



Northwest Center Health Services R&D

2011 Annual Report

Northwest Center for Outcomes Research in Older Adults
A Center of Excellence
Seattle, Washington
HFP 83-027

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<http://www.pugetsound.hsrp.research.va.gov/>

2011 Annual Report

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1 Overview

The Northwest Center for Outcomes Research in Older Adults (NW Center), a Health Services Research & Development Center of Excellence, is located at Veterans Affairs Puget Sound Health Care System (VA Puget Sound) in Seattle, WA. The NW Center conducts innovative research to generate relevant new knowledge, develop rigorous new research methods and provide high caliber training in health services research and support VA policy makers in a rapidly changing health care environment. The main research objectives are to provide information to improve the delivery of health services to Veterans and to contribute to scientific progress in the field of health services research by focusing on four emphasis areas:

- Management of Chronic Disease in Primary and Specialty Care
- Preservation of Independence in Older Adults
- Evaluation of Alternative Delivery Systems
- Basic Methodology in Health Services Research

In 2011, the NW Center had an unexpected change in leadership with the transition of Dr. Stephan Fihn to Director of the Office of Analytics and Business Intelligence. Dr. David Au, a Core Investigator since 1998, was appointed Acting Center Director. During this transition, the NW Center has continued to support 23 Core Investigators and 18 Affiliate Investigators, oversee 82 unique research projects, and manage \$13.4 million in funds from federal and non-federal sources.

Dr. Christopher Bryson, Core Investigator and Primary Care Physician agreed to new leadership roles as the Co-Director of the HSR&D Fellowship Program and as Principal Investigator for the Ischemic Heart Disease QuERI Coordinating Center. Dr. Bessie Young will Co-Direct the HSR&D postdoctoral fellowship program and has accepted the position of Chair, Research Review Committee.

The Patient Aligned Care Team (PACT) Demonstration Lab and the VISN 20 Rural Health Tele-dermatology Program are currently led by our Investigators and are co-located within the NW Center. In anticipation of VA Puget Sound relocating these operational activities, we are actively planning for capacity building and reallocating resources currently committed to these activities. In addition to a search for a permanent Center Director, there is a Joint Search with the University of Washington Biostatistical Department to recruit and develop a full time VA Investigator. Dr. Andrew Zhou, a Research Career Scientist and the lead of our Biostatistical Unit directs this effort. The objective of recruiting an additional Investigator is to develop statistical methodology in areas important to VA such as quasi-experimental designs and methods to improve causal inferences from observational data. We are also in the process of recruiting three full time data analysts to backfill PACT staff. We continue to focus on the career development of our brightest young Investigators and are planning to support three Career Development Award applications in the upcoming year.

In preparation of the 2012 Center of Innovation submissions, our Investigators have established weekly meetings to present works in progress and to discuss their research interests and new proposal ideas. These meetings, in addition to the Research Review Committee meetings, have been successful in creating new research collaboration within the NW Center and stronger study teams.

2 Investigators

Dr. Katharine Bradley, a Core Investigator and co-Director of our HSR&D Fellowship program accepted a position with Group Health Research Institute. Drs. David Au and Emily Williams assumed responsibilities as Principal Investigator on several funded studies. Dr. Bradley remains active as a Co-Investigator and study staff supervisor.

Drs. Bonnie Steele and April Gerlock, both Nursing Research Initiative (NRI) recipients, retired this year after completing their projects. Drs. Lynne Reinke and Jackie Grimesey will continue to develop NRI funded studies and maintain existing datasets.

Our newest Center Investigators have each been awarded important research funding. Dr. Emily Williams received QuERI funding within her first year of being recruited as a Center Investigator; and Dr. Ranak Trivedi received a Career Development Award with funding to begin in 2012.

We have added two Core Investigators, Drs. Andrew Saxon and Bradford Felker. They both enrich our mental health portfolio with funding through HSR&D.

3 Steering Committee

The Center Steering Committee met last year specifically to offer guidance in filling the Center Director position and to address the new HSR&D funding mechanisms. Naming a new Director prior to the submission of the Center of Innovation proposal in 2012 will be difficult, but Committee offered support in the recruitment process. A new Chairman of the Steering Committee will be named shortly, since Dr. Paula Diehr stepped down due to her recent retirement.

4 Center Funding

NW Center generated \$13.4M in direct funds. Core funds (\$1.6M) represent 14% of total funding; and all HSR&D funding (\$4M) represent 30% of total funding.

