## JACOB KRIVE, PhD

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College of Applied Health Sciences
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#### SUMMARY OF PROFESSIONAL and RESEARCH INTERESTS

Research: Research opportunities leading to breakthroughs in health outcomes, health economics, patient care quality, evidence-based medicine, and the national problem of delivering affordable accessible high-quality care. Cutting-edge research leading to partnership opportunities with thought leaders in academia and industry, as well as publications in the top-tier journals. Transition theory into practice utilizing current professional background and multidisciplinary skills, leading to significant gains in patient care effectiveness and efficiency to save lives, improve quality of life, and turn the troubled healthcare sector of the economy around. Focus on the following niches of biomedical informatics: health outcomes research, economics of health information systems, clinical & patient accounting documentation, patient data management, population health, and clinical/financial decision support.

<u>Professional</u>: Large visible healthcare-oriented technical, clinical, and operational projects leading to improvements in patient/drug safety, operational excellence, access to care, patient and physician/associate satisfaction, and quality of care. Projects and partnerships that require unique multidisciplinary combination of technical, analytical, business, management, clinical, operational, and academic skills to achieve successful outcomes and position the organization for growth, stability, and work environment that fosters achievement, care, and innovation.

#### ACADEMIC EXPERIENCE

#### 2013 - Present

#### UNIVERSITY OF ILLINOIS AT CHICAGO, Chicago, IL

# College of Applied Health Sciences, Department of Biomedical and Health Information Sciences

Clinical Assistant Professor

- Teach graduate level courses in clinical decision support systems, predictive analytics, healthcare computer networking & telecommunications, systems analysis & design, mobile health, healthcare project management, and information security.
- Design graduate curriculum in healthcare project management, networking and telecommunications, clinical decision support systems, security, research informatics, and process engineering.
- Perform cutting-edge research in the areas of biomedical informatics, clinical data management & documentation, health outcomes, and economics of healthcare information technology investments & management.
- Present and publish internationally.

#### **2013 – Present**

#### NOVA SOUTHEASTERN UNIVERSITY, Fort Lauderdale, FL

# School of Osteopathic Medicine, Department of Biomedical Informatics

Adjunct Assistant Professor and Course Director

- Design, manage, and teach graduate-level clinical decision support systems course.
- Mentor and coach students with professional and academic aspirations to become health informaticists, biomedical informatics researchers, and leaders in the healthcare information technology field.
- Co-founding faculty and curriculum design contributor for healthcare data analytics courses and the future healthcare analytics track of the biomedical informatics program.

- Perform cutting-edge research in the medical informatics economics, healthcare quality, clinical data analytics, and clinical/financial decision support subject areas.
- Publish and present research internationally.

#### 2005 - 2013

# UNIVERSITY OF MARYLAND UNIVERSITY COLLEGE, Adelphi, MD Graduate School of Management and Technology, MBA Program

Lead Faculty Assistant

- Assisted in teaching AMBA 660 Global Management course.
- Participated in the course design, management, and IT expertise dissemination and new faculty training activities.
- Mentored and coached business students in preparation for leadership careers.
- Participated in numerous research programs in the areas of online learning and competency development that led to several conference presentations and publications.

#### ACADEMIC PERFORMANCE AWARD

2016 – 'Golden Apple' outstanding faculty award from Nova Southeastern University's School of Osteopathic Medicine, Department of Biomedical Informatics

Faculty of the Year award selected by students' vote

#### PROFESSIONAL EXPERIENCE

#### **2016 – Present**

# IBM WATSON HEALTH, Chicago, IL

Senior Managing Consultant

- As a clinical business analyst, assist life sciences clients with defining and translating clinical, pharmaceutical, technology, and business requirements. Perform clinical, epidemiological, and pharmacovigilance translational research for internal and external IBM projects.
- As a data scientist, work with numerous data types, standards, and tools to unleash the power of secondary
  post-EMR clinical data to help identify new treatments, develop innovative drugs, effectively match
  patients to clinical trials, create new predictive and prescriptive analytics models, and visualize medical
  information.
- As a researcher and scientist, help generate new ideas and expand existing solutions in the healthcare cognitive and artificial intelligence engineering spaces.
- As a technical program manager and Watson Platform for Health component lead, head development of the medical research cloud solutions for life sciences, focusing on: (1) HIPAA and FDA Part 11 security standards & regulations (audit service), (2) clinical data ingestion, integration, and exchange via HL7 FHIR standard, and (3) performance management strategy and benchmarking.
- Work with a wide variety of tools, such as Tableau, Explorys Real World Evidence, Phytel care management, Bluemix, Spark, Watson Discovery Advisor, Watson for Clinical Trials, Watson for Oncology, Watson for Genomics, SPSS, ORadar, Guardium, and more.

