UNIVERSITY OF CALIFORNIA OFFICE OF THE PRESIDENT

# **REPORT: UC CENTER FOR HEALTH QUALITY AND INNOVATION**

# **Review and Assessment of Grant Impact to Date**

August 27, 2014

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#### Introduction

Spearheaded by Dr. John Stobo, Senior Vice President of UC Health Science and Services, Santiago Munoz, Chief Strategy Officer, and Terry Leach, Esq, RN, Health Policy Manager; the UC Center for Health Quality and Innovation (CHQI) was established in 2010 to support and promote innovations developed at UC medical center campuses and hospitals in order to improve quality, access and value in the delivery of health care at UC Health, and influence/advance health care delivery in California and nationally.

In 2011, the center received \$18 million in funding from the five medical centers to support a series of grants that were initiated in 2011, 2012, 2013 and 2014 to develop, implement, and spread innovative evidence-based programs at UC Health. This was followed in 2013 by \$10 million in funding from the Office of Risk Services to create a joint venture known as The Center for Quality and Innovation Quality Enterprise Risk Management (CHQIQERM). These grants were designed to focus on minimizing the risk of clinical harm, adverse events and medical malpractice claims by developing projects that included the tenets of enterprise risk management (a systems approach) to address fragmentation in the delivery of healthcare.

To date, a total of 50 grants have been funded. All grants are funded for 1 to 4 years and are designed as single and/or multi-campus projects. The latest grants are scheduled to be completed no later than June 2016 (the projected end-date of CHQI). The total funds allocation for the 50 grants is \$15 million (\$7.3 million from the medical center funding; \$7.7 million from the Office of risk services funding). The remaining funds are used to support performance improvement efforts of other service line collaboratives such as the UC Cardio-thoracic Surgery Consortium (see below), salaries and benefits, convenings (e.g., the CHQI colloquium), consultants, and expenses.

The purpose of this report is to quantify and better understand the overall impact of the CHQI grants to date. We have asked the grantees to report associated or causal measurable patient outcomes, cost-benefit analyses (including opportunities for additional revenues such as additional funds secured as a result of a project), and dissemination and/or other influence as demonstrated by publication in a peer-reviewed journal and/or presentation at a professional convening or national organization. It should be noted that many of the grants were not predicated on identifying or achieving associated with impact morbidity/mortality, cost-benefit. measures on or dissemination/influence. For example, none of the grantees were required to publish articles or present at national meetings, yet there are 16 publications in national journals and numerous presentations as a result of the grants.

Furthermore, it should not be assumed that this report is complete in terms of describing or quantifying CHQI's *total* impact and initiatives. As previously stated, the funds that were allocated by the medical centers and office of risk services also supported 3 system–wide colloquiums, and a number of multi-campus collaboratives in which clinical service leaders convene to develop and implement evidence-based practices throughout their service lines. An example of a clinical service line collaborative is the UC Cardio-thoracic Surgery Consortium that is led by the 5 CT surgery chiefs. This is a performance improvement collaborative designed to identify clinical, operational and administrative performance improvement opportunities with the goal of system-wide reduction in variability in care, outcomes and costs; improving outcomes, reducing costs, and ultimately securing additional patient volume. As noted above, the purpose of this report is to describe the impact of *just the grants* funded through CHQI.

While this report attempts to enumerate some of CHQI's grant impact to date, it's worth noting that much of the data is early in the life of the grants and CHQI in general. There are some notable accomplishments and achievements, however it would be premature to consider the findings presented in this report as fully definitive of the impact of the center. We hope the reader understands that this is a "living document" and should be considered as such. We plan to issue a yearly update, and by 2016 anticipate a more complete, in-depth review of the overall impact of the programs funded by CHQI.

# Overview of Benefits and Impact

The projects funded by the University of California Center for Health Quality and Innovation (CHQI) have produced several types of benefits to the UC Health systems, including: clinical quality improvements such as a decrease in length of stay (LOS), complication rates and readmission rates; financial benefits in realized annual savings (\$3.5 million); and an increase in annual revenues (an additional \$4 million). As more projects are spread throughout the system and come closer to completion, an increase in improved outcomes, cost savings, and revenues should be expected in the coming years. (With the exception of one 5-campus project; all single-campus projects that had a demonstrated cost-savings have been spread through additional CHQI funding initiatives). Furthermore, external recognition of CHQI work has already occurred through additional subsequent external funding, with four early projects receiving \$13.5 million in awards, and with 16 peer-reviewed publications.

