



## **2015 Annual Report**

Center of Innovation for Veteran-Centered and Value Driven Care  
A Center of Innovation  
Seattle, Washington  
CIN 13-402

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# 2015 Annual Report

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## 1 Overview

The Center of Innovation (COIN) for Veteran-Centered and Value-Driven Care is a partnership between the Health Services Research & Development (HSR&D) programs at VA Puget Sound in Seattle, WA and VA Eastern Colorado in Denver, CO and includes over 40 core and affiliate investigators, expertise in 14 clinical and methodological areas, and collaboration with 16 organizational partners.

The Center's overall mission is to:

- Conduct outstanding health services research to promote Veteran-centered and value-driven care
- Generate and disseminate knowledge that contributes to the well-being of Veterans
- Partner with VA policy and operational leaders to implement research findings into clinical care
- Train the next generation of health services researchers and leaders

The Center has two primary research focus areas plus emerging research areas.

Focus Area 1) Promote Veteran-centered care by improving the patient experience across community and healthcare settings for patients with complex chronic conditions. Specifically to improve:

- Self-management skills through research targeting patients across community and healthcare settings
- Health status and decision making of patients using principles of palliative care
- Patient experiences through interventions targeting providers and the healthcare system

Focus Area 2) Advance the science of providing Veterans with complex chronic conditions the highest quality medical care at the lowest financial burden. Specifically to:

- Identify high value VA facilities and the processes and structures they employ
- Compare the effectiveness of alternate ways of delivering high value care
- Develop new methods to quantify value

3) Develop new emerging research areas to address barriers to delivery of specialty care across community and healthcare settings and assess the effect of screening studies on patient experiences and the value of these studies to VA.

Major accomplishments in FY15: Successfully competed for 22 new research grants and training awards, continued strong collaboration with operations partners, and published more than 190 manuscripts in a year the Seattle site moved to a new location. Overall, the Center was able to navigate through a volatile year and position itself financially for increased research productivity and ultimately stronger ties to our stakeholders in FY2016.

New funding includes eight Investigator initiated awards (IIR, CDA, RNI)--

- David Bekelman: Palliative Care to Improve Quality of Life in CHF and COPD
- Vincent Fan: Understanding Patient Management of COPD Exacerbations
- Karin Nelson: Veteran peer Coaches Optimizing and Advancing Cardiac Health
- Lynn Reinke: Palliative Care Interventions for Outpatients Newly Diagnosed w/ Lung Cancer
- Lisa Callegari: Reproductive Planning for Women Veterans
- Katherine Hoerster: Move! UP: Improving MOVE! for Vets w/ PTSD Using Peer Support
- Steven Bradley: Appropriate Use of Cardiovascular Procedures to Optimize Healthcare Value
- Robert Burke: Improving Transitions of Care for Veterans Discharged to Post-acute Care Facilities

and five QuERI Centers--

- Improving Safety and Quality through Evidence-based De-implementation of Ineffective Diagnostics and Therapeutics (Au, Helfrich)
- Triple Aim (Ho)
- Veterans Choice Act Evaluation Center (Ho, Au)
- Virtual Specialty Care to Improve Access to Specialty Care for Rural Vets (Fortney)

- Office of Rural Health and QuERI Partnered Assessment Center (Littman, Fortney).

## **2 Investigators**

We added seven Core Investigators including Laura Feemster MD, Lisa Callegari MD, Alexis Beatty MD, Kate Hoerster PhD, Keren Lehavot PhD, Robert Burke MD, Joseph Frank MD. Drs. Stephan Fihn and Christopher Bryson have transitioned from Center Investigator roles. Dr. Fihn continues to work with the Center as Director of Office of Information Analytics and Business Informatics and as a member of our Steering Committee.

## **3 Steering Committee**

The Steering Committee met in October of 2014 and had the following recommendations --

1) Develop routine involvement with facility and VISN leaders: Attending regular operational meetings; 2) Recruit and encourage involvement from Primary Care and Internal Medicine; and 3) Explore innovative interactions between center directors, investigators and local and national leadership. The Center Directors have met with hospital and VISN leadership and have been successful at engaging Central Office leadership in both research and evaluation activities. There are several Center Investigators (e.g. Drs. Caplan, Nelson, Zeliadt) who are starting studies with engagement of national clinical care partners. Directors and Investigators continue to work with other integrated systems (Group Health/Kaiser Permanente) in order to develop additional innovative partnerships.

## **4 Center Funding**

The Center was able to generate research operating revenues of over \$13 million and obtain additional financial support from VA Puget Sound and Eastern Colorado leadership to provide space and infrastructure. Subcontracts and Interagency Agreements with our academic affiliates, National Institute of Health, Dept of Defense, Centers for Disease Control, Group Health Cooperative, and Fred Hutchinson Cancer Research Center accounted for over \$1.7 million in funding.

