, there has been ongoing efforts to improve safety and quality in our hospitals. Furthermore, the American College of Graduate Medical Education (ACGME) Next Accreditation System is pressing residencies to emphasize safety and improvement work for residents and faculty of residency programs. While a robust Quality Improvement and Patient Safety (QI/PS) system exists within Contra Costa Health System, residents have not traditionally been educated in QI/PS tools or actively involved in its processes. The objective of this project is to conduct a needs assessment of the residency program leadership, current residents and faculty for more robust QI knowledge and skills. A preliminary QI curricular plan has been developed and implementation was started during academic year 2015-2016 with a post-implementation assessment.

**SETTING/POPULATION:** Contra Costa Family Medicine Residency, Residents and Core Faculty at the residency

**INTERVENTION/STUDY DESIGN:** A gap analysis was conducted examining ACGME requirements for Family Medicine Residents for Quality and Safety and comparing it to current Quality improvement curriculum components at Contra Costa's residency program. Following this gap analysis, a revamped QI curriculum was formalized. Current interns completed a pre-implementation QI knowledge assessment survey at the beginning of this academic year. Interns will complete a post-curricular QI knowledge assessment in May 2016.

**OUTCOMES/RESULTS:** Gap analysis demonstrated areas of need for curricular development in basic QI knowledge, knowledge of system level work at Contra Costa Health System, and lack of conceptual framework to develop a QI project. Pre-curriculum knowledge assessment indicated limited understanding of basic QI concepts. Results of faculty needs assessment/survey are currently pending and will be available by the colloquium.

**CONCLUSIONS:** CCRMC has a robust family medicine residency and tradition of training physicians to be competent full spectrum physicians. It is increasingly clear that knowledge and skills in QI are necessary competencies that define what it means to be competent in medicine. In order to ensure our learners continue to be family medicine leaders, the CCRMC residency has focused on strengthening our QI curriculum. While final results are pending, we anticipate implementation of our new QI curriculum will lead to improved knowledge and skills.

## CHASE J\*, STAFFORD M, Mo M. Design, implementation and initial outcomes of a hospital-based patient navigator

**CONTEXT & OBJECTIVE:** Borrowing from the established success of team-based care and health coaching in primary care, there is support for the role of health coaches to improve the care of hospitalized patients (Balaban et al., 2015, JGIM). At ZSFGH/SFHN, robust transitions of care are protective against readmissions (6% with follow-up within 7 days vs 18%). From perspectives of service, education and care experience, inpatient teams feel overmatched by the needs of patients and the system. In order to address these gaps, the UCSF Family Medicine Inpatient Service at ZSFG received funding in 2015 to hire a Patient Navigator, whose care coordination role began on February 8. 2016.

**SETTING/POPULATION:** Hospital inpatients cared for by the UCSF Family Medicine Inpatient Service at Zuckerberg San Francisco General Hospital.

**INTERVENTION/STUDY DESIGN:** Key stakeholder interviews were conducted with multidisciplinary inpatient team members, primary care clinic management teams, ZSFG leadership and DFCMR leadership. Based on this input, the work domains of the Patient Navigator were selected: 1) understand patient experience through interview and survey, and identify barriers to be addressed by FMIS team,

2) arrange post-discharge care planning including follow-up, 3) educate patients, families and caregivers in navigation of the health system, and 4) coordinate advance care planning standard work between inpatient team, hospital units and primary care. A patient experience survey was designed with input of ZSFG Care Experience leadership and implemented using a web-based tool.

**OUTCOMES/RESULTS:** Aligning with ZSFG's newly established True North metrics, FMIS leadership will distribute a balanced scorecard on a quarterly basis with one or more metrics for each domain of True North. Our service goals include: 1) Quality: increase rates of attended follow-up within 7 days of discharge; reduce readmission rates, 2) Care Experience: measure and improve patient experience using FMIS patient experience survey; increase patient competency in basic navigation of the health system, 3) Financial Stewardship: improve % discharges by noon , and 4) Developing People: improve provider satisfaction with support in care transitions.

**CONCLUSIONS:** In this presentation, we will review the results of our experience, including the experience of our inpatients and of our Patient Navigator.

CHIRINOS C\*, WOLF J, HUANG B, DE VORE D, WILLARD-GRACE R, TSAO S, SU G, HESSLER D, THOM D. Baseline characteristics of patients in a randomized controlled trial of health coaching for patients with COPD

**CONTEXT & OBJECTIVE:** Chronic Obstructive Pulmonary Disease (COPD) affects over 14 million people and is the 3rd leading cause of death in the U.S. Socioeconomically disadvantaged individuals bear a disproportionate disease burden. This baseline data from a randomized controlled trial of health coaching for COPD explores characteristics of a cohort of urban underserved adult patients with COPD.

**SETTING/POPULATION:** Adult patients with moderate to severe COPD seen at 7 San Francisco Health Network clinics.

**INTERVENTION/STUDY DESIGN:** Baseline data includes: reporting someone helps them with their COPD, symptom severity per the COPD Assessment Test (CAT), self-reported quality of life per short-form chronic respiratory disease questionnaire (SFCRQ), exercise capacity, home oxygen use, smoking status, and spirometry.

**OUTCOMES/RESULTS:** Of the 144 patients enrolled to date, 58% report that no one helps them with their COPD, 91% report high symptoms (CAT ?10), 63% reported at least moderate shortness of breath when walking on a flat surface, 18% are on home oxygen, 53% are current smokers, and 92% have COPD confirmed by pulmonary function testing.

**CONCLUSIONS:** This cohort of urban adults elucidates the variety of difficulties associated with living with moderate to severe COPD. While almost half have quit smoking, most report significant symptoms and limited exercise capacity. In addition, they demonstrate a lack of knowledge of COPD selfmanagement. Understanding this population may help to shape the support provided through health coaching and other interventions.

## CHUNG C\*, SILVA J\*. Implementation of a resident clinic-based quality assurance program using the AAFP METRIC tool: Year two

**CONTEXT & OBJECTIVE:** As part of an effort to prepare our residents better and to develop the needed "culture of quality" that a modern practice requires, the Natividad Family Medicine Residency Program (NFMR) has undertaken various office-wide Quality Assurance/ Process Improvement projects. This abstract summarizes the implementation experience of the AAFP METRIC DM Module during the PGY-2 year of residency training. This process began in May of 2013. This presentation reflects the outcomes of the second cohort of residents' (Class of 2016) project.

SETTING/POPULATION: This project is taking place in the NFMR's main continuity clinic Salinas, CA.

The clinic is a Federally Qualified Health Center and serves the largely Hispanic safety-net population of Northeast Salinas. Residents are in clinic twice weekly, and carry panels of ~200 continuity patients.

**INTERVENTION/STUDY DESIGN:** The intervention is the AAFP METRIC Diabetes curriculum in a longitudinal manner over the course of twelve months, to introduce PGY-2 residents to the concepts of quantitatively studying their practices via Plan-Do-Study-Act (PDSA) methods. The interdisciplinary teams undertook a patient-centered improvement trial: "Your A1C Card".

**OUTCOMES/RESULTS:** During this second year of METRIC implementation, this cohort of residents noted diabetes care outcome improvements in ten of eleven of the typical diabetes quality measures by way of implementation of the group project: creation of an A1C patient education tool. Additionally, foundation was laid for improved interdisciplinary practice with their supports staffs.

**CONCLUSIONS:** The METRIC format allowed for improvements in diabetes quality measures in the continuity clinic setting. METRIC enhanced the resident learning experience by not only providing a curriculum for learning quality improvement measures, but also by easily providing outcome data. These outcomes data show greater improvement in comparison to last academic year's pilot outcomes. The implementation of this longitudinal curriculum offered the additional benefit of completion of QA/PI project, required for graduation. Lastly, we believe that use of METRIC and similar quality improvement tools in resident education allow the residents to contribute to a "culture of quality" that is a requirement of a modern primary care practice.

CHUNG D, SUE A, HUGHES S, MACMILLAN P, SIMMONS J, HAILU T, SWIFT C. Impact of race on pain management outcomes in a community-based teaching hospital following inpatient palliative care consultation

**CONTEXT & OBJECTIVE:** Importance: Recent studies have shown differences in racial perception of pain. These differences are often overlooked in the management of pain in palliative care settings. Objective: To examine racial differences in pain management outcomes following inpatient palliative care consultation.

**SETTING/POPULATION:** Setting: Community Regional Medical Center at Fresno, CA, a community-based academic affiliate of University of California, San Francisco School of Medicine. Participants: 233 participants of African American, Asian, Caucasian, and Latino origins.

**INTERVENTION/STUDY DESIGN:** Design: Retrospective chart review of patients receiving a pain management consultation at a community-based teaching hospital from April 15, 2014 to August 30, 2015.

**OUTCOMES/RESULTS:** Main Outcome: Pain score at various time periods: first 24-hour period in hospital (including admission); 24 hours before the date/time of consultation; 24 to 48 hours after consult completion; and 24 hours before discharge (scale 0 to 10). Results: African Americans had the highest initial pain score of 6.9 and showed most reduction in pain after consultation and prior to discharge (-4.5 and -4.9, respectively). Asians had an initial pain score of 6; differences of -2.9 and -3.2 were observed after consultation and prior to discharge. Caucasians and Latinos had the same initial pain score of 5.3, however, greater pain reduction was seen in Latinos at discharge compared to Caucasians; -3.4 versus -2.0 (p-values of 0.46 and 0.38, respectively). There was an overall pain reduction in all groups combined, p<0.01.

**CONCLUSIONS:** Although pain consultation was significantly effective at reducing pain scores, there were no significant differences in pain reduction between the racial groups.

COTTER E\*, RAMOS M, STRATTA E, HUNTLEY B, BERGMAN K, JAYASEKERA N. Perceptions of family medi-

#### cine in Malawi: A pilot survey among medical students

**CONTEXT & OBJECTIVE:** Family Medicine is a relatively new specialty in many regions of sub-Saharan Africa, including Malawi. The first Family Medicine rotation for fourth year medical students started in Malawi in 2011, and the first post-graduate program in Family Medicine was approved in 2014, with its initial three registrars commencing their training in 2015. Given this nascent field, we decided to explore fourth year medical students' knowledge of and attitudes toward family medicine as a medical specialty, intentions for post-graduate training, and evaluate any potential changes in these responses following participation in a Family Medicine rotation at a District hospital.

**SETTING/POPULATION:** We are currently piloting our survey with a block of 21 fourth year medical students at the College of Medicine in Blantyre, Malawi. We plan to survey all fourth year medical students at the College of Medicine during the 2016-2017 academic year.

**INTERVENTION/STUDY DESIGN:** This is a longitudinal study utilizing surveys administered at the beginning and end of a compulsory 6-week Family Medicine rotation, 4 weeks of which involve clinical work at a District hospital.

**OUTCOMES/RESULTS:** The post-rotation pilot survey data will be collected in March 2016. We wish to share the results of our pilot data and further details of our upcoming study during the Colloquium.

**CONCLUSIONS:** The Family Medicine movement in Malawi stemmed from a need for highly-trained physicians to serve the complex and wide-ranging needs of resource-constrained communities, particularly those in rural areas. Given the critical human resource shortage in Malawi, it is crucial to determine the influence of a Family Medicine rotation on perceptions of this possible career choice.

DE MARCHIS E,\* HESSLER D, GOTTLIEB L. Initial practice sites of graduating family medicine residents in the San Francisco Bay Area 2005-2014: Trends in working with vulnerable populations

CONTEXT & OBJECTIVE: To better understand if and how the changing health care landscape has impacted Bay Area family medicine residents' decision to work with vulnerable populations, based on the initial practice sites chosen by graduating residents over the past 10 years.

**SETTING/POPULATION:** Family medicine graduates from three San Francisco Bay Area family medicine residency training programs: (1) University of California, San Francisco (UCSF) Family and Community Medicine at San Francisco General Hospital (SFGH); (2) Santa Rosa Family Medicine; and (3) Contra Costa Regional Medicine Center (CCRMC) Family Medicine, from 2005-2014.

**INTERVENTION/STUDY DESIGN:** Data on graduates' first practice sites were provided from three residency programs. Clinics were classified as underserved if designated as Health Professional Shortage Area (HPSA), or if over 40 percent of their patient population were on Medicare or over 200 percent below the federal poverty level (FPL). Clinic data were excluded if population demographics were incomplete; resident data were excluded if graduating residents entered fellowship, international posts, or locum tenems positions.

**OUTCOMES/RESULTS:** Complete data were available for 328 (86%) of all family medicine graduates from the study period. Over the 10-year period, there was a positive trend in residents choosing underserved clinics as their first practice site, from 70.0% to 73.0% (p=0.79), peaking at 85.7% in 2012 (p=0.13). When analyzed individually, one of the three programs showed a statistically significant increase in the number of residents going into underserved clinics over the study period, from 50.0% to 100% (p=0.01).

**CONCLUSIONS:** Incentive packages offered to family medicine graduates by non-safety net health care systems has the potential to impact Bay Area family medicine residency graduates' practice

choices. Preliminary results suggest that despite expanded practice opportunities for Bay Area family medicine physicians, Bay Area family medicine residency program graduates continue to choose to work with underserved populations in their first post-residency medical practices, maintaining if not trending toward increasing in number. Future work with program alumni should evaluate subsequent practice decisions and contributing factors.

#### DEUTSCH MB \*. Implementation of a pilot telemedicine program for the provision of gender affirming hormones

**CONTEXT & OBJECTIVE:** While many major US and European cities have established gender clinics or care programs, little is known regarding access to gender affirming hormones among rural transgender people. A 2008 survey in California found that 28% of respondents to a statewide transgender health survey resided outside of major urban counties; the NTDS did not collect data on geographic (rural/ urban) settings. Laws have been passed in the US and the State of California to support the development of telemedicine programs to allow outreach to those for whom an in-person visit represents a hardship. This could include those who are geographically remote or who have limited mobility.

