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Experience:

Assistant Professor and Research Project Director,

Department of Health Policy, Jefferson Medical College (2001-), and Jefferson College of Graduate Studies (2005-), and

Quality Analyst, Clinical Care Subcommittee, Jefferson University Physicians, Philadelphia

(2003-): directing health services, outcomes,

phamacoeconomics, and quality measurement and improvement research projects; teaching Introduction to Biostatistics, Statistical Data Analysis Using Software, and Advanced Regression Models; lecturing on Measuring Outpatient Quality and Data: Sources, Management, and Confidentiality in Quality Measurement and Outcomes Analysis in Health Care; and Sampling and Statistical Data Analysis in Health Services Analysis.

Instructor, Villanova University, M.P.A. Program, Villanova (2001): taught Statistics.

Research Associate, Care Science, Inc., Philadelphia (2000-2001): developed Internet-based risk-adjusted health outcomes analysis product and pharmaceutical utilization analysis product.

Technical Director, Research Informatics Unit, Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania School of Medicine, Philadelphia (1999-2000): managed epidemiological research information systems department, including web/network administrators, developers, and user support staff and information system development projects.

Chief Performance Measurement Research Analyst,

Research and Evaluation and Marketing Departments, Independence Blue Cross, Philadelphia (1991-1999): managed Health Plan Employer Data and Information

Set (HEDIS) quality measurement and reporting, statistical programming staff, information systems audits, data warehouse development, health services utilization and cost analysis and reporting, and research, writing, and publication of annual Community Health Care Reports.

Systems Analyst, Information Services Department, Graduate Health System, Philadelphia (19841991): management of hospital electronic medical record development and implementation, user support, and medical research informatics.

Assistant Professor of Sociology, Widener University, Chester, PA (19821984):

taught Introduction to Sociology, Sociology of the Family, Research Methods, and Statistics.

Assistant Professor of Sociology, Rutgers University, Camden, NJ (1981-1982):

taught Introduction to Sociology, Sociology of the Family, Minority Groups, and Sociology of Law.

Assistant Professor of Sociology, Saint Joseph's University,

Philadelphia (1980-1981):

taught Introduction to Sociology, Sociology of the Family, Social Problems, and Criminology.

Research Associate, University of Pennsylvania, Philadelphia (19711982): management of federally funded social science research projects.

Education:

Ph.D. in Sociology, University of Pennsylvania, Philadelphia, 1976.

M.B.A. in Health Administration, Widener University, Chester, PA, 1985; Phi Kappa Phi International Honor Society.

M.S. in Information Systems, Drexel University College of Information Science and Technology, Philadelphia, 1998; Beta Phi Mu International Library and Information Studies Honor Society.

Certification:

Certified Employee Benefit Specialist, Wharton School, University of Pennsylvania, 1996.

SAS Certified Professional Level I, SAS Institute, 2000.

Database Management/Application Development/ Statistical Analysis Software:

SAS, SPSS, TreeAge Data Professional, Microsoft Access, Oracle/SQL*Plus.

Professional Society Memberships:

AcademyHealth, Healthcare Information Management Systems Society (national organization and Philadelphia area chapter); Philadelphia SAS Users Group.

Journal Articles:

John C. Kairys, Kandace McGuire, Albert G. Crawford, and Charles J. Yeo. "Cumulative Operative Experience is Decreasing during General Surgery Residency: A Worrisome Trend for Surgical Trainees?" To be published in the <u>Journal of the American College of Surgeons</u>, and presented at the 119th annual meeting of the Southern Surgical Association, December 3-5, 2007, Hot Springs, VA.

Sandra Adams, Ross Breitbart, Albert G. Crawford, Sara Their, Rajiv Rimal, Joyce Lee, Laura Janneck, and Christopher Sciamanna. "The Effects of a Computer-Tailored Message on Secondary Prevention in Type 2 Diabetes: A Randomized Trial." Submitted to <u>Diabetes Educator</u>, to be revised and resubmitted.

Daniel J. Grabo, Paul J. DiMuzio, John C. Kairys, Stephen E. McIlhenny, Albert G. Crawford, and Charles J. Yeo. "Have Endovascular Procedures Negatively Impacted General Surgery Training?" <u>Annals of Surgery</u>, 2007,246,3 (September):472-480.