#### Clinical Quality Improvements to date:

A number of projects have demonstrated improved clinical outcomes. Early cost-benefit analyses of these projects indicate that these clinical quality improvements are associated with cost savings and revenue enhancement (see the following sections). As most of the projects funded in 2013 and 2014 have not yet begun collecting patient outcome data, it is expected that within the next few years the reported patient outcome improvements will be numerous and impressive. To date, some notable projects include:

- <u>UCSD Minimally Invasive Recovery after Surgery (MIRAS)</u>: Reduced length of stay by 6 days in the highest risk patient population undergoing major small and large bowel resection, and reduced length of stay by 1 day in the moderate risk patient population undergoing major small and large bowel resection
- <u>UCSF Project to Eradicate Post-Operative Delirium in high-risk patients</u>
   (PEPOD):

Reduced the postoperative delirium rate from a historical rate of 40% to 7.8%.

 <u>UCI Enhanced Recovery After Surgery (ERAS)</u>: Reduced median length of stay for high risk abdominal surgery from 9 to 7 days, and reduced complications from 38 % to 27 %

# Cost-Savings to date

Several projects have already demonstrated reductions in health care utilization, resulting in over \$3.5 million in annual savings to the UC system, including two from the 2011 project cohort, two from the 2012 fellow project cohort, and three from the 2013 fellow cohort.

• The 2011 five campus venous thromboembolism (VTE) reduction project has estimated they prevented 140 VTE occurrences in 2013, which translates into annual savings of \$1.45 million.

- The 2011 UCSD emergency room psychiatric intervention resulted in approximately \$146,000 in savings from reduced ED length of stay over two years, or an annual savings of \$73,000.
- The 2012 UCSF palliative care intervention resulted in 45 additional palliative care consults in the ICU, which resulted in \$167,000 in annual savings from reduced ICU bed-days.
- The 2012 UCSD colorectal postoperative program reduced length of stay by 4.5 days for high risk segmental hemicolectomy patients and 0.9 days for moderate risk segmental hemicolectomy patients, which resulted in projected annual savings of \$553,000.
- The 2013 UCI enhanced recovery after surgery program reduced length of stay by 2 days for abdominal surgery patients, which resulted in projected annual savings of \$816,000.
- The 2013 UCD smoking cessation referral program generated 441 referrals which resulted in \$11,000 in one year savings from reduced inpatient and outpatient health care use; while low, savings will accrue over time.
- The 2013 UCSF electronic consult program resulted in projected annual savings of \$434,000 primarily through reduction in outpatient consultation costs plus averted emergency room and hospital visits.

# Increased Revenues to date

The savings to date likely have also led to similar amounts of increased revenues as they are nearly all due to reductions in hospital utilization, and subsequently were backfilled by other patients. Three other 2012 fellow projects also increased revenues to the health care system, resulting in over \$4 million in annual revenues to the UC system.

- The 2012 UCD specialty pharmacy initiative led to contracts which generated \$18,000 in revenues at UCD and \$1.36 million in revenues at UCSF during the fellowship, which projected annually would result in approximately \$71,000 in revenues at UCD and \$2.03 million in revenues at UCSF.
- The 2012 UCLA elective surgery discharge program increased net revenues through a discharge pharmacy program for surgical services by \$639,000 during the fellowship, which projected annually would result in \$1.29 million in revenues.
- The 2012 UCSD emergency room throughput program reduced the total number of patients who left without being seen by nearly 800 patients, which projected annually resulted in an additional \$674,000 in revenue.

# Projected Savings and Revenues:

Six of the seven projects that have generated savings were selected for further dissemination to other campuses (the seventh is already a five campus project), three via funding through the 2013 Quality Enterprise Risk Management (QERM) partnership program with the Office of Risk Services, and three via funding through the 2014 Return on Investment (ROI) program. These projects are likely to generate additional savings and revenues based on the prior experiences. Similarly, the other 2013 QERM and 2014 ROI projects are likely to demonstrate additional savings and revenues once

completed as their selection criteria included potential for cost reduction. There are also 2011 cohort projects and 2013 fellow projects that are not yet completed which may provide additional savings. For example, the 2013 UCD fellow project on laboratory testing has identified vitamin D testing changes at UCLA that could save \$5 million annually if implemented.

