ZACHARIAH T. CROLL

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EDUCATION

Undergraduate:

Bachelor of Arts Portland, Maine May 2010

University of Southern Maine, Department of Sociology

- Major: Sociology
- Double Minor: Labor Studies, Political Science
- Relevant Coursework: Medical Sociology, Sociology of Mental Health and Illness, Quantitative Research Methods, Qualitative Research Methods, Sociological Theory, Environmental Sociology, Sociology of the Body, Social Movements, Politics and Society, Politics of Race and Ethnicity, Economic Geography, U.S. Economic and Labor History, Understanding Contemporary Capitalism

Graduate:

Master of Public Health Portland, Maine December 2018

University Of Southern Maine, Muskie School of Public Service

- Major: Master of Public Health
- Relevant Coursework: Introduction to Epidemiological Research, Applied Biostatistical Analysis, Applied Public Health Research and Evaluation, Social Justice Theory and Policy Analysis, Health Law and Ethics, American Health System, Health Politics and Policy, Quality Improvement, Health Literacy, Environmental Health, Social and Behavioral Health, Health Systems Organization and Management, Leadership and Professional Development, Field Experience with Portland Minority Health Program

Professional Training and Development:

SAS Training November 2010

Online SAS Institute

SAS Programming 1: Essentials

Collaborative Institutional Training Initiative

CITI Program Human Subjects Research: Social-Behavioral-Educational

Health Information Privacy and Security

GoLeanSixSigma.com

Lean Six Sigma Training

Lean Six Sigma White Belt Certified

Institute for Healthcare Improvement

IHI Open School

TA 102: Improving Health Equity

QI 104: Interpreting Data: Run Charts, Control Charts, and Other Measurement Tools

Michigan Public Health Institute

March 2017

Office of Accreditation and Quality Improvement

Embracing Quality in Public Health: A Practitioner's Performance Management Primer

October 2016

March 2017

March 2017

Graduate Fieldwork

Minority Health Program, Portland, Maine

• Experience based learning. Provided project support for community health needs assessment and program to increase colorectal cancer screening rates and improve colorectal health among vulnerable populations

USM Data Innovation Project Training

May 2018

Track Your Impact: A Day-long Performance Measurement Workshop

SQL Training July 2018

Adventures With SQL Lunch and Learn

Workplace learning and development series

HONORS AND PROFESSIONAL MEMBERSHIPS

2010 Graduated magna cum laude, BA, University of Southern Maine

2007-2010 Member, University of Southern Maine Dean's List

2008-present Member, Alpha Kappa Delta International Sociology Honor Society

2010-present Member, *Phi Kappa Phi Honor Society* 2010-present Member, *National Rural Health Association*

2010-present Member, National Association of Rural Mental Health

2016-present Member, Maine Public Health Association

2016-present Grant Reviewer, Health Resources and Services Administration

TECHNICAL PROFICIENCY

- Microsoft Office Suite
- SAS 9.4
- EndNote
- Snap Survey Software

PROFESSIONAL EXPERIENCE

Research Analyst II - Muskie School of Public Service, USM, Portland, ME Apr 2017-present

- Participate on research teams for the Maine Rural Health Research Center, Medicare Rural Hospital
 Flexibility Program, Annual Survey of Children Served by MaineCare, Maine Lung Cancer Coalition and
 other funded projects, providing operational support across multiple ongoing studies
- Data acquisition and collection prepare quantitative and qualitative data collection protocols and tracking instruments; monitor systematic processes for quantitative data collection; design, develop, and test data collection and/or interview instruments; develop study recruitment materials; conduct qualitative interviews with primary and key informants including rural health professionals, hospital personnel, and other stakeholders; conduct literature searches and policy reviews
- Data management construct, clean, and manage analytic data files; provide data documentation; archive project files
- Project development assist in identifying project topics and new opportunities; draft sections of proposals and conduct background work (i.e., literature reviews) necessary for proposal development
- Project management and implementation track project goals, activities, and findings and communicate them to internal and external vendors; assist senior staff in monitoring specifications of work with external vendors; aid the development and monitoring of project work plans; convene and coordinate project planning and work teams; prepare project progress reports and other communications with funding agencies; coordinate communications within the project team and with external collaborators; assure analytic project activity is completed within budget; prepare materials for institutional review board (IRB) review; oversee work of Research Analyst Is, Research Assistants, and Graduate Assistants