The NW Center maintains a strong academic affiliation with the University of Washington School of Medicine and School of Public Health and continues to collaborate closely with researchers located at University of Washington Medical Center, Harborview Medical Center, Group Health Cooperative and the Fred Hutchinson Cancer Research Center. Various interagency agreements have been initiated with these institutions and with the National Institute of Health, accounting for \$1.1M in funding.

5 Research Projects

A prime objective of the NW Center is to provide information to improve the delivery of health services to Veterans and to contribute to scientific progress in the field of health services research. The 82 active funded research projects in 2011 include 16 HSR&D Investigator Initiated Research projects, 15 QuERI projects and 2 Nursing Research Initiatives. These VA funded projects contribute directly to the Center emphasis areas:

Management of Chronic Disease in Primary and Specialty Care

- Addiction Housing Case Management for Homeless Veterans Enrolled in Addictions Treatment (Saxon SDR 11-231)
- Patient Aligned Care Team Demonstration Labs Coordinating Center (Fihn XVA 61-041)
- Implementing Alcohol Counseling with Clinical Reminders: Barriers & Facilitators (Williams RRP 09-178)

Preservation of Independence in Older Adults

- Location and timing of inhaler use, exacerbations and physical activity in COPD (Fan PPO 10-264)
- Implementation of Long Term Care (LTC) Resource and Shared Decision Making Guide (Reder XVA 61-043)
- Adaptation of LTC Resource & Shared Decision Making Guide for Informal Caregivers (Reder XVA-042)

Basic Methodology in Health Services Research

- Patient Centered Adherence Intervention after Acute Cardiac Syndrome Hospitalization

(Bryson IIR-08-301)

- Access to Care for Veterans with Chronic Lower Limb Wounds (Raugi IBA 09-061)
- Predicting Implementation from Organizational Readiness to Change (Helfrich IIR 09-067)
- Outcomes, Costs and Trends in Dialysis Timing in VA (Hebert IIR 09-094)
- Evaluating the Impact of Cognitively Enhanced CPRS Document Interfaces (Hammond IIR 09-061)

Evaluation of Alternative Delivery Systems

- Organizational Factors Related to Hospital Readmissions (Liu IIR 09-354)
- Using Audit-C to Monitor Outcomes in Patients with Alcohol Misuse (Au IIR 08-314)
- Process Oriented Validated Electronic Performance Measures (Bryson RRP 09-139)
- Appropriateness of Percutaneous Coronary Intervention (Bryson RRP 09-140)

6 Research Products and Dissemination

During the reporting period, Center Investigators and trainees published 97 peer-reviewed articles. Publications appeared in the Archives of Internal Medicine; Journal of the National Cancer Institute; Chest; Journal of General Internal Medicine; and Health Services Research. Our Investigators presented over 50 papers and abstracts at national and international conferences, including the 2011 Academy Health Annual Research Meeting in Seattle, Washington; American Thoracic Society International Meeting, Denver, Colorado; European Respiratory Meetings, Amsterdam, The Netherlands; American College of Chest Physicians, Vancouver, Canada and the International Health Economics Association World Congress on Health Economics in Toronto, Canada.

Our web page:<http://www.pugetsound.hsrp.research.va.gov/> describes our program and publications and offers a wide-range of support tools for proposal preparation, data security, and human subjects protection procedures. We maintain a comprehensive SharePoint site so that investigators and trainees have better access to resources available at the NW Center and from the local and national R&D offices.

7 Key Impacts

Publications

Au DH, Udris EM, Engelberg RA, Diehr PH, Bryson CL, Reinke LF, Curtis JR. A Randomized Trial to Improve Communication about End-of Life Care Among Patients with COPD. Chest 2011 Sept 22.

Despite patients' preferences to have discussions with their clinicians about advance care planning, few ever do which may lead to receiving care that was not desired. Investigators performed a randomized trial to assess whether an intervention using patient specific feedback about preferences for discussing end of life care would improve the occurrence and quality of communication between patients with COPD and their clinicians. The investigators elicited preferences from patients about their desire for communication, life sustaining therapy, experiences important to them at the end of life. The intervention clinicians and patients received a one-page patient specific feedback form to stimulate conversations. The control group completed questionnaires but did not receive the feedback form. 92 clinicians contributed 376 patients to the study. Baseline end-of-life communication was found to be poor, but patients in the intervention arm reported marked improvement with nearly a 3 fold higher rate of discussions about end of life care. Patients in the intervention arm also reported higher quality end of life communication. We concluded a relatively simple intervention, delivered in an operating clinical environment, can improve the occurrence and quality of communication about advance care planning.

