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EDUCATION

- Ph.D. Sociology, Johns Hopkins University, Kreiger School of Arts and Sciences, 1998
- M.A. Sociology, Johns Hopkins University, Kreiger School of Arts and Sciences, 1993
- B.S. Psychology/Sociology, Birmingham-Southern College, 1991

- Fundamentals of Moderating, RIVA Training, 2007
- Qualitative Analysis and Reporting, RIVA Training, 2011
- Graduate Certificate in Intermediate Survey Methodology, Joint Program on Survey Methodology, University of Maryland, College Park, 2013

ACADEMIC APPOINTMENTS

Research Associate Professor, Department of Health Policy, Vanderbilt University School of Medicine, March 2020 – present

Research Assistant Professor, Department of Health Policy, Vanderbilt University School of Medicine, October 2014 – February 2020

PROFESSIONAL EXPERIENCE

Department of Population Dynamics, Johns Hopkins School of Public Health, Research Assistant, January 1993 to June 1993

Assisted Dr. Nan Astone in general data management and analytical tasks.

- Wrote programs to transfer data off reel tapes onto SUN computers for future analysis.
- Analyzed data from large national surveys such as National Longitudinal Survey of Youth and National Education Longitudinal Survey.
- Active in the planning stages of research, including conducting data transformations such as the construction of variables to be used in analytical work.

WESTAT, Research Assistant, June 1993 to September 1993

Assisted in preparation of draft analysis plan for National Assessment of Vocational Education Follow-up as mandated by the Perkins Act of 1990.

- Developed crosswalk documents for the original survey and follow-up, linking matching questions and making explicit the potential analytical issues that would arise.
- Developed and produced associated documents including text, tables, and graphics.

Department of Sociology, Johns Hopkins University, Research Assistant, September 1993 to June 1994 and January 1993 to June 1993

Provided data management and analytical assistance to Dr. Andrew Cherlin for project involving large British dataset, the National Child Development Study.

- Cleaned dataset and recoded variables for analytical use; wrote statistical programs to analyze dataset.
- Analyzed data from other datasets including the General Social Survey for use in descriptive tables.

CSR, Incorporated, Senior Research Analyst, June 1994 to October 2001

Research Assistant, Fetal Alcohol Syndrome Public Education Campaign Evaluation, Alcohol Research Collection, Analysis, and Dissemination, National Institute for Alcohol Abuse and Alcoholism, June 1994 – September 1994

- Assisted in designing the statistical evaluation component of a brief interview survey, using a pre- and post-test design.
- Helped determine the sampling frame, scope needed to assess statistical significance, and design of the interview instrument.
- Responded to concerns and issues related to the Office of Management and Budget document submission process.

Research Analyst, Alcohol Epidemiologic Data System, National Institute for Alcoholism and Alcohol Abuse, June 1994 – September 2000

- Analyzed epidemiological and methodological research projects on alcohol consumption, including comorbidity of disease, marital status, and longitudinal methodological issues.
- Prepared and authored a Surveillance Report examining and evaluation trends in alcohol-related hospital discharges over a twenty-year period, using the National Hospital Discharge Survey.
- Conducted research using large datasets including the National Health and Nutrition Survey and its multiple National Health Examination Follow-up Surveys.
- Analyzed, wrote, and presented research findings at several national conferences.
- Communicated directly with clients regarding progress and initiation of work.
- Created and maintained three bibliographic reference bases for use with various projects.

Senior Research Analyst, Cooperative Agreement for AIDS Community-Based Outreach/Intervention Research Program, National Institutes on Drug Abuse, September 1997 – September 2001

- Served as senior research analyst in the evaluation and data management of large-scale multi-site data collection and evaluation project. Specific tasks included evaluating the effects of attrition on the effectiveness of the intravenous drug use interventions, using both progressive quantitative and qualitative methods. Quantitative methods included descriptive, regression, and meta-analytical analyses such as the calculation of nonresponse weights and effect sizes. Lead author on final analytical report.
- Responsible for conducting and managing project-wide analytical tasks and quick-turnaround requests in addition to ongoing specific tasks.
- Highly involved in the planning and logistics of the international Global Research Network meetings, including the synthesis and creation of meeting proceedings materials, creation of an international prevention indicators database, as well as providing analytical support on-site at meetings.
- Designed analytical program producing bi-annual Fact Sheet document, summarizing demographic, drug use, intervention techniques, and follow up statistics from 23 collection sites.
- Contributed to and reviewed analytical reports including a suggested operationalization manual for dataset users and a public use dataset and codebook produced by the project.
- Supervised the data dissemination of large, multiple file dataset.

Project Director, Data Collection and Technical Assistance for Ryan White CARE Act Grantees and Reporting System, Health Resources and Services Administration (HRSA), September 2000 – September 2001

- Managed a large scale contract to assist HRSA with a centralized data collection process for CARE Act Title I, II, III, IV and Dental grantees and service providers, including the transition to a single comprehensive data collection form.
- Supervised staff coordinators and team members tasked to aggregate and client-level data collection, cross title reporting, dental reimbursement, and funding allocation formula translation, and oversaw the technical assistance efforts to collect and verify data.

- Developed timeframes and management plans and ensured that all work plans were implemented effectively and that deliverables were met on schedule.
- Maintained regular contact with project officer, monitored all project tasks and activities, conducted data collection site visits, and completed quality-control review of all project deliverables prior to submission.
- Responsible for preparing and submitting data and various progress reports to the client on a weekly, monthly and ad hoc basis.
- Managed the successful proposal writing process, including organizing the overall proposal, writing major sections, as well as responding to technical questions during the review process, culminating in a multi-year, multi-million dollar contract.

