

Cathy A. Lally, M.S.P.H

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Other Names Published Cathy Day, Cathy Day-Lally

Epidemiologist /Statistical Data Analyst/SAS Programmer

Epidemiologist specializing in data analytics, database design, data management, project management, and SAS programming with over 30 years of research experience in multiple fields of epidemiology including Genetic Epidemiology, Pharmacoepidemiology, and Environmental and Occupational Health.

Specialized Skills and Abilities

- Extensive experience with design and analyses of database studies in Medical claims (Commercial, Medicare, Medicaid) and Electronic Health Records
- Coding expertise including NDC, HCPC, ICD, Clinical Classification Software (CCS), NPI (provider of service)
- Interrogation of public use data including NHANES, NHIS, and SEER
- Computing
 - Operating Systems: Linux, Microsoft
 - Database: REDCap, MySQL
 - SAS: SAS Macro Processing, SAS Array Processing, SAS SQL, SAS IML
 - SAS GRID, SAS ODS, SAS Reporting, SAS Template, SAS ODS Graphics
 - STATA

Professional Experience

November 2017 to Present:

Senior Epidemiologist/Data Analyst

Epidemiologic Research & Methods, LLC

<https://epidemiologymethods.com/>

Company Principal Manager of all client projects. Duties include supervising MPH/MSPH level and PhD level contractors, interfacing with clients on analytic needs, and contributing to and managing deliverables. Typical consultation projects involve rigorous and creative analytic methods to estimate prevalence of rare diseases, comprehensive literature review and synthesis, writing study protocols and analysis plans, establishment of data use agreements, development of macro programs to analyze large claims data from commercial claims, Medicaid, and CMS Medicare, thorough database study reports, and creation of interactive graphic displays of the data for use by the client. The CMS data is analyzed using the Chronic Conditions Warehouse, Virtual Research Data Center. Most clients are Pharmaceutical companies.

February 2013 to October 2020

Senior Data Analyst

Emory University, Rollins School of Public Health

Department of Health Policy and Management

Design analyses alongside faculty members to answer key questions using data from Medicaid MAX files. Entails developing and writing concept protocols and analysis plans for each of the research questions and analyzing large Medicaid data files using Linux SAS on a cluster computing system. Develop new data collection instruments. Build databases using REDCap. Develop database model entity-relationship diagrams and relational schemas and work with a developer to build a web-based data collection system. I Work with faculty members to monitor data for several randomized clinical trials, including development of study instruments for data collection and report creation to monitor study follow-up and progress.

February 2011 to October 2017:

Biogen, Cambridge, MA

Part Time

Senior Data Analyst

Assisted the incoming Head of Epidemiology in establishing the analytic capability and standards for the newly formed Epidemiology function. Over time, worked with internal epidemiologists and data analysts in writing concept protocols, analysis plans, and performing analyses for studies in large claims databases and electronic medical record databases the data of which encompasses over 100 million covered lives and includes inpatient, outpatient, and pharmacy data. Additionally, performed analyses in internal data collected for mandated safety surveillance to evaluate predictors of adverse events. Provided epidemiological support for special projects involving prevalence and incidence of rare diseases and designing novel methods for computing estimates.

April 2011 to January 2013:

Emory University, Rollins School of Public Health

Department of Environmental Health

Senior Data Analyst

Founding member of the study team for the C8 Science Panel analyzing the effect of exposure to perfluorooctanoic acid (PFOA) on the health effects of an exposed community. This work involved setting up a medical record review system using SAS and Microsoft Access. Reviewed medical records on approximately 15 disease areas for validating questionnaire data and more than 4000 medical records. Responsibilities included performing analysis of data on a community cohort primarily using PHREG for survival analysis.

November 1995 to April 2011:

Emory University, Rollins School of Public Health

Department of Epidemiology

Senior Data Analyst

Responsible for data quality control, data management, programming, and analysis for a case-control study of Genetic Attributes of Thrombosis Epidemiology (GATE) funded by the Centers for Disease Control and Prevention (CDC). Conducted genetic analyses using Statistical Analysis System (SAS) software, STATA, and the Helix Tree module of Golden Helix. Assisted co-workers in preparing manuscripts for publication. Mentored graduate students who were using these data for analyses.

From January 2007 through December 2008, GSK provided 20 percent funding for the analyses of large public use data files including but not limited to National Health and Nutrition Examination Survey (NHANES) and National Health Interview Survey (NHIS) to determine outcomes related to urinary incontinence. Completed and delivered analyses for GSK and compiled data files for MPH students at Emory University who used the data for thesis requirements.

October 1993 to October 1995:

American Cancer Society
Department of Epidemiology and Statistics
Atlanta, Georgia

Research Analyst

Responsibilities included maintaining large data files on the MVS mainframe system. Worked with CDC computer staff to manage and maintain the large files and improve efficiency of programming. Collaborated closely with researchers within the American Cancer Society as well as outside collaborators to review literature, develop hypotheses, conduct analyses, and interpret results for the purpose of publication. These analyses were primarily on the CPS-II cohort data, a prospective follow-up study of 1.2 million subjects. Most analyses involved using SAS PHREG. I developed macros for use by other analyst in the department and developed, updated, and maintained analytic programs used by end users.