#### 2015 - 2016

#### VALENCE HEALTH, Chicago, IL

Program Manager & Product Analyst – Big Data and Population Health Technology
Clinical software development in an Agile environment serving growing patient population management needs of 135 hospitals/health systems, 89,000 physicians, and 20 million patients. Clinical software engineering leader in charge of several complex technical and clinical innovations, with specific emphasis on the following products:

- <u>Big Data</u>: enterprise data warehouse (EDW) replatforming effort to transition from relational SQL Server to Hadoop database technologies. Includes new EMPI application design.
- EMR/ETL patient data acceptance, management, and analysis tools for population health.
- <u>Clinical Measures</u> development of the new innovative measures for effective management of patient populations.

- ICD-10 transition of all provider and payer products to the new documentation standard.
- <u>Clinical Quality, Health Outcomes, and Biomedical Informatics Research</u> documenting success in clinical software product development for the purpose of rapid translation of research into practice.
- <u>Integration</u> clinical quality measures and care management software products interoperability to deliver predictive and prescriptive analytics solutions to healthcare clients.
- <u>Client Portal</u> development of the new comprehensive web-based program to combine technical support, client management, documentation, clinical content, and other capabilities.
- <u>Member Matching & Master Patient Index</u>— new algorithms for fast and reliable linking of patient records in support of population health analytics: technical and leadership work using statistical, programming, and healthcare data skills. R for statistics and Duke engine for de-duplication.

#### 2003 - 2015

## ADVOCATE HEALTH CARE, Oak Brook, IL

Manager, Information Systems – Clinical Software Engineering, Integration & Analytics Other Positions: Project Manager, PMO; Manager, Information Systems – Financial and Decision Support Systems; Senior Systems Programmer

- Initiated and managed Advocate's combined clinical software engineering and systems integration program. Focus on the following areas: population health management, predictive analytics, master data management (MDM) & enterprise master patient index (EMPI), patient/provider & employee portals, healthcare enterprise data warehouse, business and clinical intelligence, decision support, health information exchanges (HIE), interfaces and interoperability.
- Strategized and operationalized population health and predictive analytics models that rely on data delivery and integration from a large variety of sources feeding cloud-based analytics engine.
- Developed data governance strategy for MDM/EMPI and workforce management platform.
- Linked core components of the population health strategy via integration services that included management of 800+ interfaces, adding new sources and business entities, and providing services across the enterprise regardless of technologies employed by individual units of the organization.
- Designed, promoted, and built a \$4.3 million integrated workforce management platform that incorporates powerful Time & Attendance and Staffing & Scheduling products that serve 36,000 associates and represent the largest healthcare workforce architecture to date.
- Managed global enterprise projects of the utmost importance to the organization, such as \$13 million Security Command Center and \$7.5 million Infant Security & Protection System.
- Fostered enhanced partnership and collaboration between nursing, administration, and technology areas through mutually beneficial technology management and implementation initiatives. This partnership produced tangible outcomes in the areas of productivity, lean business process engineering, overtime reduction, and low agency staffing utilization. It also led to implementation of an aggressive road map incorporating new projects in the clinical and non-clinical areas.
- Managed implementation of \$3.3 million decision support system with budgeting, contract
  management, strategic patient volume and cost analysis, productivity, and business intelligence
  software modules.
- Managed clinical systems interface programming team and led the \$1.3 million effort of replacing legacy application with more modern HL7 Intersystems Ensemble data integration solution.
- Effectively delivered complex technologies to customers utilizing small teams of highly qualified professionals, on time and within budget.
- Responsible for numerous technological, project management, and customer service innovations
  that are featured at conferences and in publications.
- Past Unix and Windows systems architecture experience. OS/hardware focus: IBM/AIX, Sun/Solaris, HP/UX, backups, business continuity and disaster recovery. Software focus: Lawson ERP suite, WebSphere, BMC Patrol, TSM, Oracle, SQL Server, Sybase, Cache, DB2.

1999 - 2003

# TEK SYSTEMS CORPORATION, Rolling Meadows, IL List of Clients:

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#### NEWARK ELECTRONICS, Chicago, IL

Senior Systems Architect/Project Manager/Consultant

- Led architecture and design of the highly available clustered systems intended for mission-critical use in the E-Commerce and B2B applications environment.
- Advised on systems security and consolidation issues. Consulted application developers and database administrators on a variety of project implementations. Resolved network problems.

# HEALTH CARE SERVICES CORPORATION, Chicago, IL

(Blue Cross Blue Shield of Illinois)

Senior Systems Architect/Project Manager/Consultant

- Provided full project life cycle management services, including project definition, cost estimates, scheduling, systems architecture and design, implementation, and evaluation.
- Advised on a variety of information technology issues, financial risks versus benefits analysis. Presented ROI models for technical projects to the upper management.
- Led in hardware and software selection processes, vendor negotiations, and technology evaluation. Addressed technology integration issues and their impact on the enterprise environment.
- Evaluated and updated change management procedures.
- Designed and managed Unix-based systems that included 100+ AIX, Sun and SCO servers. Maintained SQL and DB2 databases on Unix and Windows platforms. Project base included Customer Relations, E-Commerce, Marketing, E-Directory, FTP and Networking, etc.