It is anticipated that by 2016, the projects funded by CHQI will demonstrate significant savings as well as additional revenues. Conservatively, we can estimate that by 2016, UC Health will realize an additional cost-savings between \$11.5 and \$13M; and that revenues will be (conservatively) enhanced between \$14 and \$16.5M. In short, based on current savings and revenues, we project a net financial gain of at least \$25M by end of year 2016. This does not include gains that may be achieved through securing additional external funds (approximately \$16M-see below), or if/when programs are spread to other service lines. For example, the Enhanced Recovery After Surgery (ERAS) program has reduced LOS for abdominal surgery patients by 2 days. If spread to other surgical service lines, LOS could be further reduced, thus resulting in greater financial gain.

At this time, the projected net financial gain in 2016 (approximately \$40M) is based on the assessments of cost-savings, increased revenues, and additional external funding of mostly the 2011 and 2012 medical center-funded grants (about \$7.3M in grant funds). Since the QERM grants and ROI grants were not funded until 2013 and 2014 respectively, there are no cost-benefit analyses available (to date). Thus we anticipate a much greater net financial gain once the 2013 QERM and 2014 ROI grants are evaluated for cost-benefit.

#### Spread within the UC System

CHQI has provided an avenue to foster and spread innovations through the UC system. In addition to the six projects described previously that are being spread to other campuses through 2013 QERM and 2014 ROI programs, each program also included an additional project for dissemination. The 2013 QERM program also spread the 2011 UCI ultrasound training project to UCLA, and the 2014 ROI program also spread the 2012 UCSF orthopedic bundled payment project to other campuses. One other project, the 2012 UCLA antibiotic stewardship was naturalistically spread from UCLA to UC Davis. Nearly all were CHQI fellowship projects except two from the 2011 project cohort.

# Additional External Funding to date

Seven project teams have received an additional \$16 million in external funding based on their CHQI work. These projects are largely from the 2011 project cohort and the 2012 fellowship projects, which suggest that this number will grow over time. These awards include:

• \$7,900,000 pending from the National Institutes of Health (NIH), \$1,881,000 from the Patient Centered Outcomes Research Institute, and \$1,500,000 from the Centers for Disease Control to the 2011 radiation safety project

- \$900,000 from NIH and \$750,000 from the American Stroke Association/Bugher Foundation to the 2011 wearable sensor project
- \$750,000 from the Health Resources and Services Administration and \$54,000 the Children's Partnership to the 2013 UCD pediatric telehealth project.
- Approximately \$600,000 from a multi-site CMMI award to AAMC with UCSF as the primary partner for the Health Care Innovation awards program in May and July 2014 for the e-consult intervention. The other sites include: UCSD, Dartmouth, Univ. of Iowa, Univ. of Wisconsin, Univ. of Virginia. The project is titled: "eConsults/ eReferrals: Controlling Costs and Improving Quality at the Interface of Primary Care and Specialty Care"
- \$400,000 from the Betty and Gordon Moore Foundation to the 2011 VTE reduction project
- \$180,000 from the Cambia Health Foundation to the 2012 UCSF palliative care intervention.
- \$150,000 from the California Health Care Foundation to the 2012 UCSF orthopedic bundled payment project.

# Additional Quality of Care Improvements

CHQI projects have led to many improvements within the system. Several highlights include:

- The 2011 project on radiation safety created the UCDOSE Virtual Symposium on Radiation Safety in Computed Tomography, an online medical conference made free to UC technologists that features over 100 lectures and 36 hours of continuing medical education.
- The 2011 project on fall prevention has developed an education program and training videos to facilitate the 5P method of reducing falls.
- The 2011 project on involving trainees in care transition improvements has enrolled 800 learners systemwide in its quality improvement training program.
- The 2012 UCI fellow project has now resulted in a formal application for a Patient Centered Medical Home for UCI's Senior Health Center.
- The 2012 UCD fellow project on improving responses to adverse events trained 550 health system staff on improving error disclosure.
- The 2013 UCD fellow project on smoking cessation developed the first two-way referral system between an electronic health record system and the California Smokers' Helpline.
- The 2013 UCLA fellow project on improving colorectal surgery transitions developed a perioperative clinical pathway with pre- and post-procedure patient education materials.
- The 2013 QERM project on improving neurosurgery quality has implemented a UC systemwide rollout of providing EMMI patient education materials preoperatively to neurosurgical patients.
- The 2013 QERM project on reducing surgical site infections has implemented a UC systemwide rollout of pre-operative and peri-operative bundles.
- The 2013 expansion of the 2012 UCSF fellow project on palliative care has now trained 250 nurses systemwide.