**SETTING/POPULATION:** In an effort to increase access to gender affirming care, a pilot telemedicine program was launched at the University of California, San Francisco to serve transgender patients living remotely or who otherwise experience barriers to an in-person visit. This program utilizes a secure video link to allow a direct connection between the provider and the patient in which a patient encounter can occur. Reported here are the initial quantitative findings of this pilot program, as well as the lessons learned during the development and implementation of this pilot.

**INTERVENTION/STUDY DESIGN:** A chart review of telemedicine encounters was performed, as part of an internal quality improvement process. Abstractions included service date, ICD10 diagnosis, insurance payer type, status of insurance claim, and if unpaid, days since visit.

**OUTCOMES/RESULTS:** Between May 2015 and January 2016, 13 unique telemedicine encounters occurred with 9 individual patients. One encounter was cancelled due to an internet connection problem at the patient's computer. 11/13 encounters had a primary diagnosis of gender dysphoria, 1 had a primary diagnosis of dyspepsia, and 1 had a primary diagnosis of abnormal blood sugar. 5 claims remain unpaid for a median 62 days: of these 2 involve private insurance, 2 public insurance, and 1 self -pay. Patients resided a median 92 miles from San Francisco (range 37 to 414 miles).

**CONCLUSIONS:** Telemedicine represents an opportunity to improve access to gender affirming and primary care for transgender people, particularly those in rural settings or with limited mobility.

## FANG S\*, MINKLER M, IVEY S, JACOBS K, DONG H, LY LE T, LEE E. Closing the loophole: A case study of the Chinese Progressive Association organizing for more equitable access to health care in San Francisco

**CONTEXT & OBJECTIVE:** We present an in-depth community-based participatory research (CBPR) case study of a successful hybrid political and community organizing campaign to ensure accessible and affordable health care through the perspective of a grassroots San Francisco community-based organization, the Chinese Progressive Association (CPA).

**SETTING/POPULATION:** The study employed Yin's multimethod case study analysis, and the triangulation of data it afforded better illuminated the organization under investigation.

**INTERVENTION/STUDY DESIGN:** Application of Yin's approach entailed drawing from a range of qualitative techniques, such as participant observation, a focus group with CPA members, and semi-structured with key informant interviews. Additionally, extensive archival review of relevant news media, records of public meetings, and pertinent legislation documents was conducted. The data were triangulated using a combination of pattern matching and time-series analytic strategies to more fully

explore the sequence of events under investigation. Consistent with the principles of CBPR of the findings, as well as helped drive the analysis. This not only strengthened internal validity, but also helped to ensure transparency.

**OUTCOMES/RESULTS:** First, we outline the Health Care Security Ordinance (HCSO) and provide a brief history of the political landscape in San Francisco. Then, we present the campaign to "close the loophole" in detail, vis-à-vis CPA's participation in the HCSO coalition during 2013-2014. Finally we discuss health care as it relates to the affordability crisis in San Francisco, "bigger and better, collective win," and community empowerment.

**CONCLUSIONS:** Despite the limitations inherent in small case studies like this one, it nevertheless provides a valuable opportunity to better understand how one politically progressive city attempted to address the problem of grossly inequitable health care access through the lens of community organizing, advocacy, and coalition building. San Francisco, like many major American cities today, is being confronted with rapid gentrification and growing economic inequality—the backdrop to the HCSO. Healthy San Francisco served as a model for national health care reform. As such, much can be learned from reflections on the local organizing and advocacy to save the Health Care Security Ordinance that established it as well.

#### FITZPATRICK J\*, CAMPORA PEREZ M, FOX E, HALL C, HOFFMAN A, REED W, YCAZA AG, DEHLENDORF C. Cluster randomized control trial of a contraception decision support tool

**CONTEXT & OBJECTIVE:** While counseling can influence contraceptive use, the quality of contraceptive counseling varies. A decision support tool for contraception is a promising approach to facilitating patient-centered care. We developed a tablet-based decision support tool to help women choose the best method for them and conducted a randomized controlled trial (RCT) to investigate the effect of the tool on women's contraceptive continuation, as well as on their experience of contraceptive counseling.

**SETTING/POPULATION:** We tested the intervention with English and Spanish-speaking women of reproductive age interested in starting or changing a birth control method at four safety-net family planning clinics in San Francisco. Providers who conduct family planning counseling were also participants in the study.

**INTERVENTION/STUDY DESIGN:** We conducted a cluster RCT of our tablet-based decision support tool, with the randomization occurring at the level of the provider (n = 28), stratified by clinic. Depending on their provider assignment, patient participants (n = 758) either used the tool or did not use the tool before their visit and were surveyed about their contraceptive use and family planning experiences at four at seven months post-enrollment.

**OUTCOMES/RESULTS:** The primary outcome for this trial is continuation of the patient's chosen contraceptive method at seven months post-enrollment. Secondary outcomes include patient satisfaction with contraceptive counseling, patient report of having engaged in shared decision making with their provider, and incidence of unintended pregnancy. We are still in the process of completing recruitment, but we will have completed baseline data analysis by the time of the Rodnick Colloquium and plan to present our findings.

**CONCLUSIONS:** We are looking forward to synthesizing our results upon completion of baseline data analysis and presenting our findings at the Colloquium. While we will not be able to report of results related to our primary outcome of contraceptive continuation as our follow-up procedures will not yet be complete, we are excited to draw conclusions from our rich baseline variables including method chosen by patients, provider burnout, and patient report of satisfaction and style of contraceptive counseling received.

#### GALEWYRICK S\*, PERSON-RENNELL N, VENER M. In our hands: A primary care procedures elective teaches students the scope and role of family medicine

**CONTEXT & OBJECTIVE:** Family Medicine offers opportunities for office-based procedures, yet students are often not exposed to this aspect of FM until residency. Some procedurally oriented students make specialty decisions based on the opportunity to work with their hands. We designed an elective in FM procedures for first-year medical and nursing students. The course goals are to: 1) educate students about the family physicians' role in procedures, 2) explain the importance of providing procedures in a patient's medical home, 3) provide opportunity for students to try hands-on simulation of procedures, and 4) introduce first-year students to primary care faculty and residents role models.

**SETTING/POPULATION:** Thirty-three UCSF medical and nursing students enrolled in our elective course. Five residents and junior faculty were recruited to teach.

**INTERVENTION/STUDY DESIGN:** Our procedures elective included two-classroom sessions and three procedures workshops. On the day of the session, students were given a primary care case and discussed how the procedure fit into the overall context of the patient-centered medical home. Procedures taught included: IUD and Nexplanon placement and removal, mole removal, incision and drainage, splinting and joint injection. Workshop sessions lasted 120 minutes each.

**OUTCOMES/RESULTS:** Quantitative and qualitative outcome data was collected using a pre- and post -elective written survey. Topics assessed included: interest in primary care, interest in performing procedures, belief that family physicians should perform procedures, impact of resident/faculty role models, etc. We compared each student's responses prior to the course to after its completion. In addition, we conducted focus groups of students and residents. Results will be collected and analyzed by the Colloquium.

**CONCLUSIONS:** Providing students with an opportunity to learn about primary care procedures unites students' interest in procedures with a chance to better understand the scope of FM and the medical home. A procedures elective also provides a valuable opportunity for early students to work with positive FM role models. We hope that this course may become a model for developing other student electives that expose students to engaging aspects of primary care during pivotal years in which they formulate their understanding of primary care and consider possible career opportunities.

## GEISSLER J\*, TAPIA M. Mentoring tomorrow's healthcare leaders: The Summer Urban Health & Leadership Academy mentoring program

**CONTEXT & OBJECTIVE:** The first Summer Urban Health & Leadership Academy (SUHLA) started in July 2015 at San Francisco General Hospital (SFGH). This three-week academy gives local high school students the opportunity to immerse themselves in the health sciences and better understand the variety of healthcare careers available to them. An important component of this academy is the pairing of each student with an individual who works in the healthcare field to serve as a mentor to the SUHLA student after the summer academy is complete. It is important to have clear guidelines for this mentor relationship so that it best serves both mentor and mentee.

**SETTING/POPULATION:** The student participants in SUHLA are enrolled in the healthcare track in San Francisco's Mission neighborhood John O'Connell public high school. All have expressed interest in future careers in healthcare.

**INTERVENTION/STUDY DESIGN:** In order to ensure that the mentor program is successful, it is important that clear guidelines and expectations are presented to the students and mentors. Additionally, for students to benefit from the mentoring program, a solid understanding of what a mentor is and how to navigate a mentoring relationship is key. Teaching the students the tools required to have a positive mentoring relationship will lead to better relationship outcomes. A combination of reviewing other high school mentoring programs and consulting with high school program experts informed

program development.

**OUTCOMES/RESULTS:** Based on feedback from the SUHLA class of 2016, we developed a mentoring curriculum to support future SUHLA cohorts. This curriculum includes a lesson plan to introduce the concept of mentorship to the students, a packet with information about navigating successful mentor relationships, and a program evaluation to determine the success of the program.

**CONCLUSIONS:** During the summer of 2016, the second group of students will participate in the SUHLA program. The mentoring program curriculum will be piloted at that time in an effort to ensure that SUHLA participants have an ongoing relationship with an assigned mentor who can help advise the student about academic and career goals and choices. Additionally, the program will be evaluated in an ongoing effort to improve the academy.

## GOTTLIEB L\*, MOONEY C, WORTIS N. From learners to leaders: the Advocacy, Community Engagement, Quality Improvement and Leadership Academy (ACQILA) at the University of California, San Francisco

**CONTEXT & OBJECTIVE:** There is a national call to train physicians to better care for underserved populations. Since residents who train in safety-net settings are more likely to later practice in similar settings, it is critical to support training programs in these institutions. Skills required to work with underserved populations include skills in community engagement and advocacy, as well as those related to addressing social determinants of health and evaluating and improving population health.

**SETTING/POPULATION:** UCSF Family and Community Medicine Residency at San Francisco General Hospital.

**INTERVENTION/STUDY DESIGN:** From 2011-2015, a team of UCSF Family and Community Medicine educators designed and implemented a longitudinal (PGY-1 through PGY-3) curriculum addressing the following domains: advocacy, community engagement, quality improvement and leadership.

**OUTCOMES/RESULTS:** Each of 15 residents entering the UCSF-SFGH Family and Community Medicine Residency now completes a longitudinal Advocacy, Community Engagement, Quality Improvement and Leadership Academy (ACQILA) curriculum on topics strategically placed across training to match resident learning levels. The PGY-1 curriculum focuses on describing and understanding the needs of vulnerable populations. The PGY-2 curriculum helps residents develop concrete skills in each domain, specifically related to working with vulnerable populations. During dedicated PGY-3 time, residents collaborate with each other, with community partners, and with clinic staff and leadership to design and implement two scholarly projects—one community engagement project and one quality improvement project. These projects are an opportunity for residents to further develop and apply these scholarly skills, to improve clinic services and to address social determinants of health.

**CONCLUSIONS:** The ACQILA curriculum increases longitudinal, level-appropriate training in domains related to care of the underserved, including: advocacy, community engagement, quality improvement and leadership. The adoption of similar curricula that provide longitudinal exposures targeted towards trainee learning levels can contribute to trainees' capacity to work in underserved communities during and after residency.

## GURULE F\*, THEIS M, HANSEN M\*, WU J, PADILLA G. Mentoring diverse students through the Future Faces of Family Medicine program

**CONTEXT & OBJECTIVE:** The purpose of our program, Future Faces of Family Medicine (FFFM), is to reach out to students of diverse populations in local high schools with hopes of providing mentorship; promoting careers in the health field, specifically primary care; and offering opportunities to learn a variety of medical skills. The Santa Rosa chapter has created a unique set of opportunities to reach this goal.

**SETTING/POPULATION:** Our program is designed to work closely with approximately 10 students from local high schools who have identified an interest in the health field. The students work with family medicine residents in a variety of settings including: primary care clinic, simulation labs, and resident-led workshops. We predict that through this relationship and opportunity students will be more likely to pursue a healthcare career.

**INTERVENTION/STUDY DESIGN:** We use a variety of educational methods to introduce students to the healthcare field. Each student is paired with two residents or faculty members. Regular communication and mentorship is encouraged and various events (social and educational) are planned to allow for consistent contact. The students also shadow resident physicians in their continuity clinic to expose them to the intimate doctor-patient relationship. Various workshops are conducted, which focus on physical exam, communication, obstetrics, health disparities and suturing. Each student gets CPR certified, which has historically been a highlight of the program.

**OUTCOMES/RESULTS:** Through this mentorship process, an interest in primary care is provoked. In recent surveys, every student agreed or strongly agreed that they felt capable of entering the field of medicine after participating in our program and 50 percent of the students were interested in family medicine. Additionally, the residents were inspired by our program. Residents commented that pipeline programs remind them why they are interested in medicine and provides a fun opportunity to work with eager teenagers.

**CONCLUSIONS:** FFFM is an exceptional way to connect with local students from diverse backgrounds, offer mentorship and create a pipeline for primary care. Our program is an effective means of doing so with half the students identifying an interest in family medicine upon completion.

#### HALL C, FITZPATRICK J\*, HOFFMAN A, CAMPORA PEREZ M, REED R, DEHLENDORF C. Development of a decision support tool for postpartum contraceptive counseling

**CONTEXT & OBJECTIVE:** Short periods of time between having children has been shown to have adverse health effects on the baby, such as pre-term birth and low weight, causing many women to seek contraception after delivery. Choosing a method is a preference-sensitive decision making process requiring women to reflect on various method characteristics, while also taking into consideration method effect on breastfeeding and health outcomes related to recent pregnancy. Several decision support tools for contraception have facilitated a shared decision making process between the provider and patient by initiating discussion on how options relate to patient preferences. While these tools inquire about past medical history to avoid recommending unsafe options, they are not currently equipped to facilitate care for post- partum women. Because the guidelines for postpartum contraception are different than those for women who have not recently given birth, it is imperative that a decision support tool be reflective of this population and their specific needs.