American Institutes for Research, Health Program, Senior Research Analyst, November 2001 to August 2007

Task Leader, Evaluation of the Community Resiliency Project (CRP), State of Virginia Department of Mental Health, September 2001 – August 2002.

- Wrote a successful task order proposal to evaluate three components of the CRP after meeting with the client to establish their needs and parameters.
- Supervised the qualitative aspects of the evaluation, including personal and telephone interviews.
- Managed all phases of the evaluation and designed the data collection instruments and analyzed the data for the group counseling participation components.
- Reconciled multiple reviews of the final reports, and was able to add a second report to the workload, providing added value to the client.

Project Director, Developing a Comprehensive Evaluation of the NIH Responsible Conduct of Research (RCR) Requirement Under the National Research Service Award Institutional Research Training Grant, Office of Extramural Research, National Institutes of Health (NIH), September 2002 – August 2003

- After writing a successful proposal, managed a team of peers and research assistants, as well library and conference planning staff to produce a comprehensive literature search, an annotated bibliography, an expert panel workshop, and a detailed NIH One Percent Evaluation Set-Aside evaluation plan, including draft survey instruments.
- Oversaw and served as a co-facilitator of an expert panel workshop, determined the agenda of the workshop, and guided the write up of the minutes and drafts of the evaluation plan.
- Served as primary contact for the client and their funding agency, debriefing after the expert panel meeting, resolving disputes over the direction of the project, and presenting drafts and finals of all deliverables.

Analysis Task Leader, Technical Support for Opioid Partial Agonist Implementation, Center for Substance Abuse Treatment (CSAT), September 2002 – August 2005

- Researched existing physician's clinical guidelines, various legal documents and treatment protocols to clarify pharmacists' legal and ethical responsibilities in the prescription of buprenorphine to revise a factsheet for pharmacists, incorporating pharmacist's comments about this new form of opioid treatment.
- Analyzed the inquiry topics received through the Information Call Center and created weekly updates of data received for internal project tracking.
- Designed weekly updates of the physician waiver processing data, and responded to client requests for additional charts and maps, as well as slides for briefing and presentation purposes.
- Responded to ad hoc analytical requests from the client, including an analysis of the sub-specialties of the physicians attending the CSAT sponsored trainings, and a zip code analysis of online trainees.
- Designed and created a new database to track training attendees, and link it to the subcontractor's waiver database to determine the client's return on investment of training on the number of physicians that submit an application for and those that receive a waiver.
- Maintained the email lists for the Web board and other database work; managed the subcontract for the Spanish translation of Web page content; and contacted and worked with various medical associations and boards to determine the number of physicians already qualified to apply for a waiver.

Task Leader for the generation of cardiovascular disease and asthma mortality maps, Health Information Network, National Heart, Lung, and Blood Institute (NHLBI), September 2001 – August 2002

- Served as primary contact for the client on a task to generate maps updating yearly cardiovascular mortality rates and Area Resource File data for a variety of subpopulations within the US at the Health Service Area level.
- Identified and repaired flaws found in the original programming and added several key revisions that assisted in the clarity and usability of the maps.
- Updated similar asthma mortality maps at the request of the client.

Evaluation Specialist, Asthma Coalition Contract Awardees and Enhanced Dissemination and Utilization Centers, Health Information Network, National Heart, Lung, and Blood Institute (NHLBI), September 2001 – August 2005

- Designed and led the cross-site evaluation of two specialized education campaigns using tools and instruments collected from the sites, developing spreadsheets of data elements, and culling potential cross-site elements.
- Supervised staff in the preparation of tracking documents to determine the data available from the individual sites for cross-site evaluation.
- Developed and facilitated evaluation workshops working with both the client and the grantee site staff to revise and clarify their tools using logic model methodology.
- Wrote analysis plans and assisted the client in developing the approach and outline for the grantee site-specific reports.
- Produced a final CD-ROM deliverable with cleaned, individual site data in ACCESS and SAS, data documentation, an instruction guide, and the cross-site analysis document.
- Presented a similar evaluation presentation and workshop at the inaugural meeting of the EDUC II project in a very short time frame and served as a consultant reviewer to assess the tools and instruments as submitted by the six EDUC II sites.
- Facilitated a meeting of Salud grantees, providing evaluation assistance, development of standardized instruments, and educating grantees on the basic analysis of their data for individual project and grant program use.

Project Manager, Technical Assistance for Opioid Treatment Accreditation and Certification, Center for Substance Abuse Treatment (CSAT), September 2002 – August 2005

- Responsible for communication with the client and sub-contractor; preparation and tracking of deliverables including progress reports and planning documents; and coordination of work efforts with the project director, team members and corporate support staff.
- Participated in strategy discussions and documentation for the main task of project, the development of the new online, automated data system as well as thirteen additional tasks associated with this project including identifying appropriate staff.
- Oversaw tasks or worked with other team members to accomplish the work as with onsite support or the State Methadone Authority list serv, or contributing directly to the work effort of a variety of tasks simultaneously including data analysis, map and special report production, and Automated Data Processing plan development.
- Managed the overall work effort and financial aspect of the project through financial reports and internal staffing updates, as well as developing tracking systems; assisted in the initial testing of the first module of the data system; and developed wireframes and use case documents for the overall database development.