#### Dissemination and External Peer-Review Recognition

A total of 16 papers have been published based on work funded by CHQI, including a paper in <u>JAMA Surgery</u>, a paper in <u>Pediatrics</u>, and two papers in <u>Medical Care</u>. This number will grow over time as there are several more papers which have been accepted and pending publication, other manuscripts in preparation, and numerous presentations at national and local meetings.

#### **Appendix A: Publications**

• Sadeghi B, White RH, Maynard G, Zrelak P, Strater A, Hensley L, Cerese J, Romano P. Improved Coding of Postoperative Deep Vein Thrombosis and Pulmonary Embolism in Administrative Data (AHRQ Patient Safety Indicator 12) After Introduction of New ICD-9-CM Diagnosis Codes. Medical Care 2013 April 1. Epub ahead of print

• Khanna RR, Kim SB, Jenkins I, El-Kareh R, Afsarmanesh N, Amin A, Sand H, Auerbach A, Chia C, Maynard G, Romano P, White RH. Predictive Value of the POA Indicator for Hospital-Acquired Venous Thromboembolism. Medical Care 2013 April 1. Epub ahead of print

• Maynard G, Jenkins IH, Merli GJ. VTE Prevention Guidelines for Medical Inpatients: Mind the (Implementation) Gap. J Hosp Med 2013,8(10):582-588.

• Khanna R, Maynard G, Sadeghi B, Hensley L, Medvedev S, Danielsen B, White RH. Incidence of Hospital-Acquired Venous Thromboembolic Events in Medical Patients Hospitalized in Academic Medical Centers. J Hosp Med 2014 Apr; 9(4): 221-5. Epub ahead of print 2014 Feb 5.

• Dobkin B, Dorsch A. The promise of mHealth: daily activity monitoring and outcome assessments by wearable sensors. Neurorehabil Neural Repair. 2011;25:788-98.

• Dobkin BH. Wearable motion sensors to continuously measure real-world physical activities. Curr Opin Neurol. 2013;26:602-8

• Rodriguez RM, Anglin D, Langdorf MI, Baumann BM, Hendey GW, Bradley RN, Medak AJ, Raja AS, Juhn P, Fortman J, Mulkerin W, Mower WR.. NEXUS Chest: Validation of a decision instrument for selective chest imaging in blunt trauma. JAMA Surg 2013; Oct;148(10):940-6. doi: 10.1001/jamasurg.2013.2757.

• Tang N. A primary care physician's ideal transitions of care--where's the evidence? J Hosp Med. 2013 Aug;8(8):472-7. Epub 2013 Jul 19. Review.

• Dharmar M, Kuppermann N, Romano PS, Yang NH, Nesbitt TS, Phan J, Nguyen C, Marcin JP: Telemedicine Consultations and Medication Errors Among Children in Rural Emergency Departments. Pediatrics. 2013 Nov 25.

• Dharmar M, Romano PS, Kuppermann N, Nesbitt TS, Cole SL, Andrada ER, Vance C, Harvey DJ, Marcin JP: Impact of Critical Care Telemedicine Consultations on Children in Rural Emergency Departments. Crit Care Med. 2013; 41(10): 2388-2395.

• Maynard G, Schnipper JL, Messler J, Ramos P, Kulasa K, Nolan A, Rogers K. Design and Implementation of a Web-Based Reporting and Benchmarking Center for Inpatient Glucometrics. J Diabetes and Science Technology 2014 May 12. Epub ahead of print.

• McLaughlin N, Buxey F, Chaw K, Martin NA. Value-Based Neurosurgery: The example of microvascular decompression surgery. J Neurosurg. 2014 Feb;120(2):462-72

• McLaughlin N, Afsar-manesh N, Ragland V, Buxey F, Martin NA. Tracking and sustaining improvement initiatives: Leveraging quality dashboards to lead change in a neurosurgical department. Neurosurgery. 2014 Mar;74(3):235-43.