 Product development – prepare written products including memoranda, policy briefs, technical reports, and journal articles; submit abstracts for consideration at state, regional, and national conferences; develop and deliver poster and podium presentations at professional conferences

Research Analyst I – Muskie School of Public Service, USM, Portland, ME Aug 2015-Apr 2017

- Participate on research teams for the Maine Rural Health Research Center, Medicare Rural Hospital
 Flexibility Program, Annual Survey of Children Served by MaineCare and other funded projects, providing
 operational support across multiple ongoing studies
- Conduct literature and policy reviews, including literature searches and integrated review of prior studies and relevant policy; write sections or drafts of research products including policy briefs, working papers, memos, and journal articles; contribute to proposals for research funding
- Organize, summarize and abstract data for benefit of project team; assist in construction of analytic data files; assist in the descriptive analysis of quantitative data; summarize outcomes of inferential analyses for benefit of project team; assist in qualitative data analysis and identification of data themes
- Assist in design and development of data collection instruments and research protocols; monitor systematic processes for data collection and cleaning; conduct qualitative interviews with primary and key informants including rural health professionals and hospital personnel
- Contribute to project management by aiding in the development and monitoring of project work plans; assist senior staff in monitoring specifications of work with external vendors; write summaries of project activities; communicate project goals, activities, and findings to internal and external vendors; prepare materials for institutional review board (IRB) review
- Disseminate research findings by drafting abstracts for consideration at state, regional and national conferences; develop and deliver poster presentations and podium presentations
- Supervise graduate assistants for the Maine Rural Health Research Center and Flex Monitoring Team

Research Assistant II – Muskie School of Public Service, USM, Portland, ME Oct 2010-Aug 2015

- Participate on research teams for the Maine Rural Health Research Center, Medicare Rural Hospital
 Flexibility Program, and Annual Survey of Children Served by MaineCare, providing operational support
 across multiple ongoing studies
- Conduct literature reviews, review and summarize key provisions of state and federal legislation, conduct telephone interviews, collect and manage project data, perform quantitative analyses using SAS 9.4, assemble data tables
- Prepare reports on rural health system topics including rural hospital patient safety, quality improvement, and community benefit activity; health insurance coverage and access to care in rural areas; rural long term services and supports; the experience of care and health status of children enrolled in MaineCare; rural health clinic practice transformation; and implementation of the Affordable Care Act in rural areas
- Draft concept papers for proposed studies and develop project timelines and work plans
- Present study findings at relevant professional conferences

Research Analyst I – RTI International, Waltham, MA May 2010-Oct 2010

- Exceptional experience in a team-oriented health policy research environment
- Assisted senior members of policy team by performing Excel spreadsheet management in preparation for SAS statistical analyses, assembled data tables, performed preliminary interpretations of SAS output, summarized findings, and conducted literature reviews
- Organized confidential patient files and healthcare provider data collected for a federally funded, national research project sponsored by the Centers for Medicare & Medicaid Services (CMS).
- Instructed hospital staff in data collection methods and procedures, and recorded notes during meetings at healthcare facilities participating in the study
- Examined consistency of payment incentives, resource usage, and outcomes for populations treated in acute and various post-acute care settings. For more information visit www.pacdemo.rti.org

Owner of Sole Proprietorship – DBA Zach Croll, Custom Tile Installer, Portland, ME 2006-2010

- Performed a range of business responsibilities including creation of job estimates and invoices, recordkeeping, and all facets of design, installation, and quality control
- Cultivated a deep appreciation for the importance of clear communication with, and accountability to, my clientele and business associates
- Maintained a successful tiling business while completing my undergraduate degree

PUBLICATIONS AND REPORTS

PEER-REVIEWED JOURNAL ARTICLES

Gale, J., Coburn, A., Pearson, K., **Croll, Z.,** & Shaler, G. (2017). Developing program performance measures for rural emergency medical services. *Prehospital Emergency Care*, 21(2), 157–165. Advance online publication. doi: 10.1080/10903127.2016.1218978