Project Manager, Evidence-Based Health Care Decision-Making Communication Toolkit, California Health Care Foundation, September 2005 – August 2007

- Lead for eliciting feedback and testing all materials developed to inform efforts by employers, labor unions, and other stakeholders to communicate with consumers and intermediaries about evidence-based

health care decision-making ; i.e., making health care decisions based on what is demonstrated to be effective (including cost-effective), safe, and appropriate.

- Responsible for maintaining timelines, conducting leadership review meetings, conducting cognitive testing of materials and ensuring all rounds of telephone and Web testing are completed.

Task Lead, Public Health Emergency Preparedness Campaign, Pandemic Influenza Public Survey, United States Department of Health and Human Services, September 2003 – August 2007

- Managed all aspects of a \$700k multi-phase survey research task, and responsible for quality assurance of all internal and external materials developed.
- Key member of survey development team and primary contact for external survey firms.
- Responsible for building report writing team and ensuring that all deliverables are prepared, quality checked, and submitted within timeframes.
- Co-author of multiple articles developed for journal submission.

Director, Access to Recovery (ATR) Activities, Substance Abuse and Mental Health Services Administration Center for Substance Abuse Treatment (CSAT), Performance Management Technical Assistance Coordinating Center, September 2003 – August 2007

- Provided management and oversight of a 20 member team responding to technical assistance requests from the client and 15 ATR grantees for an \$11.5M Presidential initiative grant.
- Coordinated provision of consultants and preparation of materials and reports. Facilitated the standardization of documents and processes.
- Responded to ad hoc requests from client involving analysis of grantee information and status. Provided major point of communication to both client staff and grantees, assisting in the communication of a nationally significant and politically sensitive program.
- Developed additional project wide products based on technical assistance to inform and promote information sharing among the current grantees, as well provide efficiency for team responsiveness.
- Team lead on site visits to ATR grantees including strategic implementation visits. Coordinated grantee meetings involving top agency and White House staff.
- The content areas of technical assistance, reports, and ad hoc requests included recovery support service, faith-based organizations, voucher redemption, strategic marketing, rate setting, burn rate, and workforce development.

CNA, Health Research and Policy Team, Principal Research Scientist, September 2007 to 2014

Analyst, Analytical Support for CNE-C6F Pandemic Influenza Exercise and Scenarios, Navy Europe Plans and Operations, United States Navy, March 2008 – October 2008

- Assisted with the design, delivery, and facilitation of an international tabletop exercise (NEPTUNE WIND 08) between the Italian Government and Navy Europe (NAVEUR) as Joint Task Force commander to examine pandemic influenza effects and issues that affect NAVEUR mission assurance, continuity of operations, and freedom of action.
- Assisted Sponsor point of contact (POC) with finalizing initial planning conference (IPC) agenda. Attended IPC and provided feedback on POC meeting feedback report.
- Contributed to the design of exercise injects and plan for facilitating exercise.

Analyst, HPAI Response Exercise, Animal and Plant Health Inspection Service, United States Department of Agriculture, March 2008 – March 2009

- Assisted with the delivery of a tabletop exercise to examine multi-agency response and coordination during an outbreak of highly pathogenic avian influenza (HPAI), conducted at the State level with the National Animal Health Laboratory Network to examine integral connections between field actions and laboratory response.
- Responsible for note taking on pre-briefing teleconferences, tracking of decision making process and consequences during exercise, and final report writing.

Survey Developer, CADRE Costs for the Seriously Wounded, Ill, and Injured, Secretary of the Air Force for Force Management Integration, Health Policy, United States Air Force, March 2008 – December 2008

- Developed a brief survey of seriously wounded, ill, and injured service members requesting information on the nature of the impacts, types of costs incurred, frequency and duration of impacts and costs, and amount of costs incurred by their family member, loved one, or friend that serves as their primary caregiver throughout their recovery process. Also programmed Web-based version of the survey.
- Lead on compilation and completion of Defense Manpower Data Center survey approval package, as well as National Naval Medical Center Institutional Review Board package.

Retention Tool and Survey Developer, Medical Service Corps Force Structure Team, United States Navy, May 2008 – September 2008

- Developed a brief interaction tool for use by Specialty Leaders within the Medical Service Corps (MSC) to capture and address concerns of MSC sailors before they make a decision to separate from the Navy.
- Assisted in the development of a survey of separating MSC sailors to assess the variation in reasons given for leaving the Navy.

Project Director, Evaluation of Warrior Transition, Bureau of Medicine and Surgery (BUMED), United States Navy, September 2007 – January 2009

- Conducted an evaluation of the implementation phase of the Navy's current redeployment transition effort, the Warrior Transition Program, as it is currently being implemented in Kuwait for individual augmentees (IAs) serving in Operation Iraqi Freedom and Operation Enduring Freedom.
- Completed key informant interviews in the identification of necessary or ideal components of a redeployment program, both within the US Armed Forces as well as those of other countries.
- Conducted a site visit to observe the Warrior Transition program in order to assess the components of the IA Warrior Transition program.
- Developed surveys to assess participant experience and satisfaction with the program and the impact of the program post-deployment, as well as conducted 20 focus groups post-deployment. Developed a Command Guide tool for welcoming and reintegrating IAs into a command upon return from deployment.

Project Director, Navy Medicine: Are We Taking Care of Our People, Bureau of Medicine and Surgery (BUMED), United States Navy, September 2007 – December 2009

- Responsible for development of web-based survey of both enlisted and officer personnel within the Navy Medical Department regarding their job satisfaction, job commitment, and connection to the organization.
- Tasking included development of an IRB package, guidance of analysis, and facilitation of focus groups to explore specific issues more in-depth.
- The results of this study identified the primary satisfactions and dissatisfactions of their jobs reported by both junior and senior medical personnel, identified different attitudes and perceptions, and detected possible strategies for Navy Medicine to consider taking to mitigate reported negative conditions and/or improve positive efforts.
- Individual survey and focus group briefs were prepared and delivered to each Navy Medicine Corps, as well as overall briefings to a wide range of Navy Medicine leadership.

