Department of Mental Health

Phase II – CIMOR Evaluation
(Strategic Assessment of DMH IT System Operations)

Report on Other State of Missouri Initiatives

Deliverable #9

Prepared by:

6263 North Scottsdale Road
Scottsdale, AZ 85250
Telephone: 480-423-8184

October 31, 2007

Table of Contents

List of Tables

1 Executive Summary

Fox Systems, Inc. (FOX) was engaged by the Mental Health Commission and Information Technology Services Division (ITSD) to conduct a review of the current health of the Customer Information Management Outcomes and Reporting (CIMOR) Project.

Phase II of the project includes a strategic assessment of DMH Information Technology system operations including:

- A review of current market offerings for public and proprietary systems providing functionality similar to that included in CIMOR;
- A review of other State of Missouri initiatives that may relate to DMH efforts;
- A High-Level Alternatives Analysis Recommendation Report and Cost Benefit Analysis (CBA) identifying options available to DMH.

The High-Level Alternatives Recommendations Report and CBA will be driven by the findings from this report and the other reports delivered as part of Phase II of the project.

This report presents the findings of a review of other State of Missouri initiatives that relate to the DMH information system needs.

1.1 Conclusions and Recommendations

The following conclusions have been drawn as a result of this review:

- Missouri has placed a high priority on bringing in new technology to assist in the administration of their health care programs.
- Missouri has identified such technology improvements as Electronic Medical Record (EMR)/Electronic Health Record (EHR), telemedicine, web services technology for prior authorization and e-prescribe as being applicable to their overall goals for improving healthcare in Missouri.
- MO HealthNet's EHR and CyberAccess™ capabilities bring technology to health care providers making information readily available for better coordination of care. These capabilities can help support evidence based medicine. DMH benefits from the functionality provided by these MMIS capabilities
- DMH is lagging behind other states in utilizing EMR technology in state psychiatric facilities. According to the 2006 Substance Abuse and Mental Health Services Administration (SAMHSA) commissioned survey most states reported having already implemented an EHR in their State Psychiatric Hospitals and/or their Community Mental Health System.
- Some new technologies planned for MO HealthNet such as EHR, service-oriented architecture, enterprise service bus, and multi-tiered benefit plan capabilities will enable the Medicaid Management Information System (MMIS) to be more interoperable with ('talk to') other systems of the State. This is good timing as the MO HealthNet Division is just beginning requirements analysis under their new MMIS vendor contract. MO HealthNet has already received 90% federal funding to enhance the MMIS.

- In an age of increased accountability and tightened budgets, DMH must be able to analysis treatment data to identify effective treatment practices. Once effective treatment practices are identified these can be used to implement policies concerning treatment and establish performance standards, and indicators to measure performance.

The following recommendations are being made based on the analysis of information within this report:

- The DMH collaborate with MO HealthNet on their EHR and telemedicine initiatives.
- The DMH implement EMR technology for State Psychiatric Facilities.
- The DMH collaborate with MO HealthNet to develop a robust data warehouse to support research into effective treatment practices. Agency end users expressed a strong need for an easy to use reporting capability. Implementing the MO HealthNet initiatives identified for behavioral health, including defining pay for performance and performance standards would assist the agency in administering services and measuring the quality of care provided.
- The DMH continue to keep abreast of the national standards setting activities related to behavioral health by:
    - Conducting a gap analysis of the latest Health Level 7 Behavioral Health Profiles to the requirements for an EHR prior to planning or beginning any procurement activities for an EMR;
    - Participating in the HL7 standards setting process;
    - Become an adopter state for the Behavioral Health Information Technology Architecture.

1.2 Summary of Findings

The State of Missouri is aggressively modernizing its health care information systems in response to the recommendations of the Medicaid Reform Commission created by the 2005 Senate Bill 539, the 2006 Missouri Healthcare Information Technology Task Force, and in response to the Missouri Health Improvement Act of 2007 which created MO HealthNet.