Lambert, D., Gale, J., Hartley, D., **Croll, Z.**, & Hansen, A. (2015). Understanding the business case for telemental health in rural communities. *The Journal of Behavioral Health Services & Research*, 43(3), 366–379. Advance online publication. doi: 10.1007/s11414-015-9490-7

Talbot, J., Coburn, A., **Croll, Z.**, & Ziller, E. (2013). Rural considerations in establishing network adequacy standards for qualified health plans in state health insurance exchanges. *The Journal of Rural Health*, 29(3), 327–335. Advance online publication. doi: 10.1111/jrh.12012

TECHNICAL REPORTS

Gale, J.A., Croll, Z., Zoll, L., & Coburn, A.F. (2018, December). Critical access hospitals' community benefit activities: An updated review. Briefing Paper #40. Portland, ME: University of Southern Maine, Muskie School of Public Service, Flex Monitoring Team.

Rosingana, K., Croll, Z., Thayer, D., Smith, M.L., & Richards, M. (2018, October). 2018 Survey of children served by MaineCare. Portland ME: University of Southern Maine, Muskie School of Public Service, Cutler Institute for Health and Social Policy.

Gale, J.A., **Croll, Z.**, Zoll, L., & Coburn, A.F. (2018, October). Critical access hospitals' community health needs assessments and implementation plans: How do they align? Briefing Paper #39. Portland, ME: University of Southern Maine, Muskie School of Public Service, Flex Monitoring Team.

Croll, Z., Williamson, M., Gallo, R., Hansen, A., & Boulos, R. (2017, December). Maine Lung Cancer Coalition partnership self-assessment baseline results. Portland ME: University of Southern Maine, Muskie School of Public Service, Cutler Institute for Health and Social Policy. Prepared for Center for Outcomes Research & Evaluation, Maine Medical Center Research Institute.

Smith, M.L., Rosingana, K., Croll, Z., Thayer, D., & Richards, M. (2017, October). 2017 Survey of children served by MaineCare. Portland ME: University of Southern Maine, Muskie School of Public Service, Cutler Institute for Health and Social Policy.

Smith, M.L., Croll, Z., Thayer, D., Gallo, R., & Rosingana, K. (2016, October). 2016 Survey of children served by MaineCare. Portland ME: University of Southern Maine, Muskie School of Public Service, Cutler Institute for Health and Social Policy.

Kahn-Troster, S., Burgess, A., Coburn, A., Wallace, R., Croll, Z., & Gallo, R. (2016, September). Maine rural health profiles. Portland, ME: University of Southern Maine, Muskie School of Public Service, Maine Rural Health Research Center.