Carter R. Coberley, Matthew McGinnis, Patty M. Orr, Sadie S. Coberley, Adam Hobgood, Brent Hamar, Bill Gandy, James Pope, Laurel Hudson, Pam Hara, Dexter Shurney, Janice L. Clarke, Albert Crawford, and Neil I. Goldfarb. "Association Between Frequency of Telephonic Contact and Clinical Testing for a Large, Geographically Diverse Diabetes Disease Management Population." <u>Disease Management</u>, 2007,10,2(April):101-109.

Patty M. Orr, Matthew A. McGinnis, Laurel R. Hudson, Sadie S. Coberley, Albert Crawford, Janice L. Clarke, and Neil I. Goldfarb. "A Focused Telephonic Nursing Intervention Delivers Improved Adherence to A1c Testing." <u>Disease Management</u>, 2006,9,5(October):277-283.

James M. Gill, Peter Fleischut, Scott Haas, Brian Pellini, Albert Crawford, and David B. Nash.

"Use of Antibiotics for Adult Upper Respiratory Infections in Outpatient Settings: a National Ambulatory Network Study." Family Medicine, 2006,38,5(May);349-354.

Laurel R. Hudson, G. Brent Hamar, Patty Orr, Jeffrey H. Johnson, Amy Neftzger, William M. Gandy, Albert Crawford, Janice Clarke, Neil I. Goldfarb. "Remote Physiological Monitoring: Clinical, Financial, and Behavioral Outcomes in a Heart Failure Population." <u>Disease Management</u>, 2005,8,6(December);372-381.

Albert G Crawford, Vanja Sikirica, Neil I. Goldfarb, Richard G. Popiel, Minal Patel, Cheng Wang, Jeffrey B. Chu, and David B. Nash. "Interactive Voice Response Reminder Effects on Preventive Service Utilization." <u>American Journal of Medical Quality</u>, 2005,20,6 (November/ December):329-336.

Crawford AG, Fuhr JP Jr., Clarke J, and Hubbs B. "The Comparative Effectiveness of Total Population versus Disease-Specific Neural Network Models in Predicting Medical Expenses." <u>Disease Management</u>, 2005;8:277-287.

LT Pizzi, JB Howell, CT Carter, NE Johnson, SM Vallow, AG Crawford, SM Walton, ED Frank. "Work Loss and Healthcare Utilization Among U.S. Employees with Chronic Non-Cancer Pain." <u>Disease Management</u> and Health Outcomes, 2005,3:201-208.

Albert G. Crawford, Joseph P. Fuhr, Jr., Bhaskar Rao. "Cost Benefit Analysis of Chlorhexidine Dressing in the Treatment of Catheter-Related Blood Stream Infections." <u>Infection Control and Hospital Epidemiology</u>, 2004;25,8:668-674.

Neil Goldfarb, Christine Weston, Christine W. Hartmann, Mirko Sikirica,

Albert G. Crawford, Hope He, Jamie Howell, Vittorio Maio, Janice Clarke, Bhaskar Nuthulaganti, Nicole Cobb. "Impact of Appropriate Pharmaceutical Therapy for Chronic Conditions on Direct Medical Costs and Workplace Productivity: A Review of the Literature." <u>Disease Management</u>, 2004;7,1:61-75.

Vittorio Maio, Dea Belazi, Neil I. Goldfarb, Amy L. Phillips, Albert G. Crawford. "Use and Effectiveness of Pharmacy Continuing-Education Materials." <u>American Journal of Health-System Pharmacy</u>, 2003; 60,16:1644-1649.

Albert G. Crawford, Neil Goldfarb, Reuel May, Kerry Moyer, Jayne Jones, David B. Nash. "Hospital Organizational Change and Financial Status: Costs and Outcomes of Care in Philadelphia." <u>American Journal of Medical Quality</u>, 2002;XVII,6(November/December): 236-241.

TK Girts, AG Crawford, NI Goldfarb, M Bachleda, A Grogg. "Predicting High Utilization of Emergency Department Services Among Patients with a Diagnosis of Psychosis in a Medicaid Managed Care Organization." <u>Disease Management</u>, 2002;V,4(Winter):189-196.

Janice Clarke, Albert Crawford, David B. Nash. "Evaluation of a Comprehensive Diabetes Disease Management Program: Progress in the Struggle for Sustained Behavior Change." <u>Disease Management</u>, 2002;V,2 (Summer):77-86.

DT Belazi, A Crawford, L Pizzi. "Impact of Direct to Consumer Advertising - The Consumer Search for Information." Value in Health, 2002; 5(3):133.