1.2.1 The Department of Social Services (DSS)

DSS MO HealthNet Division (MHD) is the State of Missouri entity with the most significant initiatives that relate to the DMH information system needs. That is largely due to the two Departments sharing many clients (58% of DMH patients are MO HealthNet eligible). As a result of this shared clientele, many of the recommendations of the Medicaid Reform Commission applied to both MHD and DMH. The Commission recommended that the Medicaid program change from a traditional payer of services to a health care program focused on improving healthcare outcomes. Maximizing the use of technology is necessary to achieve the recommendations of the Commission. The MO HealthNet program is a leader in adopting the use of innovative technologies and strategies to improve the care of participants served. CyberAccess™ is a Web-based tool that gives providers the capability to view two years drug and medical claims history for each patient, identify if a drug requires prior approval, and initiate a request for pharmacy and medical prior authorization. SmartPA™ and Smart MedPA™ contain individualized prior approval functionality, including rules-based functions specifically for

Missouri in addition to the clinical/fiscal editing and edit override functions. These tools are utilized by health care providers of both MHD and DMH.

1.2.2 MO HealthNet Division

Mo HealthNet has recently begun to reengineer the Medicaid Management Information System (MMIS). As part of the effort, they will develop and implement 17 enhancements, which will add leading edge technologies to modernize the MMIS. MO HealthNet will receive enhanced federal funding from the Centers for Medicare and Medicaid Services (CMS) for these system improvements.

Some of the planned MMIS enhancements that relate to the DMH information systems include:

- Develop and implement the capability to exchange electronic health records within the MMIS.
- A Service Oriented Architecture with an Enterprise Service Bus middleware will be implemented to support Medicaid enterprise data transfer and conversion between all Medicaid-related systems. The ESB will be used to replace custom-coded point to point interfaces between the MMIS and other systems. The ESB will support X12 EDI, HL7, Web Services and other standards required for MMIS and healthcare data exchange. This technology can be used for multiple state programs and will be made available and funded through the MMIS enhanced funding.
- Develop and implement a multi-tiered benefit package capability that encompasses those processes necessary to define the coverage for various programs, waivers, managed care plans, and third party coverage. This multiple tiered benefit package capability, when implemented, will make it possible for the MMIS to process claims for separate programs and send payment information to SAM II for multiple fund appropriations. The possibility will exist for the MMIS to process claims for Medicaid and/or other non-Medicaid programs as desired by the State.
- Implement a business rules engine within the reengineered MMIS. The use of a rules engine reduces maintenance and enhancement costs by separating business rules from application code. A rules engine addresses functional and technical challenges of designing, developing, deploying, and managing business rules in a robust, scalable, and high performance environment. When implemented, the same flexible technology used within CIMOR for constructing and editing claims using a business rules engine will be available within the MMIS.
- The DSS MHD has also issued an RFP for continuation and expansion of the web portal and web tools for patient history and access currently provided by the CyberAccess™ and SmartPA™ capabilities that enable providers to view paid claims history, receive alerts, and to initiate prior authorizations using mobile electronic devices. That RFP also includes development of capabilities to exchange electronic health records with other entities.

Senate Bill 577 enacts the following provisions affecting technology needs for the MO HealthNet program:

- An electronic web-based prior authorization system shall use best medical evidence and care and treatment.
- Subject to appropriations, the act requires a pay for performance method to be developed for MO HealthNet providers.
- DSS shall promulgate rules governing the practice of telehealth in the MO HealthNet program. Telehealth providers shall be required to obtain patient consent before telehealth services are initiated and to ensure confidentiality of medical information.[1]
- Establishes the Healthcare Technology Fund. Upon appropriation, moneys in the fund shall be used to promote technological advances to improve patient care, decrease administrative burdens, and increase patient and health care provider satisfaction. Any programs or improvements on technology shall include encouragement and implementation of technologies intended to improve the safety, quality, and costs of health care services in the state.[2]
- Missouri has been selected by the Center for Health Care Strategies (CHCS) to participate in the Pay for Performance Purchasing Institute. As part of this initiative, MO HealthNet will receive technical assistance from CHCS and other collaborators in areas such as developing incentive structure, choosing measures and engaging providers.[3]