#### UNITED AIRLINES CORPORATION, Chicago, IL

Senior Systems Architect/Project Manager/Consultant

- Designed complex Unix and Windows based systems for several multi-million dollar projects in a large distributed environment. Examples of the projects include Electronic Procurement, corporate Intranet and Internet access systems, internal Web based information databases, customer information databases, compensation management, payroll processing, United Cargo systems management, Mileage Plus, etc.
- Advised on budget allocation issues within the Information Technology division. Evaluated financial risks and long-term impacts of technology investments.
- Participated in the assessments of support agreement contracts across different functional organizations.
   Addressed issues and risks associated with supporting newly added systems. Advised in the process improvement procedures.
- Worked closely with vendors to provide 99.9% and higher availability solutions for projects. Used several
  software and hardware redundancy solutions to support such architectures. Software packages included HP
  MC/Service Guard, HP Port Aggregation, IBM HACMP, Veritas, EMC, etc.
- Implemented, upgraded, and supported Internet systems of critical importance to the company's operations. Projects included Internet systems (United Reservations, United.com, Unitedcargo.com, & Unitedvacations.com) and Intranet applications (Skynet, internal reservations Web List database, HR, benefits, & Information Services division web pages). Applications used included Iplanet Application Server, Iplanet LDAP Server, IBM WebSphere, Apache, Web Logic, JRUN, Perl, C++, along with many more.
- Participated in computer security decision-making process, along with other teams. Examples include firewalls, proxy servers, LAN design, Unix software (Sendmail, Secure Mail, CA Access Control, HP Trusted systems, etc).

#### COMDISCO CORPORATION, Rosemont, IL

Senior Consultant/Project Manager

• Led a team of engineers in providing consulting and technical support for a new, distributed architecture project. Provided Unix technical support for HP and Sun Solaris servers.

- Assisted in planning and implementation of the large data center move from Minnesota to Illinois. Led in hardware, software, and space planning. Provided schedule and costs tracking, negotiated with vendors, and trained junior team members and operations supervisors.
- Evaluated current environment and advised management of ways to improve it by adding new technology and reducing overall maintenance and systems management costs. Provided comprehensive information regarding financial and strategic risks of investing or not investing in the new technology.
- Planned, designed and implemented new complicated distributed systems for the Internet Service Providing and Web hosting solutions.
- Worked closely with DBAs to provide Oracle and Sybase support to all internal and external clients. Application base included Sybase 11 and 12, Oracle Server 7.x and 8.x, Oracle Financials, Oracle Parallel Server, EMC Time Finder, etc. Helped to set up and maintain a highly available database environment.
- Built HP Open View network and applications monitoring Unix server from the ground up, including
  programming of applications, events and traps. Also used the Web interfaces and incorporated BMC Patrol
  and Best/1 products into the architecture. Worked with an array of HP Openview products, including
  Network Node Manager, OmniBack, Glance Plus, Measure Ware, ITO, ITA, etc.

#### 1998 - 1999

# DATA PROCESSING RESOURCES CORPORATION, Chicago, IL

**List of Clients:** 

# CNA INSURANCE CORPORATION, Chicago, IL

Senior Consultant

- Effectively managed technical projects in the systems and network administration areas. Tasks included, but were not limited to budgeting, planning, scheduling; project costs, vendor negotiations and labor costs; project implementation and evaluation.
- Provided third level technical support for all critical and development systems in the Unix environment. This included HP, AIX, and Sun production systems support, as well as applications development.
- Changed, created, and updated technical procedures and policies to match the latest industry standards.

## SPIEGEL CORPORATION, Westmont, IL

Project Leader/Consultant

- Managed a multi-million dollars project of installation and implementation of the new merchandise management system. Advised in budget allocation, vendor selection, cost effectiveness and systems architecture processes. Addressed technical capacity issues.
- Successfully implemented technology that reduced overall spending on maintenance and usage with critical business applications.
- Led systems installation and administration activities including AIX and Sun Solaris support on all levels, TCP/IP configuration, and network architecture.

#### 1998

#### IBM GLOBAL SERVICES, Schaumburg, IL

Senior Systems Integration Specialist

- Led in providing Unix systems and network support for the large international E-Commerce project.
- Coordinated Web based design activities for the corporate Intranet. Participated in the process of planning and designing of firewalls.
- Communicated with other technical leaders across the organization to find the best possible technical solutions in a large enterprise environment.
- Led in planning and implementation of the disaster recovery procedures. Provided support for the infrastructure and external clients.

#### 1996 - 1998

#### LOCKHEED MARTIN AIR TRAFFIC CONTROL, Rockville, MD

Associate Software Engineer

• Designed, implemented, and supported real-time Air Traffic Control infrastructure for FAA (includes most major airports nationwide) and several other countries around the world.

- Received numerous corporate awards for different implementations, project completions, and innovations.
- Coordinated activities focused on improving existing and coming up with new architectures across local functional organizations and external clients. External clients included many officials and technical leaders across the globe responsible for maintaining safe and reliable air traffic control operations.
- Actively participated in a continuous business and technical process improvement, including ISO 9000.

