

TRUDY MILLARD KRAUSE, DrPH, MBA, CPHQ

SUMMARY

Associate professor at respected university and highly trained data scientist and healthcare professional with experience in health informatics, health data analysis, data modeling, development of algorithms and quality measures, big data research, clinical care, hospital administration, academic training, health plan and disease management accreditation and certification, quality assessment/performance improvement, outcomes analysis, and clinical effectiveness research with focus on population health and health policy

EDUCATION

Doctorate in Public Health, University of Texas School of Public Health, 1995: Occupational Health and Aerospace Medicine, and Behavioral Health

Masters of Management, Louisiana State University, 1986: Management

Bachelors of Science, University of Minnesota, 1976: Special Education, Art Therapy

CERTIFICATION

CPHQ: Certified Professional in HealthCare Quality

CORA: Certified Outcomes Research Analyst

CMS DVAA: Former CMS Data Validation Auditor

CHCA: Former HEDIS Compliance Auditor

ACADEMIA:

University of Texas School of Public Health: Associate Professor: Management, Policy and Community Health Division and the George McMillan Fleming Center for Healthcare Management: Management, Quality, Data Informatics, Comparative Outcomes Research, Occupational Health

Co-Director: Center for Health Care Data Research

Co-Director: BCBS UT Payment Systems and Policies Research Program

Course: Comparative Health Systems

Course: Healthcare Payment Systems and Policy

Course: Use of Administrative Claims Data For Healthcare Research

Course: History and Culture of Disease and Healing

EMPLOYMENT

***UNIVERSITY OF TEXAS SCHOOL OF PUBLIC HEALTH JANUARY 2010 -2014 Part Time, 2014 – PRESENT Full Time
Associate Professor Houston, Texas***

Serve as full faculty member in the Division of Management, Policy and Community Health, Co-Director of the Center for Health Care Data Research and member of the Fleming Institute for Professional Management and Policy at the School of Public Health, faculty requirements include the creation and teaching of a course entitled Healthcare Payment Systems and Policy, which focuses on various US healthcare policies and the impact of the Patient Affordability and Accountability Act. Creator and instructor of the course Use of

Administrative Claims Data in Healthcare Research.

Act as Co-Director of the Center for Health Care Data Research with responsibilities for data set development, data integrity, proposal development and research. Principal in the development of and certification of a CMS Qualified Entity within the Center. Led activities in transparency efforts in population health in collaboration with Texas Department of Insurance and CMS and the Center for Health Transparency.

DYNAMIC HEALTH STRATEGIES

NOVEMBER 1999 – OCTOBER 2014

Vice President, Analytics and Product Development

Houston, Texas

This health data company provided health informatics services related to health care outcomes and performance initiatives and activities to employer group health plans. Additionally, it provided audit, consultation, project management, public health initiatives, accreditation compliance, and health care research. Technology initiatives were related to complex data modeling, data analysis and data bases for use in performance and quality analysis of claims data, provider performance data, disease management, and other health initiatives.

- **Data Science**: Development of the HealthSpectiveSM, a data analytical tool that provides a comprehensive review of client performance in relation to adjusted benchmarks on over 120 measures of healthcare quality, population health, standards of care, cost, vendor performance, and return on investment.
- **Data Science**: Creation of clinical risk assessment data model and logic that utilizes administrative claims data, Health Risk Assessment data, biometrics, and other health and wellness data to identify individual clinical risk value, and risk stratification
- **Data Science**: Creation of data model to identify health plan members with identified diseases: chronic disease, congenital disease, or disease of extended duration and the corresponding severity level of disease
- **Data Science**: Creation of a scientific data logic to identify the financial return on investment for disease management programs as well as the clinical effectiveness of such programs
- **Data Science**: Development of products related to data analysis and data mining for quality assessments
- **Business Strategy**: Development of services related to HIPAA consulting, HIPAA assessment, and HIPAA compliance for providers and employer sponsored group health plans
- **Business Strategy**: Creation of a unique Health Status Survey that is web-based and integrated with data warehousing
- **Client Services**: **Consulting services for quality and performance measurement and reporting**
- **Client Services**: International consulting related to health services design and quality and performance
- **Client Services**: Audit functions for HEDIS Compliance for health plans and CMS Data Validation
- **Client Services**: Consulting related to HIPAA Privacy Readiness and Compliance
- **Client Services**: **Consulting related to URAC, NCQA, JCAHO, and CARF Accreditation**
- **Client Services**: **Consulting related to development and implementation of Disease Management programs and disease management data collection tools**
- **Quantitative and Qualitative Research**: Comprehensive data analysis of health indicators for group health plans and self insured employers
- **Quantitative and Qualitative Research**: Research activities related to clinical practice guidelines, medical evidence, outcomes, and quality and performance