Project Director, Caregiver Occupational Stress Assessment, Bureau of Medicine and Surgery (BUMED), United States Navy, September 2008 – June 2010

- Responsible for development of web-based survey of military and civilian caregivers within the Navy Medical Department regarding their work environment and experience of occupational stress.
- Tasking included an accelerated timeline for development and submission of an IRB package (accomplished), examination of objective Command level workload measurements, and guidance of analysis.
- The results of this study were used to develop a Command level assessment of occupational stress utilizing a revised assessment tool and value-added chart generating tool for subsequent assessments, and by BUMED to inform the ongoing education and intervention aspects of the larger Caregiver Occupational Stress Control program.

Task Lead, Houston Regional Catastrophic Planning Initiative: Pandemic Influenza Planning, City of Houston, Texas, July 2010 – December 2010

- Completed a synthesis of H1N1 after action reports (AARs) from the 2009-2010 flu season and outbreak of H1N1 within the Texas Department of State Health Services region 6/5 south.
- Developed and briefed an integration strategy report based on the identification of best practices and areas for improvement from the AARs.
- Reviewed the development of a pandemic influenza planning scenario for the region.
- Tasks informed a review of regional pandemic influenza plans, a capabilities and gap analysis, and a concept of operations planning for the region.

Field Controller, National Level Exercise 2011, United States Department of Health and Human Services, May 2011 – June 2011

- Provided oversight and control of exercise injects for an incident response coordination team (IRCT) participating in an exercise of a national disaster (earthquake along New Madrid fault line).
- Observed information sharing and coordination within the IRCT and with other federal and state agencies. Kept control cell abreast of challenges to facilitation of play.
- Captured and reported lessons learned.

Project Director, Tobacco Cessation and the Fleet, Bureau of Medicine and Surgery (BUMED), United States Navy, September 2009 – June 2011

- Responsible for gathering information regarding the feasibility of US Navy ships becoming tobacco free while underway. Developed interview guides for use with officer and enlisted leadership, as well as focus group guides for use with crew who are either former or current tobacco users returning from ship board deployments.
- Developed a survey of US Navy medical officers and independent duty corpsmen regarding the tobacco cessation resources available while ships are underway.
- Tasking included development of an IRB package, identification of points of contact for access to ships, and facilitation and synthesis of interviews and focus groups.
- The results of this study assessed the knowledge, attitudes, and barriers of the operational fleet regarding a tobacco-free environment aboard afloat units.
- Produced a final report as well as concise one-page synopses of the significant findings.

Survey Developer, Patient Centered Medical Home Care Model Metrics, Bureau of Medicine and Surgery (BUMED), United States Navy, September 2009 – September 2010

- Developed a brief survey of patients seen at internal medicine clinics, one of which has implemented the medical home model requesting information on their satisfaction with their access to care. Also developed a staff satisfaction survey for release at multiple internal medicine clinics to capture data on staff perceptions of how the clinic structure assists their ability to provide quality patient centered care. Lead in the fielding of the surveys.
- Assisted in compilation and completion of Defense Manpower Data Center survey approval package, as well as National Naval Medical Center Institutional Review Board package.
- Report lead for both the patient and staff satisfaction findings.

Project Director, Sexual Assault Forensic Examination Study, Bureau of Medicine and Surgery (BUMED), United States Navy, September 2010 – September 2011

- Responsible for overseeing qualitative study of the training and experience of sexual assault forensic examiners at Navy medical treatment facilities. Tasks include strategic planning of study, budgeting, and quality control of deliverables.

Survey Developer, Assessing the Implications of Possible Changes to Women in Service Restrictions, Assistant Commandant, United States Marine Corps. September 2011 – September 2012

- Developed a brief survey of Marine Corps personnel regarding their opinions and attitudes to allowing female Marines to serve in ground combat billets and billets supporting ground combat elements. Conducted focus group to test survey questions, was lead in developing institutional review board (IRB) package and assisted with the sampling plan.

Project Director, Emerging Disciplines and Training Requirements, Bureau of Medicine and Surgery (BUMED), United States Navy, September 2011 – September 2012

- Responsible for overall management and gap analysis of the current state of several emerging disciplines and skill sets within Navy Medicine and assessing the way forward for potential training and career path requirements.
- Tasking included an environmental scan, assessing the current state, and conducting a gap analysis for each of the selected skill sets.
- The results of this study assisted Navy Medicine in their understanding of the feasibility of incorporating clinical informatics, hospitalists, and program management into the culture of Navy Medicine as well as the career ladders of Navy Medicine personnel.

Project Director, MARSOC Performance and Resiliency (PERRES) Program Metrics, Marine Corps Special Operations Command (MARSOC), United States Marine Corps, September 2011 – October 2012

- Requested study based on earlier Warrior Transition work.
- Responsible for assessing, developing, and analyzing the short and long term metrics for measuring the PERRES program's physical, mental, and spiritual components and their effect on the performance and resiliency of special operating forces.
- Tasking included an environmental scan of resiliency metrics currently in use and potentially applicable to the MARSOC populations, a gap analysis comparing the results of the scan to the current state of the PERRES program (including its third location decompression effort), and the development or revision of metrics, data collection instruments, and protocols.
- Final documentation included suggested psychological and spiritual metrics for immediate integration, as well as an additional resource guide of supplemental assessments on physical, psychological, spiritual, and social resilience for potential integration as the program evolves.