## **5 Research Projects**

The Center had a total of 72 unique projects with the majority funded by VA Health Services Research Program. To better describe the 2015 VA projects supporting the Center's research focus areas, we've grouped them by topic area.

### **Focus Area 1: Promoting Veteran-Centered Care**

#### Self-Management Across Community & Healthcare Settings

- Implementation Research for Evidence based Care for Alcohol Dependence (Williams CDA 12-276)
- Addiction Housing Case Management for Homeless Veterans (Saxon SDR 11-231)
- Environmental Impact on Exacerbations Chronic Symptoms and QOL in COPD (Fan EPID 005)
- MOVE! UP: Improve MOVE! For Veterans with PTSD using Peer Support (Hoerster CDA 12-263)
- Video-to-Home Inhaler Training Program for COPD (Fan PPO 13-384)

#### Palliative Care

- Advance Care Planning in Veterans with Kidney Disease (O'Hare IIR 12-126)
- Planning Palliative Care for Homeless Vets who are at the End of Life (Hutt IIR 10-322)
- Can Concurrent Hospice Care and Cancer Tx Achieve Superior Outcomes? (Levy IIR 12-121)
- Palliative Care Interventions for Outpatients w/ Newly Diagnosed Lung Cancer (Reinke NRI12-141)

#### Systems Interventions Targeting Providers & Healthcare Systems

- A Mixed Methods Multi-Site Evaluation of the Implementation of the Veterans Choice Act (Ho, Au VCA 15-240)
- Redesigning Collaborative Depression Care for PTSD and Alcohol Abuse (Bonner RRP12-175)
- Collaborative Care Management for Complex Recurrent Substance Use Disorders (Hawkins PPO 13-137)
- Development and Validation of a Perceived Access Measure (Fortney CRE 12-300)
- Integrating Care after Exacerbation of COPD (InCasE) (Au IIR 12-130)

- Organization & Outcomes of Dialysis for Vets with End Stage Renal Disease (Hebert IIR 12-342)
- Hybrid Effectiveness Implementation Study to Improve Clopidogrel Adherence (Ho SDP 12-179)
- Improving Outcomes of Older Adults Discharged to Post-acute Care after Hospitalization (Burke XNV 61-522)
- Natl Surveillance of Acute Kidney Injury Following Cardiac Catheterization (Maddox IIR 11-292)
- Implementing Collaborative Care for Depression plus PTSD in Primary Care (Felker SDP 09-402)

## **Focus Area 2: Promoting Value-Driven Care**

### High Value

- Appropriateness of Percutaneous Coronary Intervention (Bradley CDA 10-199)
- Optimizing the Value of Primary Care Delivered by Nurse Practitioners (Liu IIR 14-054)
- Medical Foster Homes: A Safe, Cost Effective Substitute for Nursing Homes (Levy CRE 12-029)
- Differences in Quality Cost & Access between VA & Fee Basis CABG & PCI (Maddox IIR 11-049)

### Comparative Effectiveness

- Comparative Safety of Benzodiazepines and Opioids among VA Patients with PTSD (Hawkins IIR 12-377)
- Economic Impact of Dual Use and Patient Choice in Primary Care (Wong CDA 13-024)
- Organization Factors Related to Hospital Re-Admissions (Liu IIR 09-354)
- Differences in Practice Styles in VA and Medicare Causes and Implications (Hebert IIR 10-150)

### Methods to Quantify Value

- Improving Stat Disclosure Methods for Protecting Confidential VA Health Data (Zhou IIR 13-330)
- A Novel Approach to Measuring Costs & Efficiency: Lung Nodules Case Study (Zeliadt IIR 12-065)
- A Joint Evaluation of Surgery Related Outcomes and Costs across VAMCs (Zhou IIR 10-365)

## **Outside Focus Areas/Emerging Areas of Research**

- Integrating Smoking Cessation with Lung Cancer Screening (Zeliadt PPO 14-130)
- Women Veterans VA Maternity Care Utilization Satisfaction and Health Outcome (Katon Women's Health)
- Evaluate the Safety & Efficacy of Methylprednisolone in Hospitalized Veterans w/Pneumonia (Fan CSP-574)

## **6 Research Products and Dissemination**

During the reporting period, Center Investigators and trainees published 190 peer-reviewed articles. They participated in national and international meetings highlighting the Center's focus areas reflecting the deep and broad disciplines represented by Center as well as the close relationship with our organizational partners.