1.2.3 Missouri Department of Health and Senior Services (DHSS)

DHSS is not actively involved in EHR development at this time. However, in its role of administering the Medicaid waiver services for the elderly the agency will take advantage of some of the tools being obtained by MO HealthNet. The MO HealthNet Pharmacy Unit recently received a Medicaid Transformation Grant[4] making it possible to enhance CyberAccess™ and SmartPA™ Web-based prior authorization capabilities to make this functionality available within DHSS regional offices. Enhanced funding has been approved by CMS under the new MMIS Fiscal Agent contract to add similar Web-based prior authorization capabilities to the MMIS. Implementing either of these enhancements would streamline the prior authorization process, reduce administrative burden to administer the program, and improve timeliness for the turnaround of provider requests under the program.

1.2.4 Current Mental Health Collaborative Efforts

The Department of Mental Health (DMH) has the following initiatives in cooperation with other Missouri state agencies involving health care information systems:

- The Missouri Mental Health/Medicaid Partnership is a collaborative effort between MO HealthNet and DMH. Health data analytic tools and evidence-based interventions are used to target high-risk Medicaid patients with severe mental illnesses and co-morbid physical health conditions to improve health outcomes.

[1] Senate Bill 577, Enacts the “Missouri Health Improvement Act of 2007”, section 208.670
[2] Department of Social Services. The Transformation of Missouri Medicaid to MO HealthNet, Recommendations Offered by the Departments of Social Services, Health and Senior Services and Mental Health, December 7, 2006, Page 16.
[3] Ibid. page 8.
[4] DSS Press Release October 12, 2007.

- The Department of Mental Health has received a Mental Health Transformation Grant to provide a comprehensive, seamless, system that utilizes evidence-based practices, integrates physical and mental at service delivery level, establishes local investment and ownership of services, and creates a unified system across the department that incorporates multiple funding streams.
- As the mental health authority for Missouri, DMH supports MO HealthNet by publishing the clinical and program standards of care for the treatment of mental illness, substance abuse and developmental disabilities. Additional health information exchange initiatives (e.g., CyberAccess™ screens for behavioral health claims history) are planned for the future.
- The DMH clinicians currently have access to CyberAccess™ and are using the tool to access Medicaid eligibility, review their patient's Medicaid claims history, and submit prior authorization requests to Medicaid. The current RFP for continuation of CyberAccess™ includes implementation of ePrescribe functionality. Additionally MO HealthNet and DMH have discussed functionality to allow DMH clinicians to view DMH claims history through CyberAccess™, which would serve as a central hub interacting with DMH data systems.
- Some preliminary work for implementing an Electronic Health Record (EHR) has been undertaken but will require substantial time and money for the Department and their healthcare providers. The Department has defined the EHR to include the total package of services provided for a lifetime of a patient – the dataset is more limited but would contain all patient episodes of care. The Electronic Medical Record (EMR) is defined as the record for a specific inpatient stay and includes a complete comprehensive record of a specific encounter.
- The Department is working with DSS to assign a unique patient identification number to all consumers accessing care through the DMH healthcare delivery system. This change will allow DMH to track services provided to consumers going on and off Medicaid eligibility under both MO HealthNet and DMH programs using the same unique identification number.

1.2.5 Missouri Healthcare Information Technology Task Force

The recommendations of the Healthcare Information Technology Task Force of 2006 are summarized within this review. The task force provided recommendations on how healthcare information can be made readily available to health care providers, consumers, and public health agencies.

1.2.6 National Initiatives

At the federal government level changes are taking place in the context of health care industry-wide movement toward health care information standards development to facilitate the electronic exchange of health care data and to improve the interoperability of diverse health care systems.

The 2004 Executive Order 13335 called for the widespread adoption of interoperable electronic health records and established the Office of the National Coordinator of Health Information Technology. For behavioral health, at the national level the Center for Substance Abuse

Treatment and the Center for Mental Health Services within the Substance Abuse and Mental Health Services Administration have been working toward the creation of an Electronic Health Record (EHR) Functional model for Behavioral Health to be included within the Health Level 7 (HL7) standard. The HL7 EHR Personal Health Record Systems Functional Model has been published for public comment as part of the process for its acceptance as the standard.