#### FORMAL EDUCATION

# 2013 NOVA SOUTHEASTERN UNIVERSITY, Fort Lauderdale, FL

#### Doctor of Philosophy (PhD) in Information Systems & Biomedical Informatics

Specialization: Biomedical Informatics

Dissertation Topic: "Effectiveness of Evidence-Based CPOE Medication Order Sets Measured by

Health Outcomes".

GPA: 3.97

# 2006 UNIVERSITY OF MARYLAND UNIVERSITY COLLEGE, Adelphi, MD

Master of Science in Management Information Systems

GPA: 4.0

# 2005 UNIVERSITY OF MARYLAND UNIVERSITY COLLEGE, Adelphi, MD

Master of Business Administration

GPA: 4.0

# 2002 UNIVERSITY OF MARYLAND UNIVERSITY COLLEGE, Adelphi, MD

Bachelor of Science in Management Studies and Computer Studies

GPA: 3.5

ACADEMIC HONORS: Upsilon Pi Epsilon (2008), Phi Kappa Phi (2006), Annual Dean's List

(2001/2002)

**PROFESSIONAL ASSOCIATIONS:** Association for Computing Machinery (ACM)

Institute of Electrical and Electronics Engineers (IEEE)

American Medical Informatics Association (AMIA)

Healthcare Information & Management Systems Society (HIMSS)

Scottsdale Institute

Institute for Healthcare Improvement (IHI)

Healthcare Technology Research Alliance & Council (HTRAC)

#### PROFESSIONAL SERVICE AWARDS:

**2017** – **IBM Lab Service Award** in the **Client Success** category for innovation and designing healthcare industry's first HIPAA and FDA Part 11 compliant audit service for logging and monitoring activity in the medical research cloud.

**2013** – **Advocate Health Care MVP Award** for **Partnership** with administrators and clinicians to design the healthcare provider industry's largest fully integrated workforce management system.

1998 – Lockheed Martin Mission Success Award for innovation, design, and delivery of the firewall and data integration solutions for air traffic control systems.

# JOURNAL AND BOOK PUBLICATIONS

- Krive, J., Hendrickx, A., & Godar, T. (2016). Resolving disconnected patient records to support patient care and population health. *Online Journal of Public Health Informatics*, 8(1), e130.
- Krive, J. (2016). Six Sigma applicability and implementation in healthcare. In A. Ortenblad, R. Sheaff, & C. Abrahamson Lofstrom (Eds.), *Management innovations for healthcare organizations*. Oxford, United Kingdom: Routledge. ISBN-10: 1138825697. ISBN-13: 978-1138825697.
- Krive, J., Mahatkumar, P., Gehm, L., Mackey, M., Kulstad, E., Li, J., Lussier, Y.A., & Boyd, A.D. (2015). The complexity and challenges of the ICD-9-CM to ICD-10-CM transition in emergency departments. *American Journal of Emergency Medicine*, *33*(5), 713-718.
- Krive, J., Shoolin, J.S., & Zink, S.D. (2015). Effectiveness of evidence-based pneumonia CPOE order sets measured by health outcomes. *Online Journal of Public Health Informatics*, 7(2). Open access: <a href="http://ojphi.org/ojs/index.php/ojphi/article/view/5527">http://ojphi.org/ojs/index.php/ojphi/article/view/5527</a>
- Krive J. (2014). Health Infonomics: The Changing Landscape of Health Information Technology (HIT) and the Factors Driving HIT Investment and Measurement. *Austin Journal of Computational Biology and Bioinformatics*, *1*(2), 2-3. Open access: <a href="http://austinpublishinggroup.com/computational-biology-bioinformatics/fulltext/ajcbb-v1-id1007.php">http://austinpublishinggroup.com/computational-biology-bioinformatics/fulltext/ajcbb-v1-id1007.php</a>
- Krive, J. (2013). Building effective workforce management practices through shared governance and technology systems integration. *Nursing Economics*, 31(5), 231-236.
- Krive, J. (2007). The use of open source software in enterprise distributed computing environments. In J. Feller, B. Fitzgerald, W. Scacchi, A. Silitti (Eds.), *Open Source Development, Adoption and Innovation*, 277-282. New York, USA: Springer. ISBN-13: 978-1-4419-4439-9. DOI: 10.1007/978-0-387-72486-7 28