Project Director, Navy Medicine Personnel 2011, Bureau of Medicine and Surgery (BUMED), United States Navy, September 2010 – March 2013

- Client requested follow-on study to earlier Navy Medicine People job satisfaction survey.
- Responsible for development of web-based survey of enlisted, officer, and federally employed personnel within the Navy Medical Department regarding their job satisfaction, job commitment, and connection to the organization.
- Tasking included development of an IRB package, guidance of analysis, and facilitation of over 100 focus groups with corpsmen, nurses, dentists, physicians, and healthcare administrators to explore specific issues more in-depth.
- Individual survey and focus group briefs prepared and delivered to each Navy Medicine Corps, as well as overall briefings to a wide range of Navy Medicine leadership.

Project Director, Analysis of Mental Health Resources for the Marine Corps, Bureau of Medicine and Surgery (BUMED), United States Navy, September 2012 – October 2013

- Worked with CNA colleagues to apply the CNA-developed TRICARE Management Activity (TMA) Psychological Health Risk-Adjusted Model for Staffing (PHRAMS) forecasting model to the mental health needs of the Marine Corps.
- Responsible for conducting over 100 one-on-one interviews to identify the existing concerns of Marine Corps leadership as well as the points of view of Navy Medicine mental health care providers currently working with the Marine Corps. Based on these discussions, the parameters of the PHRAMS model were revisited and adjusted accordingly to produce staffing requirements that address Marine Corps concerns.

- The findings of this study assisted BUMED in determining how to work with other Marine Corps base resources to meet the (presumed) increasing volume of mental health services needed by the Marine Corps as the current conflicts wind down.

Project Director, Evaluation of Purchased Care Referral Practices, Bureau of Medicine and Surgery (BUMED), United States Navy, September 2012 – October 2013

- Responsible for clarifying the real world processes associated with a medical treatment facility's (MTF's) right of first refusal (ROFR) with regard to referrals for specialty care from network providers to help Navy Medicine achieve lower cost and higher quality of US Navy beneficiary health care through the recapture of purchased care.
- Process evaluation approach - looked at whether the ROFR processes are followed appropriately and/or can be changed so that MTFs can recapture more of the purchased specialty care in an era of decreasing funding for health care.
- Tasks included identifying the volume of identified specialty care procedures being handled by purchased care that could be handled by direct care, identifying the formal policies that guide the ROFR process, and conducting interviews and focus groups with ROFR decision-makers at select MTFs to examine how the ROFR decision-making process is applied in real situations.
- The findings of this study showed significant contractual "off ramps" allowing some managed care support contractors to route a higher volume of specialty care referrals to network providers than to MTFs, despite ROFR intentions.

Principal Investigator, Legacy for Children Longitudinal Follow-Up, Centers for Disease Control and Prevention, September 2013 – March 2014

- The original intervention was conducted at two sites and focused on promoting strong parental support and involvement, starting in the earliest years of a child's life.
- The follow-up study focuses on following the mothers and children enrolled in this study to primarily study the impact of the intervention on the children's long-term developmental outcomes.
- Responsible for overseeing multiple subcontractors' data collection and deliverables, IRB packages and necessary changes, and tracking a multiple task budget. Primary point of contact for client and subcontractor communication.

Survey Developer, Developing Program Evaluation Metrics for the Marine Corps' CREDO Program, Marine and Family Programs Division, Manpower and Reserve Affairs, United States Marine Corps, September 2013 – September 2014

- Responsible for conducting the first phase of a program evaluation of the Chaplain's Religious Enrichment Development Operation (CREDO) Marriage Enrichment Retreat (MER) program which traditionally has neither tracked nor collected data on its participants.
- Working with CREDO staff and facilitators to identify the program's components and explicit goals through review of formal training and retreat materials and passive observation of facilitated retreats.
- Developing primary data collection instruments to assess baseline skills, knowledge, and concerns pre- and post-retreat to provide short-term assessments of skills and knowledge gained from the retreat instruction. Also developing a survey to be administered four to six months post-retreat to assess longer term impacts associated with the retreat. These primary data collection efforts will allow for the development of evaluation metrics that rely on participants' self-reported outcomes, such as marriage satisfaction or ability to cope with stressful situations.
- Responsible for the developing the data collection protocol including facilitator materials, consent language, and all human subjects research review packages.

Project Director, Personnel Reliability Program (PRP) Certification/Recertification, Bureau of Medicine and Surgery (BUMED), United States Navy, September 2013 – September 2014

- Responsible for conducting a process evaluation of the current medical screening portion of the PRP certification/recertification protocols by examining guidance documents and interviewing key personnel responsible for implementing and managing these processes.

- Developing relevant metrics for the various steps in the medical screening process.
- Analyzing data to identify opportunities for program improvement to minimize delays, streamline practices, and optimize the medical screening process.
- Developing recommendations for effective process improvements. This study is part of the Evaluation of Process and Cost Issues portfolio of four studies I am managing for BUMED.

Department of Health Policy, Vanderbilt University School of Medicine, Director of Operations, October 2014 to present; Vanderbilt University Medical Center (VUMC) April 2016 - present

- Coordinates grants and development activities for faculty of the Department of Health Policy by researching and managing the sources and solicitation of funding for foundation, corporate, individual and governmental donations.
- Well versed in VUMC, School of Medicine, and Departmental internal policies and resources. Promotes understanding of these policies and resources within the Department. Continually assesses policies and procedures to help improve efficiency and effectiveness.
- Serve as Departmental liaison to VUMC and School of Medicine core support offices for personnel, budgetary, contracting, and hiring processes. Provides supervisory support as well as direct supervision of department personnel.
- Participates in coordinating and executing funded research projects consistent with areas of research expertise; collaborates to produce manuscripts and other research products.

