

THOMAS M. WHITE, MD, MS, MA

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Healthcare IT executive and Informatics researcher with 15 year track record of predicting national healthcare and research challenges, and envisioning and delivering transformational solutions for them.

HIGHLIGHTS

- Solved national healthcare IT standardization problem affecting \$1.8 billion/year in Medicare payments.
- Architect of 4 visionary software suites that each retained superior functionality to leading commercial alternatives for a decade after their creation (CORTEX, Dialogix, fMRI, PSYCKES).
- Created two internationally used software suites (CORTEX and Dialogix), used to support over \$100 million in research, and essential to the publication of nearly 1000 peer-reviewed articles.
- Created strategy and tools for eliminating millions of dollars per year in excessive polypharmacy (PSYCKES).
- Recipient of National and Governor's awards for IT innovation and workforce development (PSYCKES).
- Expert in over 50 programming, database, web, XML & statistical languages and frameworks.
- Over 70 publications and invited presentations. Complete list on CV at www.tomwhitemd.com.
- Leading Bureau of up to 25 staff and consultants with budget over \$2 million.
- Provided strategic vision and thought leadership to national and regional healthcare IT initiatives via active membership on 5 national and 6 regional Health IT and quality improvement committees.
- Championing use of federally sponsored open-source tooling (NHIN Connect, PHIN, NCI caBIG) to support intra- and cross-agency Health Information Exchange, Data Governance, and Master Data Management efforts.

STRENGTHS

- Architecting & Evaluating Healthcare IT Systems
- Balanced Scorecards & Strategy Maps
- Business Intelligence Systems
- Clinical, Imaging, and Public Health Informatics
- Clinical Trials & Services Research
- Computerized Decision Support
- Designing & Implementing Clinical Guidelines
- Electronic & Personal Health Records
- Enterprise & Clinical Data Warehousing
- Evidence-Based Practices & Benchmarking
- Master Data Management & Data Governance
- Optimizing System Usability & Client Satisfaction
- Psychometrics, Epidemiology, Neuroimaging
- Quality & Performance Management
- Shaping National Healthcare IT Standards
- Statistical Analysis, Forecasting, & Data Mining
- Strategic Planning & Analysis
- Taxonomies, LOINC, UMLS, HL7, SNOMED
- Transforming the Clinical Research Enterprise
- Web 2.0 & Service Oriented Architectures

EXPERIENCE

New York State Office of Mental Health & Columbia University, New York, NY

2001 - Present

Associate Professor of Mental Health Informatics (in Psychiatry) (2008 – Present)

Director, Bureau of Mental Health Informatics (2004 - Present)

Chief, Unit of Psychiatric Informatics (2003-2004)

Assistant Director, Bureau of Evidence Based Medicine (2001-2003)

Challenge: OMH strives to be the national leader in implementing evidence based practices for people with mental illness, but lacked the informatics infrastructure needed to achieve that goal, including an enterprise-wide clinical + financial data warehouse, disease management and business intelligence systems, computerized decision support, data standards, and an adequate electronic health record.

PROVEN LEADERSHIP

- Recruited to envision and lead a series of initiatives to improve statewide IT systems and business processes for accountability, best practices, care coordination, quality, safety, and cost-effectiveness.
- Rapidly promoted to senior executive level; now managing > \$2 million budget and multi-disciplinary staff of

up to 25 including researchers, statisticians, database architects, and IT application specialists.

- Conceived and executing corporate vision for using informatics best practices to transform mental health research and services delivery.

SPECIALIST IN CLINICAL DATA WAREHOUSES AND DECISION SUPPORT SYSTEMS

- Architected and oversaw construction of master data management, data warehouse, and reporting systems which federate data from multiple state-wide clinical, financial, and administrative systems including Medicaid, pharmacy, lab, clinical, safety, financial, and outcomes content.
- Designed and evaluated the national-award-winning PSYCKES project (<http://psyckes.omh.state.ny.us/>), a web-based disease management, quality improvement, and cost-containing decision support system that used state Medicaid and hospital administrative data to implement clinical best practices. PSYCKES resulted in 41% reduction in polypharmacy, and 58% reduction in excessive doses in inpatient hospitals. Deployment to all outpatient clinics in NY showed similar results.
- Architected the Rational Pharmacotherapy Quality Improvement (RPQI) initiative which eliminated, in 3 months, 50% of the suboptimal prescribing which remained after implementation of PSYCKES.
- Identified millions in annual cost savings by implementing PSYCKES and RPQI statewide, and led enhancement of these systems to support statewide quality improvement.

EXPERT IN HEALTH INFORMATION EXCHANGE AND ELECTRONIC MEDICAL RECORDS

- Leading multi-agency Master Data Management effort to support harmonization and sharing across agencies, including (a) statewide Master Provider and Person Indexes, (b) Enterprise Vocabulary Services, and (c) cross-agency Data Governance and Stewardship infrastructure and policy development.
- Coordinated usability analysis of existing electronic medical record (EMR).
- Spearheaded benchmarking and review of vendors competing to be new statewide EMR, with special focus on their ability to support agency research and evaluation goals.
- Researched unique needs of behavioral health electronic health records, and championed their codification within federal CCHIT process, culminating in the HL7 Behavioral Health EHR Profile.
- Advised CMS and SAMHA in creation of Behavioral Health extensions to the Medicaid Information Technology Architecture (MITA).
- As member of New York e-Health Collaborative (NYeC), and co-chair of Protocols and Services Workgroup, helped steer creation of standards for the Statewide Health Information Network for NY (SHIN-NY).