### **Focus Area 1: Promoting Veteran-Centered Care**

Based on collaborative work with our key partners we have published in high profile peer-reviewed journals and our researchers had the opportunity to present their work at national meetings including the HSR&D sponsored sessions at Academy Health. Our team working with Geriatrics and Extended Care Services met with National Representatives from Central Office to share their work and dialogue regarding sharing of data, current trends in palliative care delivery and large-scale dissemination and implementation strategies.

### **Focus Area 2: Promoting Value-Driven Care**

Several articles focused on the Medical Foster Home Program will be published in a special Veteran focused edition of the Gerontologist.

## **Outside Focus Areas/Emerging Areas of Research**

Our emerging area on screening and in particular around the potential adverse effects of lung cancer screening on smoking cessation was featured in the New York Times. The work derived from a research partnership with the National Center for Health Promotion and Disease Prevention.

## **7 Partners**

In addition to our five key partners detailed below we collaborate closely with the following national

stakeholders: Patient Care Services, Office of Nursing, Women's Health Services, VISN 19/20, and Office of Academic Affairs.

### **Key Partner 1: Office of Specialty Care Services**

We currently collaborate and have funding through the Office of Specialty Care (OSC) Evaluation Center, supplemented with QuERI funds and OSC clinical initiatives within VISN 20. The OSC-QuERI Evaluation Center, directed by Drs. Ho and Au, has been evaluating the rollout and effectiveness of specialty care initiatives. Evaluations have focused on E-Consults, SCAN-ECHO, mini-residency and specialty care neighborhoods. We have been working closely with OSC planning/training for Hepatitis C treatment with the recent approvals of novel Hepatitis C antiviral treatments. We developed and presented to VISN Chief Medical Officers planning maps that optimize the location for primary care training based on location of patients to minimize travel burden for patients. Our Center also leads the VISN 20 SCAN-ECHO clinical program.

### **Key Partner 2: Geriatrics and Extended Care Services**

COIN Investigators collaborate with Geriatrics and Extended Care through regular communication regarding ongoing and planned projects with Hospice and Palliative Care National Director, Dr. Scott Shreve and his staff. Drs. Levy, O'Hare, Reinke, Au, Hutt and Bekelman are engaged in the Palliative Care Research Focus Area Group which is focused on improving the delivery of palliative care to Veterans with serious life-limiting illness. This group of Investigators meets monthly to discuss individual projects, funding opportunities and national initiatives with a goal of promoting cross-center research collaboration responsive to national priorities. Dr. Levy is also partnering with Dr. Shreve to understand how end-of-life outcomes are impacted by the concurrent provision of hospice and disease modifying treatments such as chemotherapy and radiation using data from the Performance Reporting and Outcomes Measurement to Improve Standards of Care at End of Life (PROMISE) Center.

### **Key Partner 3: Office of Informatics and Analytics - Analytics and Business Intelligence**

Our collaboration with the Office of Informatics and Analytics through the CART program allows for synchronization between the COIN research efforts and the operational activities of the National Program Director of Cardiology office. Drs. Maddox, Ho, and Bradley are integrally involved in the CART operations. Tom Maddox is the Associate Director of the CART program and oversees the execution of their quality and safety programs, including national benchmarking, major adverse event detection and review and medical device surveillance. He is designing programs to detect and reduce contrast induced nephropathy and bleeding complication in all VA Cath labs. Steve Bradley leads the research and publication committee for the CART program. The research program uses CART data linked to longitudinal care and outcomes data from veterans. Steve Bradley is also leading an effort to integrate patient reported outcomes into the process of elective PCI, which will allow for both improved patient-centered care and the opportunity to study the impact of patient reported outcomes on procedural success and patient satisfaction.

### **Key Partner 4: Office of Rural Health**

Dr. Robert Burke has successfully implemented a transition of care program for patients referred from outlying VA medical centers who are discharged home following care at the Denver VA. Initial interviews with patients and providers have demonstrated enthusiasm for the program. Dr. Vincent Fan has been working with the VA Office of Rural Health on a pilot project to develop a remote internet-based, interactive video inhaler training program for Veterans with COPD. Dr. Bessie Young was also been funded by the Office of Rural Health to establish a Kidney Disease Registry for SCAN-ECHO.

### **Key Partner 5: National Center for Health Promotion and Disease Prevention**

We have been working with National Center for Health Promotion and Disease Prevention (NCHPDP) on a number of research and operational projects. The lung cancer screening demonstration laboratory was funded by VA Central Office to assess the resources and effectiveness of lung cancer screening in VA. Dr. Steven Zeliadt has been working closely with the demonstration project as a member of their Steering Committee. Dr. Zeliadt was instrumental in providing structure to the role out allowing for the ability of the program to be systematic evaluated.