# CONFERENCE PRESENTATIONS & PUBLICATIONS, INVITED TALKS

- Krive, J. (2016). Healthcare big data research opportunities through the prisms of economics, health outcomes, and bioethics. 2<sup>nd</sup> Annual Third Coast Biomedical and Health Informatics Consortium: Big Data Workshop, University of Wisconsin, Milwaukee, United States of America, <a href="http://www.bighealthdata.org">http://www.bighealthdata.org</a>
- Krive, J. (2016). Patient care index as an all-inclusive predictor of health information technology performance. *IEEE International Conference on Healthcare Informatics, Chicago, Illinois, United States of America, http://www.ieee-ichi.org*
- Krive, M., & Krive, J. (2016). Opportunities for analytical and cognitive technology innovation in cardiac oncology. *Global Cardio-Oncology Summit 2016, Vancouver, Canada, http://cardiaconcology.ca/current-conference/*
- Swirsky, E. S., Krive, J., & Brauner, D. (2016). Data wars: the ethical conundra arising from the use of health information. 18<sup>th</sup> Annual Meeting of the American Society for Bioethics and Humanity, Washington, DC, United States of America, <a href="http://asbh.org/annual-meeting/bioethics-humanities-meeting">http://asbh.org/annual-meeting/bioethics-humanities-meeting</a>
- Krive, J. (2016). Tailoring project management curriculum to an emerging niche field. 32<sup>nd</sup> Distance Teaching and Learning Conference, Madison, Wisconsin, United States of America, <a href="https://dtlconference.wisc.edu">https://dtlconference.wisc.edu</a>
- Krive, J. (2016). Effectiveness of academic online learning environments: Enhanced experience through live interaction. 8<sup>th</sup> Annual International Conference on Education and New Learning Technologies EDULEARN'16, Barcelona, Spain, <a href="http://iated.org/edulearn/">http://iated.org/edulearn/</a>
- Krive, J. (2016). New trends in healthcare economics and data analytics. Lecture for current and prospective Valence Health clients, Chicago, Illinois, United States of America, http://www.valencehealth.com

Krive, J. (2016). Challenges and complexity of ICD-10 transition: Post-implementation risk management. *January Meeting of the Healthcare Financial Management Association (HFMA) South Dakota Chapter, Chamberlain, South Dakota, United States of America.* 

- Krive, J. (2016). Trends in healthcare analytics, population health, and economics of health information technology investment. *January Meeting of the Healthcare Financial Management Association (HFMA) South Dakota Chapter, Chamberlain, South Dakota, United States of America.*
- Krive, J., Hendrickx, A., & Godar, T. (2015). Resolving disconnected patient records to support patient care and population health. *Proceedings of the 14<sup>th</sup> International Society for Disease Surveillance Conference, Denver, CO, United States of America, <a href="http://www.syndromic.org/annual-conference/2015-isds-conference">http://www.syndromic.org/annual-conference/2015-isds-conference</a>.*
- Krive, J., & Eggleston, M. (2015). Population health management and patient privacy: Unique patient identification. Health Technology Research Alliance & Council's Secure Health Summit, Hot Springs, VA, United States of America, <a href="http://htracnov2015.htrac.org">http://htracnov2015.htrac.org</a>
- Krive, J. (2015). ICD-10 post implementation risk management. *Health Technology Research Alliance & Council's Secure Health Summit, Hot Springs, VA, United States of America, http://htracnov2015.htrac.org*
- Krive, J., Shoolin, J. S., & Zink, S. D. (2015). Effectiveness of evidence-based venous thromboembolism (VTE) CPOE order sets measured by health outcomes. *University of Illinois at Chicago College of Applied Health Sciences Research Day, Chicago, IL, United States of America*.
- Krive, J. (2015). Health infonomics as a framework for making smart health information technology decisions. University of Illinois at Chicago College of Applied Health Sciences Research Day, Chicago, IL, United States of America.
- Krive, J., Shoolin, J. S., & Zink, S. D. (2015). Effectiveness of evidence-based venous thromboembolism electronic order sets measured by health outcomes. Proceedings of the *IEEE/EMB International Conference on Biomedical and Health Informatics, Haikou, China, http://icbhi.org*
- Krive, J. (2015). Aligning online graduate curriculum with a rapidly evolving niche field. 31<sup>st</sup> Distance Teaching and Learning Conference, Madison, Wisconsin, United States of America, <a href="https://dtlconference.wisc.edu">https://dtlconference.wisc.edu</a>
- Krive, J. (2015). Patient outcomes as transformative mechanisms to bring health information technology industry and research informatics closer together. *Proceedings of the 15<sup>th</sup> World Congress on Health and Biomedical Informatics*, 216, 410, Sao Paulo, Brazil, http://www.medinfo2015.org
- Krive, J. (2015). Complexity and challenges of ICD-10 transition. Lecture for current and prospective Valence Health clients, Chicago, Illinois, United States of America, http://www.valencehealth.com
- Krive, J. (2015). Population health data management strategies: Analytics and clinical informatics. *Health Technology Research Alliance & Council Meeting, Gettysburg, PA, United States of America, http://htracjune2015.htrac.org*
- Krive, J. (2015). Data quality in health outcomes and biomedical informatics research. University of Illinois College of Medicine, Chicago, IL, United States of America, <a href="http://www.medicine.uic.edu">http://www.medicine.uic.edu</a>
- Krive, J. (2015). Student experience transformation in the online learning environment supported by live lectures and office hours. 7<sup>th</sup> International Conference on Education and New Learning Technologies EDULEARN'15, Barcelona, Spain, http://iated.org/edulearn/
- Krive, J. (2015). Evolution of asynchronous discussion based online graduate courses to comprehensive student experience with live instruction components. 9<sup>th</sup> International Technology, Education, and Development Conference INTED2015, Madrid, Spain, <a href="http://www.iated.org/inted">http://www.iated.org/inted</a>

- Chair/Moderator: Harris, J. & Rumsey, D. (2015). Pediatricians Pioneer Population Healthcare Approaches.