In the Medicaid arena the Center for Medicaid and State Operations' Medicaid Information Technology Architecture (MITA) initiative has emphasized the need to plan for systems interoperability and the use of standardized components and protocols as new Medicaid systems are developed. The MITA guidelines are intended to help states develop enterprise architectures that meet federal expectations in a collaborative manner to address state-specific goals and objectives. MITA's Maturity Model outlines a pathway toward achieving higher levels of business and system capability. The Substance Abuse and Mental Health Services Administration (SAMHSA) has recently commissioned work on architecture similar to MITA for Behavioral Health. This initiative is in its planning stages but is anticipated to affect Mental Health Agencies in the future.

1.2.7 Initiatives in Other States

Several other states also have electronic health records initiatives underway. In a 2006 SAMHSA-commissioned assessment of the status of states' implementation of Electronic Health Records (EHR) and Health Information the progress of states was surveyed. The outcome of this report found:

- Seventy-two percent (72%) of States (32 of 47) reported implementing an EHR in their State Psychiatric Hospitals and/or their Community Mental Health System;
- Nineteen (19) states reported having implemented an Electronic Pharmacy/Medications Ordering System in their state psychiatric hospitals. Four states reported having these systems available within their community mental health provider settings;
- Most SMHA's are using technology to help consumers access mental health care and treatment information; and,
- Forty seven states reported being actively engaged in activities to promote the use of telemedicine to provide mental health services.[5]

Many of the functionalities of Missouri's CIMOR system correspond to the EHR functions most commonly being implemented into other states' SMHA systems.

The State of Washington has developed programs to integrate physical and behavioral health services and has demonstrated some level of success in lowering health care costs for chronically ill patients with co-morbid behavioral health diagnoses, such as substance abuse or mental health problems. Studies show that those patients would usually tend to experience significantly higher medical costs than those without.

[5] State Profile Highlights. Implementation of Electronic Health Records and Health Information: 2006. Published at http://www.nri-inc.org)projects/profiles/profiles os/emr2006.pdf.

2 Department of Social Services / MO HealthNet Division

The Missouri Department of Social Services (DSS) MO HealthNet Division (MHD) is the single state agency responsible for the Missouri Medicaid program.

2.1 MO HealthNet Transformation

In 2005 Senate Bill 539 placed a sunset on the Medicaid program and created the Medicaid Reform Commission to review the Medicaid program and make recommendations for reform. Annual expenditures for Medicaid in State Fiscal Year 2006 had climbed to $6.1 billion and the program served more than 826,000 Missourians. A new approach to services is needed to ensure the sustainability of the program.

The Medicaid Reform Commission was comprised of representatives from the Governor's Office, Department of Social Services (DSS), Health and Senior Services (DHSS) and Mental Health (DMH). The Commission recommended that the program change from a traditional payer of services to a health care program focused on improving healthcare outcomes, which fosters participant responsibility for wellness through prevention, and the provision of high-quality health care. Web-based tools, access to evidence-based practice guidelines, health risk assessments for patients and Pay for Performance are some of the new elements of the program that will be introduced for service providers.[6] Another important element of the transformation is maximizing the use of technology. Senate bill 577 enacted the Missouri Health Improvement Act of 2007 and changed the name of the Missouri Medicaid program to MO HealthNet.

Ideas for transforming the Medicaid program which appear to be applicable to Mental Health and under consideration by the Mo HealthNet Work Group are shown in the table 1 below. As part of the review effort, FOX consultants identified the system functionality needed to support these initiatives and provided this information in column 3.[7]

Table 1 Options Relating to Mental Health

Focus Area	Summary of Available Options Relating to Mental Health	Supporting System(s) Functionality
Changing Roles of Participants and Providers	Identify providers with the best outcomes at the best price, using a five-star system to provide consumers and decision makers with data to make informed choices.	Robust data warehouse and analytic tools Personal Health Records
	Encourage continued collaboration between the MO HealthNet Division and Department of Mental Health on the Missouri Mental Health/Medicaid Partnership. Health data analytic tools and evidence-based interventions are used to target high-risk Medicaid patients with severe mental illnesses and co-occurring	Robust data warehouse and analytic tools Personal Health Records

[6] Missouri Department of Social Services, The Transformation of Missouri Medicaid to MO HealthNet, Recommendations Offered by the Departments of Social Services, Health and Senior Services and Mental Health, December 7, 2006, Page 13.
[7] Ibid. Appendix A.