Notably, Dr. Zeliadt characterized the misperceptions of CT screening among Veterans who continued to smoke. His paper published in JAMA-Internal Medicine and was highlighted in multiple news outlets including the New York Times. Drs. Katherine Hoerster and David Au have also been working with NCHPDP on treatment approaches to obesity.

## **8 Cross Medical Center Collaborations**

Our multi-site COIN has active collaborations with the majority of HSR&D programs throughout the country.

### **Focus Area 1: Promoting Veteran-Centered Care**

Specific to Focus Area 1, David Au is working with Co-Investigators at Boise VA Medical Center on "Integrating Care after Exacerbation of COPD (InCase)." Dr. Levy works with the COIN based in Providence, RI on projects related to Veteran-Centered palliative and home-based care. In FY16, Dr. Levy will begin collaborating with the Long-Term Care QuERI at the Ann Arbor VA to study implementation of the Life-Sustaining Treatment Initiative in collaboration with the National Center for Ethics in Health Care.

### **Focus Area 2: Promoting Value-Driven Care**

Collaboration between Drs. Liu and Hebert with the Durham VA HSR&D Investigators continue on multiple projects including "Differences in Practice Styles in VA and Medicare: Causes and Implications" and "Organizational Factors Related to Hospital Readmissions." Dr. Zeliadt collaborates with Investigators at NY Harbor and Pittsburgh VA as part his study entitled "A Novel Approach to Measuring Costs and Efficiency: Lung Nodules as a Case Study." The Veteran Care Act evaluation is a collaborative effort between VA Medical Centers in Denver, Seattle and Cleveland. The new Quality and Safety QuERI through de-implementation is a collaborative effort between investigators in Bedford and Seattle.

### **Outside Focus Areas/Emerging Areas of Research**

Drs. Reiber and Katon collaborate with Sepulveda VA on their Women's Health studies and Women's Health Initiative projects. Dr. Zeliadt collaborates with the nine VA Medical Centers throughout the US participating in the lung cancer screening program.

## **9 Key Impacts**

Our Investigators have produced research and operational based projects that have direct impact to clinical care and health policy. We published manuscripts that demonstrate the effect of organizational changes to VA as well as manuscripts that document processes and interventions to improve care quality and improve health and functional status of Veterans.

### **Publications, Research Presentations, Abstracts**

**Frank JW, Carey EP, Fagan KM, Aron DC, Todd-Stenberg J, Moore BA, Kerns RD, Au DH, Ho PM, Kirsh SR. Evaluation of a telementoring intervention for pain management in the Veterans Health Administration. Pain medicine (Malden, Mass.). 2015 Jun 1; 16(6):1090-100.**

In 2011, the Veterans Health Administration launched the Specialty Care Access Network-ECHO (SCAN-ECHO), which uses telehealth technology to provide primary care providers with case-based specialist consultation and education. We evaluated the implementation of the SCAN-ECHO pain management (SCAN-ECHO-PM) program in seven regional VHA healthcare networks. Specifically, we examined patient utilization of outpatient care and initiation of medications. In the patient panels of primary care providers who presented at least one SCAN-ECHO-PM sessions (N=159), there were 22,454 patients with chronic, non-cancer pain. Provider presentation to SCAN-ECHO-PM was associated with patient utilization of physical medicine (including physical therapy and occupational therapy) and with initiation of antidepressant medications and anticonvulsant medications. Provider presentation was not significantly associated with patient initiation of opioid medications. SCAN-ECHO-PM may provide a novel means of enabling guideline-concordant, multimodal pain care by building pain management competency among primary care providers.

**Focused Area of Research:** Promoting Veteran-Centered Care

**Partner:** Office of Specialty Care Services

**Bekelman DB, Plomondon ME, Carey EP, Sullivan MD, Nelson KM, Hattler B, McBryde CF, Lehmann KG, Gianola K, Heidenreich PA, Rumsfeld JS. Primary Results of the Patient-Centered Disease Management (PCDM) for Heart Failure Study: A Randomized Clinical Trial. JAMA internal medicine. 2015 May 1; 175(5):725-32.**

The study was a multi-site randomized clinical trial of a multidisciplinary disease management intervention; and the team found the intervention did not improve the primary outcome of patient-reported health status in patients with heart failure. However, among secondary outcomes, depression and mortality improved in the intervention arm compared to usual care.