William Simon, Sharon Gates, Albert G. Crawford, Doreen Robinson. "Back School Relieves Patients' Pain." Pennsylvania Medicine, 1990;XCIII,1(January):40-44.

Frank F. Furstenberg, Jr., Albert G. Crawford, Douglass Strong. "What Happened When the Census Was Redone: An Analysis of the Recount of 1870 in Philadelphia." <u>Sociology and Social Research</u>, 1979;LXIII,3(April):475-505.

Frank F. Furstenberg, Jr., Albert G. Crawford. "Family Support: Helping Teenage Mothers to Cope." <u>Family Planning Perspectives</u>, 1978;X,6(November-December):322-333.

Abstracts, Presentations, Book Chapters, and Editorials:

Amy Talati, Jeanette Koran, and Albert G. Crawford. "Systematic Approaches to Preventing Errors in the Care of the Elderly." To be published in Christine Arenson, et al., Reichel's Care of the Elderly: Clinical Aspects of Aging. Hagerstown, MD: Lippincott, Williams, and Wilkins, 2008.

Sciamanna, CN, Adams SY, Breitbart RE, Crawford AG, Thier SL, Rimal RM, Lee JS, Janneck L. "Computer-tailored Messages in the Care of Type2 Diabetes." Poster presented at the Society of General Internal Medicine Annual Meeting: The Puzzle of Quality: Clinical, Educational, and Research Solutions, Toronto, April 25-28, 2007.

Daniel J. Grabo, Paul J. DiMuzio, John C. Kairys, Stephen E. McIlhenny, Albert G. Crawford, Charles J. Yeo. "Have

Endovascular Procedures Negatively Impacted General Surgery Training?" Presented at the American Surgery Association Meeting, Colorado Springs, CO, April 26-28, 2007.

Albert G. Crawford. "eHealth Standards: Create or Wait?" Presentation to the InterComponentWare Advisory Board Meeting, Philadelphia, December 1, 2006.

Albert G. Crawford. "Measuring Ambulatory Care Quality." Presented at "Information Mastery: Applying Evidence-Based Medicine in Daily Practice" Continuing Medical Education Program, Philadelphia College of Osteopathic Medicine, October 28, 2006.

Neil I. Goldfarb, Albert G. Crawford, Jeanette Koran, Howard Chapman, and David B. Nash. "Physician Engagement to Promote Ambulatory Quality and Safety Among the Jefferson University Physicians." Poster presented at the University HealthSystem Consortium 2006 Quality and Safety Fall Forum, Baltimore, October 11-13, 2006

Albert G. Crawford. "Ambulatory Information Technology," in David B. Nash, Editor. <u>Practicing Medicine in the 21st Century</u>. Jones and Bartlett, 2006.

Albert G. Crawford and Christopher N. Sciamanna. "Introduction" to "Case Studies on Medication Reconciliation"; also editors of the collection of case studies. <u>American Journal of Medical Quality</u>, 2006;21,5(September/October):291-292.

Albert G. Crawford and Howard Chapman. "Implementing SAS and Enterprise Guide to Enhance a Graduate Biostatistics Curriculum," Presented at the NorthEast SAS Users Group (NESUG) Meeting, Philadelphia, September 20, 2006.

Brenda Holtzer, Meg Johantgen, Jeanne Geiger-Brown, and Albert Crawford. "Factors Influencing Care Coordination for CSHCN," Presented at the AcademyHealth Child Health Services Research Meeting, Seattle, WA, June 24, 2006.

Albert G. Crawford. "Predictive Modeling" and "Disease Management Return on Investment," Presented at Segal's Technical Actuarial Meeting, Rye, New York, March 7, 2006.

Albert G. Crawford. "UHC's Clinical Quality Metrics Update and Quality Measure Pilot: Member Experiences" and "Member Quality Efforts in Ambulatory Care: Member Panel," Presented at the University HealthSystem Consortium Ambulatory Care and Group Practice Council Joint Meeting, San Francisco, February 2, 2006.

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Albert G. Crawford and Cecilia Roco. "Thomas Jefferson University Hospital and Jefferson University Physicians Department of Emergency Medicine Quality Measurement and Improvement Projects." <u>University Health System ED Update</u>, 2005.