Focus Area	Summary of Available Options Relating to Mental Health	Supporting System(s) Functionality
	chronic physical health disorders to improve their health outcomes.	
Promote evidence-based practice	Extend evidence-based practice and the principles of evidence-based medicine to all professions associated with health care, including purchasing and management. Evidence-based medicine is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research.	Rules Engine to implement clinical algorithms into P.A. processing decisions
	Promote evidenced-based mental health practices through integrated dual diagnosis treatment assertive community treatment, supportive employment and transformation initiatives.	Robust data warehouse and analytic tools
	Encourage collaboration among state departments in assuring programs meet standards of care established by the Department of Mental Health.	Rules engine to edit claims for adherence to standards. Robust data warehouse and analytic tools Publish standards of care on Website for access by clinicians
Improve efficiency and effectiveness of MO HealthNet	Coordinate resources so the audit outcomes for the DSS, DMH and DHSS can be maximized to detect and deter fraud, waste, and abuse of the MO HealthNet program.	N/A
	Reduce inappropriate prescribing and participant abuse of controlled substances.	Rules engine to edit pharmacy claims Robust data warehouse and analytic tools
	Establish the Office of Program Integrity within Department of Mental Health to prevent and detect fraud and abuse, increase audit capacity, procurement and oversight of contractors, including reviews and audits.	Robust data warehouse and analytic tools
Greater	Increase availability of services and supports	N/A

Focus Area	Summary of Available Options Relating to Mental Health	Supporting System(s) Functionality
Independence/ Mental Health	not covered by Medicaid. Examples include employment, housing, respite care and wraparound services.	
	Increase integration of primary care and basic behavioral health care by incentivizing with an enhanced rate for integrated settings.	Provide web-based viewing of client history and/or EMR capability to clinicians Robust data warehouse and analytic tools
	Expand home and community-based services in lieu of institutionalization.	N/A
Technology	Explore establishing a centralized web portal that would serve as a central hub interacting with other data systems to allow users easier access to participant data without direct inquiry into multiple state systems.	Robust data warehouse and analytic tools infrastructure
	Use Modified National Correct Coding which is an edit system developed by the Center for Medicare and Medicaid (CMS) to address correct coding methodologies and control improper coding leading to inappropriate payment.	Rules engine for editing claims
	Expand the utilization of CyberAccess™ to encompass more MO HealthNet participants, providing access to patient information by incorporating Medicaid paid medical and pharmacy claims with a patient profile.	Web-based functionality to include screens to display participant claims history Personal Health Records
	Explore the creation of electronic health records.	EMR capabilities integrated to MMIS and/or CIMOR
Uninsured Strategies	Pilot a community mental health center/federally qualified health center collaboration.	N/A

The MO HealthNet program is a leader in adopting the use of innovative technologies and strategies to improve the care of participants served. CyberAccess™ is a Web-based tool that gives providers the capability to view two years drug and medical claims history for each patient, identify if a drug requires prior approval, and initiate a request for pharmacy and medical prior authorization. SmartPA™ and Smart MedPA™ contain individualized prior approval functionality, including rules-based functions specifically for Missouri in addition to the clinical/fiscal editing and edit override functions. A Web-based Plan of Care product, Care Connection, was implemented to monitor Chronic Care Improvement Program (CCIP)

participants. This product has a care management component with intensive patient tracking by Care Coordinators/Nurse Managers for ongoing chronic care support and goal-setting assessment.

2.2 Reengineer the Medicaid Management Information System (MMIS)

The Department of Social Services (DSS) MO HealthNet Division (MHD) recently entered into a new contract with Infocrossing Health Services, Inc. (IFOX) to reengineer the Medicaid Management Information System (MMIS). As part of the contract, IFOX will develop and implement 17 enhancements, which will add leading edge technologies to modernize the MMIS. MO HealthNet will receive enhanced federal funding from CMS for these system improvements.