Fihn SD, Bucher JB, McDonell M, Diehr PH, Rumsfeld JS, Doak M, Dougherty C, Gerrity M, Heidenreich P, Larsen G, Lee PI, Lucas L, McBryde C, Nelson K, Plomondon ME, Statudis M, Bryson CL. Collaborative Care Intervention for Stable Ischemic Heart Disease. Archives of Internal Medicine. 2011 Sept 12: 171(16): 1471-9.

Collaborative models of care are multi-faceted interventions that typically include planned, interactive communication between primary care providers and specialists. The Collaborative Cardiac Care Project (C3P) examined whether a multi-faceted intervention using a collaborative care model would improve symptoms of angina, self-perceived health, and concordance with practice guidelines for Veterans with chronic stable angina. 183 Primary Care Providers (PCPs) and 703 Veterans with symptomatic IHD from primary care clinics at four VAMCs (344 intervention patients and 359 control patients) were included in the study. At each site, a collaborative care team, including a cardiologist, general internist, and clinical nurse or pharmacist, met twice monthly to review intervention patients' records, develop diagnostic and treatment plans, and conduct progress evaluations. Recommendations were forwarded to PCPs via the electronic medical record as unsigned orders that PCPs could sign, modify, or reject. Veterans in the control group received usual care. All Veterans were mailed follow-up questionnaires at 4, 8, and 12 months to assess symptoms and self-perceived health.

The collaborative care intervention had no significant effects on symptoms or self-perceived health, but it significantly improved receipt of guideline-concordant care in Veterans with stable angina. This was mainly due to increased use of diagnostic testing. The collaborative care model was well received by primary care providers, who implemented 92% of 701 recommendations made by collaborative care teams. Nearly half of the recommendations were related to medications, e.g., adjustments to beta blockers, long-acting nitrates, and statins.

This collaborative care intervention is potentially applicable to other chronic illnesses and is being evaluated as part of VHA's transformational initiative related to new models of care.

Liu CF, Chapko M, Bryson CL, Burgess JF, Fortney JC, Perkins M, Sharp ND, Maciejewski ML. Use of outpatient care in Veterans Health Administration and Medicare among veterans receiving primary care in community based and hospital outpatient clinics. Health Services Research 2010 October 1: 45(5 Pt 1): 1268-86.

Using VA administrative and Medicare claims data, the study team examined differences in use of VHA and Medicare outpatient services by VA primary care patients (8,964 in community based clinics and 6,556 in hospital based clinics). A significant proportion of VA patients used Medicare reimbursed primary care (>30%) and specialty care (> 60%) but not mental health care (3-4%). Community based patients had 17% fewer VA primary care visits, 9% more Medicare reimbursed visits and 6% fewer total visits than hospital based patients. Community based patients had 22% fewer VA specialty care visits and 21% more Medicare reimbursed specialty care visits than hospital based patients, but no difference in total visits. The study found that Medicare eligible VA primary care patients followed over 4 consecutive years used significant amount of primary care and specialty care outside of VA. Community based patients offset decreased VA use with increased service use paid by Medicare. This paper suggests that VA will likely need to implement organizational practices that decrease the possibility of fragmenting care when Veterans utilize outside care. VA needs to consider how to best coordinate care between VA and non-VA providers and health care systems in order to maintain high quality and continuity of care.

Nelson K, Taylor L, Lurie N, Escarce J, McFarland L, Fihn SD. Neighborhood environment and Health status and mortality among veterans. Journal of General Internal Medicine. 2011 Aug 1;26(8):862-7.

Veterans who utilize the VA for their care have worse health status than the general population. However there is limited evidence about the association of neighborhood environment and health outcomes among veterans. The primary aim of this study was to determine the relative contributions of neighborhood socioeconomic status, health system factors, and individual characteristics to veteran health status and mortality. Information on personal socio-economic indicators, existing medical conditions, and health status (SF-36) were obtained from baseline data (n=15,889). The physical competent scale (PCS) and mental component scale (MCS) summarized health status. Census tracts were used as proxies for neighborhoods. Veterans living in lower SES neighborhoods have poorer health status and a higher risk of mortality, independent of individual characteristics and health care access. Neighborhood walk-ability was associated with higher PCS scores.