Research Associate Professor, Emerging Infections Program, Tennessee Site, Tennessee Department of Health, Centers for Disease and Prevention Control, October 2014 – December 2021 (\$3M/yr)

- The Tennessee Department of Health (TDH) and Vanderbilt University Medical Center (VUMC) have worked in close collaboration on Emerging Infections Program (EIP) activities since its inception. EIP activities are performed statewide, covering a population of 6.6 million people. The Tennessee program has very close relationships with over 130 participating laboratories, and is exceptional among sites by visiting every participating laboratory in person on a regular basis to maintain personal contact, provide support and facilitate active collaboration.
- Assist with the development and monitoring of twelve-plus inter-related budgets as well as overall program monitoring and advisement.

Co-Investigator, Sentinel Initiative, Harvard Pilgrim, U.S. Food and Drug Administration, January 2015 – September 2021 (\$275,000/yr)

- The goal of Sentinel is to create an active safety surveillance system of FDA-regulated medical products, procedures, and drugs. As a data partner, VUMC provides pre-existing electronic healthcare data from TennCare, the Tennessee Medicaid program, for data queries.
- We monitor data query results to ensure anonymity or that only the proper individual-level data elements are returned to the Sentinel operating center in over 300 queries annually. In addition to monitoring queries, I monitor and manage the multiple additional task orders dealing directly with Harvard Pilgrim and assist with identification of and manage subject matter experts for expert workgroups.

Project Manager, Slowing Medicare Spending: Data Analysis Support, The Commonwealth Fund, May 2015 – November 2016 (\$250,000)

- Under the guidance of Melinda Buntin, Ph.D., chair of the Department of Health Policy at Vanderbilt University, this project will provide the data analysis necessary to assess growth in Medicare spending per beneficiary from 2007 through 2013, with an eye toward informing targeted federal and local policies. The researchers will analyze spending variation and trends across the spectrum of health services covered by Medicare, including post-acute care and prescription drugs. They also will examine geographic variation in spending for beneficiaries with chronic conditions as well as the underlying causes for variation

Co-Investigator/Project Manager, Innovation in Medical Evidence Development and Surveillance, Reagan-Udall Foundation, July 2015 – present (\$30,000+)

- The IMEDS program is offered by the Reagan-Udall Foundation for the FDA through the FDA Amendments Act of 2007. IMEDS serves to advance the science and tools necessary to support post-market evidence generation on regulated products and to facilitate utilization of a robust secondary electronic healthcare data platform for generating better evidence on regulated products in the post-market settings. As a data partner, VUMC provides pre-existing electronic healthcare data from TennCare, the Tennessee Medicaid program. We monitor data query results to ensure anonymity or that only the proper individual-level data elements are returned to the IMEDS operating center.

Lead, Qualitative Interviews, The Prescription Opioid Epidemic: Understanding its Complications and the Effectiveness of State Policies, National Institute for Health Care Management, January 2016 – December 2016 (\$57,072)

- Using a mixed methods approach, this project seeks to characterize and evaluate state-level policies aimed at reducing opioid pain reliever (OPR) misuse and its associated complications. We collected and validated information on state-level policies to control opioids, including prescription drug monitoring programs. I led the effort to assess state-level policies' effectiveness in preventing opioid-related admissions and reducing length of hospital stay for opioid related complications. Findings will be disseminated through the peer-reviewed literature, presentations at national meetings, and social media and webinars aimed at key stakeholders.

Project Manager, Providing Timely Data and Support to Nashville Health, Robert Wood Johnson Foundation, January 2016 – November 2017 (\$253,741)

- Vanderbilt University's Department of Health Policy is supporting NashvilleHealth by drawing on experts from across Vanderbilt University to create a collaborative research team. The research team's aims are to 1) support priority-setting; 2) assist programmatic development; and 3) conduct formative and summative evaluations of NashvilleHealth's efforts. The research team will support in the initial phase of this project by providing data and expert input to assist with identifying three pilot priorities for this initiative. To support programmatic development the Department of Health Policy convened three separate national expert panels led by nationally-known Vanderbilt faculty focused on tobacco control, hypertension, and infant mortality. The goal of each panel was to systematically create specific recommendations for Nashville by health outcome.

Project Manager, Using Local Data and Resources to Reduce Infant Mortality Rates in Nashville, TN, AcademyHealth, February 2016 – June 2017 (\$100,000)

- For this project, the research team will include members from Vanderbilt's Biomedical Informatics department with experience in community-based participatory research approaches applied to health informatics. This research has provided novel approaches to ensuring that health informatics and technology needs are reflected in a successful implementation. The research team and NashvilleHealth are well positioned to create novel data-sharing partnerships around one of the chosen pilot priorities as a Participant Community in the Community Health Peer Learning Program – infant mortality.

Project Manager, Slowing Medicare Spending: Analysis of Trends and Their Policy Implications, The Commonwealth Fund, Feb 2016 – June 2016 (\$231,547)

- In recent years, Medicare spending per beneficiary has grown at historically low rates and significantly slower than private insurance spending per person. To inform policies aimed at sustaining slower Medicare growth for the long term, we will assess recent Medicare spending trends and examine geographic areas and health service sectors where spending is high or growth more rapid. The analyses will focus on markets where payment reforms have taken hold as well as those where post-acute care costs appear to be significantly higher than expected.