HORNE CPA GROUP

APRIL 1999 - OCTOBER 1999

Senior Health Care Consultant

Houston, Texas

With complete responsibility for building the department of Outcomes Data Management within the Health Care Division of this consulting firm, I created a service line to meet the needs of physicians and health care entities to measure and promote clinical and performance outcomes.

- **Client Services:** Direct interaction with physicians and health care administrators to define research project, its objectives, process, and application
- **Quantitative and Qualitative Research:** Design of research elements; identification of scientifically valid instruments, survey protocol, data collection, and methodology
- **Quantitative and Qualitative Research** Applied statistical and biometric science to outcomes data analysis and reporting
- **Quantitative and Qualitative Research** Facilitate analysis of research results and application of findings to improvement of medical effectiveness or efficiency
- **Quantitative and Qualitative Research** Applied research results for leverage in medical economics: managed care contracting, differential reimbursement, disease management

OUTCOME STRATEGIES, INC

1997 - 1999

President and Chief Executive Officer

Houston, Texas

Six physician partners and I developed this company to apply interdisciplinary assessments and outcomes data to medical care decisions. Outcome Strategies, Inc., provided an outpatient medical rehabilitation program, outpatient rehabilitation services, and applied outcomes research in musculoskeletal disease to create a disease management process in advance of anticipated changes in the workers compensation market.

- **Accreditation and Certification:** Completed all requirements for CARF (Commission on Accreditation for Rehabilitation Facilities) accreditation process
- **Business Strategy:** Responsible for program design, development, implementation, and promotion, resulting in payer approval and support for an innovative spinal treatment outpatient medical rehabilitation program unlike any in the country
- **Business Strategy:** Developed disease management program for on-the-job musculoskeletal injuries consistent with outcomes-based algorithm
- **Quantitative and Qualitative Research:** Developed outcomes data management program for musculoskeletal disease that has been successfully applied within the company and supporting clinics, resulting in one of the nation's largest data bases on spine disease medical outcomes
- **Quantitative and Qualitative Research:** Utilized outcomes data to develop extensive, comprehensive treatment algorithm encompassing network of providers: primary care, occupational medicine, orthopedic surgeons, neurosurgeons, neurologists, chiropractors, physical therapists, pain specialists and others.
- **Quantitative and Qualitative Research:** Identified participants in provider network with philosophies consistent with algorithm in order to initiate contracting opportunities within workers compensation market

COLUMBIA/HCA

1993 - 1997

Director of Operations **1995-1997**
Spinal Treatment Evaluation Process and the Sports Medicine and Performance Institute
Texas Orthopedic Hospital, an affiliate of Columbia/HCA ***Houston, Texas***

The initial spinal rehabilitation program was developed with the support of Texas Orthopedic Hospital prior to its privatization in 1997. In this position, I was able to apply both my clinical training and my management skills in the creation, development and growth of a medical specialty service: The Spinal Treatment Evaluation Process. Additional responsibilities included operation of the wellness programs and fitness center as well as clinical research and design of outcome management services.