Some planned capabilities may include the same functionalities desired by other state agencies, such as DMH and DHSS. This would be an excellent time to collaborate with MO HealthNet on enhancements for desired functions, since requirements definition and design for the product within the MMIS is not yet finalized.

2.2.1 Electronic Health Record (EHR)

The MMIS Fiscal Agent will be developing and implementing the capability to exchange electronic health records within the MMIS. MO HealthNet plans to work with outside entities to identify system requirements and file formats for data exchange. To the extent that both MO HealthNet and DMH define the functionality for an EHR together, it would be possible to exchange this data for the 58% DMH patients that are MO HealthNet eligible.

At this time, there is not a standard format or standard content for electronic health records. DMH could collaborate with MO HealthNet and lobby for use of HL7 standards.

2.2.2 Service Oriented Architecture

An Enterprise Service Bus (ESB) middleware will be implemented to support Medicaid enterprise data transfer and conversion between all Medicaid-related systems based on XML-based messaging including Simple Object Access Protocol (SOAP) and Web Service Description Language (WSDL). The ESB will be used to replace custom-coded point to point interfaces between the MMIS and other systems. The ESB will support X12 EDI, HL7, Web Services and other standards required for MMIS and healthcare data exchange. To the extent that DMH or DHSS define the services the same as Medicaid and exchange data through the ESB (e.g., eligibility files), this technology can be used for multiple state programs and will be made available and funded through the MMIS enhanced funding.

2.2.3 Multiple Tiered Benefit Package Capability

The MMIS Fiscal Agent will be developing and implementing a multi-tiered benefit package capability that encompasses those processes necessary to define the coverage for various programs, waivers, managed care plans, and third party coverage. The contract includes processing of claims for multiple health care programs; Medicaid and non-Medicaid programs yet to be defined. The Contractor must provide a benefit plan administration system using the Rules Engine that allows flexible definition of each benefit package, recipient populations; service limitations, prior authorization; multiple payment methodologies; co-payment and/or cost sharing requirements. This multiple tiered benefit package capability, when implemented, will

make it possible for the MMIS to process claims for separate programs and send payment information to SAM II for multiple fund appropriations. The possibility will exist for the MMIS to process claims for Medicaid and/or other non-Medicaid programs as desired by the State.

2.2.4 Business Rules Engine

The MMIS Fiscal Agent will be implementing a business rules engine within the reengineered MMIS. The use of a rules engine reduces maintenance and enhancement costs by separating business rules from application code. A rules engine addresses functional and technical challenges of designing, developing, deploying, and managing business rules in a robust, scalable, and high performance environment. When implemented, the same flexible technology used within CIMOR for constructing and editing claims using a business rules engine will also be available within the MMIS.

2.2.5 Clinical Management Services and System for Pharmacy Claims and Prior Authorization

The DSS has also issued an RFP for continuation and expansion of the web portal and web tools for patient history and access currently provided by the CyberAccess™ and SmartPA™ capabilities that enable providers to view paid claims history, receive alerts, and to initiate prior authorizations using mobile electronic devices. That RFP also includes requires development of capabilities to exchange electronic health records with other entities and to add consumer health record access.

2.3 Pharmacy Services Medicaid Transformation Grant

On October 12, 2007, Gov. Blunt and DSS announced that Missouri is one of 17 states to receive a Medicaid Transformation Grant in the amount of $1.9 million from the Centers for Medicare and Medicaid Services (CMS).[8] The grant was authorized by the Deficit Reduction Act of 2005 and will run through September 30, 2009. No matching state funds are required for the grant. The grant monies will allow MHD to partner with the Department of Health and Senior Services (DHSS), using CyberAccess™ to speed up the prior authorization approval process for MO HealthNet participants enrolled in waiver services.