  Healthcare Information Management and Systems Society Annual Conference, Chicago, Illinois, United States of America.
- Krive, J., Shoolin, J.S., & Zink, S.D. (2014). Effectiveness of evidence-based congestive heart failure (CHF) CPOE order sets measured by health outcomes. *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium, Washington, DC, United States of America, 815-824, http://knowledge.amia.org*
- Krive, J., Cole, J., Mierzwa, S., Beighe, B., Mason, P. (2014). Population vs. personalized health tools and strategies to find the right balance. *East Health Technology Research Alliance & Council Meeting, Leesburg, VA, United States of America, http://east2014.htrac.org/*
- Krive, J. (2014). Key strategies for population health management and research. East Health Technology
  Research Alliance & Council Meeting, Leesburg, VA, United States of America, http://east2014.htrac.org/
- Krive, J. & Kerfoot, K. (2014). Clinical outcomes in the era of accountable care organizations (ACO). API Healthcare / GE Healthcare Client Forum in Milwaukee, Wisconsin, United States of America.
- Krive, J. & Snegur, M. (2014). Reporting governance. API Healthcare / GE Healthcare Client Forum in Milwaukee, Wisconsin, United States of America.
- Chair/Moderator/Contributor: Levy, B. (2014). Leveraging analytics to capture the full benefit of ICD-10. Healthcare Information Management and Systems Society Annual Conference, Orlando, Florida, United States of America.
- Chair/Moderator: Kochendorfer, K. (2014). Using clinical decision support and knowledge management in healthcare settings. *Healthcare Information Management and Systems Society Annual Conference, Orlando, Florida, United States of America.*
- Krive, J. (2013). Measuring success: Demonstrating clinical and business outcomes of IT initiatives. *Washington Health Technology Research Alliance & Council Meeting, Washington, DC, United States of America*, http://htrac.org/council-meeting/november-2013
- Krive, J. (2013). How informatics is changing decision support today and will revolutionize healthcare tomorrow. *Washington Health Technology Research & Council Meeting, Washington, DC, United States of America*, http://htrac.org/council-meeting/november-2013
- Krive, J. (2013). Building effective workforce management practices through shared governance and integration. API Healthcare Client Forum in Milwaukee, Wisconsin, United States of America.
- Krive, J. (2013). Innovation in healthcare information technology project management: Improving efficiency and effectiveness. *Chicago HealthTech Council Meeting, Itasca, Illinois, United States of America*, <a href="http://www.healthtechcouncil.org/index.php/council-meeting/april-2013">http://www.healthtechcouncil.org/index.php/council-meeting/april-2013</a>
- Chair/Moderator/Contributor: Nelson, M. & Rolf, E. (2013). Mitigating fraud risk for payers. *Healthcare Information Management and Systems Society Annual Conference, New Orleans, Louisiana, United States of America*.
- Chair/Moderator: Waldren, S. & Boerger, G. (2013). Improving outcomes with benchmarking data: The AAFP's clinical data repository. *Healthcare Information Management and Systems Society Annual Conference, New Orleans, Louisiana, United States of America.*

- Krive, J. (2012). Effectiveness of evidence-based CPOE medication order sets measured by health outcomes.

  Advocate Research and Innovation Forum, Advocate Lutheran General Hospital in Park Ridge, Illinois,
  United States of America,

  <a href="http://www.advocatehealth.com/documents/clinicalresearch/poster/2012researchposter005.pdf">http://www.advocatehealth.com/documents/clinicalresearch/poster/2012researchposter005.pdf</a>
- Krive, J. (2012). Migrating from v.6 to v.9 A client's perspective (AdvocateWorks workforce management platform implementation story). API Healthcare Client Forum in Milwaukee, Wisconsin, United States of America.
- Bliss, J., Ross, J., Krive, J., Backhous, W., & Graul, L. A. (2008). Competency-based active learning: is your faculty on-board? Research applications in active learning. *Proceedings of the 14th Annual Sloan-C International Conference on Online Learning in Orlando, Florida, United States of America, http://sloanconsortium.org/*
- Bliss, J., Ross, J., Krive, J., & Graul, L. A. (2008). Competency development in online business learning environments MBA program, University of Maryland University College (UMUC). Proceedings of the International Conference of Education, Research, and Innovation ICERI'08 in Madrid, Spain, <a href="http://www.iated.org/iceri2008/">http://www.iated.org/iceri2008/</a>
- Krive, J. (2007). The use of open source software in enterprise distributed computing environments: A decision-making framework for OSS selection and planning. *Proceedings of the Third International Conference on Open Source Systems OSS'07*, *Limerick, Ireland*, 277-282.
- Krive, J., Graul, L.A., Bliss, J., & Ross, J. (2007). Competency development in blended and online business learning environments. *Proceedings of the 13th Annual Sloan-C International Conference on Online Learning in Orlando, Florida, United States of America, http://sloanconsortium.org/*