This project provides the first information about the contributions of neighborhood environment with veteran health status and mortality, controlling for health system factors such as access and distance to care, and personal health risks. Our findings suggest that a health policy perspective that moves beyond individual and health system characteristics may be useful in identifying factors that will improve veteran health status.

Zeliadt SB, Hoffman RM, Etzioni R, Fore JL, Kessler LG, Lin DW. Influence of publication of US and European prostate cancer screening trials on PSA testing practices. Journal of the National Cancer Institute. 2011 Mar 16; 103 (6):520-3.

There has been much controversy over how to interpret the mixed results of the U.S. and European screening trials which were published in 2009. The European trial observed a 20% reduction in deaths due to prostate cancer, while the U.S. trial did not observe a decrease in mortality potentially due to high rates of background PSA utilization in the U.S. Thus providers and patients have been left with conflicting evidence about the benefit of screening.

This study examined whether providers and patients responded to the trial results by changing PSA utilization patterns by comparing historical patterns of PSA utilization starting in 2004 with rates of testing in the year following the publication of the trial results. Rates were calculated by age group to also examine the influence of the US Preventive Services Task Force revised 2008 recommendation against PSA screening among men over age 75.

PSA testing rates were fairly constant between 2004 and 2008, with a slight increase in utilization over the time period for men under age 74. The updated USPSTF guidelines in 2008 did not appear to correspond to a change in PSA testing for men younger than 75 years, as PSA testing rates continued to increase slightly for all men aged 40–74 years. However, we observed a decrease in testing among men aged 75 years and older from 25.4% in the period just before the USPSTF update to 24.3% in the period just after the USPSTF update (P = .036). We did observe a decrease in PSA testing among all three age groups, 40–54, 55–74, and ≥75 years, by 3.0 percentage points, 2.7 percentage points, and 2.2 percentage points, respectively, following the publication of the two trials.

This study provides a preliminary indication that patients and physicians may have interpreted the evidence from the trials negatively and responded by decreasing PSA testing rates. This study highlights how VA databases can help understand the rapid dissemination of clinical guidelines and high profile randomized trials.

System Improvements

Tele-Dermatology – A VISN-wide Approach

In response to the Rural Health Outreach and Delivery Initiative, Drs. Gayle Reiber and Gregory Raugi have initiated a service to expand dermatology care capacity and improve access to specialist care for rural Veterans in VISN 20. Since 2009, they have developed a tele-dermatology consultation program that facilitates access to expert dermatology care and improves quality of care across rural VISN 20. A curriculum for training and education for dermatology networked clinicians has also been developed and is being utilized across the VISN. The program has created several thousand new dermatology consults in VISN 20; and has provided consistent, defined tele-dermatology processes that are to be implemented by other VISNs.

8 Key Services

HSR&D

Computer Network, Data Security and Data Extraction

The Center provides shared computer network support to over 140 VA Investigators, fellows, and project staff. Support includes access to common data storage drives, high-speed shared printers, and HSR&D-supported software. HSR&D computers also have access to all hospital resources such as Internet/Intranet connectivity, VistA patient information, CPRS, remote access, VA e-mail and VISN data storage resources. Our IT Support Team developed and maintains a comprehensive data security policy and training program. It includes local data security policies and practices specifically oriented towards the conduct of research at the NW Center, with focus on recognition and protections of human subject identifiable data, storage of protected health information on the VA network; and policies regarding data sharing, data use and business associate agreements. The procedures, policies, and training program have been adopted by other local and national Center of Excellences, Service Lines, and Medical Centers.

Annual Report Template (ART) Development

The Annual Report Template is an automated reporting system that gathers, tracks, and organizes personnel, funding, and project data from VA Health Services Research and Development (HSR&D) Centers and all ORD Clinical Trials. Staffing and management of the program at the Seattle COE includes technical development, database management, field training and support, quality control, and reporting. The ART Website tracks and processes HSR&D Intent to Submit documents and Submission Review letters, 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 ORD in preparing reports to Congress.