December 1992 to October 1993:

Department of Medicine
Division of Infectious Diseases
Case Western Reserve University
Cleveland, Ohio

Project Coordinator/Data Manager

Worked with physicians in the Department of Infectious Disease coordinating and facilitating a placebo control randomized clinical trial of preventive therapy for tuberculosis in HIV positive individuals, and a case-control study of the natural history of tuberculosis in HIV positive persons in Kampala, Uganda. Coordinated data collection on site in Uganda, and managed data files on site, worked with other SAS programmers to set up an interactive data entry system for entry and tracking of laboratory data in Kampala, using SAS SCL and FSP. Monitored the quality of the data entry through a quality assurance program, carried out on-site in Kampala, Uganda. The programs generated monthly and weekly reports and corrected detected errors. This effort also included initiating appropriate training and working to improve the study participant follow-up in Uganda as well as maintaining integrity of case report forms and assisted the on-site principal investigator with all aspects of data collection. Prepared data for presentation and publication.

July 1991 to December, 1992:

Department of Medicine
Division of General Internal Medicine
Case Western Reserve University
Cleveland, Ohio

Project Coordinator/Data Manager

Responsible for the day-to-day operation of an NIH funded project exploring patient self-monitoring of partial thromboplastin time (PTT) while receiving warfarin therapy. This project work required working with other hospital personnel to design a computer program for proper subject identification. Developed data collection forms and questionnaires, reviewed all medical records to evaluate subject eligibility and abstracted relevant medical record information. The position involved various data tracking, management and data analysis duties including designing initial SAS data files and data entry screens, supervising the data entry, as well as directly managing the data and performing appropriate statistical analyses using mainframe and PC SAS for logistic regression, and survival analysis as well as other categorical data analyses.

October 1988 to June 1991:

School of Public Health
Department of Epidemiology
University of Alabama at Birmingham

Project Coordinator / Data Manager

Responsible for the day-to-day operation of a cohort study and two nested case-control studies of stomach and lung cancer among workers in the automotive industry. Work included establishing mechanisms for determining the vital status of cohort members, retrieval of death certificates, supervision of work history abstraction from personnel records, as well as locating, contacting and interviewing study subjects. Responsible for data entry, data editing and data management, and projects budget. Directly supervised two interviewers and data abstractors. Met frequently with United Auto Workers representatives and plant personnel to discuss the conduct of the study.

June 1985 to October 1988:

School of Public Health
Department of Epidemiology
University of Alabama at Birmingham

Research Assistant

Interviewer and study coordinator for a case-control study of endometrial cancer. Responsibilities included the identification of eligible cases and controls, abstracting medical records, interviewing subjects, obtaining extensive anthropometric measurements including skin folds and circumference measurements, performing phlebotomy, and collection and processing of blood samples. Worked with three gynecologic oncologists to read and evaluate pathology reports used for staging and grading of tumors. Created data entry screens and conducted data entry, data editing and data management as well as assisted in the data analysis.

Education

Master of Science in Public Health Epidemiology (MSPH)
University of Alabama at Birmingham School of Public Health; 1996
Bachelor of Science Psychology
University of Alabama at Birmingham; 1995
Associate of Science Nutrition Sciences; 1985
Jefferson State College

Professional Experience

- Workshop Conducting Research with Medicare Claims Data, Research Data Assistance Center (ResDAC) Minneapolis MN, 2019
- Harvard University course Measurement, Design, and Analysis Methods for Health Outcomes Research, 2014
- Workshop Conducting Research with Medicaid Claims Data, Research Data Assistance Center (ResDAC) Minneapolis MN, 2013
- Short Course Tufts University "Theory and Practice of Epidemiology II". Dr. Ken Rothman 1995.
- Short Course Tufts University "Regression and Categorical Data Methods". Dr. Stan Lemeshow; 1995.
- Short Course University of Michigan "Epidemiology of Aging", 1992.
- Short Course Cleveland Clinic Foundation "Biostatistics in Medicine", 1992.

May 2003 to December 2008:

Data Analyst / Consultant

- Analyze data for the US court of claims using Adverse Events Reporting System (AERS)
- Analyzed Vaccine Safety Data (VSD) and gave a presentation before the Special Court of Claims in Washington DC.

May 1998 to May 2002: GlaxoSmithKline (GSK)

Data Analyst / Consultant

- Use large public use data files (NHANES, NHIS, and SEER) to provide reports and support to Epidemiologist at GSK.

June 2000 to April 2003: AstraZeneca

Data Analyst / Consultant

- Use large public use data files (NHANES, NHIS, and SEER) to provide analytic support and generate reports for AstraZeneca Pharmaceuticals

November 1995 to April 2003: American Cancer Society (ACS)

Data Analyst / Consultant

- Analysis using the large cohort study Cancer Prevention Study II (CPS-II).