Advisor, Mid-South Clinical Data Research Network, Patient-Centered Outcomes Research Institute, May 2016 – September 2020

- The Mid-South Clinical Data Research Network (CDRN) was founded in 2014 under PCORI Phase I funding. Our CDRN encompasses three large networks with multiple health systems, ambulatory

practices and hospital across the country. In Phase II, our CDRN will include additional health systems in that expand our reach across the South, and increase access to research and informatics expertise. Our expanded CDRN includes a diverse array of academic and community hospitals, primary care and specialty practices, and community health centers in rural and urban areas, reaching over 9 million patients in the South, plus 14 million patients nationally.

- Oversee and help to assure access to Tennessee state data (hospital discharge and vital statistics) and TennCare data.

Project Manager, Trends in Medicare Spending: An Analysis on the Dual-Eligible Population, The Commonwealth Fund, May 2016 – October 2017 (\$179,999)

- Our work will contribute to policymakers' understanding of the factors that drive health care spending for dual-eligible beneficiaries and the extent to which Medicare payments should account for the unique needs of dual-eligible beneficiaries. Each of these interrelated components is vital to current efforts to reform the financing and delivery of health and long-term care services for dual-eligible beneficiaries. In light of the current efforts to evaluate whether interventions and new payment models are cost-efficient for dual-eligible beneficiaries, our work will provide better data on spending trends for dual-eligible beneficiaries. Our analysis also will lay the groundwork for addressing the critical question of how national reforms to Medicare reimbursement policies might impact states differentially depending on the composition and needs of their dual-eligible populations.

Co-Investigator, Evaluation of the Risk of Neural Tube Defects Among Live Births Exposed to Maternal Prescription Opioids During Early Pregnancy, Harvard Pilgrim, U.S. Food and Drug Administration, September 29, 2016 – September 2019 (\$224,344)

- A retrospective cohort design of pregnant women will be used to study the association of opioid use during pregnancy and neural tube defects (NTDs). The purpose is to measure the association between *in utero* exposure to prescription opioids during early pregnancy and primary neurulation defects. As a data partner, VUMC provides pre-existing electronic healthcare data from TennCare, the Tennessee Medicaid program.
- We monitor data query results to ensure anonymity or that only the proper individual-level data elements are returned to the operating center. In addition to monitoring queries, I am the contact person at the data partner site, making sure staff adhere to contractual deadlines, and coordinating with contracts at Vanderbilt.

Project Manager, Chronic Conditions and Acute Episode-Based Spending in Medicare, August 2017 – March 2019 (\$301,803)

- To inform ongoing debates about Medicare's capacity to meet the needs of beneficiaries with chronic conditions, we are conducting a series of analyses that will examine Medicare spending on acute episodes for chronic conditions. Based on our prior work, we identify chronic conditions that have emerged as key contributors to overall cost-growth, including diabetes, chronic kidney disease, and congestive heart failure. We also focus on chronic conditions that are disproportionately common among the dual-eligible population. This work will inform current policy debates about value-based payments and opportunities to tailor Medicare services to individuals with chronic conditions.

Co-Investigator, Death Data Exploration Workgroup, Sentinel Initiative, Harvard Pilgrim, U.S. Food and Drug Administration, September 2107 – March 2018 (\$34,499)

- The objective of this Workgroup was to determine under which circumstances, if any, could death and cause of death information in the Sentinel Distributed Database be used for safety assessment, most specifically routine queries. The Workgroup focused on cardiovascular death, a component in MACE (major adverse cardiovascular events), as a use case and conducted a systematic review of algorithms to identify cardiovascular death in administrative health plan claims databases.

Co-Investigator, Data Infrastructure Expansion Workgroup, Sentinel Initiative, Harvard Pilgrim, U.S. Food and Drug Administration, November 2107 – October 2018 (\$35,518)

- The objective of this Workgroup is to enhance to Sentinel Infrastructure to enable routine evaluation of medical product exposure during pregnancy and risk of adverse birth outcomes. To develop this capability, Data Partners are assisting the Sentinel Operations Center (SOC) in creating appropriate infrastructure to routinely 1) identify and link mothers and infants using health plan data at participating Data Partner sites; 2) capture linkage information in the Sentinel Common Data Model (SCDM); and 3) quality check the data to ensure fitness for use in Sentinel studies.

TEACHING ACTIVITIES

Co-Instructor, Survey Research Seminar (1 credit), Master of Public Health Program, Vanderbilt University School of Medicine

- November – December 2020
- November – December 2019
- November – December 2018
- December 2017
- December 2016
- January 2016

PROFESSIONAL ORGANIZATIONS

- American Association for Public Opinion Research 2013 – present
- American Public Health Association 1998 – 2014; 2020
- AcademyHealth 2018

PROFESSIONAL ACTIVITIES

INTRAMURAL:

- VUMC Academic Performance Metrics Task Force 2016 – present
- VUMC Research Compliance Expert 2018 – present
- VUMC Institute for Medicine and Public Health Center for Health Services Research 2014 – present
- Vanderbilt Institute for Clinical & Translational Research (VICTR) Expert Reviewer
Grant Review Studio 2018 (Selove)
Specific Aims Studio 2019 (Lewis)
- Vanderbilt Event Coordinators and Planners 2016 – 2019

EXTRAMURAL:

- Ad hoc reviewer – Health Affairs

SCHOLARSHIPS/AWARDS:

- Magna Cum Laude, Birmingham-Southern College
- Phi Beta Kappa, Birmingham-Southern College
- Tuition Fellowship, Johns Hopkins University
- Customer Service Award, CNA, 2011, 2012, 2013

PUBLICATIONS

Whitmore, C.C., Hawley, R., Min, J.Y., Mitchel, E., Daugherty, J, Griffin, M.R., Grijalva, C.G. (2020). Building a Data Linkage Foundation for Mother-Child Pharmacoepidemiology Research. *Pharmaceutical Medicine*. (<https://doi.org/10.1007/s40290-020-00371-8>).