Gregg Goldstein, Joseph Spiegel, Michael Gaslin, William Keane, Marc Rosen, Debra Tereschuk, Cecilia Roco, Albert Crawford, Howard Chapman. "Smoking Cessation Practices for Patients with Head and Neck Cancer," Presented at the

2005 American Academy of Otolaryngology Meeting.

Albert G. Crawford. Editorial: "Outpatient Healthcare Quality: Think Globally, Act Locally." <u>American Journal of Medical Quality</u>, 2005;20,5(September/October):233-234.

Jeffrey Clough, Al Crawford, and David B. Nash. "The Future of Economic Evaluation Within the United States." In: Jennifer Lofland and Laura Pizzi, Eds. <u>Economic Evaluation in U.S. Health Care: Principles and Applications:</u> 157-175. Boston: Jones & Bartlett Publishers, 2005.

Albert G. Crawford. Editorial: "Thoughts on Senator William H. Frist's *Health Care in the 21st Century.*" American Journal of Medical Quality, 2005;20,3(May/June):117-118.

Crawford AG, Roco C, Riggio J, Valko G, Goldfarb NI, and Nash DB. "Patient Education and Adherence and Hypertension Control in Two Academic Medical Center Primary Care Practices." Poster presentation at the Tenth Annual Meeting of the International Society for Pharmacoeconomics and Outcomes Research, May 16, 2005. Poster published as Crawford AG, Roco C, Riggio J, Valko G, Goldfarb NI, and Nash DB. "Patient Education and Adherence and Hypertension Control in Two Academic Medical Center Primary Care Practices." Value Health 2005;8:273.

V Sikirica, AG Crawford, NI Goldfarb, DB Nash, RG Popiel, M Patel, C Wang, JB Chu. "Outcomes of an Interactive Voice Response (IVR) Reminder System to Promote Managed Care Organization (MCO) Members' Attainment of Influenza Immunization." Poster presentation at the Ninth Annual Meeting of the International Society for Pharmacoeconomics and Outcomes Research, Arlington, VA, May 18, 2004.

M Sikirica, CW Hartmann, N Goldfarb, A Crawford, DB Nash. "Multi-Site Evaluation of Diabetes Disease Management Programs Using the Diabetes Management Evaluation Tool (DMET)," Presented at the Eighth Annual Meeting of the International Society for Pharmacoeconomics and Outcomes Research, Arlington, VA, May 21, 2003.

LT Pizzi, CT Carter, NE Johnson, JB Howell, SM Vallow, AG Crawford, SM Walton, ED Frank. "Work Loss and Healthcare Utilization Among U.S. Employees with Chronic Non-Cancer Pain." Presented at the Eighth Annual Meeting of the International Society for Pharmaco-economics and Outcomes Research, Arlington, VA, May 20, 2003.

TK Girts, A Crawford, N Goldfarb, A Grogg, M Schaffer. "Predicting High Utilization of Emergency Department Services among Patients with Psychiatric Diagnoses in a Medicaid Managed Care Organization." Presented at the Fourteenth Annual Academy of Managed Care Pharmacy Meeting and Showcase, Salt Lake City, Utah, April, 2002.

V Maio, JH Lofland, AG Crawford. "Evaluating the

Structure of Pharmacoeconomic Fellowship Programs." Presented at the Seventh Annual Meeting of the International Society for Pharmacoeconomics and Outcomes Research, May 21, 2002, Arlington, VA. Abstract published as: V Maio, JH Lofland, AG Crawford. "Evaluating the Structure of Pharmacoeconomic Fellowship Programs." Value in Health, 2002;5(3):224.

Albert G. Crawford, Bruce Orlandi. "Blue Plan Experience with a HCFA Audit." Presented at the Blue Cross Blue Shield Association HEDIS Conference, Denver, January 22, 1998.

Albert G. Crawford, Bruce Orlandi. "Blue Plan Experience with Medicare Measurement." Presented at the Blue Cross Blue Shield Association HEDIS Conference, Denver, January 23, 1998.

Albert G. Crawford. <u>Community Health Care Report</u> (annual book-length analysis of Philadelphia area health care utilization and cost trends). Philadelphia: Independence Blue Cross and Pennsylvania Blue Shield, 1991-1995.

Albert G. Crawford. "The Ambulatory Services Information System at Graduate Hospital." Presented at the Ninth International Congress of the European Federation for Medical Informatics, Glasgow, August, 1990.

Richard V. Riggs, Michael W. O'Dell, John Turner, Ceil Abrams, Albert G. Crawford. "Reliability of the Karnovsky Performance Scale in the HIV and AIDS Population." Presented at the Sixth International Conference on AIDS, San Francisco, June, 1990.