- Gale, J., Coburn, A., Pearson, K., **Croll, Z.,** & Shaler G. (2016, August). Population health strategies of critical access hospitals. Briefing Paper #36. Portland, ME: University of Southern Maine, Muskie School of Public Service, Flex Monitoring Team.
- **Croll, Z.**, Zoll, L., Gale, J., & Coburn, A. (2016, August). Community benefit activities of critical access, other rural, and urban hospitals: National and state-level data. Portland, ME: University of Southern Maine, Muskie School of Public Service, Flex Monitoring Team.
- Smith, M.L., **Croll, Z.**, Thayer, D., & Gallo, R. (2016, June). 2015 Survey of children served by MaineCare. Portland ME: University of Southern Maine, Muskie School of Public Service, Cutler Institute for Health and Social Policy.
- Smith, M.L., **Croll, Z.**, & Thayer, D. (2015, October). 2014 Survey of children served by MaineCare. Portland, ME: University of Southern Maine, Muskie School of Public Service, Cutler Institute for Health and Social Policy.
- Gale, J., **Croll, Z.**, & Hartley, D. (2015, September) Adoption and use of electronic health records by rural health clinics: Results of a national survey. Working Paper #58. Portland, ME: Maine Rural Health Research Center
- Gale, J., Croom, J., **Croll, Z.,** & Coburn, A. (2015, June). Charity care and uncompensated care activities of tax-exempt critical access hospitals. Briefing Paper #35. Portland, ME: University of Southern Maine, Muskie School of Public Service, Flex Monitoring Team.
- Croom, J., Croll, Z., Gale, J., & Coburn, A. (2015, February). Community benefit activities of critical access, other rural, and urban hospitals: National and state-level data. Portland, ME: University of Southern Maine, Muskie School of Public Service, Flex Monitoring Team.
- Gale, J., **Croll, Z.**, & Hartley, D. (2015, January). Rural health clinic readiness for patient-centered medical home recognition: Preparing for the evolving healthcare marketplace. Working Paper #57. Portland, ME: Maine Rural Health Research Center.
- Lenardson, J.D., Griffin, E., Croll, Z., Ziller, E.C., & Coburn, A.F. (2014, May). Profile of rural residential care facilities: A chartbook. Portland, ME: University of Southern Maine, Muskie School of Public Service, Maine Rural Health Research Center.
- Gale, J., Hartley, D., & Croll, Z. (2014, February). Meaningful use of electronic health records by rural health clinics. Working Paper #52. Portland, ME: Maine Rural Health Research Center.
- Talbot, J., Thayer, D., Croll, Z., & Fox K. (2013, December). 2013 Survey of children served by MaineCare. Portland, ME: University of Southern Maine, Muskie School of Public Service, Cutler Institute for Health and Social Policy.
- Anderson, N.J., Fox, K., Thayer, D., & Croll, Z. (2013, January). 2012 Survey of children served by MaineCare. Portland, ME: University Of Southern Maine, Muskie School of Public Service, Cutler Institute for Health and Social Policy.
- Gale, J.A., Croll, Z.T., Gregg, W.R., & Coburn, A.F. (2012, December). Why do some critical access hospitals close their skilled nursing services while others retain them? Briefing Paper #32. Portland, ME: University of Southern Maine, Muskie School of Public Service, Flex Monitoring Team.
- **Croll, Z.**, Gale, J., & Coburn, A. (2012, November). Community benefit activities of critical access hospitals, non-metropolitan hospitals, and metropolitan hospitals: National and state-level data. Portland, ME: University of Southern Maine, Muskie School of Public Service, Flex Monitoring Team.

- Coburn, A., Ziller, E., Croll, Z., & Kilbreth, E. (2012, May). The rural implications of geographic rating of health insurance premiums. Minneapolis, MN: SHARE, Robert Wood Johnson Foundation.
- **Croll, Z.**, Coburn, A., & Pearson, K. (2012, April). Promoting a culture of safety: Use of the hospital survey on patient safety culture in critical access hospitals. Briefing Paper #30. Portland, ME: University of Southern Maine, Muskie School of Public Service, Flex Monitoring Team.
- Anderson, N.J., Thayer, D., Fox, K., & Croll, Z. (2012, March). Children served by MaineCare, 2011: Survey findings. Portland, ME: University Of Southern Maine, Muskie School of Public Service, Cutler Institute for Health and Social Policy.
- Coburn, A., Talbot, J., Ziller, E., & **Croll, Z.** (2011, June). CO-OP health plans: Can they help fix rural America's health insurance markets? Minneapolis, MN: SHARE, Robert Wood Johnson Foundation.
- Gage, B., Smith, L., Ross, J., Coots, L., Kline, T., Shamsuddin, K., Reilly, K., & **Croll, Z.** (2010, August). Analysis of the reliability of the items in the continuity assessment record and evaluation (CARE) item set. Prepared by RTI International. Report to Centers for Medicare & Medicaid Services (CMS), Contract No. HHSM-500-2005-00291. Baltimore, MD: Office of Clinical Standards and Quality, CMS.