**Focused Area of Research:** Promoting Veteran-Centered Care

**Partner:** Office of Patient Care Services

**Bradley SM, O'Donnell CI, Grunwald GK, Liu CF, Hebert PL, Maddox TM, Jesse RL, Fihn SD, Rumsfeld JS, Ho PM. Facility-Level Variation in Hospitalization, Mortality, and Costs in the 30 Days After Percutaneous Coronary Intervention: Insights on Short-Term Healthcare Value From the Veterans Affairs Clinical Assessment, Reporting, and Tracking System (VA CART) Program. Circulation. 2015 Jul 14; 132(2):101-8.**

This study assessed whether facility-level hospitalization rates after PCI are associated with cost of care. We studied 32,080 patients who received PCI at any 1 of 62 Veterans Affairs hospitals from 2008 to 2011. We identified facility outliers for 30-day risk-standardized hospitalization, mortality, and cost. Compared with the risk-standardized average, 2 hospitals (3.2%) had a lower-than-expected hospitalization rate, and 2 hospitals (3.2%) had a higher-than-expected hospitalization rate. We observed no statistically significant variation in facility-level risk-standardized mortality. The facility-level unadjusted median per patient 30-day total cost was \$23,820. Compared with the risk-standardized average, 17 hospitals (27.4%) had lower-than-expected costs, and 14 hospitals (22.6%) had higher-than-expected costs. At the facility level, the index PCI accounted for 83.1% of the total cost, whereas hospitalization after PCI accounted for only 5.8% of the 30-day total cost. Facilities with higher hospitalization rates were not more expensive. In this national study, hospitalizations in the 30-day period after PCI accounted for only 5.8% of 30-day cost, and facility-level cost was not correlated with hospitalization rates. This challenges the focus on reducing hospitalizations after PCI as an effective means of improving healthcare value. Opportunities remain to improve PCI value by reducing the variation in total cost of PCI without compromising patient outcomes.

**Focused Area of Research:** Promoting Veteran-Centered Care

**Partner:** Office of Informatics and Analytics - Analytics and Business Intelligence

**Fortney JC, Pyne JM, Kimbrell TA, Hudson TJ, Robinson DE, Schneider R, Moore WM, Custer PJ, Grubbs KM, Schnurr PP. Telemedicine-based collaborative care for posttraumatic stress disorder: a randomized clinical trial. JAMA psychiatry (Chicago, Ill.). 2015 Jan 1; 72(1):58-67.**

This randomized controlled trial found that care management and telemedicine technologies can be used to engage rural Veterans in evidence based psychotherapy in order to reduce PTSD symptom severity. This is the first clinical intervention designed for the primary care setting (Community Based Outpatient Clinics) that has been shown to improve PTSD outcomes among VA enrollees. We are currently partnering with the Office of Rural Health to implement the intervention at six VA healthcare systems across the country. Media coverage included: VAORD Quarterly Update, VA Research Currents, Reuters, Fox News, US Medicine, Stars and Stripes, Science Newsline Medicine, HealthcareDrive, and Healthline News.

**Activity Outside of Focused Areas:** Address barriers to delivery of specialty care

**Partner:** Office of Rural Health

**Levy CR, Alemi F, Williams AE, Williams AR, Wojtusiak J, Sutton B, Giang P, Pracht E, Argyros L. Shared Homes as an Alternative to Nursing Home Care: Impact of VA's Medical Foster Home Program on Hospitalization. *The Gerontologist*. 2015 Sep 18.**

This study used a nested, matched, case control design to examine 817 VA Medical Foster Home residents and matched each to three VA Community Living Center residents selected from a pool of 325,031. CLC and MFH cases were matched on (a) baseline time period, (b) follow-up time period, (c) age, (d) gender, (e) race, (f) risk of mortality calculated from comorbidities, and (g) history of hospitalization for the selected condition during the baseline period. Compared with matched CLC cases, MFH residents were less likely to be hospitalized for adverse care events, anxiety disorders, mood disorders, skin infections, pressure ulcers, and bacterial infections other than tuberculosis or septicemia. MFH cases and matched CLC controls did not differ in rates of urinary tract infections, pneumonia, septicemia, suicide/self-injury, falls, other injury besides falls, history of injury, delirium/dementia/cognitive impairments, or adverse drug events. Hospitalization rates were not higher for any conditions studied in the MFH cohort compared with the CLC cohort.