Vice President **1994-1995**
Spring Branch Medical Center, an affiliate of Columbia/HCA ***Houston, Texas***

As Vice President, I acted as a key member of the administrative team, responsible for the operations of two hospitals involved in a merger. I was directly responsible for one hospital, one satellite campus, one surgical center, office buildings, and many shared hospital and outpatient services, with total annual gross revenue of \$75 million, 175 FTE's

- **Administration and Management:** Served as key administrator to plan, direct, and oversee the acquisition of one hospital and merger with a medical center, resulting in the merger of services, merger of medical staffs, redistribution of staff, and repositioning of the new entity within the community
- **Administration and Management:** Responsible for physician relations in psychiatric services, rehabilitation services, occupational medicine, wound care, sleep and neurological disorders, and addictions.
- **Administration and Management:** Supervision of 300-400 employees
- **Administration and Management:** Revived occupational medicine department, increased client base by 65%, recruited medical director and nurse practitioner, implemented new billing process resulting in improved revenue stream and recouping \$400,000 in delinquent accounts receivable.
- **Administration and Management:** Directed transition of services from outdated facility to medical center facility over 8 months, allowing for maximum efficiency of resources, and resulting in eventual closure and sale of older property, as per merger plan and resulting in \$16 million savings in operational costs
- **Business Strategy:** Developed strategic plans for psychiatric services, rehabilitation services, occupational medicine department.
- **Business Strategy:** Created a mental health triage center within the Houston Columbia network to respond to psychiatric crises and emergency admissions or interventions.
- **Quantitative and Qualitative Research:** Implemented Improving Organization Performance activities including critical pathways that identified and contained unnecessary procedures or unnecessary hospital days, reducing average length of stay and maximizing reimbursement

CEO-Administrator **1993-1994**
HCA Belle Park Hospital, an affiliate of HCA ***Houston, Texas***

Responsible for operations of specialty hospital, specific challenges included positioning for managed care environment, development of Physician-Hospital Network (PHO), financial analysis and business plan to improve hospital performance. Gross revenues of \$8.4 million, 144 beds, 200 FTES

- Accreditation and Certification: Successfully completed Joint Commission on Accreditation of Health Care Organizations (JCAHO) survey with accommodation, demonstrating organizational compliance with standards of care and operation
- Administration and Management: Also served as interim administrator at HCA Gulf Pines Hospital for two months, covering administrative needs and administrative calls at both facilities.
- Administration and Management: Implemented Total Quality Management program
- Administration and Management: Positioned the facility for sale in HCA efforts to sell psychiatric hospitals. Prepared documents regarding the facility, its history, its services, its financial performance, etc.
- Business Strategy: Developed a PHO network with three other HCA psychiatric hospitals in Houston and the selected medical staff. Developed legal structure within committee, designed utilization computation formula used for capitation pricing strategy, recruited physicians and allied health professionals, developed centralized referral system
- Business Strategy: Developed strategic plan with potential facility buyers/investors to effectively position the facility in a changing market.
- Compliance: Reviewed contracts and alliance agreements to ensure compliance with revised state regulations
- Quantitative and Qualitative Research: Developed a mental health/psychiatric outcomes data instrument and computer program for data tracking and analysis to demonstrate effectiveness and efficiency of treatment for use in managed care contracting. Became model program within HCA psychiatric services.

CAMBRIDGE INTERNATIONAL

1989 - 1992

Administrator

1990-1992

Orchard Creek Hospital, an affiliate of Cambridge International Houston, Texas

Responsible for all operations and administration of small, specialty rural hospital. Demonstrated effective financial turn-around and increase in census through the development of new referral sources, contracting, and physician recruitment.