POLICY BRIEFS

- Gale, J.A., **Croll, Z.T.**, & Coburn, A.F. (2019, April). Rural health clinic costs and Medicare reimbursement. Policy Brief #72. Portland, ME: University of Southern Maine, Muskie School of Public Service, Maine Rural Health Research Center.
- Gale, J.A., **Croll, Z.**, & Coburn, A.F. (2018, July). Rural health clinic participation in the merit-based incentive system and other quality reporting initiatives: Challenges and opportunities. Policy Brief #70. Portland, ME: University of Southern Maine, Muskie School of Public Service, Maine Rural Health Research Center.
- Paluso, N., Croll, Z., Thayer, D., Talbot, J., & Coburn, A. (2018, March). Residential settings and healthcare use of the rural "oldest-old" Medicare population. Policy Brief #69. Portland, ME: University of Southern Maine, Muskie School of Public Service, Maine Rural Health Research Center.
- Gale, J., Croll, Z., Coburn, A., & Croom, J. (2016, November). Comparing the community benefit spending of CAHs, other rural, and urban hospitals. Policy Brief #45. Portland, ME: University of Southern Maine, Muskie School of Public Service, Flex Monitoring Team.
- Ziller, E., **Croll, Z.**, & Coburn, A. (2016, October). Health insurance CO-OPs: Product availability and premiums in rural counties. Policy Brief #65. Portland, ME: University of Southern Maine, Muskie School of Public Service, Maine Rural Health Research Center.
- Coburn, A., Griffin, E., Thayer, D., **Croll, Z.**, & Ziller E. (2016, June). Are rural older adults benefiting from increased state spending on Medicaid home and community-based services? Policy Brief #65. Portland, ME: University of Southern Maine, Muskie School of Public Service, Maine Rural Health Research Center.
- Gale, J., Coburn, A., & Croll, Z. (2015, December). Critical Access Hospital-relevant measures for health system development and population health. Policy Brief #42. Portland, ME: University of Southern Maine, Muskie School of Public Service, Flex Monitoring Team.
- Gale, J., Croom, J., **Croll, Z.**, & Coburn, A. (2015, June). Charity care and uncompensated care activities of tax-exempt critical access hospitals. Policy Brief #38. Portland, ME: University of Southern Maine, Muskie School of Public Service, Flex Monitoring Team.
- Gale, J., Croll, Z., Hartley, D., & Coburn, A. (2015, January). Rural health clinic readiness for patient-centered medical home recognition: Preparing for the evolving healthcare marketplace. Policy Brief #57.

- Portland, ME: University of Southern Maine, Muskie School of Public Service, Maine Rural Health Research Center.
- Gale, J., Hartley, D., & **Croll, Z**. (2014, February). Meaningful use of the electronic health record by rural health clinics. Policy Brief #52. Portland, ME: University of Southern Maine, Muskie School of Public Service, Maine Rural Health Research Center.
- Lambert, D., Gale, J., Hansen, A., **Croll, Z.**, & Hartley, D. (2013, December). Telemental health in today's rural health system. Research and Policy Brief #51. Portland, ME: University of Southern Maine, Muskie School of Public Service, Maine Rural Health Research Center.
- Gale, J.A., Croll, Z.T., Gregg WR, & Coburn AF. (2012, November). Why do some critical access hospitals close their skilled nursing services while others retain them? Policy Brief #31. Portland, ME: University of Southern Maine, Muskie School of Public Service, Flex Monitoring Team.
- **Croll, Z.**, Coburn, A., & Pearson, K. (2012, May). Promoting a culture of safety: Use of the hospital survey on patient safety culture in critical access hospitals. Policy Brief #27. Portland, ME: University of Southern Maine, Muskie School of Public Service, Flex Monitoring Team.
- Coburn, A., & Croll, Z. (2011, June). Improving hospital patient safety through teamwork: The use of TeamSTEPPS in critical access hospitals. Policy Brief #21. Portland, ME: University of Southern Maine, Muskie School of Public Service, Flex Monitoring Team.