**Focused Area of Research:** Promoting Veteran-Centered Care

**Partner:** Geriatrics and Extended Care Services

**Zeliadt SB, Heffner JL, Sayre G, Klein DE, Simons C, Williams J, Reinke LF, Au DH. Attitudes and Perceptions About Smoking Cessation in the Context of Lung Cancer Screening. *JAMA internal medicine*. 2015 Sep 1; 175(9):1530-7.**

Our group conducted qualitative interviews with Veterans from 7 of the 8 Lung Cancer Screening Clinical Demonstration sites in order to understand how to talk to Veterans about risks of and benefits of screening and gain insight into patient perceptions of screening on smoking cessation. These interviews identified multiple mechanisms in which offering screening provided reassurance that smoking had not caused harm when the results were clean, or that screening by itself would provide protection not just from lung cancer but from the harms of smoking more generally. This was especially true among the majority of patients identified with abnormal nodules that needed additional follow-up, but were not yet considered cancer, as many of these patients believed that screening had caught their disease early and was working to save their life. These findings were featured in the popular media including New York Times, the Guardian, and National Public Radio. As lung cancer screening policy is being developed, our research findings about the inadvertent misperceptions and exaggerated beliefs in ability of screening to avoid all harms of tobacco-use beyond just lung cancer have prompted how VA is incorporating smoking cessation in development of national guidelines. Our findings are being used to determine resource priorities and national implementation of lung cancer screening. Jane Kim, MD MPH, the Chief Consultant for National Center for Health Promotion and Disease Prevention, is using our findings to formulate the VA's clinical preventive services guidance statement. This work is being highlighted in the guidance statement and formulation of smoking cessation services that will be integrated into delivery of lung cancer screening. The guidance statement, as well as any implementation guidance, will be put together in early 2016 for consideration by VA leadership.

**Activity Outside of Focused Areas:** Assess the effect of screening studies on patient experiences

**Partner:** National Center for Health Promotion and Disease Prevention

**Sylling PW, Wong ES, Liu CF, Hernandez SE, Batten AJ, Helfrich CD, Nelson K, Fihn SD, Hebert PL. Patient-centered medical home implementation and primary care provider turnover. Medical care. 2014 Dec 1; 52(12):1017-22.**

In April 2010, VA began implementing a patient-centered medical home (PCMH) model of care delivery through its Patient Aligned Care Team (PACT) initiative. PACT substantially reengineers the delivery of primary care through Care Teams; however, components of PACT may increase workload for many primary care providers (PCPs). This study examined the association between PACT implementation and turnover of PCPs in VA. Findings from this study indicate PACT was associated higher PCP turnover overall. We found that PACT implementation was associated with a modest increase in turnover of 4.0 additional PCPs per 1000 PCPs per quarter. This translates into a loss of 192 PCPs in the entire VA between April 2010 and March 2012 due to PACT implementation. The increase in turnover attributable to PACT was concentrated among older and more experienced PCPs. In summary, health systems should consider potential workforce effects when implementing PCMH. This study was conducted in collaboration with the PACT Demonstration Lab Coordinating Center.

**Focused Area of Research:** Promoting Veteran-Centered Care

**Partner:** Primary Care Services - Patient Aligned Care Teams Demonstration Lab  
**Burke RE, Juarez-Colunga E, Levy C, Prochazka AV, Coleman EA, Ginde AA. Patient and Hospitalization Characteristics Associated With Increased Postacute Care Facility Discharges From US Hospitals. Medical care. 2015 Jun 1; 53(6):492-500.**

In this study, we sought to understand which patients, hospitals, and payers were most affected by a recent trend in increased discharges from the hospital to post-acute care (PAC) facilities (like skilled nursing facilities). We also wanted to find out if PAC facility care might be substituting for a longer hospital stay in some cases. We used a nationally representative patient sample, the National Hospital Discharge Survey, from 1996-2010, which included 3 million discharges to PAC facilities (representative of 386 million discharges nationally). We found that the trend in increased discharges to PAC extended across all patient groups, payers, and several diagnosis groups. In particular, we found more than 50% of all patients discharged to PAC are 80 years of age or older, that PAC facility care may be increasingly substituting for a longer hospital stay for all patients, but particularly those treated for pneumonia, hip fracture, and sepsis, and that the increase in discharges to PAC is not explained by the aging population, changes in payers (such as Medicare or Medicaid) or hospital length of stay.

**Focused Area of Research:** Promoting Value-Driven Care

**Partner:** Office of Patient Care Services  
**Rinne ST, Wong ES, Hebert PL, Au DH, Lindenauer PK, Neely EL, Sulc CA, Liu CF. Weekend Discharges and Length of Stay Among Veterans Admitted for Chronic Obstructive Pulmonary Disease. Medical care. 2015 Sep 1; 53(9):753-7.**

This VA funded study examined whether patients with weekend discharges from hospital had greater resource utilization, readmission rates, mortality, and post-discharge follow-up. Investigators found significantly fewer discharges on the weekend and weekend stay was associated with an increased length of stay (0.59 day [95% confidence interval (CI), 0.54-0.63 d]. Discharge on the weekend was not associated with increased odds of 30-day hospital readmission or lack of primary care follow-up visit within 14 days of discharge. However, weekend discharges were significantly associated with lower odds of mortality within 30 days after discharge (OR=0.80; 95% CI, 0.65-0.99). This study suggests that identifying methods to increase weekend discharges may create an opportunity to improve hospital efficiency.