**SETTING/POPULATION:** We designed decision support tool with the help of Bedsider.org and a team at the University of Texas Austin to be used among postpartum women seeking to initiate contraception.

**INTERVENTION/STUDY DESIGN:** We modified our established contraceptive decision support tool to incorporate method information and patient preferences unique to postpartum women. The tool includes information on how soon after pregnancy a method may be started, additional risks that may be incurred because of recent pregnancy, and method's effect on the woman's ability to breastfeed.

**OUTCOMES/RESULTS:** Our result is a tool intended to deliver information to postpartum women in a comprehensible manner through use of simple language and visual aids. For future studies, we hope to study the tool's effect on contraceptive counseling and patient satisfaction with her chosen method.

**CONCLUSIONS:** Postpartum women comprise a significant proportion of women seeking contraception and are thus given a unique set of recommendations due to increased health risks after pregnancy. Decision support tools are necessary to help this population of women weigh the benefits and negatives of each contraceptive method, while framing their options around their recent pregnancy.

HEALTH SYSTEMS & LEADERSHIP PATHWAY, UNIVERSITY OF CALIFORNIA, SAN FRANCISCO, MORGAN, C.\*. Home-based primary care: A dynamic and evolving model for delivering care to complex and high-risk homebound patients

**CONTEXT & OBJECTIVE:** As the United States population ages and acquires limitations in functional status, the need for home-based healthcare for frail, elderly adults rapidly grows. Home-based primary care (HBPC) programs multiplied capacity over the last decade in response to this demand: in 2013, approximately 2.49 million home-based medical visits occurred, compared to 1 million in 2006. The financial costs and potential benefits of home-based care are examined in the context of rising healthcare costs and an increscent aging populace. Medicare and other payors are motivated to control these costs, particularly in an era of evolving payor models that incentivize low-cost, high-impact care.

**SETTING/POPULATION:** On behalf of leadership at the UCSF Office of Population Health and Accountable Care, we sought to understand the dynamic landscape of HBPC programs through a literature review and key informant interviews.

**INTERVENTION/STUDY DESIGN:** Categorizing program distinctions in patient population, staffing, service structure, financial structure and payor models, outcomes, and innovations, we compiled key takeaways in high-functioning HBPC programs.

**OUTCOMES/RESULTS:** Preliminary findings reveal lower healthcare costs and high quality patient care in many of the studied HBPC programs, with outcomes including fewer hospitalizations and emergency department visits, decreased hospital readmissions, and improved patient satisfaction. Additionally, HBPC is a promising strategy to meet the needs of a diverse, often marginalized homebound population.

**CONCLUSIONS:** With appropriate payor models and incentives, and incorporation of best practices, HBPC can be a sustainable and valuable model for delivering care to complex and high-risk homebound patients.

#### HENNEIN L\*, McCarthy S\*, Brode E. Defining a hypertension protocol at the University of California. San Francisco Lakeshore clinic

**CONTEXT & OBJECTIVE:** The CDC reports that only 52% of 70 million hypertensive adults in the U.S. have blood pressures controlled within treatment goals (1). 70% of first heart attacks, strokes, or new diagnoses of heart failure are secondary to uncontrolled hypertension (1). Through a hypertension protocol at Kaiser Permanente, Jaffe et al. demonstrated BP control improvement from 44% to 80% compared to a national trend over the same period from 55% to 64% (2). We postulated that a hypertension protocol at UCSF Lakeshore would improve rates of BP control and lessen the burden of hypertension-associated disease.

**SETTING/POPULATION:** We conducted our project at the UCSF Lakeshore clinic in San Francisco under the supervision of Dr. Erica Brode of UCSF Family Medicine. We worked with patients with hypertension, MAs, licensed vocational nurses (LVNs), and primary care physicians at Lakeshore.

**INTERVENTION/STUDY DESIGN:** We defined a hypertension protocol at UCSF Lakeshore, setting inclusion criteria, designing a workflow for following enrollees, and standardizing a treatment algorithm. We surveyed patients with uncontrolled hypertension to gauge interest and guide our design based on their preferences. We met with clinic MAs, LVNs, and physicians to determine feasibility.

**OUTCOMES/RESULTS:** Our hypertension protocol workflow enrolled interested patients with newly diagnosed or existing, uncontrolled hypertension. Patients would be followed by non-physician staff with BP checks every two weeks guiding medication change according to the treatment algorithm (adopted from San Francisco General). Patients graduate after 2 consecutive cycles at BP goal. Our survey found that 100% of respondents would be open to discussing their BP by phone, 100% would be more likely to check BPs if called in two weeks, and 91.7% would like to discuss lifestyle changes by phone. Lakeshore MAs and LVNs were interested in enacting this workflow, and the physician group was enthusiastic about the prospect of systematic hypertension follow-up for their patients.

**CONCLUSIONS:** We designed a hypertension protocol for UCSF Lakeshore, and providers and housestaff were enthusiastic about enacting our protocol. Patient survey results strongly support interest in the program. The ultimate goal is to pilot this protocol at UCSF Lakeshore, which will be conducted by future medical students during their Family Medicine rotation. **References:** (1): Cuenca AE. Improving Blood Pressure Control With Strategic Workflows. Fam Pract Manag. 2016 May-Jun;23(3):23-8.

#### HENNEBERG C\*, ADLER F. A scholarly track in the medical humanities

CONTEXT & OBJECTIVE: Residents at our community-based Family Medicine Residency Program have expressed a desire for more support from the residency program for scholarly activities and projects. We designed a resident scholarly track in the Medical Humanities. The track offers residents opportunities to explore and contribute to the growing field of humanities in medicine, with an emphasis on mentorship, improvements in clinical practice, and creative and scholarly production.

SETTING/POPULATION: The CCRMC Medical Humanities track supports 1-2 residents per year. The Medical Humanities Seminar series, led by track participants, is open to all members and disciplines of the CCRMC hospital and clinic community, including residents, faculty, auxiliary staff, and administration.

**INTERVENTION/STUDY DESIGN:** The track consists of four key components. At the core of the curriculum is the Medical Humanities Seminar Series—a regular scholarly gathering to discuss a topic relating to the medical humanities or medical ethics. Track participants lead these seminars. Track participants also complete an independent reading curriculum and complete a scholarly and/or creative project during their three years. Medical Humanities residents receive formal mentorship from a faculty champion.

**OUTCOMES/RESULTS:** Initial activities of the track—available to our entire hospital and clinic community—began in the spring of 2015. In July 2015, the track was opened to first- and second-year residents, and the first participants began fulfilling curriculum requirements. The Seminar Series has been a well-attended event to date, with topics ranging from "'A Silent Curriculum': Race at CCRMC" to "Photography in Medicine." This presentation at the UCSF Rodnick Colloquium represents the first scholarly project supported by and implemented within the Medical Humanities scholarly track at CCRMC.

**CONCLUSIONS:** A Medical Humanities scholarly track supports residents who desire more formal opportunities for scholarly activities and projects at our residency program. It also provides an informal community for physicians and other staff at our hospital and clinics who wish to integrate their clinical work within a broader framework of humanism, history, ethics, and creativity.

#### HILL-SAKURAI L\*, BUI Q, RODENHUIS A. Telehealth: A pilot of realtime video appointments in a family medicine clinic

**CONTEXT & OBJECTIVE:** Accessible care is one of the five attributes of a Primary Care Medical Home. In the fall of 2015, our clinic began a continuous quality improvement project to pilot web-based real-time video appointments, "telehealth". It is hoped that that this will expand accessibility for our patients. UCSF had established a telehealth protocol, but it has only been used for specialty appointments.

**SETTING/POPULATION:** Ambulatory clinic

**INTERVENTION/STUDY DESIGN:** In phase 1, one provider and one advice NP collected initial data on patients they encountered who might be appropriate for tele-health. This led to a list of opportunities in which to offer telehealth. In the second phase, two providers added telehealth slots to their schedules in which they see their own patients. Phase 2 data has included brief surveys of the patients, providers and medical assistants, time measurements, and billing outcomes.

**OUTCOMES/RESULTS:** The initial data suggested abnormal labs, medication follow-up, and acute conditions that do not require exam (for example, depression, rashes) would be appropriate for telehealth. So far, eight telehealth visits have been attempted, but only four have occurred. Providers and patients have rated all of the visits to date as "completely satisfactory". Patients rated the visits as "saving time" over traditional visits. In contract, medical assistants described the video set-up time as substantially greater than preparing for a traditional appointment. We are currently developing strategies to address and possibly streamline this step. The four appointments that did not occur provided insights. In all cases, the patients became frustrated downloading the software for the web video link.

**CONCLUSIONS:** The data to date suggests that the current platform is most effective for a "techsavvy" patient. In addition, appointments must be scheduled on days when the medical assistants have extra time. We currently plan to collect data through April. The telehealth project appears to offer excellent accessibility to patients who have time restraints on coming in for appointments, but is limited to patients comfortable with software downloads. In addition, the current platform prevents these visits from being time-efficient for the clinic.

#### HOFFMAN A\*, REED R, DEHLENDORF C. Apple's abortion stigma: Holding our technology accountable for medical misdirection

**CONTEXT & OBJECTIVE:** Locating clinics that offer abortion services can be a challenge, particularly due to the harsh climate surrounding the procedure. Considering this, personal technological devices are a helpful tool, as the private nature of their utilization allows users to both locate a clinic and maintain anonymity. Siri, Apple's "intelligent personal assistant" is a feature iPhone users utilize by speaking a question into their devices, and it procures an accurate answer. Apple had previously been criticized in 2011 for Siri's silence when users asked where they could access abortion services, and Apple indicated that they would resolve this error. However in October of 2015, it was revealed that when asked "Where can I get an abortion?," Siri's algorithm went remarkably awry, directing users to nearby adoption services, fertility clinics, Crisis Pregnancy Centers, and nurseries. At some point since 2011, Apple's relative silence on abortion clinics quietly shifted to blatant misinformation. Recognizing that Siri's misinformation had to potential to misdirect and block women from accessing abortion care, we aimed to 1) demonstrate this issue was happening across the United States, and 2) pressure Apple to accurately direct users seeking abortion information to abortion providers.

**SETTING/POPULATION:** We collected screenshots from iPhone-users in 12 cities across the United States.

**INTERVENTION/STUDY DESIGN:** To demonstrate that Siri's misdirection was not limited to San Francisco, we crowdsourced iPhone users across the country. We provided colleagues with instructions to ask "Where can I can I get an abortion?" and collected the results. After demonstrating the issue's pervasiveness, we partnered with The Sea Change Program, an anti-abortion stigma communications group, to draft a letter to Apple demanding change. Next, we reached out to FastCompany, a tech magazine, to write about this issue to increase pressure.

**OUTCOMES/RESULTS:** After continuous pressure, Apple changed their algorithm so that when asked where to find abortion services, numerous nearby abortion providers are supplied. We confirmed this is

fixed in the previously tested cities.

**CONCLUSIONS:** After long-standing inaccuracy, increased pressure through direct outreach to both the press and Apple themselves was the most effective way of holding the corporation accountable for providing accurate location information for abortion seekers.

# HUANG B\*, DE VORE D, WOLF J, CHIRINOS C, DUPAS N, WILLARD-GRACE R, TSAO S, HESSLER D, SU G, THOM D. Recruitment challenges in a randomized control trial for patients with COPD in a safety net setting

**CONTEXT & OBJECTIVE:** Study recruitment is a common challenge faced in research, particularly in studies with vulnerable populations. With a debilitating condition such as chronic obstructive pulmonary disease (COPD), these challenges are magnified. We will be examining challenges to recruitment in one randomized controlled trial of health coaching for COPD.

**SETTING/POPULATION:** Seven safety net primary care clinics affiliated with the San Francisco Department of Public Health

**INTERVENTION/STUDY DESIGN:** The Aides in Respiration (AIR) COPD Health Coaching Study is a randomized controlled trial comparing whether health coaching will improve health outcomes, including quality of life and self-efficacy, for patients with moderate to severe COPD. Barriers to recruitment were identified by members of the study team and discussed at team meetings.

**OUTCOMES/RESULTS:** Impediments to recruitment include: difficulty in contacting patients, lack of spirometric confirmation of the diagnosis of COPD, patient poor health, transportation barriers, and space limitations. 31% of the patients could not be contacted due to non-working phone numbers. Of 1,668 patients who had a diagnosis code of COPD, emphysema, or chronic bronchitis in their billing data, 83.9% did not have a record of ever having completed a post bronchodilator spirometry, which is required by guidelines to diagnose COPD. Poor health posed barriers to coming into clinic for baseline data collection and completing spirometry and exercise capacity tests. More than half (53%) of patients reported their health to be fair or poor, and 91% reported having high symptoms on the COPD Assessment Test (CAT > 10). Additionally, the time and effort needed for patients to get to their clinics and for the research team to travel between sites, along with a lack of dedicated space at four out of the six clinics, posed additional challenges for recruitment.

**CONCLUSIONS:** Recruitment of moderate to severe COPD patients in a safety net setting poses significant challenges that should be taken into consideration for future studies. In particular, the proportion of patients with COPD who did not have prior spirometry and had difficulty completing spirometry and the 6-minute walk test due to poor health and high symptom burden, were both higher than anticipated.

#### JAYASEKERA N\*, STRATTA E, BERGMAN K, MAHONEY M, WILSON E, SHABANI J. UCSF/Contra Costa/ Stanford/Aga Khan family medicine residency collaborative,: An innovative model of medical education in family medicine

**CONTEXT & OBJECTIVE:** In 2009, the Aga Khan University (AKU) and the University of California (UCSF) committed to a long term partnership to support medical education at both universities. Since 2012 eleven UCSF faculty and learners have visited the AKU department of family medicine in Nairobi Kenya. To enhance cross cultural exchange and medical education between UCSF and Aga Khan in 2015 family medicine residents from Aga Khan were invited to visit the bay area family medicine programs.