PRESENTATIONS

- **Croll Z**, Pearson, K. (2017, November 15). Collaborative strategies to identify and address rural population health needs. *Presentation delivered at the fall conference of the New England Rural Health Roundtable*. Bartlett, NH.
- **Croll Z,** Ziller E, Talbot J, & Coburn A. (2015, June 15). Early impact of CO-OPs in the rural health insurance marketplace. *Poster session at the annual research meeting of Academy Health*. Minneapolis, MN.
- **Croll Z**, Ziller E, & Coburn A. Role and early impact of CO-OPs in the rural health insurance marketplace. (2015, April 16). *Presentation delivered at the annual conference of the National Rural Health Association*. Philadelphia, PA.
- **Croll Z**, Gale J, & Hartley, D. (2015, April 15). Adoption and use of electronic health records by rural health clinics: Results of a national survey. *Presentation delivered at the annual conference of the National Rural Health Association*. Philadelphia, PA.
- **Croll Z,** Gale J, & Hartley D. (2014, April 22). Meaningful use of electronic health records by rural health clinics. *Poster session at the annual conference of the National Rural Health Association*. Las Vegas, NV.
- **Croll, Z**, Gale J, Croom J, Reed A, & Coburn A. (2013, May 7). Comparing the financial assistance activities of tax-exempt critical access, other rural, and urban hospitals. *Poster session at the annual conference of the National Rural Health Association*. Louisville, KY.
- **Croll Z**, Gale J, & Coburn A. (2012, April 17). Factors influencing the provision of skilled nursing services by critical access hospitals. *Poster session at the annual conference of the National Rural Health Association*. Denver, CO.
- **Croll Z**, Gale J, & Coburn A. (2011, May 4). Provision of long-term care services by critical access hospitals: Are things changing? *Presentation delivered at the annual conference of the National Rural Health Association*. Austin, TX.

RESEARCH SUPPORT

Maine Rural Health Research Center. This grant is funded by the Federal Office of Rural Health Policy and supports a portfolio of projects addressing rural health insurance, long term services and supports, primary care, behavioral health, and children's health. The Center informs policymaking and the delivery of rural health services through research, policy analysis, and technical assistance on issues of regional and national significance.

Rural Hospital Flexibility Monitoring Team. Funded by the Federal Office of Rural Health Policy, this project assesses the impact of the Medicare Rural Hospital Flexibility Program on Critical Access Hospitals and their communities, and examines the role of states in achieving overall program objectives.

Survey of Children Served by MaineCare. Funded by the Maine Department of Health and Human Services, this annual survey of parents of children enrolled in MaineCare, Maine's Medicaid and Children's Health Insurance Program, measures experience of care, diet and exercise, and parent-reported body mass index.

Behavioral Risk Factor Surveillance System. Funded by the Maine Department of Health and Human Services (DHHS), the BRFSS survey collects data on health-related risk behaviors and events, chronic health conditions, and the use of inventive health practices among Maine's adult population. This project comprises data cleaning and standardization, performance of ad hoc analyses, and provision of technical and statistical assistance to DHHS. Data analysis from BRFSS surveys informs policy development, program planning, and other public health interventions.

Sustainable Public-Private Strategies to Improve Population Health in Maine. Funded by MaineHealth, this project sought to explore the unique role of hospitals and health systems in addressing population health challenges, and to identify financing strategies that health systems use to fund successful population health initiatives. Intensive literature review and key informant interviews with state and health system leaders were used to generate a report to MaineHealth leadership offering recommendations about replicable and sustainable strategies to fund population health initiatives.

Maine Lung Cancer Coalition and Maine Lung Health Study. Funded by the Bristol-Myers Squibb Foundation, this project seeks to develop the infrastructure required to implement and disseminate evidence-based lung cancer prevention and early detection services, and facilitate early referrals for treatment of lung cancer patients. A central focus of the initiative is to expand access to lung cancer prevention, early detection, and treatment services for vulnerable, rural, underserved patient populations in Maine.

Assessing Challenges and Opportunities of Implementing Health Reform in Rural America. Funded by SHARE, a program of the Robert Wood Johnson Foundation, this project analyzed rural issues, challenges, and policy strategies to achieve more effective rural implementation of the Affordable Care Act.

Advancing Rural Health Transformation: Profiling Rural Maine. Funded by the Maine Health Access Foundation, a nonprofit working to promote access to quality health care and improve the health of Maine residents, this project generated state and county-level profiles describing the health resource availability and socioeconomic and health status characteristics of Maine counties. The final reports were used to foster community discussions and engagement among local stakeholders to advance new approaches to rural health care delivery.

Oxford County Wellness Collaborative Program Evaluation and Support. This project comprised evaluation and data support services for several Maine Health Access Foundation-funded initiatives undertaken by OCWC to improve population health in Oxford County, Maine. The initiatives seek to reduce childhood obesity by encouraging healthy eating and physical activity, promote resilience to adverse childhood experiences, improve substance use prevention and treatment services, and use community gardens as a platform to foster greater community engagement.