Bob Cort, Albert G. Crawford. "Tackling the Technology," in Patrick Abrami and Joyce Johnson, Eds. <u>Bringing Computers to the Bedside: Emerging Technology in Health Care Today</u>. New York: Springer Publishing Company and New England Health Care Assembly, 1990.

Ross Koppel, Albert G. Crawford, Bob Cort. "The Hospital Computer System Case: Dilemmas of Providing Immediate Access to Confidential Data," in Hal Salzman, ed. <u>Values in Software Design</u>, Bethesda, MD: National Science Foundation, Division of Instrumentation and Resources, Program: Ethics and Values Studies in Science, Technology and Society, 1990.

Albert G. Crawford, Bob Cort. "The Effects of an Electronic Medical Record on the Structure and Culture of a Hospital." Presented at the Sixth World Congress on Medical Informatics, Singapore, December, 1989.

Allison Young, Albert G. Crawford. "Using an Automated Referral System for Social Work." Presented at the Sixth World Congress on Medical Informatics, Singapore, December, 1989.

Allison Young, Albert G. Crawford. "The Potential for Reducing Length of Stay by Using a Computer-Based Surveillance System to Support Discharge Planning." Presented at the Eighth Annual National Congress of the American Association for Medical Systems and Informatics, San Francisco, May, 1989.

Charles Schaffer, Albert G. Crawford. "The MD-H&P, A Menu-Driven History and Physical Integrated Within a

Hospital Information System." Presented at the Eighth Annual National Congress of the American Association for Medical Systems and Informatics, San Francisco, May, 1989.

William Simon, Sharon Gates, Albert G. Crawford, Doreen Robinson. "The Graduate Hospital Back School: The First 100 Consecutive Cases." Presented at the Conference of the American Academy of Orthopaedic Surgery, Las Vegas, February, 1989.

Charles Schaffer, Albert G. Crawford. "Demonstration of the Menu-Driven History and Physical." Presented at the Symposium on Computers in Medical Education, Thomas Jefferson University, Philadelphia, October, 1988.

Allison Young and Albert G. Crawford. "A Computer-Based Surveillance System to Support Discharge Planning: An Implementation Within a Hospital Information System." Presented at the Twelfth Annual Symposium on Computer Applications in Medical Care, Washington, DC, October, 1988.

Sharon Gates, Janet Haberl, Albert G. Crawford. "Preparatory Instruction in Myelogram Outcomes: The Results of a Prospective Controlled Investigation of 30 Subjects." Presented at the Conference of the National Association of Orthopedic Nurses, Phoenix, May, 1988.

Albert G. Crawford, Elena Steencken, Ken Levitan. "Automating Rehabilitation Therapy Documentation." Presented at the Fourth Annual International Conference on Computerization of Medical Records, New York, April, 1988.

- Albert G. Crawford. "Social Support and Health in Elderly Populations." Presented at the Meeting of the Society for the Study of Social Problems, Philadelphia, March 27, 1983.
- Albert G. Crawford. "Methods of Studying Social Support and Health in Elderly Populations." Presented at the Second Annual Blueprints Conference, "Promoting Healthful Aging," sponsored by the Mid-Atlantic Long-Term Care Gerontology Center, Temple University, Philadelphia, March 17, 1983.
- Frank F. Furstenberg, Jr., Albert G. Crawford. "Teenage Pregnancy and Child Welfare," in Joan Laird and Ann Hartman, eds. <u>A Handbook of Child Welfare: Context, Knowledge, and Practice</u>. New York: The Free Press, 1982.
- Albert G. Crawford. "Toward a Theory of Social Support and Health." Presented at the Meeting of the American Sociological Association, Toronto, August 28, 1981.
- Albert G. Crawford. "Social Networks and Health in Lower Income Families," Presented at the Meeting of the Eastern Sociological Society, New York, March 20, 1981.
- Frank F. Furstenberg, Jr., Albert G. Crawford. "The Social Implications of Teenage Childbearing," in Peggy Smith and David Mumford, Eds. <u>Adolescent Pregnancy: Perspectives for the Health Professional</u>. Boston: G.K. Hall & Co., 1980. Albert G. Crawford, Rela G. Monson. <u>Academy and Community: A Study of the Jewish Identity and Involvement of Professors</u>. Philadelphia: American Jewish Committee,

Institute of Human Relations, 1980.