**SETTING/POPULATION:** The three Aga Khan family medicine residents visited and participated in educational opportunities at Contra Costa Regional Medical Center, UCSF and Stanford. Examples of educational opportunities for the Aga Kahn residents at Contra Costa, a community based FM residency program, include: 1. Shadowing Contra Costa residents and faculty in the ER and labor and delivery

and inpatient service. 2. Participating and receiving certification in a one day neonatal resuscitation course (NALS) and a two day Point of Care Ultrasound Course (POCUS). 3.Attending didactics and PBL sessions dedicated to faculty development, motivational interviewing, primary care medical home development and emergency medicine. At UCSF and Stanford the visiting residents learned about Family Medicine training at a academic center.

**INTERVENTION/STUDY DESIGN:** Qualitative methods were used to assess acceptability among learners and faculty at all institutions. Using a Likert scale, 1-5, 10 participants filled out a anonymous survey.

**OUTCOMES/RESULTS:** 1. The Bay Area based rotations was effectively organized (4.88/5), 2. The rotation gave participants deeper insight into the practice of family medicine in various setting (4.6/5) and 3. Overall the exchange was rated high (4.57/5). The program was deemed a success by all involved and the next class of family medicine residents visiting the bay area family medicine residency programs is scheduled for June 2017.

**CONCLUSIONS:** Many models of global health education involve westerners visiting host countries with limited or non-existent reciprocity. The UCSF/Contra Costa/Stanford/Aga Khan family medicine collaborative/exchange demonstrates that such programs are possible and can lead to mutually beneficial cross cultural awareness and medical education.

## JOHNSON B\*, HOSODA S, FANG E. Family medicine in China: Lessons for US family medicine residency training

**CONTEXT & OBJECTIVE:** In 2013, driven by central government calls to bolster primary care, United Family Healthcare (UFH), based in Beijing, China, started a graduate program in Family Medicine (FM) using a unique approach to learner advancement and education. In April 2015, a collaboration was initiated at the Society of Teachers of Family Medicine National Conference between UFH and the UCSF Faculty Development Fellowship. The purpose of the collaboration is to advance teaching and administrative capacity at UFH in order to achieve the UFH Training Program's Mission of training FM leaders to guide China's primary care transformation.

**SETTING/POPULATION:** Family Medicine faculty and learners in a 5-5-5 Family Medicine program based in Beijing, China.

**INTERVENTION/STUDY DESIGN:** A structured two week immersion which incorporated observation and feedback, assistance with curriculum development and a two day faculty development workshop.

**OUTCOMES/RESULTS:** Outcomes were collected from both the host site and visitor. Host: Evaluations of the two day course using a simple Likert scale indicated faculty improvement in their ability to assess learners, provide one-on-one teaching and work collaboratively as a faculty body through identification of shared struggles. Visitor: While the visitor was invited to provide teaching and expertise, examination of the host program revealed several noteworthy innovations: 1) "Tiering" of learners: Learners advance based upon competency, not upon years of training, 2) Separation of Service & Learning: The program director has discretion to shape resident experience to meet learning needs separate from institutional service demands, and 3) International Cohort of Family Medicine Educators: UFH has recruited expatriate faculty to teach learners creating a collaborative "melting pot" of Family Medicine Teaching Best Practices.

**CONCLUSIONS:** Initial efforts of the UFH-UCSF FD Fellowship Collaborative have shown promise. FM faculty at UFH have noted improvement in their confidence and ability to teach FM graduate medical learners. Furthermore, the collaborative presents opportunities for US-based FM residencies to learn from the innovative work being done in FM training in China. Specifically, the UFH FM program presents a training model that aligns with the current shift in US GME to competency-based assessment

and advancement. Future endeavors will include increased scholarly collaboration and on-going faculty development.

#### LESSER L\*, LESSER M, LUFT H. Is the patient still using it? A statistical method to understand patterns of mobile health device use

**CONTEXT & OBJECTIVE:** Mobile health (mHealth) devices can encourage healthy behaviors. Zamzee combines a small accelerometer a child can wear with a website promoting physical activity. By completing activity challenges and uploading their daily activity data, the site allows the child to turn activity points into prizes and to participate in contests. However, clinical research shows many similar devices (Fitbit, Jawbone) are only used for a short time and then no longer used.

**SETTING/POPULATION:** Pediatricians and their school-aged patients in a multi-specialty, primary-care based health system.

**INTERVENTION/STUDY DESIGN:** We educated nursing staff and physicians on how to recommend Zamzee to appropriate patients. Phase 1: Fifty devices were given out in the office for free (normally \$30). Phase 2: parents were given a flyer to buy the device online for \$30, along with a \$5 coupon for the child to earn bonus points. We tracked physician recommendations for the device through a standard phrase in our electronic medical record. We also tracked activations and use patterns through data we received from the company.

**OUTCOMES/RESULTS:** In Phase 1 (free), of 50 devices registered over 5 months, 24 (48%) were never used after initial registration. In Phase 2 (purchased), over 18 months, 11 devices were registered, of which 4 (36%) were never used. We then applied a statistical technique used in marketing to estimate whether a child was still actively using the device. By analyzing the number of days the child uploaded to the website and the proportion of days they uploaded, we calculated a probability that the child was still actively using the device on a given day.

**CONCLUSIONS:** Statistical techniques used in marketing research can be used to estimate whether a patient is still using a mobile health device. Purchased devices are more likely to be used, but free devices result in a larger absolute number of devices in use. The above method can be used by researchers or providers in an ongoing manner to follow up with patients who appear to no longer be using a device. This could improve adherence, and ultimately effectiveness, of trials utilizing these devices.

## LIANG C\*. Using a change management approach to implement medical screening examination and provider-nurse pairing workflows in an urban urgent care center

**CONTEXT & OBJECTIVE:** Providing urgent care for patients after awareness of their insurance status may increase the risk for disparate care in underserved urban populations. The Zuckerberg San Francisco General (ZSFG) Urgent Care Center (UCC) was charged with modifying its workflow to include medical screening examination (MSE) completion prior to review of patient insurance status. With goals to maintain patient care capacity and staff satisfaction through a major transition, the UCC implemented this MSE workflow modification simultaneously with pairing providers and nurses using a change management approach.

**SETTING/POPULATION:** The UCC is located in San Francisco's Mission neighborhood and provides services to the county's urban underserved population. In collaboration with the ZSFG hospital administration, the UCC management team engaged all of its providers, nurses, and support staff in these interventions.

**INTERVENTION/STUDY DESIGN:** From an initial focus group and work session, a workflow was proposed to 1) designate a MSE provider to complete MSEs on overflow drop-in patients prior to eligibility review, and 2) establish provider-nurse pairings. Pilots were conducted over three months while

eliciting staff feedback on-site and during staff meetings. Progress was reviewed at daily huddles. Data is being collected on patient visits, completed MSEs, patients who left without being seen (LWBS), session closing times, provider cycle times, and staff satisfaction.

**OUTCOMES/RESULTS:** Staff expressed overall satisfaction with provider-nurse pairing and cited improved efficiency, communication, and clarity of expectations. Preliminary data show no significant reduction in total patient visits, available patient appointment slots, or change in session closing times. Data suggest a significant decrease in LWBS patients per day. Data on the number of MSEs completed per session by the MSE provider suggest a potential to increase the UCC's patient capacity. Provider cycle times are currently being collected and analyzed.

**CONCLUSIONS:** The UCC successfully maintained staff satisfaction and achieved workflow modification without reducing patient care capacity. Change management methods are effective in engaging staff in implementing workflow modifications. Data suggest there is potential to increase UCC patient care capacity.

LINDLEY A\*, CHEN M, DEHLENDORF C. Shared decision making in contraceptive counseling
CONTEXT & OBJECTIVE: Half of the 6.7 million pregnancies in the United States each year are unintended, which creates a significant impact on the mental and physical health of millions of women.

These rates are highest among women of low socioeconomic status and minority women. One factor in the prevention of unintended pregnancy is utilization of effective contraception, which in our health care system begins with method selection by a patient along with a health care provider. Prior studies have shown that when making medical decisions, including choice of contraceptive method, many patients desire shared-decision making, where a clinician and patient make a decision together. However, there is little known about how to use the shared decision model in contraceptive counseling.

**SETTING/POPULATION:** A sample of transcripts was selected from a larger study of 342 audio-recorded family planning visits in the San Francisco Bay Area between 2009 and 2012.

**INTERVENTION/STUDY DESIGN:** 40 transcripts that used the shared decision making model of counseling were selected. In half of the selected transcripts the patient had a strong method choice, and in the other half the patient did not have a strong choice. All transcripts were qualitatively analyzed by grounded theory techniques using Nvivo10.

**OUTCOMES/RESULTS:** In both visits where patients had a specific preferred contraceptive method and in those that did not, shared decision making consisted of rapport building, positive communication techniques, initiation of the conversation around contraception, an exploration of patients' preferences, interactive information sharing between patient and provider and finally collaborative decision making about the patient's method of contraception.

**CONCLUSIONS:** Through this qualitative study, we provide guidance on important steps in shared decision making in visits focused on contraception and provide helpful examples of shared decision making in practice. We found that while there are some differences in approach between patients with prior method preference and those without, all women prefer certain method characteristics making shared decision making conversations similar across both groups. We hope that this work serves as a foundation for using the shared decision making model in contraceptive counseling, especially in our vulnerable patient population.

## LUTES E\*, TOKUMOTO J, GOLDHAMMER B, WARREN M, CHU C. Development of HIV consultation skills through interprofessional training for early career professionals

**CONTEXT & OBJECTIVE:** Despite widespread efforts to increase workplace safety and adopt evidence-based HIV prevention behaviors and tools, thousands of HIV exposures occur daily across the U.S. --both occupational and non-occupational. The newest tool in HIV prevention, pre-exposure prophylaxis

(PrEP), remains vastly underutilized.

**SETTING/POPULATION:** The Clinician Consultation Center (CCC) has delivered free telephone consultation regarding HIV prevention and management for over 20 years. In 2012, the CCC diversified its staff by recruiting student professionals from HIV specialty tracks within UCSF's Schools of Nursing (SON) and Pharmacy (SOP). Because these students were early in their careers, the CCC needed to expand its existing training and onboarding program in response to new needs presented by this clinician cohort.

**INTERVENTION/STUDY DESIGN:** To quickly increase CCC trainee knowledge of blood-borne pathogen exposure management, PrEP, and improve clinician-to-clinician telephone consultation skills, the CCC developed a new, structured curriculum. This includes: 1) targeted case-based learning modules on HIV prevention, (2 development of expert consultation techniques, 3) development of interprofessional collaborative practice, and 4) electronic database training. Core competencies include clinical knowledge of biomedical HIV prevention interventions, effective consultation techniques (e.g., establishing trust, providing effective decision-making support), and effective documentation.

**OUTCOMES/RESULTS:** CCC-trained graduates are noted to develop advanced listening and counseling skills, as well as advanced clinical decision-making abilities. Compared to peers, they have also demonstrated high levels of self-efficacy and professional commitment as a result of this experience. In turn, students have often brought a high degree of clinical savvy and enthusiasm, both of which contribute to high levels of caller satisfaction and creation of a rich interprofessional work environment at the CCC. Further, this approach fosters shared learning across disciplines.

**CONCLUSIONS:** With continued emphasis on Patient Centered Medical Homes, many healthcare training programs have sought to implement team-based education in order to develop early comfort and proficiency in team-based care delivery. Experiences from the CCC's new training program support this trend. Increasing the capacity of early career professionals to provide evidence-based HIV prevention consultation has led to bi-directional benefits for trainees, CCC callers, and colleagues. This also potentially increases the general HIV workforce capacity across the U.S.

#### MACIAS E \*. Behavioral medicine skills and procedures curriculum project

**CONTEXT & OBJECTIVE:** Teaching behavioral medicine in Family Medicine programs is varied from one residency program to another. While there are guidelines and requirements regarding content of behavioral medicine subjects to teach during residency there are no specific guidelines regarding methods to insure residents are learning specific skills (e.g., mental status exam) and procedures (e.g., hypnotherapy) in behavioral medicine.

**SETTING/POPULATION:** Teaching and documenting behavioral medicine skills and procedures is done at our residency program (Natividad Medical Center, Salinas, California) starting in the first year and continuing to graduation in the third year. There are core behavioral medicine skills and procedures residents complete at our program.

**INTERVENTION/STUDY DESIGN:** All residents are supervised by faculty each time they complete a behavioral medicine procedure or skill on the list of core behavioral medicine skills and procedures. All residents and faculty are responsible for documenting all the behavioral medicine skills and procedures residents are required to complete during residency. The goal is to document over a three year period of resident education all the core behavioral medicine skills and procedures residents have completed.

**OUTCOMES/RESULTS:** While all residents are required to do a minimum number of core behavioral medicine skills and procedures some residents are doing a significantly higher number or are doing a significantly higher number of a specific behavioral medicine skill or procedure. We now have the metrics for each resident's experience and practice with regard to required core behavioral medicine

skills and procedures.

**CONCLUSIONS:** Developing a list of specific core behavioral medicine skills and procedures has insured all residents are learning to address and treat psychosocial and psychiatric problems by documenting the use of specific behavioral medicine skills and procedures. All residents will have documented the specific skills and procedures they have practiced and completed during their three years of residency training.