# CLINICAL RESEARCH/TRIAL

Agency: Advocate Health Care Protocol Number: 5038

Primary Investigator: Jacob Krive

Title: Effectiveness of evidence-based CPOE medication order sets measured by health outcomes

#### PROFESSIONAL CERTIFICATIONS

Certified Professional in Healthcare Information Management and Systems (CPHIMS) certification from Healthcare Information Management and Systems Society (HIMSS)

Lean Six Sigma Green Belt certification from Purdue University

# SERVICE TO ACADEMIC AND PROFESSIONAL COMMUNITIES

# Physician Board Exam Item Writing:

American Medical Informatics Association (AMIA) / American Board of Preventive Medicine (ABPM) Item Writer – Clinical Informatics Subspecialty Board Examination

# Peer Reviews:

2017 BMJ Open manuscript reviewer.

2016 International Journal of Clinical Practice manuscript reviewer.

- 2016 American Medical Informatics Association (AMIA) Annual Symposium, Chicago, Illinois, United States of America.
- 2016 Online Journal of Public Health Informatics (OJPHI) manuscript reviewer (several manuscripts).
- 2016 International Journal of Healthcare Technology and Management (IJHTM) by Inderscience manuscript reviewer.
- 2016 Healthcare Information Management and Systems Society Annual Conference, Chicago, Illinois, United Stated of America. Clinical and Business Intelligence track.
- 2015 Netherlands Organization for Health Research and Development TOP science grant reviewer.
- 2015 Peer reviewer for Generating Evidence and Methods to Improve Patient Outcomes (eGEMs), the Electronic Data Methods (EDM) Forum's journal.
- 2015 American Medical Informatics Association (AMIA) Annual Symposium, San Francisco, California, United States of America.
- 2015 Healthcare Information Management and Systems Society Annual Conference, Chicago, Illinois, United Stated of America. Clinical and Business Intelligence track.
- 2014 American Medical Informatics Association (AMIA) Annual Symposium, Washington, DC, United States of America.
- 2014 20<sup>th</sup> Americas Conference on Information Systems (AMCIS), Savannah, Georgia, United States of America. Healthcare Information Systems and Technology track.
- 2014 Academy of International Business Annual Conference, Vancouver, Canada. Innovation and Knowledge Management, International Business Research Methodology tracks.
- 2014 Healthcare Information Management and Systems Society Annual Conference, Orlando, Florida, United Stated of America. Clinical and Business Intelligence track.
- 2013 Academy of International Business Southeast USA Conference, Atlanta, Georgia, United States of America. International Business Research track.
- 2013 Academy of International Business Annual Conference, Istanbul, Turkey. Innovation and Knowledge Management track.
- 2013 Healthcare Information Management and Systems Society Annual Conference, New Orleans, Louisiana, United Stated of America. Financial Information Systems and Business Operations Optimization track.
- 2012 Academy of International Business Southeast USA Conference, Fort Lauderdale, Florida, United States of America. Innovation and Knowledge Management, Emerging Markets tracks.
- 2012 Academy of International Business Annual Conference, Washington, DC, United States of America. Innovation and Knowledge Management track.
- 2011 Academy of International Business Annual Conference, Nagoya, Japan. Innovation and Knowledge Management track.
- 2010 Academy of International Business Annual Conference, Rio de Janeiro, Brazil. Innovation and Knowledge Management track.

# PUBLIC RELATIONS/MEDIA EXPOSURE

#### Ambassador, Health Technology Research Alliance & Council (Ongoing)

http://htrac.org/ambassador

Ongoing

Serve as a council member, subject matter expert & industry insider, and researcher - to help collect, analyze, and disseminate health information technology knowledge. Consult on a wide range of topics and help grow awareness about the Council among researchers and practitioners in the field.

# Healthcare Finance News (September 2013)

"Cut Labor Costs with Smarter Scheduling"

Interview in collaboration with J.P. Fingado, CEO of API Healthcare, on the subjects of healthcare scheduling efficiency and positive effects of automation on associate and patient satisfaction

#### Reuters/Business Wire Press Release (June 2013)

"Advocate Health Care Improves Patient and Staff Experience"

Highlighting Advocate's success in employing workforce management software to improve patient and associate satisfaction

#### Reuters/Business Wire Press Release (March 2013)

"API Healthcare Redefines Workforce Technology for the Future"

Scottsdale Institute Lectures

Introduction of the HwIE concept in collaboration with J.P. Fingado, API Healthcare's CEO and President