**Focused Area of Research:** Promoting Value-Driven Care

## 10 Key Services

We provide a number of important services that support Research & Development and support the overall mission of VA. Many of these services are based on the expertise of our Investigators and staff and are a reflection of the number and quality of our relationships with our organizational partners.

### HSR&D

#### Statistical/Data Analyses and Database Management

Center biostatistics and data analysis support has been a key strength and resource to HSR&D investigators. Dr. Andrew Zhou oversees a Biostatistics Unit that includes PhD/Masters level VA staff, and post-/pre-doctoral students to support Investigators in both complex statistical design planning activities, as well as day-to-day content support including appropriate analytic approaches and methods to address missing data. Database Manager, Jeff Todd-Stenberg, oversees all the program and project data analysts to ensure continuity among sites and projects.

#### Annual Report Template (ART) Development

Staffing and management of the Annual Report Template program located at our Center includes technical development, database management, field training, quality control, and reporting for HSR&D nationwide. The ART Website tracks and processes HSR&D Intent to Submit documents and Final Reports. It is accessible to over 300 users nationwide, allowing Centers and Investigators to enter data while providing VACO with a centralized quality-reporting tool. The end products include all HSR&D and QUERI Center Annual Reports, Quarterly Matrix Reports, citation updates, and National Library of Medicine clinical trial updates. All of these reports are used by Central Office in preparing reports to Congress.

### Other VA/ORD

#### VA Statisticians Association (VASA)

Andrew Zhou, Senior Biostatistician and Director of Biostatistics Unit created VASA to help promote and disseminate statistical methodological research relevant to VA studies, facilitate communication among VA-affiliated statisticians, and increase participation of VA statisticians at national meetings and on scientific merit review boards. Membership is open to all VA-affiliated statisticians and currently has over 50 members. VASA members have highlighted VA research activities at national and international events.

#### Medical Foster Home

Dr. Cari Levy and colleagues provided budgetary impact data to the Office of Geriatrics and Extended Care Home and Community Based Services for the Medical Foster Home Program. These data were provided in response to requests for a business plan to further national program expansion. Outcomes data and recommendations for successful program implementation were also provided to national program coordinators for use in presentations to hospital leadership considering program implementation.

**Partner:** Geriatrics and Extended Care Services

## **Cardiac Assessment, Reporting and Tracking System for Cardiac Catheterization Laboratories (CART-CL)**

Drs. Thomas Maddox, Michael Ho, and Steven Bradley work closely with Dr. Stephan Fihn from Office of Analytics and Business Intelligence and Dr. John Rumsfeld, National Program Director for Cardiology on the National VA Clinical Assessment, Reporting and Tracking (CART) Program, a quality and safety program for all 79 cardiac catheterization laboratories in VA Health Care System nationwide. Using specialized software program, CART-CL collects patient and procedural information on all coronary procedures performed nationally (40,000 diagnostic angiograms and 10,000 percutaneous coronary interventions (PCI) annually). This data is used to provide real-time quality management, quality improvement, procedural safety surveillance, and clinical research.

**Partner:** Office of Informatics and Analytics - Analytics and Business Intelligence

## **Evaluation of Patient Care Services**

We have provided key services to a number of different Offices within the Patient Care Services. Center Investigators provide on-going evaluation of the national rollout of PACT and Specialty Care programs through the PACT Demonstration Lab Coordinating Center (Seattle) and the Specialty Care/QuERI Evaluation Center (Seattle/Denver). We also work closely with the National Center for Health Promotion and Disease Prevention on the Lung Cancer Screening Demonstration project providing guidance on methods to examine the effectiveness of implementation as well as processes that will need to be implemented to reduce heterogeneity in patient selection, imaging interpretation and follow-up recommendations.

**Partner:** Office of Specialty Care Services

## **Women's Health Services**

Our service to Women's Health Services (WHS) has been through the VA Women's Veterans Research Network and through multiple national operations and policy initiatives. Dr. Jodie Katon serves as a Senior Reproductive Epidemiology Consultant to WHS. In this role she led the planning, writing, and dissemination of the State of Reproductive health in Women Veterans Report. Dr. Katon also leads the development of VA Maternity Care Quarterly Report and Database in collaboration with VSSC. Funded by WHS and HSR&D, Dr. Gayle Reiber is leading collaboration between HSR&D, WHS, and the Women's Health Initiative to better understand the needs of aging women Veterans. As part of VA Women Veterans Research Network. Dr. Lisa Callegari leads the working group on preconception health and Dr. Karin Nelson serves as the local site lead for VA Women Veterans Practiced Based Research Network.