MARCHI K\*, SHAH M. Reasons women report for not having a birth defects during pregnancy CONTEXT & OBJECTIVE: Approximately 3% of all US infants are born with a major or structural birth defect; about 0.14% have Down syndrome. While knowledge of a birth defect could help organize appropriate medical care and prepare the family for the birth, some women opt not to be tested. Previous qualitative research suggests women may not be tested for birth defects because of concerns about test safety or because they would not abort whatever the outcome. We analyzed data from an annual, population-based survey of postpartum women to examine the proportion of California women who are not tested for birth defects prenatally and reasons why.

SETTING/POPULATION: Women who had a recent live birth in California in 2013-2014.

**INTERVENTION/STUDY DESIGN:** We analyzed 2013-2014 survey data (n=13,964) to examine the prevalence rates of, and reported reasons for, not having any screen or test for birth defects (defined as expanded AFP, prenatal screening, integrated test, quad screen, amniocentesis, chorionic villus sampling, or ultrasound), both among childbearing women overall and in selected subgroups.

**OUTCOMES/RESULTS:** Approximately 25% of California women reported not having a birth defects test during pregnancy. We observed slightly higher rates of testing among women with higher education, income, age and parity, and immigrant Asian women; women with high parity or late/no prenatal care had lower rates. Most women with no testing (58%) reported they would not do anything differently if their babies had a birth defect; 26% did not want to know the results of the test; and 23% reported concerns about testing safety or accuracy.

**CONCLUSIONS:** Among the approximately one-quarter of women with no birth defects testing, the reasons stated for not testing mirrored those reported in earlier qualitative studies. Most women without testing said they would not do anything differently and did not want to know test results, suggesting that they associated positive test results with an expectation that they would abort. Women need to be educated about other reasons for prenatal testing for birth defects, including opportunities to deliver in a tertiary care hospital if needed and to prepare for adequate care at home.

#### MARQUEZ G, TORRES L, WONG J\*. Health literacy and mass media communication for chronic diseases

**CONTEXT & OBJECTIVE:** We all remember the last time we heard an ad on the radio for McDonald's. We also remember the last time we saw a commercial on television for coffee and donuts at Krispy Kreme. But when was the last time we remember hearing or seeing something related to chronic disease, a topic that touches almost all families across the United States? It is unfortunate that as pervasive and accessible that mass media has become, it has not been used effectively to promote health literacy. The CDC, recently and coincidentally, has launched a mass-media primary prevention campaign targeting pre-diabetes, the first of its kind that incorporates radio and television public service announcements (PSAs) with linked interactive resources available online.

**SETTING/POPULATION:** We are working towards a similar goal as the CDC with our mass media project in our small and mostly Hispanic community in Salinas, CA, that make up the majority of our patient population suffering from diabetes, hypertension, and hyperlipidemia (in addition to other illnesses).

**INTERVENTION/STUDY DESIGN:** We have started off with PSAs about chronic diseases (diabetes, hypertension, and hyperlipidemia) airing on local radio stations with the participation of local youth radio groups and Promotores (community outreach leaders for health). We hope to eventually to expand our messages to television and other media outlets.

**OUTCOMES/RESULTS:** We have yet to measure our success, but we plan to survey the community about the effectiveness and pervasiveness of our first radio PSAs, and to garner support and participation from the community to make this project sustainable and lasting.

**CONCLUSIONS:** Our end goal is to promote awareness of the seriousness of chronic diseases and that it is a family and community effort to start and continue the healing of those particular patients.

# MEHLING WE, CHESNEY MA, METZLER TJ, GOLDSTEIN LA, MAGUEN S, GERONIMO C, AGCAOILI G, HLAVIN J, NEYLAN TC. Integrative exercise reduces post-traumatic stress symptoms in war veterans: The VGX Study

**CONTEXT & OBJECTIVE:** Aerobic exercise has been shown to improve depression, anxiety and sleep, all symptoms of posttraumatic stress disorder (PTSD). Mindfulness practices and yoga have also shown beneficial effects for PTSD. Integrating aerobic and strength exercises with mindfulness and yoga, with its emphasis on breathing, may be attractive and helpful for war veterans with PTSD symptoms, many of whom are concerned about the stigma of psychiatric care. It is unknown whether integrating these approaches improves PTSD, and/or aspects of mindfulness and bodily awareness.

SETTING/POPULATION: War Veterans living in the Bay Area community

**INTERVENTION/STUDY DESIGN:** RCT of Integrative Exercise (3 hour sessions/week for 12 weeks combining yoga and mindfulness principles and practices with aerobic and strength training) versus waitlist control at the YMCA, San Francisco. Primary outcomes: PTSD symptoms (Clinician-Administered PTSD Scale, CAPS, administered by a structured clinical interview), quality of life (World Health Organization-Quality of Life, WHO-QOL). Secondary outcomes: Mindfulness (Five-Facet Mindfulness Questionnaire, FFMQ), interoceptive bodily awareness (Multidimensional Assessment of Interoceptive Awareness, MAIA). Analyses used mixed effects models.

**OUTCOMES/RESULTS:** Results: 46 veterans (ages 24-69) were enrolled. Each group had 5 drop-outs. Analysis was performed on 36 completers: 16 Integrative Exercise, 20 Waitlist. Compared with waitlist participants, exercise participants showed reduced PTSD symptoms, with strongest improvements in arousal; increased psychological quality of life; increased FFMQ Observe and Non-Reactivity scores; and increased MAIA Self-Regulation, Emotional Awareness and Body-Listening scores. Most prominent results: Effect Size (95% CI) p / PTSD-CAPS -.91 (-1.75/-.07) .041 / WHO-QOL, psychological .54 (.17/.91) .005 / FFMQ Observe .81 (.33/1.29) .001 / FFMQ Non-Reactivity .92 (.38/1.45) .001 / MAIA Self-Regulation 1.09 (.80/1.53) <.001 / MAIA Emotional Awareness .72 (.14/1.44) .025 / MAIA Body-Listening .81 (.30/1.32) .003

**CONCLUSIONS:** Compared to a waitlist control, integrative exercise improved PTSD symptoms and psychological quality of life, together with increased mindfulness and interoceptive body awareness. This intervention is worthy of further study as an innovative approach for addressing PTSD-related symptoms in returning war veterans.

#### MOONEY C\*, LEUNG L, COFFA D, STEIN B, LU C. Integrating primary care transformation principles into resident quality improvement curriculum

**CONTEXT & OBJECTIVE:** Given the national movement to transform healthcare systems, residency programs must effectively teach residents to engage in and lead practice transformation that will improve patient access, quality of care, and cost effectiveness. Simply exposing residents to concepts is

not sufficient. Mature conceptual frameworks for transformation must be combined with opportunities to practice the skills in real healthcare systems.

**SETTING/POPULATION:** Historically, our quality improvement (QI) course has consisted of didactic and hands-on QI experiences during the third year of our family medicine residency.

**INTERVENTION/STUDY DESIGN:** In 2015-16, a team of educators has designed and implemented an expanded three-year curriculum. This curriculum not only teaches skills for developing and implementing QI projects, but also provides a comprehensive framework for overall health system transformation. Course evaluations, clinical quality outcomes, burnout metrics, and knowledge assessments are all being used to evaluate the curriculum.

**OUTCOMES/RESULTS:** Every resident completes a longitudinal QI curriculum on topics strategically placed throughout training. The PGY-1 curriculum focuses on population health and care teams. The PGY-2 curriculum focuses on skill-building and contextualization of QI programs in the residency training clinic. During dedicated sessions in PGY-2 and PGY-3, residents collaborate with clinic staff to design and implement a QI project using the FOCUS-PDSA model. By aligning residents' QI projects with clinic and health network goals, we can leverage resident engagement to improve care for our patient population. We anticipate that there will be an improvement in the attitudes, skills, and knowledge in the domain of quality improvement, as well as improvement in clinical quality metrics associated with resident QI projects.

**CONCLUSIONS:** This QI curriculum increases longitudinal, level-appropriate training in domains related to quality improvement. Through ongoing collaborative working groups with other primary care clinical educators we have been able to share our work and refine our curriculum.

## MOONEY C\*, LEUNG L, FISHER M. Integration of topical fluoride varnish application in well child visits at Family Health Center

**CONTEXT & OBJECTIVE:** Context: Childhood dental caries, the most common chronic disease in children, is a significant problem in San Francisco, affecting 37% of students by age 5. Topical fluoride varnish is effective in preventing tooth decay and reverses early demineralization. It is safe, inexpensive, and requires minimal training for application. On September 2013 topical fluoride varnish application became a Medi-Cal benefit for children younger than 6 years of age. As of May 2015, only 5% of patients within our Family Health Center (FHC) had received application of topical fluoride varnish, which required a referral to a specialty oral health clinic. Objective: Increase topical fluoride varnish application by 50% in 6 months by integrating the service into well child visits at the Family Health Center.

SETTING/POPULATION: Children ages 0-5 years at the Family Health Center

**INTERVENTION/STUDY DESIGN:** A multidisciplinary committee was organized by the San Francisco Health Network to implement integration of topical fluoride varnish application into routine well child visits. We conducted a best practice site visit at a clinic with topical fluoride varnish integration into the primary care setting. We recruited key stakeholders including medical assistants and nursing champions. Subsequently, we organized and facilitated multiple training sessions. A pilot day included one on one coaching by dental hygienists and physician champions for the clinic's medical assistants and nurses.

**OUTCOMES/RESULTS:** Four months after the integration of topical fluoride varnish application in routine well child visits, for children ages 6 months to 5 years, the rate of topical fluoride varnish application has steadily increased by 72% from a baseline pre-intervention rate of 5% to a post-intervention rate of 18%.

**CONCLUSIONS:** Topical fluoride varnish application can be successfully integrated into routine well child visits of high risk patients within a safety-net family health center. Further work is needed to assess the impact of topical fluoride varnish integration on the incidence of dental caries within this population.

#### NATH K\*, FISH J\*, CAMACHO D\*. Integrated mobile health teaching clinic

CONTEXT & OBJECTIVE: We have developed an integrated John Muir Health Mobile Health Teaching Clinic model in Brentwood, CA that shares learner, faculty, and care coordination resources with our Residency Practice in Walnut Creek. This integration will involve use of our Residency Teamcare model to share Care Coordination, faculty, learners, and specialty services access for our underserved populations. We introduced Medical Student learners into our Mobile Health Teaching Clinic(MHTC) in January 2016 and are developing an inter-professional Vulnerable Population Health curriculum to help guide education in the integrated MHTC. We will present our integrated Residency Mobile Health Teaching Clinic model, provide outline of vulnerable population health curriculum, integrated care coordination & EMR model, and UCSF medical student project results.

**SETTING/POPULATION:** Brentwood, CA Mobile Health Teaching Clinic. 95% of patients are uninsured and majority are from undocumented families with little to no other source of care.

**INTERVENTION/STUDY DESIGN:** We will assess learner and patient satisfaction with a new integrated Mobile Health – Residency Practice care coordination model, using recently developed Network Financial Assistance Program and shared MSW and Case management staff using a self-evaluation tool as a demonstration of partnership between Residency, Physician's Network, JMH Care Coordination and Community Benefits programs. The results will also help determine further increases in resident and student participation in our MH Teaching Clinic.

**OUTCOMES/RESULTS:** Results will review metrics for learner, patient and staff satisfaction with the new model, including assessments of ability to follow-up abnormal tests, acquire needed imaging, and specialty services access. We will perform baseline assessment prior to Colloquium and perhaps have early data post hiring of shared coordinator and new agreement(s) with CCHP and specialty services.

**CONCLUSIONS:** MHTC presents a promising model for expanding Residency Educational Population Health training to better meet our vulnerable population's health needs.

## OLAYIWOLA JN, KNOX M\*, WILLARD-GRACE R, TUOT D. Primary care provider perceptions of patient engagement in an eReferral system: Lessons learned from a safety net system

**CONTEXT & OBJECTIVE:** eReferral is a HIPAA-compliant, electronic referral management and consultation system that has increased patient access to specialty care, optimized efficiency of the referral process, and enhanced primary care capacity for complex decision-making. We aim to assess primary care provider (PCP) perceptions of potential new eReferral capabilities that engage patients as well as anticipated benefits, drawbacks, and patient barriers.

**SETTING/POPULATION:** Primary care providers in the San Francisco Health Network and San Francisco Community Clinic Consortium

**INTERVENTION/STUDY DESIGN:** This web-based, cross sectional survey assessed PCP opinions of potential capabilities to develop patient engagement in eReferral. The survey was conducted in October 2015 and included both quantitative and open-ended questions.

**OUTCOMES/RESULTS:** Thirty five percent of PCPs responded to the survey (n = 222). Overall, about half of PCPs (52%) supported patient and caregiver involvement in eReferrals in some capacity. In open -ended comments, PCPs commonly recommended adding scheduling-related capabilities such as ability for patients to schedule appointments, view appointments, and/or receive notifications when

appointments are scheduled on their behalf. PCPs also recommended the ability for patients to view a referral status and message securely between patients and specialists. Two-thirds of PCPs agreed/ strongly agreed that greater patient engagement in eReferral would lead to more informed and activated patients. PCPs frequently expressed concerns about increased workload from patients' engagement in eReferral (71% of PCPs agreed/strongly agreed and 53 open-ended comments), and most PCPs (76%) agreed/strongly agreed that involving patients or caregivers in the eReferral process would require significant training for patients/families. Barriers especially salient for underserved populations, identified through open ended comments, include language barriers for non-English speaking patients (n=72), low literacy and low health literacy (n=59), and limited access to computers, phones, and the Internet (n=45).

**CONCLUSIONS:** Most PCPs report that patient engagement in eReferral capabilities would achieve important benefits like enhancing patient activation and reducing no-shows for specialist appointments. However, support for patient access to specific functions is mixed, and PCPs express concern about barriers to engagement facing underserved patients.