- Administration and Management: Increased hospital inpatient census overall from 10% occupancy to 50% occupancy through effective alliances, medical staff recruitment, marketing efforts, and new program development.
- Administration and Management: Negotiated managed care contracts for the first time for this facility
- Administration and Management: Implemented actions for compliance with Americans with Disabilities Act
- Administration and Management: Responsible for renovation efforts in aging rural facility
- Business Strategy: Contracted with state mental health agency to serve state patients in local area, resulting in increasing hospital inpatient census by 30%

PROFESSIONAL AFFILIATIONS:

American Public Health Association
National Association of Health Care Quality
American College of Occupational and Environmental Medicine

COMMUNITY COMMITTEE AND VOLUNTEER INVOLVEMENT:

Texas Department of Insurance Project on Transparency: 2013-2016
Center for Healthcare Transparency National Forum: October 2015
Center for Healthcare Transparency Employer Forum: May 2016
Center for Healthcare Transparency Physician Forum: September 2015
American Public Health Association Annual Meetings: 2010-2015
Scalable Collaborative Infrastructure for a Learning Health System: March 2015
National Summit on Health Care Price, Cost and Quality Transparency: April 2015
American Public Health Association Annual Meeting: November 2014
American Public Health Association Annual Meeting: November 2013
National Business Group on Health Annual Meeting: November 2013

PUBLICATIONS

- "Risk predictors for postcontrast acute kidney injury", Krause, TM, Ukhanova, M, Revere, FL, Finkel, KW, J Am Coll Radiol 2018, a 2018 American College of Radiology 1546-1440/18/\$36.00 n <https://doi.org/10.1016/j.jacr.2018.04.015>
- Rates for HEDIS Screening for Diabetic Nephropathy Quality Measure May Be Overstated Trudy Millard Krause, DrPH, Cecilia Ganduglia-Cazaban, MD DrPH, Kevin W. Finkel, MD, FACP, FASN, FCCM,, Managed Care, 2018
- "Comparison of utilization of urgent care and primary care 2011-2015", Krause, TM, Ganduglia-Cazaban, C, Piller, LB, Venkataraman, V, Family Medicine and Care, OAT Open Access Text, DOI: 10.15761/FMC.1000102, 04/16/2018
- "Access to Accredited Cancer Hospitals Within Federal Exchange Plans Under the Affordable Care Act", Kehl, K. L., Liao, K, Krause, T. M., Giordano, S. H., J Clin Oncol 35, 2017, American Society of Clinical Oncology, DOI 10.1200/JCO 2016.69.9835
- "Challenges in Healthcare Quality Transparency Efforts", Krause, T. M., Ganduglia-Cazaban, C., Journal of Health Care Finance, Fall 2016
- "Future expenditure risk of silent members: a statistical analysis", Krause, TM, Yay Donderici, E., Ganduglia Cazaban, C, BMC Health Services Research, (2016) 16:319, DOI 10.1186/s12913-016-1552-x
- "Price transparency and healthcare cost: an evaluation of commercial price variation for obstetrical services", Revere, F. L., Delgado, R. I., Yay Donderici, E., Krause, T. M., Swartz, M. D., Journal of Health Care Finance, Summer 2016
- "Private Carriers' Physician Payment Rates Compared With Medicare and Medicaid", Krause, TM, Ukhanova, M, Revere, F, Texas Medicine, June 2016: 112(6)e1
- "The English Origins of Thomas Millard of Boston and His Cousin, John Millard of Rehoboth", The NEHG Register: The Journal of American Genealogy, Summer 2015; 197-201
- "Revisiting the economic efficiencies of observation units". Abbass IM, Krause TM, Virani SS, Swint JM, Chan W, Franzini L. Manag Care. 2015 Mar;24(3):46-52. PubMed PMID: 25939196
- "Measuring Quality of Life Changes in Individuals with Chronic Low Back Conditions: A Back Education Program Evaluation", Evaluation and Program Planning, 25, 2002, 61-70

“Quality of Life Measurements”, Social Work in Medicine, March, 1999

“Outcomes Management Through A Spinal Treatment Evaluation Process”, Journal of Rehabilitation Outcomes, August 1997

“Case Management Through A Spinal Treatment Evaluation Process”, Journal of National Association of Orthopedic Nurses, April 1997

RESEARCH AND PRESENTATIONS

Dissertation: The Effects of 24-Hour Shifts on Circadian Rhythms and Chronobiology Among City of Houston Paramedics