Min J.Y., Grijalva C.G., Morrow, J.A., **Whitmore C.C.**, Hawley R.E., Singh S, Swain R.S., Griffin M.R. (2019). A Comparison of Two Algorithms to Identify Sudden Cardiac Deaths in Computerized Databases. *Pharmacoepidemiology and Drug Safety*, 28 (10), 1411-1416. (<https://doi.org/10.1002/pds.4845>).

Whitmore, C.C., White, M.N., Buntin, M.B., Fry, C.E., Calamari, K., Patrick, S.W. (2019). State Laws and Policies to Reduce Opioid-Related Harm: A Qualitative Assessment of PDMPs and Naloxone Programs in Ten U.S. States. *Preventive Medicine Reports*, 13, 249-255. (<https://doi.org/10.1016/j.pmedr.2018.12.014>).

Singh, S., Fouyazi, H., Anzuoni, K., Goldman, L., Min, J.Y., Griffin, M., Grijalva, C.G., Morrow, J.A., **Whitmore, C.C.**, Leonard, C.E., Selvan, M., Nair, V., Zhou, Y., Toh, S., Petrone, A., Williams, J., Fazio-Eynullayeva, E., Swain, R., Coyle, D.T., Andrade, S. (2019). Diagnostic Algorithms for Cardiovascular Death in Administrative Claims Databases: A Systematic Review. *Drug Safety*, 42,515-527. (<https://doi.org/10.1007/s40264-018-0754-z>).

Christensen, E., Dorrance, K., Ramchandani, S., Lynch, S., **Whitmore, C.**, Borsky, A., Kimsey, L., Pikulin, L., Bickett, T. (2013). Impact of a Patient-Centered Medical Home on Access, Quality, and Cost. *Military Medicine*, 178(2), 135-141. (<https://doi.org/10.7205/MILMED-D-12-00220>)

Hanna, E.Z., Yi, H.Y., Dufour, M.C., and **Whitmore, C.C.** (2001). The Relationship of Early-Onset Regular Smoking to Alcohol Use, Depression, Illicit Drug Use, and Other Risky Behaviors During Early Adolescence: Results from the Youth Supplement to the Third National Health and Nutrition Examination Survey. *Journal of Substance Abuse*, 13(3), 265-82. ([https://doi.org/10.1016/S0899-3289\(01\)00077-3](https://doi.org/10.1016/S0899-3289(01)00077-3))

Whitmore, C.C., Yi, H., and Dufour, M.C. (2001). Trends in Alcohol-Related Morbidity Among Short-Stay Community Hospital Discharges, United States, 1979-99. Surveillance Report #58. Alcohol Epidemiologic Data System, National Institute on Alcohol Abuse and Alcoholism, United States Department of Health and Human Services.

Final Analytical Report: NIDA Cooperative Agreement Program, September 2001. Report prepared for National Institute on Drug Abuse, Center on AIDS and Other Medical Consequences of Drug Abuse.

Whitmore, C.C., Stinson, F.S., and Dufour, M.C. December 1999. Trends in Alcohol-Related Morbidity Among Short-Stay Community Hospital Discharges, United States, 1979-97. Surveillance Report #50. Alcohol Epidemiologic Data System, National Institute on Alcohol Abuse and Alcoholism, United States Department of Health and Human Services.

SELECT PRESENTATIONS

Min J.Y., Grijalva C.G., Morrow, J.A., **Whitmore C.C.**, Griffin M.R. A comparison of two algorithms to identify sudden cardiac deaths. Poster presented at International Society for Pharmacoepidemiology Annual Conference; August 25, 2018, Prague, Czech Republic.

Singh, S., Anzuoni, K., Goldman, L., Min J.Y., Grijalva C.G., Griffin M.R., **Whitmore C.C.**, Morrow, J.S., Leonard, C.E., Selvan, M., Nair, V., Zhao, Y.P., Toh, S., Petrone, A., Williams, J., Fazio-Eynullayeva, E., Fouyazi, H., Swain, R., Cole, T., and Andrade, S. Algorithms for cardiovascular death in administrative claims databases: A systematic review. Poster presented at International Society for Pharmacoepidemiology Annual Conference; August 24, 2018, Prague, Czech Republic.

Whitmore, C.C., White, M.N., Buntin, M.B., Fry, C.E., Calamari, K., Scott, T.A., Patrick, S.W. Lessons Learned: A Qualitative Assessment of State Opioid Policies. Poster presented at: AcademyHealth Annual Research Meeting; July 25, 2018; Seattle, WA.

Needle, R.N., Ball, A., Des Jarlais, D., **Whitmore, C.C.**, and Lambert, E. 2001. The Global Research Network on HIV Prevention in Drug Using Populations (GRN) 1998-2000: Empirical and Methodological Trends in the Epidemiology, Ethnography, and Prevention of HIV/AIDS in Injection Drug Users. *Global Research Network Meeting on HIV Prevention in Drug-Using Populations. Third Annual Meeting Report. July 5-7, 2000. Durban, South Africa.* National Institute on Drug Abuse, USA 2001.