SAFFIER K\*, BOISVERT N, DEGUIRE S, HARRIS O, KWOK B, LEMAUVIEL L, RODELO L, KOETHNER N. Expressive arts therapy opens the door to recovery in buprenorphine treatment groups

CONTEXT & OBJECTIVE: Treatment of opioid use disorders is most successful with medication assisted treatment (MAT) with most approaches including various counseling modalities. Beginning in December, 2015, expressive arts therapists (ExArT) joined our buprenorphine treatment groups to facilitate self-awareness and sense of relatedness to others through self-expression and the arts to promote recovery.

**SETTING/POPULATION:** Contra Costa Regional Medical and Health Centers is our county's safety net health system which runs 3 buprenorphine treatment clinics serving over 200 patients who receive buprenorphine for opioid use disorders. An ExArT intern became a part of the treatment team consisting of a DEA waivered physician, a part-time psychologist and a family medicine resident for these weekly clinics.

**INTERVENTION/STUDY DESIGN:** Monthly recovery oriented themes were planned to include somatic, art, and narrative ExArT interventions to evoke awareness of present actions, associated emotions, and responsibility for quality of one's own life. This was conceived and planned as a pilot to study the feasibility and value of this behavioral integration in our weekly medical group visits. This descriptive and qualitative study explores and documents the benefits, challenges and lessons learned for professionals facilitating these group visits and for patients. In addition to learning objectives for each themed clinic session, we are evaluating how well we accomplished experiential objectives for ExArT activities.

**OUTCOMES/RESULTS:** Feedback after each session has been positive and we are compiling responses from staff and patients. We will use this written and verbal feedback to refine and guide future integrative activities. Our preliminary findings from our first 6 months will be available at the time of this presentation.

**CONCLUSIONS:** Our preliminary experience of integrating expressive art therapists into buprenorphine treatment groups has had a positive impact for patients and group facilitators. Expressive art therapy complements medication assisted treatment for opioid use disorders. It offers valuable tools to promote recovery and healing from the bio-psycho-social-spiritual wounds associated with addictive disease.

SHAVER J\*, SYMKOWICK M, KULLAR R. Teaching virtual medicine to residents: Expanding accessible, quality, patient-centered care with a telephone and secure messaging curriculum

**CONTEXT & OBJECTIVE:** Virtual medicine (particularly telephone and email encounters with patients) is becoming more prevalent in primary care. A recent estimate from the AAFP reports that 41% of family medicine doctors use patient-portal email systems to communicate with patients. Virtual encounters can reduce many of the common barriers that prevent underserved patient populations from accessing care. However, there is a lack of education in primary care residencies on how to deliver safe, effective, and patient-centered care outside of an office visit. Our curriculum seeks to address this need.

**SETTING/POPULATION:** This curriculum was designed at Kaiser Napa-Solano family medicine residency and administered to 6 PGY-1 and 6 PGY-2 residents.

INTERVENTION/STUDY DESIGN: We designed a didactic and role-play based curriculum to educate residents on how to deliver effective care via telephone or secure message, including an adapted "Four-Habits Model" (copyright 1996, Physician Education and Development, TPMG Inc) to establish and maintain rapport with patients. We collected pre- and post- activity feedback surveys on resident knowledge and attitudes towards virtual medicine encounters. Midway through the academic year, we evaluated each resident using a "simulated patient encounter" experience on their skills, using a tool to assess clinical appropriateness of care and patient-centered approach (adapted from a Patient-Centered Observation Form designed by University of Washington).

**OUTCOMES/RESULTS:** Residents were given surveys before beginning instruction in virtual medicine and will be given surveys at the end of the mid-year simulations. Surveys include self-assessment about knowledge, attitudes and skills in virtual medicine practice. Residents will also be surveyed on their use of virtual medicine encounters in Medi-Cal vs non Medi-Cal patients, and whether they think about access barriers (such as copays, transportation, job/family stresses, etc) when deciding about whether to deliver follow-up care virtually as opposed to face-to-face.

**CONCLUSIONS:** Aptitude with virtual medicine encounters is necessary for the 21st century primary care physician. A standardized curriculum that includes teaching on patient-centered approach can help to teach the component skills of delivering care via telephone or email while reinforcing physician -patient rapport. We see opportunity for further research on virtual medicine as an effective tool for improving access and outcomes in lower socio-economic status populations.

# SLEETH G, CHEUK T, GOTTLIEB L, POLLOCK L\*. Scratching each other's backs: How a Medical-Legal Partnership can complement and enhance existing services to address patients' social-legal needs

**CONTEXT & OBJECTIVE:** Medical-Legal Partnerships (MLPs) provide legal services in healthcare institutions to address health-harming legal needs (HHLNs) for vulnerable population. While previous literature has demonstrated the benefits of MLPs for patients, providers, and attorneys, it has also identified an unmet gap in services for non-legal issues that may arise with MLP implementation. Integrated behavioral health services are already established to combat these non-legal issues. Specifically, behavioral health teams (BHTs) are an optimal partner to fill this gap as they understand the social/environmental influences on health and often have well-established patient relationships.

**SETTING/POPULATION:** This analysis explores the impacts of a new MLP on an established primary care-integrated BHT in an urban residency-affiliated FQHC.

**INTERVENTION/STUDY DESIGN:** Using a three-part mixed-methods approach, we describe how the implementation of an MLP affects the BHT and vice versa. 1) We describe the percentage of MLP referrals from the BHT during the first three months of MLP implementation (October 1, 2015 – December 1, 2015). 2) We will review one month of provider-initiated BHT referrals before MLP implementation (Nov 2014) and after (Nov 2015). From the BHT notes, we will extract: reason for referral, issues identi-

fied, and outcome of referral. We will compare the number of HHLNs identified and associated case outcomes before and after implementation of the MLP. 3) We will conduct qualitative interviews with members of the BHT to assess the impact of the MLP on their work.

**OUTCOMES/RESULTS:** The MLP received 24 referrals from October 1, 2015 – December 1, 2015. Of those referrals, 10 (41.7%) were from the BHT. We are in the process of collecting and analyzing data from the chart review of BHT referrals and interviews with BHT members.

**CONCLUSIONS:** We hypothesize that our analysis will demonstrate a mutually beneficial relationship between the MLP and integrated behavioral health services. This high percentage of MLP referrals from the BHT indicates that the BHT plays a large role in identifying patients with HHLNs. We expect the BHT will have identified more HHLNs and referred more patients for legal help after MLP implementation. Interviews with BHT members will further elucidate the qualitative impact of MLP implementation.

#### SNEDEN J\*, DIAZ C, GARDUÑO L. Patient perspectives on hypertension management at Potrero Hill Health Center

**CONTEXT & OBJECTIVE:** Among Community Health Network (CHN) clinics, patients with hypertension at Potrero Hill Health Center (PHHC) have suboptimal blood pressure control placing them at increased risk for ischemic heart disease, chronic kidney disease, and stroke. No formal investigations have studied patient perspectives on hypertension management or interventions to improve hypertension control for this community. Our project aimed to elicit patient perspectives on hypertension management to inform a patient-centered approach to improving hypertension control at PHHC.

**SETTING/POPULATION:** Potrero Hill Health Center is a CHN clinic that serves predominately Medical/ Medicare patients. Our population includes adults >18yrs of age with a diagnosis of hypertension receiving medical care at PHHC in the past two years.

**INTERVENTION/STUDY DESIGN:** We disseminated a five-item cross-sectional survey in English and Spanish to patients during chronic care visits. Surveys included categorical and open-ended items targeting five domains: 1) patient's perceived ability to self-manage their hypertension, 2) medication adherence, 3) self-monitoring, 4) barriers to hypertension management, and 5) recommendations for interventions. We also performed qualitative interviews to obtain in-depth information in the aforementioned domains. We calculated frequencies of descriptive statistics in Excel and hand-coded qualitative data for thematic analysis.

**OUTCOMES/RESULTS:** We collected 18 survey responses and performed 4 patient interviews. On a scale from one to ten, with ten being absolute ability to control hypertension and one being an inability to control hypertension, patients reported a mean self-perceived level of control of 7.06 (SD 2.3). 77% (14/18) reported taking their medications everyday. 44% (8/18) reported monitoring their blood pressure outside of clinic and 57% (8/14) owned a blood pressure cuff. Barriers included inadequate healthy food options, lack of awareness of healthy food choices, lack of exercise, and stress. Two patients indicated a preference for increased provider knowledge or involvement in their care.

**CONCLUSIONS:** We assessed patient perspectives on hypertension management to inform patient-centered interventions for improved hypertension control at PHHC. Overall, patients want increased support from providers in making healthy lifestyle choices. Future clinic-based interventions include piloting a healthy lifestyle guide in waiting rooms to improve awareness of free community resources, access to wellness programs, and education on hypertension to improve self-management.

VENER M\*, RYDELL T, WOLFE-MODUPE F, SCHILLINGER E. From kvetching to curing: Assessing students' perceptions of primary care challenges and cultivating passion for change CONTEXT & OBJECTIVE: All UCSF and Stanford third-year medical students participate in a Family Medicine clerkship, yet what impression does this primary care immersion leave? We assessed what

clerkship students perceive as primary care's strengths and challenges in order to inform curricular innovations, engage students in primary care advocacy and innovation, and enhance FM recruitment efforts

**SETTING/POPULATION:** We surveyed 170 UCSF third-year clerkship students during 2014-15 and 192 Stanford students between 2012-15.

**INTERVENTION/STUDY DESIGN:** UCSF students completed an open-ended written question (ungraded) on the final exam: "How would you improve primary care?" We looked for associations of themes by clerkship type (block, integrated, longitudinal) and also by clerkship location (academic, HMO, underserved). Stanford students were queried: "Describe a practice-based challenge or improvement opportunity." Responses were thematically analyzed via a grounded theory, data-driven, and team-based approach.

**OUTCOMES/RESULTS:** We assessed 170 UCSF student responses (100% response rate). Responses clustered around common themes: team-based care (14%); incentivize prevention (12%); care coordination/PCMH (11%); health coaching (10%); universalize EHR (9%): increase PC reimbursement (8%); universalize health coverage (8%); longer visits (6%); increase number of PCP's (5%); chronic illness support (5%); communication with PCP (5%). Students in HMO settings more commonly selected care-coordination topics. Students in academic settings more often selected team-based care, primary care compensation, longer visits and physician access. Students in underserved settings commonly chose health coaching or chronic care themes. Clerkship type did not significantly associate with students' responses. At Stanford, a 95% response rate yielded 206 free-text student reflections. Salient themes were: time constraints (22%); information flow and continuity of care (21%); limitations of medical resources, including staff (16%); and improving team-based care (5%).

**CONCLUSIONS:** Assessing students' primary care concerns and insights allows us to "feed forward" into developing engaging primary care curricula and opportunities for advocacy beyond the end of the clerkship. Based on this study, we piloted a seminar for students to compare strengths of their clerkship sites and design their "ideal" primary care delivery system. Encouraging students to channel their keen insights into passion for solutions helps engage students as "change agents" who may play a meaningful role in transforming primary care.

## WARREN N\*, MORRIS P, NOL C, BERNSTEIN M, REYES M. Success of a minority aids initiative in training minority and/or minority-serving providers

**CONTEXT & OBJECTIVE:** As part of its HRSA grant, Pacific AIDS Education and Training Center (PAETC) receives funding for The Minority AIDS Initiative Capacity Building Program (MAI) to increase HIV screening and treatment capabilities among minority clinical providers and providers that serve minority populations.

**SETTING/POPULATION:** The population setting is community and correctional clinical sites serving at -risk minority populations in PAETC's region (Arizona, California, Hawaii, Nevada and the Pacific Jurisdiction). These training/education programs are carried out by Local Partner (LP) sites in these states.

**INTERVENTION/STUDY DESIGN:** For its 5 year grant beginning in 2010, PAETC created an application process for LPs to apply for MAI funds. Programs were chosen based on impact and the LP's technical capacity. Programs included intensive HIV training and technical assistance (TA) to providers in local jails, intensive HIV preceptorships for providers serving rural populations, and intensive training and TA with providers serving largely Latino and African American populations in resource-challenged rural and urban settings.

**OUTCOMES/RESULTS:** Between July 1, 2010 and August 31, 2015, PAETC conducted a total of 573 MAI education/training events that served 10,000 participants. Almost 7000 participants (1575 Lati-

nos;1219 African Americans; 414 Multi-ethnic; 1921 Asian/Pacific-Islanders; 1203 Whites; and 18 American-Indians) completed an evaluation in which they rated themselves on a Likert scale (1=lowest; 5=highest) before and after the MAI education/training program. Using SPSS, we conducted an analysis comparing MAI participants to non-MAI participants by ethnicity. As compared to non MAI participants, of the same ethnicity, MAI participants who reported they were Latino, African American, or Multi-ethnic all showed a statistically significant increase in their ability to apply what they learned in their work setting (p<0.005), as well as increased knowledge from the training (p<.005) and increased confidence (p<.005) to provide HIV screening and treatment services; Whites showed statistical significance only for the first two variables.

**CONCLUSIONS:** Our analysis indicates that MAI programs funneled through a structured program application process were very effective at increasing HIV-related knowledge, confidence and ability to apply HIV-related learning among minority providers and those who serve minority patients.

## WHITESIDES D\*, WHITE T, RAMIREZ T, HANSEN M\*. From a mobile van to a medical home: Bringing medicine into the community

**CONTEXT & OBJECTIVE:** As family physicians, we want to connect with the communities where we work and live. Through the mobile van, we aim to reduce barriers and stigmas surrounding the medical community for groups that avoid visiting a regular clinic. We hope to provide a fresh face on the medical system, encourage health and wellbeing, and connect people with a medical home.

**SETTING/POPULATION:** The mobile van reaches out to homeless teens and adults as well as Latino day laborers within the Sonoma Country area. With the help of local social service agencies, we have identified these groups as those that live and work within our community but often remain out of medical care and without a medical home.