• McLaughlin N, Upadhyaya P, Buxey F, Martin NA. Value-based neurosurgery: measuring and reducing the cost of microvascular decompression surgery. JNS. 2014 Jul 11:1-9.

• McLaughlin N, Rodstein J, Burke MA, Martin NA. Demystifying Process mapping: A key step in neurosurgical quality improvement initiatives. – Neurosurgery. 2014 Aug 75(2):99-109

• Tran MH, Lin DM, Wilcox T, Schiro D, Cannesson M, Milliken J. Effects of a multimodality blood conservation schema toward improvement of intraoperative hemoglobin levels and off-pump transfusions in coronary artery bypass graft surgery. Transfusion. 2014 Jun 12. Epub ahead of print.

# Appendix B: Presentations

Year	<u>PI</u>	Presentation
2011	Belkora	Two posters presented at the International Shared Decision Making conference in Lima, Peru, June 2013
2011	Dobkin	• "Stroke rehabilitation trials, outcomes, disappointments, and new pathways" Visiting Professor, University of Toronto Neuroscience Program Distinguished Lecture, Toronto, 2011.
2011	Dobkin	• "How to develop and test wireless sensors within real-world clinical trials and everyday care," keynote, annual International mHealth Conference, San Diego, 2011.
2011	Dobkin	• "Confounders and proposed solutions for neurorehabilitation clinical trials," keynote, George Burniston Oration, World Congress of NeuroRehabilitation, Melbourne, 2012
2011	Dobkin	• "Technologies to monitor and measure physical activities in the community for neurological research." ASNR/American Congress of Rehabilitation Medicine annual meeting, Montreal, 2010.
2011	Dobkin	• "Activity monitoring and outcome measures," International Transformation Technology Summit, USC/Rancho Los Amigos, 2012
2011	Dobkin	• "Developing evidence for medical uses of wireless sensing," NIH-UCLA Summer Institute on Mobile Health (mHealth) Technology Research, UCLA, 2013
2011	Dobkin	•" Capabilities of activity monitors," Advancing Exercise Testing and Activity Evaluation in Patients with COPD Workshop, NYC, 2013
2011	Rodriguez	Society for Academic Emergency Medicine meeting (Atlanta, May 2013).
2011	Shaikh	Project-related abstracts have been submitted to the Western Society for Pediatric Research and Society for     Hospital Medicine Conferences
2011	Smith- Bindman	Abstracts submitted and accepted by the Radiological Society of North America (RSNA): Comparing doses across campuses for 2012 and historical analysis of CT doses for UCSF 2010-2012.
2011	Turner	American Institute of Ultrasound in Medicine Conference 2013 (Poster & Oral presentation)
2011	Turner	Society of Critical Care Medicine Conference 2013 (poster)
2011	Walsh	• 5P Toolkit for Fall/Fall Injury Prevention, Quest/ Premier Partnership for Patients National Meeting, San Antonio, TX, - June 10,2013
2011	Walsh	<ul> <li>Individualizing Assessments of Risk to Reduce Falls in University of California Medical Centers. 2012 National Patient Safety Foundation (NPSF) Annual Patient Safety Congress, National Harbor, MD, May 2012.</li> </ul>
2011	Walsh	• Teryl K. Nuckols, MD, MSHS; Catherine Walsh, MSN, RN. Assessing Risk Factors for Falls During Nurses' Hourly Bedside Rounds Reduced Falls in An Academic Medical Center. Society for Hospital Medicine, Annual Meeting, National Harbor, MD. May 16-19, 2013. Finalist, Innovations.
2012	Anderson	• The IMPACT-ICU project was presented as part of a talk given by Dr. Puntillo, "The Essential Role of the ICU Nurse in Communicating with ICU Families," at The 2013 Inaugural Merinoff Palliative Medicine Symposium: Advancing Palliative Care in ICU and Beyond Contributions and Challenges, December 2, 2013, New York, NY.
2012	Anderson	• Anderson W, Puntillo K, Barbour S, Boyle D, Cain J, Cimino J, Fairman N, Ferrell B, Grywalski M, Herman H, Joseph D, Liao S, MacMillan J, Meyer J, Milic M, Mitchell W, Moore E, Noort J, O'Neil-Page E, Pearson D, Turner K, and Pantilat S. "The IMPACT-ICU Project: Expanding Palliative Care Nursing Across University of California ICUs" Center to Advance Palliative Care National Seminar, November 7-9, 2013, Dallas, TX. <u>http://www.capc.org/capc-resources/capc-poster-sessions/capc-dallas-2013/abstracts/25</u>