Other VA/ORD

VA/DoD Collaboration Guidebook for Healthcare Research. Resnik L, Reiber GE, Steager P, Evans RK, Barnabe K, Hayman K. www.research.va.gov/VA-DoD

Over the past 20 years, there have been numerous legislative efforts to encourage and increase collaboration between the Department of Veterans Affairs (VA) and the Department of Defense (DoD), covering issues from the construction of military and VA healthcare facilities to the sharing of electronic medical records. Collaboration is one of three guiding principles of the VA/DoD Joint Strategic Plan for 2009-2011. Congress identified this cross-agency research collaboration as a VA and DoD priority because these Departments serve a common population, albeit at different times during their life. A number of VA and DoD investigators report difficulty in navigating research systems of an unfamiliar agency. Therefore, Guidebook authors and collaborators joined forces to produce the VA/DoD Collaboration Guidebook for Healthcare Research. The Guidebook content is organized by Department, VA and DoD (Army, Navy, and Air Force). Thus readers can review specific organizational structure and nuts and bolts of the health care research process by agency.

The Guidebook answers six key questions:

- What are strategies to develop collaborative relationships involving VA and DoD?
- What are research funding sources?
- What are the current mechanisms for collaborative contracts and agreements?
- Are there human research and data security efficiencies?
- What are strategies to improve media relations and public affairs challenges?
- What can be learned from case examples and cautionary tales?

The target audience is VA and DOD healthcare human subject research, clinicians, and research administrations. Funding provided by the NW Center (LIP 61-518).

VA Statisticians' Association (VASA)

Dr. Andrew Zhou, Senior Biostatistician and Director of Biostatistics Unit at the NW Center created the 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.

Patient Aligned Care Team (PACT) Demonstration Laboratory Coordinating Center

Patient Care Services (PCS) established the PACT Demonstration Lab Coordinating Center which is managed by NW Center research staff. The Coordinating Center is divided into workgroups comprised of researchers and clinicians from VA Puget Sound Health Care System, the Demonstration Labs from VISNs 4,11, 19, 22 and 23 and a broad range of consultants from academic centers, foundations, and professional organizations (American College of Physicians, Commonwealth Foundation, National Committee for Quality Assurance and Group Health of Puget Sound). Each workgroup has responsibility for elements of evaluation of the national PCMH roll-out and support for local/regional evaluations and clinical programs conducted by the Demonstration Labs.

Lung Cancer Collaborative

In response to a desire to improve care coordination between facilities, Drs Au, Reinke and Zeliadt are working with a national systems redesign team to improve lung cancer quality between tertiary referral centers and smaller facilities within VISN20. We have been examining processes of care and are targeting the goals of improving timeliness of evaluation and care, as well as care-coordination between facilities. The local team has been developed new comprehensive care templates that are designed to improve communication and care coordination. These templates provide detailed instruction to the referring facilities prior to transfer and upon return.

9 National and Regional Leadership Roles

Associate Director for the Center Dr. Michael Chapko, has been Acting ACOS, Research & Development since late 2009. Due to his sound management practices that elevated the overall performance measures, Office of Research Oversight gave VA Puget Sound an excellent report during their return visit in 2011.

Dr. Jason Dominitz, a Center Investigator, currently serves as the National Program Director for Gastroenterology. The role of this position is to develop policy and practice focused on gastroenterology that includes treatment and diagnosis of hepatitis, colorectal cancers, use of technology and procedures.

NW Center Investigators influenced health research and policy through leadership and service to a wide-range of national organizations. These include the US Food and Drug Administration, Center for Disease Control, National Institutes of Health (NHLBI/NIAAA/NIDDK), American Thoracic Society, American Society of Addiction Medicine American Association of Medical Colleges, National Committee for Quality Assurance.

NW Center Investigators continue to 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.

10 Training Activities

The training of postdoctoral MD and PhD fellows in Health Services Research and Medical Informatics remains a central mission for the NW Center. In 2011 the HSR&D postdoctoral fellowship programs supported four MD and four PhD trainees. In addition, 9 visiting fellows affiliated with the University of Washington participated in fellowship events and collaborated with our Core Investigators on research projects.

Drs. Christopher Bryson and Bessie Young Co-Direct the HSR&D MD Fellowship Program and the University of Washington Internal Medicine NRSA Primary Care training grant. Dr. Gayle Reiber directs the HSR&D PhD Fellowship Program; and Dr. Ken Hammond directs the Medical Informatics Fellowship Program. The HSR&D and NRSA trainees currently hold joint weekly Works in Progress Seminars, creating a more robust and diverse health services environment for our trainees and investigators in the local community.

All our Core Investigators remain extremely active in teaching in the Schools of Medicine and Public Health at the University of Washington, with several members serving as Co-Director of clinical research training programs, course Directors, and faculty for NIH KL2, K23 and K12 training programs. All Core Investigators serve on thesis and dissertation committees.