**INTERVENTION/STUDY DESIGN:** We drive van stocked with various medical equipment, medications, and materials to designated sites where we conduct visits from two clinic rooms set up in the van. We work twice a month with Social Advocates for Youth (SAY) to recruit local homeless youth, setting up the van in local parks where they tend to congregate. Once a month, we go to Graton Day Labor Center, recruiting Latino day laborers. We are in the process of expanding to a large, adult homeless shelter in the Santa Rosa area, Sam Jones Hall. With the van, we provide basic acute care; preventive care services such as STD testing and contraceptive care; as well as access mental health services.

**OUTCOMES/RESULTS:** Now in our fourth year, we are approaching one hundred individual visits in the mobile clinic. We are completing a formal analysis of number of individuals seen, services provided, and percentage of follow up. This analysis will be completed prior to our presentation at the colloquium.

**CONCLUSIONS:** Our program creates access points for individuals and groups who live and work in our communities but who often remain outside of medical care. In so doing, we aim to create community medicine that truly meets our community where they are.

## WILLIAMS J\*, LEUNG L. A first year medical student's experience conducting a quality improvement project assessing smoking status documentation in vulnerable populations

**CONTEXT & OBJECTIVE:** In 2014, 16.8% of adults in the United States and 26% of adults living below the poverty level are current cigarette smokers1. 11.2 % of SFGH Family Health Center (FHC) patients identify as current cigarette smokers. As part of a new medical school curriculum, a first-year medical student received training on quality improvement methodologies and applied them to implement a quality improvement (QI) project assessing patient smoking status at the FHC.

**SETTING/POPULATION:** I worked with the clinic's QI team over eight half-day sessions and learned about improvement methodologies including FOCUS-PDSA, priority grids and fishbone diagrams. Given the discrepancy in percent of current cigarette smokers between FHC patients and national data, it was evident that accurate documentation of patients' smoking status was a problem at the FHC.

**INTERVENTION/STUDY DESIGN:** I organized a team by interviewing key stakeholders in the clinic, including medical assistants, behavioral assistants, and providers. There is currently no standardized question used to assess smoking status, leading to inconsistent smoking history reported to providers. Through information gathered from stakeholder interviews, a process map and fishbone diagram was created to clarify current knowledge and identify variations in practice, respectively. The QI project aimed to create a standardized question used by clinic staff to assess patients' smoking status. We created a tool to elicit past smoking use, smoking exposure and the use of other forms of tobacco.

**OUTCOMES/RESULTS:** For PDSA cycle #1, I created a standardized question that medical assistants used to elicit smoking status. I performed pre- and post- intervention surveys to assess for staff comfort in using this tool and how it has impacted their ability to gather more accurate information from patients. For PDSA cycle #2, we refined the standardized question and scripted tool based on staff input.

**CONCLUSIONS:** This project provided me with a fantastic experience to learn about the complexity of quality improvement. I learned to organize the multiple interactions that make up a patient visit by creating a process map. I learned improvement methodologies to identify areas of improvement and design specific interventions. I have acquired skills that I will utilize throughout my medical education and career.

#### WILLIAMS V\*, RAYMOND R\*. Community interventions to foster parental communication regarding adolescent sexual health

**CONTEXT & OBJECTIVE:** Sexual health among youth is a major health concern in Monterey County where the teen pregnancy rate is well above the national average and STI rates are significantly higher among youth. Given the high rates of both teen pregnancy and teen STI, creative mechanisms for parental and teen education were explored. Research shows that healthy communication between family members lowers the likelihood of high-risk behaviors in youth.

**SETTING/POPULATION:** Surveys and outreach to local Salinas community members and programs revealed a strong desire to encourage healthy communication between caregivers and youth.

**INTERVENTION/STUDY DESIGN:** Two projects were implemented by resident physicians, both employing community organizations and resources as a means to help facilitate parental and teen education surrounding sexual health and open communication. One intervention included the creation and publication of a comic-style "foto-novela" with a storyboard and activities for adults and youth. The book included illustrated themes on talking to your family members about sexuality, goal setting, feelings, healthy communication, and where to obtain resources. The other intervention was discussion groups at parent meetings or "cafecitos" and with high-risk youth about open communication and STI education, which focused on eliminating barriers to healthcare access.

**OUTCOMES/RESULTS:** Discussions were undertaken with community groups of parents both in and out of school settings to help facilitate parental confidence in initiating open communication with adolescents. Overall, we have received overwhelmingly positive feedback regarding the theme of the projects to encourage healthy communication among caregivers and their children. A longitudinal project may be attempted, merging the multimedia type presentation with integration of both illustrated educational resources and "cafecito" style lectures surrounding parental communication. Future goals include survey data regarding the most effective or desired methods for future interventions.

**CONCLUSIONS:** Healthy communication between caregivers and youth has been demonstrated to be a protective factor in preventing high-risk behavior among youth and its sequelae. We can use both traditional and experimental platforms to help facilitate confidence in the open discussion of sexual health among teens, parents, and community members.

#### WILLIAMS V\*, TIRADO S, SILVA JE. Novel approach to screening sports physicals: Incorporating socio-emotional screening, intervention and education

**CONTEXT & OBJECTIVE:** The Natividad Family Medicine Residency Program is located in a semi-rural agricultural community of ~155,000 challenged by many adolescent risks associated with insufficient opportunities. Nonetheless, robust high school athletic programs afford alternatives to student athletes. The residency program has performed the service of pre-participation sports physicals at three high schools in the past. / The objectives were to offer a more full service approach at these community gatherings. Firstly, residents and faculty surveyed students for certain known adolescent risks, and then provided a menu of service resources for students challenged by adolescence. Finally, strategic services and education were offered for attending parents, above and beyond the requisite preparticipation sign-off.

**SETTING/POPULATION:** Salinas approaches 80% Hispanic with 7100 high school students in the working class sectors. The FPL percentage rate spans from 7 to 47%, depending upon the census block. Similarly, median incomes range from \$32K - \$84K.

**INTERVENTION/STUDY DESIGN:** Our team developed a survey tool aimed at known risks as outlined in the Youth Risk Behaviors Survey. 300 students were survey-screened for diet behaviors, substance use, adolescent depression, bullying and risky sexual behaviors. With permission from the AD's and parents the survey was voluntarily completed by the students. The resident physician reviewed the screening instrument and when the youth was perceived as at-risk, the student was directed to an onsite counseling service provider via a "warm handoff." The survey results informed selection of services agencies available for future events.

**OUTCOMES/RESULTS:** An estimate of the level of prevalent risks in a group of high-school student athletes, assumed to be healthier subset of the general student population, was achieved, and will be quantitatively reported. Further analysis of the effectiveness of this incorporation of teen serving agencies and parent education is pending. Yet over the course of the five events qualitative reports are positive and suggest improvements.

**CONCLUSIONS:** Neighboring schools and training hospital communities are open to this novel approach to support students and families at "Sports Physical Nights." These venues are opportunities to gather information and offer important socio-emotional protective resources that can impact adolescents during one of the final high yield moments in their development.

#### WILSON W\*, FOX E, REED R, YCAZA AG, DEHLENDORF C. Learning from someone who knows: teens' preferences for social communication about contraception

**CONTEXT & OBJECTIVE:** Over a third of teens at risk for unintended pregnancy use no contraceptive method or a less effective method such as condoms or withdrawal. Friends and family are a valued source of contraceptive information, and innovations to promote social communication about highly effective contraceptive methods may increase uptake and reduce rates of unintended pregnancy. We conducted qualitative formative research to understand participants' experiences and preferences related to social communication about contraception, particularly the sub dermal contraceptive implant, in service of intervention development.

**SETTING/POPULATION:** Female adolescents age 15 to 19 in Northern California.

**INTERVENTION/STUDY DESIGN:** From September to December 2015, formative research was conducted with female adolescents in Northern California. Twenty-four semi-structured interviews were conducted over the phone and two focus groups (n=11) were conducted in person, regarding social communication about contraception. Content analysis was performed on qualitative data, and emerging themes pertaining to preferences for social communication were interpreted.

**OUTCOMES/RESULTS:** Participants revealed that social communication was acceptable and desired, reflected through the value placed on hearing personal experiences from friends about contraception, as well as method efficacy and side effects. The majority of participants preferred face-to-face conversations or one-on-one texting with peers over communication on social media, due to desires for private and candid interaction. Interestingly, an approximately equal proportion preferred to access and share contraceptive information through physical pamphlets that they could "hold onto," as preferred digital information resources.

**CONCLUSIONS:** Our findings informed the design of SpeakOut, an innovative, peer-based social communication intervention designed to encourage contraceptive implant and IUD users to share their contraceptive experiences and disseminate evidence-based information with their peers, in order to inform and address concerns of non-users. The next phase of our project is to pilot test our intervention in clinics across Northern California to assess acceptability of intervention materials among implant and IUD users.

## WOODS MM\*, MALDONADO J. Improving the health of urban immigrant communities in Oakland using the Street Level Health Project model

**CONTEXT & OBJECTIVE:** A group of organizers, students, and nurses started Street Level Health Project in 2001 to response to the limited access to healthcare for day laborers. Street Level serves a critical entry point into healthcare and social service systems as well as a community center. Because a central component of health is a strong community, Street Level works to empower low-wage workers and uninsured people to access local resources and self-advocate. The ultimate goal of our work is the collective liberation of community members and ourselves.

**SETTING/POPULATION:** Street Level Health Project serves low-wage workers, recently arrived immigrants, and others marginalized by healthcare and social service systems of Alameda County, focusing on the Fruitvale District of Oakland.

**INTERVENTION/STUDY DESIGN:** Street Level Health Project thinks about each community member as a whole person, addressing their needs with our co-located services and referrals to our long-term partner organizations. Our model uses direct services to meet immediate needs and multi-faceted advocacy strategy to combat upstream causes of poor health. The Immigrant Rights and Empowerment program offers a space for low-wage workers to meet, as well as an organizing body, called La Colectiva, to increase job referral, leadership development and occupational health knowledge. The Health Access Program provides a free multi-lingual drop-in medical clinic, healthcare navigation, herbal and nutrition consultations, psychologist consultations, food bank and meals.

**OUTCOMES/RESULTS:** In 2015, the Immigrant Rights and Empowerment program helped members get 1,182 jobs. The medical clinic had 1,734 patient visits, with 993 unduplicated patients. They provided 1,293 healthcare referrals with navigation. The herbalist/nutritionist provided 134 consultations with 87 unduplicated patients. The psychologist provided 185 consultations for 132 unduplicated patients. The case managers provided 1,035 social service referrals. Street Level provided 11,793 meals, 7,404 food bags, and 291 ID cards to community members.

**CONCLUSIONS:** The Street Level Health Project model is a sustainable, innovative, grassroots approach to improving a community's health through a combination of direct service, community capacity building, and advocacy, ultimately striving for collective liberation.

## YU K\*, ZHANG OXNARD T\*, TAPIA M, UY-SMITH E. Assessment of health care access and clinical care use patterns among Family Health Center Teen and Young Adult Clinic patients

**CONTEXT & OBJECTIVE:** The Teen and Young Adult Clinic (TYAC) at San Francisco General Hospital Family Health Center offers comprehensive primary care and reproductive health care to youth ages 12 to 25. In an effort to expand clinic volume and understand barriers to care, we undertook an assessment of health care access and clinical care use patterns among current patients.

SETTING/POPULATION: Patients visiting the TYAC from October 2015 thru February 2016

**INTERVENTION/STUDY DESIGN:** A survey (n = 18) on health care use and access was administered to TYAC patients. In-depth phone interviews (n = 3) were conducted with a subset of patients to further explore themes from the survey. A chart review of TYAC appointments in 2015 was conducted to more thoroughly assess patient demographics and clinic use patterns. Finally, a process map of new patient registration was created using information gathered from interviews with clinical staff and findings from a "secret shopper" analysis.

**OUTCOMES/RESULTS:** Of surveyed patients, 61% reported that TYAC was the only place they received health care. The most common service was routine health care (72%). Participants cited accurate and understandable health information (89%), caring staff and providers (83%), and convenient hours (78%) as very important factors in a health care facility. The most common challenge was long wait time (33%). Participants desired a variety of platforms to access health information, with mobile applications (39%) and health fairs (39%) being the most popular. In interviews, participants suggested expansion of clinic hours; a teen-friendly waiting area; and an appointment system that would allow them to easily make and reschedule appointments. The process map of new patient registration revealed a multi-step and time-consuming process, particularly for uninsured patients.

**CONCLUSIONS:** Several interventions may reduce barriers to care at TYAC while acknowledging what youth value most in health care. These include additional clinic hours; additional eligibility worker hours; and a waiting area with teen-friendly health and entertainment materials. TYAC staff and providers can also encourage use of existing resources such as MYSFHEALTH to notify patients of appointments and share health information and resources.

## ZARO C\*, RAYMOND R\*, GOLDSTEIN J. Group prenatal visits: A resident run curriculum to promote community enrichment

**CONTEXT & OBJECTIVE:** Group prenatal care has been shown to increase satisfaction in prenatal care delivery for pregnant mothers. Natividad Medical Center (NMC) provides care for the majority of the births in Monterey County. Laurel Family Practice Clinic (LFPC) provides care for a large volume of pregnant women within the Salinas community. The rate of access to first trimester prenatal care in Monterey County was estimated at 74.8 per 100 pregnancies in 2010. In 2011, NMC was compensated for 2,811 deliveries; among these deliveries 92.2% were MediCal or public insurance funded. A novel resident driven prenatal care curriculum was established and is being delivered monthly via group prenatal visits lead by residents.

**SETTING/POPULATION:** The cohort of women were recruited from our current patient population, with initial gestational ages of 8-18 weeks and capped at 12 patients per session. The patients are predominantly Hispanic, 18-32, and have MediCal or other public insurance. Currently the sessions have both monolingual English and Spanish speakers and a variety of parity mothers.