2012	Bozic	<ul> <li>Bozic KJ, Ward L, Vail TP, Maze M. Bundled Payments in TJA: Targeting Opportunities for Quality Improvement and Cost Reduction. Proceedings of the Members Meeting of the Knee Society. Garden City, NY. September 6- 8,2012.</li> </ul>
2012	Bozic	<ul> <li>Bozic KJ, Ward L, Vail TP, Maze M. Bundled Payments in TJA: Targeting Opportunities for Quality Improvement and Cost Reduction. Proceedings of the 22nd Annual Meeting of the American Association of Hip and Knee Surgeons. Dallas, TX. November 2-4, 2012.</li> </ul>
2012	Bozic	• Bozic KJ, Ward, L, Vail TP, Maze, M. Bundled Payment in TJA: Targeting Opportunities for Quality Improvement and Cost Reduction. 41st Open Meeting of the Knee Society and 19th Combined Open Meeting Knee Society and AAHKS. Chicago, IL, March, 23, 2013.
2012	Bozic	• Practical Aspects of Implementing Bundled Payments. Harvard Business School Value Based Healthcare Intensive Seminar. Boston, MA. January 9, 2013.
2012	Bozic	• Current Experience with a New Reimbursement Model: Bundled Payments. California Orthopaedic Association (COA) Annual Meeting. Rancho Palace Verdes, CA. April 19, 2013.
	Bozic	<ul> <li>Keynote: Bundled Care Can Reduce Cost and Improve Quality. 43rd Annual Advances in Arthroplasty Course.</li> <li>Boston, MA. October 24, 2013.</li> </ul>
2012		• ACO and Bundled Payments. Symposium F ACO and Bundled Payments. Presented at the 80th Annual Meeting of the American Academy of Orthopaedic Surgeons, Chicago, IL, March 19, 2013.
2012	Bozic	<ul> <li>Physician Leadership and Bundled Payments: Case Studies in Orthopedics and Cardiology. CMMI Payment Innovation Webinar Series. February, 28, 2014.</li> </ul>
2012	Bozic	<ul> <li>Bundled Payments Business Management Principles: Avoiding Pitfalls. Bundled Payments 101 AAHKS Webinar. April 1, 2014.</li> </ul>
2012	McLemore	<ul> <li>American Society of Colorectal Surgeons Meeting: UC Collaborative Group of Colorectal Surgeons Meeting, 6/3/12, CHQI Grant and MIRAS Proposal presentation</li> </ul>
2012	McLemore	<ul> <li>American College of Surgeons Meeting: MIRAS UC Campus Surgical Champions, 9/30/12, MIRAS Program Overview &amp; Dissemination of Education Materials</li> </ul>
2012	McLemore	<ul> <li>American Society of Colorectal Surgeons Meeting: UC Collaborative Group of Colorectal Surgeons &amp; Surgical Champions Meeting, 4/28/13, MIRAS Progress Update</li> </ul>
2012	Ū	<ul> <li>Oral presentation at the AcademyHealth Annual Research Meeting, June 23, 2013 "Variations in 30-day hospital readmission rates across primary care clinic specialties"</li> </ul>
2012	-	<ul> <li>Oral presentation accepted at the UHC Annual Meeting, October 17, 2013 "ADMIT-ONE: A Collaboration across Primary Care Clinics at 8 Academic Medical Centers to Benchmark and Reduce Hospital Readmission Rates"</li> </ul>
	Tang	• Poster presentation at the Society of General Internal Medicine Annual Meeting, April 26, 2013 "Variations in 30-day hospital readmission rates across primary care clinic specialties"
	Tang	<ul> <li>Poster presentation at the AcademyHealth Annual Research Meeting, June 23, 2013 "Reducing Hospital Readmissions: Developing a Transitions-of-Care Program at UCSF's General Internal Medicine Clinic"</li> </ul>
	Uslan	<ul> <li>"Assessing Antibiotic Stewardship Programs Using a Standardized Framework: The University of California Experience." (manuscript in preparation, abstract submitted to UHC Annual Conference, 2013)</li> </ul>
2013	Cannesson	<ul> <li>October 2013 - Invited Lecture at the American Society of Anesthesiology, San Francisco, CA: Implementing Perioperative Goal Directed Therapy at the Bedside: Experience at UC Irvine</li> </ul>
2013	Cannesson	November 2013 - Invited Lecture at the 4th Goal Directed Therapy Symposium, Newport Beach, CA: Implementing