Research: The Health of Texas

Research: Comparison of Urgent Care Centers and Primary Care Trends

Research: Silent Members in a Commercial Health Plan and Long Term Costs

Research: Provider Fee Schedules Comparison in Texas

Research: Hospital Readmissions in a Commercial Population

Research: Price Variation in Texas for Well Woman Services

Research: Mental Health Services for Uncontrolled Diabetics

Research: Integration of Mental Health Services with Medical Care

Research: RUC and Policy Implications of Changes in CPT Coding

Research: The Effect of Demographics on Quality of Life Outcomes

Research: Co-Morbidities Among Chronic Spinal Patients

Research: Locus of Control Among Chronic Spinal Patients

Research: Psychosocial Profile of Cervical Spine Patients as Compared to Lumbar Spine Patients

Research: Drug Seeking Behavior of Chronic Back Patients

Research: Quality of Life as an Outcome Measurement

Research: Effective Case Management for Spine Patients

Research: Psychological Predictors and Treatment Outcomes for Spinal Patients

Research: History of Abuse Among Chronic Back Pain Patients

Research: A Decision Model for Maximizing Outcomes in Spine Services

Research: Symptom Magnification With and Without Thought Disorders

Research: Desynchronization of Chronobiological Patterns Among EMS Workers

Research: Job Stress and Job Satisfaction Among EMS Workers

Presentation: RBRVS and the RUC The Processes Behind Physician Fee Schedules: September 2015: University of Texas Medical School, Houston TX

Presentation: Charge Transparency Validity: A Comparison of Data from the State and Federal Repositories of Hospital Charges for Texas in 2011: AcademyHealth's 2014 Annual Research Meeting (ARM), June 8-10 2014, San Diego California, Co-Author: Bobbie Kite, Ph.D

Presentation: "Accuracy in Reported Hospital Charge Data: Comparison of State and Federal Sources": 2014 Academy of Management Meeting, August 2014, Philadelphia, Pennsylvania, Co-Author: Bobbie Kite, Ph.D

Presentation: Webinar: Discriminating Benchmarks in Population Health: January 2014

Presentation: Webinar: Probability and Uncertainty- The Principles of Risk: March 2014

Presentation: Webinar: Disease Management Data and ROI: June 2014

Presentation: Advanced Data Analytics in Health and Wellness Benefits: July 2014, Houston, TX

Presentation: Cost of Care HEDIS Measures 2008, HRA Focus Panel Meeting, San Antonio, TX, December 2007