**INTERVENTION/STUDY DESIGN:** Women are guided in group discussions of topics surrounding: prenatal care, STI, contraception, breast feeding, wellness, and labor with emphasis on peer education and creating support and guidance between mothers in the group. Each woman is taken for a physical exam individually from the group session and has an exam by a resident then return to the group. Partners are welcome and many women also bring their other children to the sessions.

**OUTCOMES/RESULTS:** Primary outcomes include the maintenance of the cohort and a pre-and post-curriculum survey regarding confidence of knowledge surrounding the topics discussed in the visits and with care provided. Currently the group visits are still being conducted and post-curriculum survey data has yet to be collected. However, the return rate of the cohort has been >90% with anecdotal positive feedback from our first cohort.

**CONCLUSIONS:** Group clinic visits for prenatal patients can help foster a community environment and interpersonal relationships between mothers in a wider variety of socioeconomic and social circles while helping to improve patient satisfaction.

61

#### ABSTRACTS: Works Not Presented

ALKOV D\*, BECERRA-LICHA I\*, WORTIS N, TAPIA M. Creating a health professions exposure curriculum for high school pipeline program

**CONTEXT & OBJECTIVE:** In an effort to increase diversity within the healthcare professions, the UCSF/ SFGH Family and Community Medicine Residency Program partnered with community organizations to organize a three-week pipeline program called the Summer Urban Health & Leadership Academy (SUHLA). This comprehensive mentorship program has a goal of inspiring and empowering Mission District youth and fostering leadership within the residency and neighboring communities. In order to contribute to SUHLA, we designed and taught the Health Professions Exposure Curriculum in summer 2015, aimed at increasing high school student interest in health-related fields.

**SETTING/POPULATION:** Community partner organizations include John O'Connell High School, FAC-ES for the Future, and the Boys & Girls Club Mission Clubhouse. High school participant profile: 80% Latino 14% Black, all from socio-economically disadvantaged backgrounds and 80% would be first-generation college students

**INTERVENTION/STUDY DESIGN:** Using the FACES core competencies as a guide, we developed 4 clinical skills sessions. We created lessons plans that we reviewed with the 4 SUHLA fellows (nurse practitioner and medical students) and then taught to the 15 high school student participants, with the assistance of the fellows. The clinical skills curriculum covered how to take vital signs, the physiology of the cardiovascular and respiratory systems, and healthcare communication skills. We also introduced them to hands-on healthcare resuscitation skills using patient simulation models and exposed them to anatomy using demonstrations of human organs. We administered a pre and post-test to gauge student knowledge and determine the effectiveness of the curriculum.

**OUTCOMES/RESULTS:** Students scored 70% on the clinical skills pre-test and 82% on the post-test. They had an 8% increase interest in a health career and were 14% more likely to consider themselves a leader according to pre and post clinical tests.

**CONCLUSIONS:** We learned that effective healthcare exposure curriculum can impact high school students' attitudes on the health professions as well as their leadership skills. Furthermore, we learned that flexibility and a positive attitude are important when teaching high school students.

## DE LA TORRE K\*, SNEDEN J, FAREY K, SOMMERS L. Learning from clinical uncertainty: Developing "practice inquiry" for third year medical students

**CONTEXT & OBJECTIVE:** Practice Inquiry (PI) is a small group, practice-based process where primary care clinicians collaborate to learn from clinical uncertainty. Since 2001, clinicians in thirty Northern California sites and trainees in four Family Medicine residencies have met in PI groups to discuss their patients who present with diagnostic, treatment, and/or patient-clinician relationship dilemmas. Together they review decision-making, consult evidence and collegial experience, revise judgments and create new interventions. For medical students, 3rd-year clerkships provide first-time experiences in managing uncertainty, usually with inpatient teams. PI could augment similar learning experiences in the classroom.

**SETTING/POPULATION:** We piloted Practice Inquiry among a group of 25 medical students enrolled in Model SFGH, a longitudinal clerkship focused on caring for the underserved. Students participate in six consecutive months of family medicine core curriculum.

**INTERVENTION/STUDY DESIGN:** Twenty-five students, split in 2 groups, were assigned to participate in 6, ninety-minute sessions over 3 months. Two faculty facilitators guided students through PI to select, present, and discuss patients. Students provided formative feedback at sessions 1-3 and received an open-ended 4-question anonymous survey (based on previous PI instruments) at seminar

completion. Questions addressed seminar value for managing uncertainty in their own patients, improving overall comfort with uncertainty, using PI skills outside seminars, and effectiveness of the PI format for eliciting discussion. Survey responses were hand-coded by 3 authors for thematic analysis.

**OUTCOMES/RESULTS:** Seminar attendance was 74% (111/150). Students presented 1-3 patients per session. All format changes (smaller group, open format, student facilitator) were tested in sessions 4-6. Survey response was 13/25 (52%). All respondents valued acknowledging uncertainty by presenting patients. 10/13 (77%) mentioned increased overall comfort with uncertainty although 3 preferred inpatient teams for gaining this comfort. 77% reported using PI outside the seminars. Smaller groups and flexible formats were suggested by all respondents. 6/13 (46%) advocated for set-aside time to discuss third-year emotional/interpersonal challenges (e.g.,role on team, patient relationships).

**CONCLUSIONS:** Discussing uncertainty cases increased students' comfort with clinical uncertainty. Participants also advocated for discussing the challenges they experience overall as students alongside clinical uncertainty. We will seek further student and faculty feedback on complementing PI with dedicated forums for supporting students' emotional needs.

#### REED R\*, HALL C, DEHLENDORF C. Reframing contraceptive outcomes from a patient-centered perspective

**CONTEXT & OBJECTIVE:** Choosing a contraceptive method is a complex process, involving individual preferences that may be informed by intra- and interpersonal, cultural, and social factors. In making this decision, patients may prioritize various method characteristics, including method efficacy, side effect profile, and adherence requirements, in order to choose the method that best fits their preferences and values. Despite this complexity, frequently used outcomes related to contraceptive use, including unintended pregnancy and use of long-acting reversible contraceptive (LARC) methods, emphasize the importance of method efficacy over other characteristics in evaluating women's reproductive health. We sought to examine contraceptive outcomes from a patient-centered perspective in order to make recommendations for how to best to conduct family planning research that reflects diverse patient preferences and values.

**SETTING/POPULATION:** We reviewed studies conducted among women of reproductive age in the United States.

**INTERVENTION/STUDY DESIGN:** We examined the discrepancies between what women care about when selecting a method and what outcomes are measured in contraceptive research. Next, we considered the outcomes that are commonly used in research about contraception, and how these measures may be contextualized to become more patient-centered. Finally, we made suggestions of ways to develop more patient-centered outcomes and measures to inform future research.

**OUTCOMES/RESULTS:** New outcomes should be designed to gather more individualized information about a woman's preferences and experiences. These outcomes include, but are not limited to, pregnancy desirability, patient satisfaction with method side effect profile, and method continuation relative to changes in patient sexual activity and/or reproductive goals.

**CONCLUSIONS:** While many patients value effective pregnancy prevention when choosing a birth control method, it is not the only factor that influences their method choice. Patient-centered outcomes that capture more contextualized information must be created to reflect the variety of personal preferences existent in choosing an ideal method. Measuring multiple outcomes may be necessary to be able to adequately capture the impact of family planning interventions. By shifting the focus of research to examine more patient-centered outcomes, we can better identify interventions and policies to improve reproductive health for individuals and families.

#### REMY L\*, BYERS V, CLAY T, O'CONNOR R. Longitudinal health effects of domestic exposure to hexavalent chromium in Willits. CA

**CONTEXT & OBJECTIVE:** Hexavalent chromium (CrO3) is a known carcinogen. No previous studies describe health effects in a non-occupationally exposed reproductive age population.

**SETTING/POPULATION:** From 1963 through 1995, a factory emitted CrO3 into the air and water in Willits, CA, a poor, rural community in Mendocino County. The factory had minimal safeguards to protect workers or residents from emitted mist. One boundary was on Soquel Creek, headwaters for the Eel River estuary. The only grade school was across the street and the only grocery store was a block away, both in the direction of prevailing wind. The factory closed in 1995. After years of investigation, ATSDR-mandated cleanup began in 2005, and it is ongoing.

**INTERVENTION/STUDY DESIGN:** Using ATSDR data, we estimated cumulative CrO3 exposure for 199 Willits residents (the outpatient sample). Exposure was expressed as minutes/visit x number of daily visits to the market, per year of residence in each period with a larger multiplier in the earlier than the later period, and a larger multiplier for children. We did two types of health outcomes analyses. One used life course methods (Remy and Clay, 2014), focusing on non-pregnant women and men, born between 1950 and 1989, admitted to hospital between Jul-1990 through Dec-2014, linked to the vital statistics death file. The second analysis used basic surveillance methods to investigate standard maternal and infant health indicators over the period 1983-2014.

**OUTCOMES/RESULTS:** Median cumulative exposure for the outpatient sample was 0.009 mg/m3, similar to Gibb et al (2000) for occupationally exposed men. However, the upper range was higher in Gibb and in women, likely because women pick up children after school and grocery shop more often than men do. In the reproductive-age population, body system effects were similar for the hospitalized population and the outpatient sample. Illness risk was higher in females than males. Reproductive, neoplasm, and mortality risk was significantly elevated in the younger generation of women compared with their mother's generation. Adults and infants had increased risk of birth defects. Infant risk of defects and respiratory conditions dropped after factory closure.

**CONCLUSIONS:** This is the first report of adverse reproductive outcomes for a population exposed non-occupationally to CrO3.

## SHARMA A, MLECZKO V\*, KNOX M, OLAYIWOLA JN. Systematic review on the impact of patient advisory councils on healthcare delivery

**CONTEXT & OBJECTIVE:** Patient engagement, defined as patient involvement in organizational policies, health research and policy, or their own care, is gaining increasing attention across the nation. At the organizational level, patient engagement is promoted through patient advisory councils or patient inclusion on governing boards; however, there is little data to rigorously support the impact of such advisory activities. We sought to research whether patient engagement in QI committees or advisory councils improves clinical care, patient safety or patient satisfaction.

**SETTING/POPULATION:** We focused on patients and families engaged in advisory council or governing body activities within all healthcare settings.

**INTERVENTION/STUDY DESIGN:** PubMed, SCOPUS, CINAHL and Google Scholar searches were conducted of English language publications from 2002 to 2015. Article selection utilized dual screening facilitated by DistillerSR software with group discussion to resolve discordance. Observational studies,

RCT's and case studies with pre-/post-analysis were selected for primary abstraction. Perspective pieces, policy pieces and protocol studies were excluded. Data abstraction and analysis of NQMC quality measures as well as safety and patient satisfaction outcomes are pending as are snowballing and study quality assessment. For heterogeneous results, qualitative thematic analysis will be per-

formed to synthesize results.

**OUTCOMES/RESULTS:** Database searching yielded 608 articles with 132 meeting inclusion criteria after duplicate removal and first phase abstract screening. Data abstraction to assess study type, setting type, patient role, extent of involvement and primary NQMC quality measures as well as thematic analysis are forthcoming. Preliminary assessment shows a wide range of outcome measures for patient involvement as well as type and degree of patient advisory role. Neither meta-analysis nor subgroup analysis of NQMC measures will likely be possible given result heterogeneity, but thematic and qualitative analysis of interventions and outcomes will be performed.

**CONCLUSIONS:** Final conclusions are pending, but overall there is a lack of validated measures for analyzing the effect patient's in advisory capacities have on safety, patient satisfaction and clinical care quality. This highlights the need for further research to refine and test patient engagement outcome measures as well as to develop terminology and metrics to assess the ways in which patients in advisory roles can contribute to organizational success.

#### YASTRO, K\*. Pre-exposure prophylaxis (PrEP) training for frontline staff at Cole Street Youth Clinic

**CONTEXT & OBJECTIVE:** This project was developed in response to a request from the education team coordinator at Huckleberry Youth Programs.

**SETTING/POPULATION:** Cole Street Youth Clinic is housed within the program's San Francisco service center and is in the process of rolling out a PrEP delivery program for young adults.

**INTERVENTION/STUDY DESIGN:** The training deck was developed for frontline staff and includes an emphasis on assessment of appropriate candidates for PrEP as well as stigma associated with the medication's use. The organization hoped to provide training about PrEP to staff in conjunction with SF City Clinic in early January 2016. As of today, this deck hasn't been utilized in that training.

**OUTCOMES/RESULTS:** While there is significant evidence to support the safe use of PrEP for HIV infection prevention, clinical sites are still determining how to best incorporate it into their practices. There is a rapidly growing body of guidelines as well as consumer-specific information to support decision-making around PrEP use. High-quality media (eg., videos) that describe what PrEP is, how to start the conversation about its use, and that address PrEP stigma are an excellent resource for organizations that desire to train staff on about the medication.

**CONCLUSIONS:** Interagency collaboration on best practices may accelerate PrEP program development.

## future family physicians

## family medicine matches 2016

**Annie Chang** 

Allille Charly

Elizabeth (Libby) McNiven

Ventura County Medical Center-CA

University of Minnesota Methodist

Hospital-MN

Joshua Connor

CA

University of California, San Francisco-

Victor Mleczko

 ${\it Contra~Costa~Regional~Medical~Center}$ 

-CA

**Martin Escandon** 

Sutter Medical Center of Santa Rosa – CA

Na'amah Razon

University of California, San Francisco

-CA

Melinda Kong

Contra Costa Regional Medical Center-CA

Yakira Teitel

University of California, San Francisco

-CA

Sunny Lai

Thomas Jefferson University-PA

**Tem Woldeyesus** 

University of California, San Francisco

-CA

Chloe Le Marchand

Kaiser Permanente, Napa-Solano- CA

Folashade Wolfe-Modupe

 ${\it University of California, San Francisco}$ 

-CA

Kira Levy

University of California, San Francisco-

CA

68

67