<ul> <li>Belgium: Quality Improvement Program for Implementing Goal Directed Therapy for High Risk Abdominal Surgery</li> <li>Quality Improvement Program for Implementing Goal Directed Therapy for High Risk Abdominal Surgery:</li> <li>Experience at UC Irvine. Invited Visiting Professor at IARS meeting (May 2014, Montreal, Canada)</li> <li>American Society of Anesthesiologists (October 2014, New Orleans)</li> <li>Abstract submitted for consideration at the ASA annual meeting to be held in Oct 2014 in New Orleans (ERAS in high risk abdominal surgery).</li> <li>Magan Y and Fang MC. "Perioperative management of novel oral anticoagulants in patients undergoing arthroplasty procedures". Presented at the 2014 national Society of Hospital Medicine meeting.</li> <li>Gleason N, Prasad P, Ackerman S, Wang M, Collado D, McKinney D, Gonzales R. eReferrals and eConsults: Downstream Impact on Access, Utilization, and Cost in a Fee-for-Service Setting. Accepted for opening Plenary Session, Society of General Internal Medicine, National Meeting, San Diego, CA, April 2014</li> <li>Gleason N, Ho C, Ackerman S, Wang M, Collado D, Gonzales R. Timely, Low-cost Access To Specialty Care in an Academic Medical Center: Implementation of an e-Consult system in a Fee for Service Setting. Oral Presentation at the University HealthCare Consortium (UHC) National Meeting, Atlanta, Georgia, October 2013</li> <li>Gleason N, Ho C, Wang M, Collado D, Gonzales R. Providing Timely, Low-cost, Access to Specialty Care in a Rea-For-Service Setting. Understation at the Society of General Internal Medicine, National Meeting, Denver, Co, 2013</li> <li>Gleason H, Ho C, Wang M, Collado D, Monzeles R. Implementation of a Structured, Electronic Referral System to Support the Principles of the PCMH-Neighborhood. Society of General Internal Medicine, National Meeting, Denver, Co, 2013</li> <li>Gleason W, Ho C, Wang M, Collado D, Monzeles R. Implementation of an e-Consult system at UCSF.</li> <li>Selsaon N, Ho C, Wang M, Collado D, Monzelei J, Ackerman S, Gonza</li></ul>	S,
<ul> <li>2013 Cannesson</li> <li>2013 Cannesson</li> <li>2013 Cannesson</li> <li>2013 Cannesson</li> <li>2013 Fang</li> <li>2013 Fang</li> <li>2013 Gleason</li> <li>2014 Carter in a Fee-For-Service Setting, Collado D, Gonzales R. Timely, Low-cost Access to Specialty Care in a Fee-For-Service Setting, Collado D, Gonzales R. Implementation of a Structured, Electronic Referral System to Support the Principles of the PCMH-Neighborhood. Society of General Internal Medicine, National Meeting, Denver, Co, 2013</li> <li>2013 Gleason</li> <li>2013 Gleason</li> <li>2013 Gleason</li> <li>2013 Gleason</li> <li>2014 Cleason</li> <li>2015 Gleason</li> <li>2015 Gleason</li> <li>2014 Cleason</li> <li>2015 Gleason</li> <li>2016 Gleason</li> <li>2017 Gleason</li> <li>2018 Gleason</li> <li>2019 Cleason</li> <li>2019 Cleason</li> <li>2019 Cleason</li> <li>2010 Cleason</li> <li>2013 Gleason</li> <li>2013 Gleason</li> <li>2013 Gleason</li> <li>2014 Cleason</li> <li>2015 Cleas</li></ul>	