# CONTINUING PROFESSIONAL EDUCATION

| Ongoing | Scottsdale histitute Lectures  |
|---------|--|
| Ongoing | HIMSS Events and Continuing Education  |
| 2016    | HIPAA and FDA Part 11 Compliance and Regulatory Training - IBM                                 |
| 2016    | Secure Engineering for Healthcare - IBM  |
| 2016    | Natural Language Processing – IBM Watson Academy   |
| 2016    | Watson for Oncology – IBM Watson Academy   |
| 2016    | Watson for Clinical Trials Matching – IBM Watson Academy                                       |
| 2016    | Watson Discovery Advisor – IBM Watson Academy  |
| 2016    | Explorys Real World Evidence for Life Sciences – IBM Watson Academy                            |
| 2016    | IBM SPSS Workshops – University of Illinois at Chicago   |
| 2015    | Hadoop Training (environment, architecture, Pig, Hive) - MapR                                  |
| 2015    | Agile Scrum Master Education, Training, and Coaching – Valence Health                          |
| 2014    | Grant Writing Workshops – Nova Southeastern University   |
| 2013    | Cache System Management – Intersystems   |
| 2013    | Fundamentals of Data Warehousing in Healthcare – HIMSS/University of Central Florida           |
| 2013    | Building and Managing HL7 Productions - Intersystems   |
| 2012    | Healthcare Quality Improvement – Institute for Healthcare Improvement (IHI)                    |
| 2012    | Managing Healthcare Operations - Institute for Healthcare Improvement (IHI)                    |
| 2012    | Healthcare Project Management - Milwaukee School of Engineering                                |
| 2012    | Negotiation Institute – Northwestern University  |
| 2012    | Application of LEAN and Six Sigma in Healthcare – University of Wisconsin, Madison             |
| 2012    | Human Research Curriculum – Collaborative Institutional Training Initiative (CITI)             |
| 2012    | HIMSS Chicago Chapter Healthcare IT Education Symposium - HIMSS                                |
| 2012    | Crucial Conversations - Advocate   |
| 2012    | Operational Excellence in Nursing Summit – Advisory Board                                      |
| 2011    | Leadership in Chaotic World (leadership training for healthcare professionals) – Kathy Malloch |
|         | Healthcare Leadership Systems  |
| 2010    | Protecting Human Research Participants – National Institutes of Health (NIH)                   |
| 2010    | Conflict Management and Assertive Leadership Training - Advocate                               |
| 2009    | ITIL Foundation – Learning Tree  |
| 2009    | API Time & Attendance Technical Training – API Healthcare                                      |

| 2008 | API LaborWorkx Technical Training – API Healthcare            |
|------|---|
| 2008 | New Leader Orientation and Launch Training - Advocate         |
| 2007 | IBM AIX 6 and Power 6 - IBM                                   |
| 2006 | IBM WebSphere Application Server Administration, V6 AIX - IBM |
| 2006 | IBM WebSphere V6 Proof of Technology - IBM                    |
| 2006 | IBM Advanced Power 5 Virtualization - IBM                     |
| 2004 | BMC Patrol Architecture and Best Practices – BMC              |
|      |   |

#### KEYWORD INDEX OF SKILLS

## Software, Languages, Operating Systems, Databases

SPSS, R, SAS, Tableau, Duke Deduplication Engine, Excel, MATLAB, Mathematica, Lindo, C, C++, Pascal, BASIC, PL/1, Cobol, Lisp, Java, JavaScript, HTML, Unix Shells (C-shell, Korn-shell, Bourne-shell, Z-shell), Unix Operating Systems (AIX, Sun, HP-UX, SCO, Linux), Windows Operating Systems (XP, 2008, 7), Performance Monitoring Tools (HP Openview, BMC Patrol, IBM Tivoli), Lawson ERP, API LaborWorkx workforce management, EPSi budgeting and strategic planning, Oracle eGate and Intersystems Ensemble HL7/CCD clinical systems integration, IBM MDM/Initiate/EMPI, Cerner Millennium, Cerner Healthy Intent, SumTotal learning management, Advisory Board Compass dashboard products, Computer Databases (Oracle, DB2, SQL, Access), IBM WebSphere eCommerce, Ariba Supply Chain, Cerner Millenium, Epic, Meditech, eClinicalWorks, Allscripts TouchWorks, Explorys, Phytel, IBM Watson Discovery Advisor, Watson for Oncology, Watson Clinical Trials Matching, Qradar, Guardium.

## Knowledge, Skills, and Process Management

Operations and scheduling optimization programming, mathematical and business statistics, applied mathematics (numerical analysis, linear algebra, discrete math, calculus), research methodology, historical data trends, ex post facto research, qualitative research, research design, medicine/clinical concepts, clinical trials, nursing effectiveness and workflow, Lean, Six Sigma, TQM, evidence based medicine and healthcare operations research, financial analysis, clinical and financial decision support, computer programming, systems architecture and design, networking, information technology, computer science, agile software development, Scrum Master, waterfall software development, SDLC, clinical informatics, project management, program management, budget planning, fiscal responsibility, productivity, people management, team building, relationship building, vendor collaboration, change and process management, organizational transformation, organizational leadership, effective communication, negotiation, presentation, political savvy.