**Partner:** Women's Health Services

## **National (non-VA)**

### **Qualitative Research**

George Sayre, PhD provides expertise in qualitative research to Center Investigators and project staff. Dr. Sayre offers consultation and qualitative research training including sessions on how to use ATLAS.TI geographical software. In addition Dr. Sayre's qualitative team continues to work with OABI on the access to care data used to help create Veteran Choice legislation.

**Partner:** Office of Informatics and Analytics - Analytics and Business Intelligence

## **Renal Registry**

Dr. O'Hare leveraged national VA data and renal registry data to examine the appropriateness of contemporary practice guidelines for the management of chronic kidney disease in older adults. Through her role in co-chairing the VA-DOD clinical practice guideline group, she has helped disseminate optimal guidelines throughout the VA as well as across the nation; she is collaborating with the CDC to lead a multisite effort that includes building a comprehensive surveillance system for chronic kidney disease across the U.S.

## **11 Mentoring and Career Development**

Our HSR&D Fellowship program has been especially successful in steering its graduates into academic and research careers in health services and implementation science and developing junior faculty into independent investigators. We received funding for four Research Training Programs in 2015:

- Cathy Battaglia, Allan Prochaska: OAA/HSRD MD and PhD Post-doctoral Fellowship
- Bessie Young, Karin Nelson, Chuan-Fen Liu: OAA/HSRD MD and PhD Post-doctoral Fellowship
- Steve Zeliadt, David Au: NCI/OAA BigData Fellowship
- Cathy Battaglia, Lynn Reinke: Nursing Research Fellowship

Seattle and Denver have a history of successful mentorship and training programs. The training of post-doctoral MD and PhD investigators is central to the Denver COINs mission. Seattle had 12 Post-Doc Fellows (Margaret Yu MD, Victoria Johnson MD, Lisa Callegari MD, Julie Silverman MD, Ann Melzer MD, Joe Simonetti MD, Ann Long MD, Denise Cooper PhD, Erin Bouldin PhD, Preston Greene PhD, Kristen Gray PhD, and Mark Schure PhD). Denver was successful in receiving a new HSR&D Advanced Fellowship in Health Services Research and had two MD fellows, David Saxon and Misha Huang, and a Ph.D. nutritionist fellow, Diana Brostow.

All core and affiliate Investigators remain active in teaching at the School of Medicine and School of Public Health (Health Services, Biostat, Epidemiology) at the University of Washington and University of Colorado. Several investigators are serving as directors of clinical research training programs, course Directors, and faculty for T32, KL2, K23 and K12 training programs. All Center Investigators serve on thesis and dissertation committees.

## **12 National and Regional Leadership Roles**

COIN Investigators provide services to a large variety of VA executive committees, steering committees, associations, review panels, quality forums, external advisory boards, data monitoring boards, guideline panels, steering committees, and task forces; and they will continue to provide leadership in the field and provide information nationally and internationally to ensure that lessons learned in VA can be applied to problems in the larger health care system.

The Center continues to have strong leadership roles within Specialty Care. Dr. Bessie Young is the VISN lead for the Renal SCAN-ECHO program as well as the lead for the overall SCAN-ECHO program. Dr. Ann O'Hare has been part of a VA leadership group developing a clinical registry of Veterans with kidney disease. David Au and Michael Ho are co-Directors of the Office of Specialty Care Evaluation Center. Dr. David Au is a member of the American Board of Medical Specialties – Pulmonary Board and on the Pulmonary, Critical Care and Sleep Field Advisory Committee. Dr. Cari Levy serves in an advisory capacity to the Office of Geriatrics and Extended Care, Home and Community Based Services regarding cost and quality outcomes in the Medical Foster Home Program. Dr. Karin Nelson is the Medical Director and Associate Director of the PACT Demonstration Laboratory Coordinating Center.

In addition, Center Investigators provide important leadership roles within VA Research. Dr. Lynn Reinke is the current Chair of the Nursing Research Field Advisory committee. Dr. David Au is the HSR&D representative on the Field Research Advisory Committee. Dr. Bradley serves on the VA

Resuscitation Education Initiative (REDI) Committee, as a Co-Chair of the VHA Resuscitation Quality Improvement Steering Committee, and a member of the Veterans Choice Act Program Evaluation Expert Council. Dr. Ho continues to serve on the HSR&D Scientific Merit Review Board (SMRB) for career development awards. Dr. Caplan serves as an Executive Committee Member on the VA's Program to Understand the Long term Outcomes in SpondyloARthritis (PULSAR). Cathy Battaglia serves as Co-Chair of the ECHCS Nursing Research Committee.