<ul> <li>high risk abdominal surgery).</li> <li>2013 Fang</li> <li>Magan Y and Fang MC. "Perioperative management of novel oral anticoagulants in patients undergoing arthroplasty procedures". Presented at the 2014 national Society of Hospital Medicine meeting.</li> <li>2013 Gleason</li> <li>Gleason N, Prasad P, Ackerman S, Wang M, Collado D, McKinney D, Gonzales R. eReferrals and eConsults: Downstream Impact on Access, Utilization, and Cost in a Fee-for-Service Setting. Accepted for opening Plenary Session, Society of General Internal Medicine, National Meeting, San Diego, CA, April 2014</li> <li>2013 Gleason</li> <li>Gleason N, Ho C, Ackerman S, Wang M, Collado D, Gonzales R. Timely, Low-cost Access To Specialty Care in an Academic Medical Center: Implementation of an e-Consult system in a Fee for Service Setting. Oral Presentation at the University HealthCare Consortium (UHC) National Meeting, Atlanta, Georgia, October 2013</li> <li>2013 Gleason</li> <li>Gleason N, Mo nacelli J, Ho C, Wang M, Collado D, Gonzales R. Providing Timely, Low-Cost, Access to Specialty Care in a Fee-For-Service Setting: Implementation of an eConsult System. Oral presentation at the Society of General Internal Medicine, National Meeting, Denver, Co, 2013</li> <li>Colason N, Ho C, Wang M, Collado D, Monacelli J, Ackerman S, Gonzales R. Implementation of a Structured, Electronic Referral System to Support the Principles of the PCMH-Neighborhood. Society of General Internal Medicine, National Meeting, Denver, Co, 2013</li> <li>2013 Gleason</li> <li>Association of American Medical Colleges (AAMC), National Meeting, Philadelphia, Pennsylvania, November 4, 2013. Timely, Low-cost Access To Specialty Care in an Academic Medical Center: Implementation of an e-Consult system at UCSF.</li> <li>2013 Gleason</li> <li>American College of Physicians, National Meeting, San Francisco, April 11, 2013. The Council of Subspecialty Societies presents: The Specialist and the Patient-Centered Medical Home: Going from Paper to Practice with the</li> </ul>	
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<ul> <li>2013 Lau</li> <li>Lau C, Harrison J, Afsar-manesh N, Amin A, Seymann G, Uppington J, Berger, M. Hospitalists Leading the Way: A novel, inter-disciplinary approach to improve neurosurgical patient outcomes and care experiences. Society of Hospital Medicine Annual Meeting, Las Vegas, NV, 3/2014. Finalist, Best Innovation Poster Competition.</li> </ul>	A
<ul> <li>2013 Lau</li> <li>• Lau C, Harrison J, Berger M. UC Care Check: A standardized multi-disciplinary approach to improve neurosurgical patient outcomes and care experiences. American Association of Neurological Surgeons Annual Scientific Meeting, San Francisco, CA, 4/2014.</li> </ul>	
<ul> <li>2013 Lin</li> <li>Project was presented at the annual NSQIP meeting in July 2013 and at the American Society of Colorectal Surgery meeting in May 2013</li> </ul>	ery
<ul> <li>2013 McLaughlin</li> <li>Oral: 11 total – including 81th AANS (2013); CNS (2013); 25th Annual National Forum on Quality Improvement in Health Care – IHI - (2013); CANS (2013; 2014), NASBS (2014); CFNS (2014); CNS (2014); UHC (2013)</li> </ul>	
<ul> <li>2013 McLaughlin</li> <li>Poster: 10 total - including 81th AANS (2013); UCLA Short Term Training Program (2013); 82nd AANS (2014); 49th CFNS (2014); CNS (2013)</li> </ul>	lth

2013 Stamos
 Nicole E. Lopez, MD\*; Cristina R. Harnsberger, MD\*; Kathrin M. Troppmann, MD, FACS#; Emily V. Finlayson, MD, MS, FACS^; Anne Y. Lin, MD, FACS~; Alessio Pigazzi, MD, PhD, FACS+; Sonia Ramamoorthy, MD\*, Reference # 14801, Abstract title: Results of a Web-based Patient Education Program in a Multi-Center University Health System. EMMI abstract accepted at ACS 2014 surgical forum (preoperative education video)
 2013 Tolia
 Abstract was presented at ACEP in Seattle, WA (Abstract published in Annals of Emergency Medicine - October 2013)