- Presentation: Update on HIPAA Privacy and Security for Health Plans, Houston, TX September 2007
- Presentation: Cost of Care Asthma, Diabetes, Back Pain, HEDIS Measures 2007, HRA Focus Panel Meeting, Las Vegas, NV, December 2006
- Presentation: Low Back Pain Standards of Care and HEDIS Measurement and Reporting, HRA Focus Panel Meeting, San Antonio, TX, November 2005
- Presentation: Clinical Interventions to Improve HEDIS Measures, HRA Focus Panel Meeting, New Orleans, December 2004
- Presentation: HEDIS Outcomes: Mental Health Measures, American Public Health Association, Washington, DC, November 2004
- Presentation: HIPAA for Employer Sponsored Group Health Plans, Workgroup for Electronic Data Interchange, May 2004, La Jolla, CA
- Presentation: HIPAA: Arab American Medical Association, September 2003, Houston, TX
- Presentation: HIPAA for Employers: Centers for Medicaid and Medicare, July 2003, New Orleans, LA
- Presentation: The Fuzzy Lines of HIPAA: Texas Gulf Coast Healthcare Quality Professionals Association, September 2002, Houston, TX
- Presentation: HIPAA Impact on Employers: Dallas Fort Worth Human Resources Managers, September 2002, Plano, TX
- Presentation: HIPAA Impact on Employers: Independence Blue Cross Annual Marketing/Sales Training, August 2002, Philadelphia, PA
- Presentation: HIPAA Impact on Employers: Workgroup for Electronic Data Interchange WEDI Annual Meeting, May 2002, Denver, CO
- Presentation: Employers as HIPAA Covered Entities: Greater Houston Partnership Privacy Conference, February 2002, Houston, TX
- Presentation: Lessons From the HEDIS Auditors, HIMSS Annual Conference, January 2002, Atlanta, GA
- Presentation: Outcomes to Prove and Improve, Pfizer Pharmaceuticals Seminar, December 2001, Richmond, VA
- Presentation: Management Response to Terrorism, Well City, Well Workplace, October 2001, Houston, TX
- Presentation: Employee Health Data Analysis, National Conference for The American Public Health Association, October 2001, Atlanta, GA
- Presentation: HIPAA for Social Work Management, National Conference for The American Public Health Association, October 2001, Atlanta, GA
- Presentation: Careers in Outcomes and Quality for Public Health Professionals, School of Public Health, April 2001, Houston, TX
- Presentation: Outcomes to Prove and Improve: Pfizer Pharmaceuticals Seminar, March, 2001, Houston, TX
- Presentation: Data Management Techniques, Pfizer Pharmaceuticals Seminar, March, 2001, Houston, TX
- Presentation: HIPAA Challenge: Houston Business Group on Health, February 2001, Houston, TX
- Presentation: Measuring Quality of Life Changes: Poster Presentation APHA (American Public Health Association) Annual Meeting, November 2000, Boston, MA
- Presentation: HIPAA: What You Need to Know: Gulf Coast MGMA (Medical Group Management Association), November, 2000, Houston, TX
- Presentation: HIPAA: Physician Alert: Harris County Medical Society, Houston, October 2000
- Presentation: Putting Outcomes to Work: The Practical Outcomes Researcher Workshop, Albuquerque, New Mexico, September 2000
- Presentation: Quality in Health Care: University of Texas School of Public Health Speaker Series, Houston, February 2000
- Presentation: Proving Quality in a Medical Practice: The Horne Health Care Group Workshop, Marriott Hotel, Houston, September 1999
- Presentation: Putting Outcomes To Work: The Practical Outcomes Researcher Workshop, Houston, April 1999
- Presentation: The Effect of Demographics on Quality of Life Outcomes, American Academy of Orthopaedic

Surgeons, Annual Meeting, Anaheim, CA, February 1999

Presentation: Drug Seeking Behavior of Chronic Back Patients, National

Organization of Orthopedic Nurses Annual Meeting, San Francisco, May 1998

Presentation: Video: Spinal Treatment Outcomes: Concept, Practice, and Results, American Academy of Orthopaedic Surgeons Annual Meeting, New Orleans, March, 1998, Award Winner

Presentation: Psychosocial Profile of Cervical Patients, Cervical Spine Society, Rancho Mirage, CA, December 1997

Presentation: Symptom Magnification With and Without Thought Disorders, North American Spine Society Annual Meeting, New York, November 1997: Poster

Presentation: Results of Patient Education on Inpatient Spine Surgery Outcomes, North American Spine Society Annual Meeting, New York, November, 1997: Poster

Presentation: Disease Specific Outcome Measures: Low Back, American Group Medical Association, Chicago, July 1997

Presentation: Disease Specific Outcome Measures: Spine, American Group Medical Association, San Diego, January 1997

Presentation: Case Management for Spine Patients, National Association of Orthopedic Nurses, New Orleans, November 1996

Presentation: Outcome Measures for Low Back Pain, American Group Medical Association, San Francisco, July 1996

Presentation: Preliminary Findings of the Spinal Treatment Evaluation Process, Houston, Texas, April 1996

Presentation: Spinal Treatment Evaluation Process: An Innovative Model for Spinal Treatment, Houston, Texas, January 1996

Presentation: The Effects of 24-Hour Shifts on Circadian Rhythms and Chronobiology Among City of Houston Paramedics, International Association of Chronobiology and Chronotherapeutics, Ferrara, Italy, September 1995

Presentations: HCA Management Skills Workshops: Tennessee, Louisiana, Florida, Texas, 1984-1986