Department of Health and Human Services (DHHS), Washington, DC

2005 - 2007

Consultant to Office of the Assistant Secretary for Planning and Evaluation (ASPE) (via subcontract to Apelon)

Challenge: Despite a year's effort, contractors only achieved 50% of their goal of making the Centers for Medicare & Medicaid Services (CMS)'s mandated long term disability surveys compliant with interoperable Health IT standards. These surveys affect \$1.8 billion in annual payment decisions.

- Recruited to architect and champion innovative solution of creating new standards for missing content, achieving 100% compliance with federal goals within two months at minimal additional cost.
- Co-author on a dozen white papers and invited presentations which culminated in a Federal Register notice mandating that this process be used in all Federal Healthcare IT purchases that include assessments of functional status. This process was endorsed by the federal steering process for standards (NCVHS, CHI, DHHS, and HITSP), and is now being championed by standards development organizations (LOINC, SNOMED, HL7). These standards have been successfully demonstrated in HIMSS interoperability showcases.

Columbia University, New York, NY

1999-2001

Fellow

Challenge: Although numerous web-based survey and computer aided interviewing tools exist, none can support the complex branching, tailoring, scoring, multi-lingual, statistical, and psychometric needs of the hundreds of semi-structured interviews and surveys used within mental health research. This lack of tools was halting over \$10 million of NIH funded research. It is also a barrier to making interoperable questionnaires available within Personal Health Records (PHR)s.

- Created Dialogix (<http://www.cet-surveys.org/Dialogix>), an internationally used system for rapidly designing,

- conducting, and analyzing multi-lingual surveys and public health research.
- Dialogix has supported over \$100 million in NIH-funded grants and still beats many commercial systems.
- Extensions to Dialogix (into LOINC) have become the national standard for representing survey instruments.

National Council on Compensation Insurance, Boca Raton, FL 1999

Consultant

Challenge: NCCI lacked robust database, content management, and version control systems for its products, preventing it from web-enabling its intellectual property.

- Architected an XML/XSLT and web-based content management system for the company's intellectual property, achieving all goals in 1/8th the time and for 1/20th the cost of the next lowest bidder.

Memorial Sloan Kettering Cancer Center, New York, NY 1994

Consultant

Challenge: MSKCC's Vision Laboratory was conducting functional MRI brain imaging studies for basic research and pre-surgical planning, but lacked tools to process, visualize, analyze, and report their results.

- Designed and created fMRI, a PV-Wave-based software suite for conducting multi-dimensional image visualization, alignment, segmentation, analysis, and publication of fMRI studies.
- System exceeded all expectations, and a decade later, was still driving most of lab's analysis and reporting.

National Institutes of Mental Health, Bethesda, MD 1989 - 1997

System Architect and Consultant

Challenge: NIMH needed tools for designing, conducting, and analyzing real-time brain imaging research. It also had a two year backlog of data, and needed tools to automate the statistical analysis and results reporting of those data.

- Created CORTEX (<http://www.cortex.salk.edu/>), an internationally recognized software suite for real-time data acquisition and experimental control, and maintained it while attending medical school.
- Created a statistical analysis suite and custom statistical programming language which let researchers analyze a two-year backlog of data in three months.
- Both systems used by hundreds of researchers internationally; essential to publication of 1000 research articles.

EDUCATION

MA, Department of Medical Informatics, Columbia University, New York, NY 1999 – 2002

MD, Cornell Medical College, New York, NY 1999

MS, Neuroscience, Cornell Medical College, New York, NY 1997

PhD Candidate (ABD), Neuroscience, Cornell University, New York, NY 1990 – 1997

BA, Neuroscience, Oberlin College, Oberlin, OH 1985 – 1989

AWARDS

- Council of State Governments Innovations Award for PSYCKES, 2005
- Governor's Workforce Development Award for PSYCKES, 2004
- Phi Beta Kappa, Sigma Xi
- Member 5 National and 6 Statewide Health IT committees including 6 elected memberships.

TECHNICAL SKILLS

- **Specialized Skills:** Enterprise data warehousing, master data management, healthcare interoperability standards, decision support systems, statistics, data mining, and real-time operating system development.
- **Master Data Management:** Expert in NextGate, Mural, Initiate, Informatica, and Talend MDM platforms.
- **Programming Languages:** Over 25 years of experience ranging from Assembly to Java, including C/C++, JavaCC, LISP/Scheme, Matlab, Perl, PHP, Python, Ruby, SAS, SPSS, SOA, Web Programming, and XML.
- **Databases:** Over 15 years of modeling for, managing, and tuning MySQL and Oracle.