2.4 Senate Bill 577

This bill enacts the following provisions affecting technology needs for the MO HealthNet program:

- An electronic web-based prior authorization system shall use best medical evidence and care and treatment.[9]
- Subject to appropriations, the act requires a pay for performance method to be developed for MO HealthNet providers.[10]

[8] DSS Press Release, October 12, 2007.
[9] Senate Bill 577, Enacts the “Missouri Health Improvement Act of 2007”, Section 208.152 (19), (20) and (26)
[10] Senate Bill 577, Enacts the “Missouri Health Improvement Act of 2007”, Section 208.153.2

- DSS shall promulgate rules governing the practice of telehealth in the MO HealthNet program. Telehealth providers shall be required to obtain patient consent before telehealth services are initiated and to ensure confidentiality of medical information.[11]
- Establishes the Healthcare Technology Fund. Upon appropriation, moneys in the fund shall be used to promote technological advances to improve patient care, decrease administrative burdens, and increase patient and health care provider satisfaction. Any programs or improvements on technology shall include encouragement and implementation of technologies intended to improve the safety, quality, and costs of health care services in the state.[12]

2.5 Center for Health Care Strategies (CHCS)

Missouri has been selected by the Center for Health Care Strategies (CHCS) to participate in the Pay for Performance Purchasing Institute. As part of this initiative, MO HealthNet will receive technical assistance from CHCS and other collaborators in areas such as developing incentive structure, choosing measures and engaging providers.[13]

[11] Senate Bill 577, Enacts the "Missouri Health Improvement Act of 2007", section 208.670
[12] Senate Bill 577, Enacts the "Missouri Health Improvement Act of 2007", Section 208.975
[13] Department of Social Services. The Transformation of Missouri Medicaid to MO HealthNet, Recommendations Offered by the Departments of Social Services, Health and Senior Services and Mental Health, December 7, 2006, Page 8.

3 Department of Health and Senior Services

3.1 Electronic Health Record

As part of the research for this report, FOX consultants contacted Susan Elder and Paul Monda, Director of Information Technology Services Division at the Missouri Department of Health and Senior Services by email. DHSS is not aware of any actions to do EHR's (from a Missouri State Government position) at this time. Mr. Monda did report that he is aware of several private vendors, and hospitals that are doing EHR's as part of their own initiatives. DHSS is aware of the Presidential Executive Order mandating states to do EHR's but thus far has not seen much interest in actually making it happen at he state level.

3.2 Web-based Prior Authorization

The DHSS administers the Medicaid waiver services for the Elderly for the MO HealthNet program. The DSS Pharmacy Unit recently received a Medicaid Transformation Grant making it possible to enhance CyberAccess™ and SmartPA™ Web-based prior authorization capabilities to make this functionality available within DHSS regional offices. Enhanced funding has been approved by CMS under the new MMIS Fiscal Agent contract to add similar Web-based prior authorization capabilities to the MMIS. Implementing either of these enhancements would streamline the prior authorization process, reduce administrative burden to administer the program, and improve timeliness for the turnaround of provider requests under the program.

4 Current Mental Health Collaborative Efforts

4.1 Missouri Mental Health/Medicaid Partnership

The Missouri Mental Health/Medicaid Partnership is a collaborative effort between MO HealthNet and DMH. Health data analytic tools and evidence-based interventions are used to target high-risk Medicaid patients with severe mental illnesses and co-morbid physical health conditions to improve health outcomes. The interventions provided through this program include:

- Educating clinicians on prescribing medications consistent with industry best-practice guidelines;
- Alerts to clinicians and case managers when consumers fail to refill medications in a timely manner; and
- Provides patient health profiles and clinical recommendations for improved health care quality and care coordination to behavioral and physical health clinicians.[14]

4.2 Mental Health Transformation Grant

The Department of Mental Health has received a Mental Health Transformation Grant to provide a comprehensive, seamless, system that:

- Utilizes evidence-based practices.
- Integrates physical and mental at service delivery level;
- Establishes local investment and ownership of services, and,
- Creates a unified system across the department that incorporates multiple funding streams.[15]

4.3 MO HealthNet

As the mental health authority for Missouri, DMH supports MO HealthNet by publishing the clinical and program standards of care for the treatment of mental illness, substance abuse and developmental disabilities. Approximately 58% of DMH consumers are eligible for MO HealthNet program at any point in time and the two agencies are working closely to ensure coordination of care. CIMOR billing of claims to MO HealthNet for eligible consumers occurs on a regular schedule. CyberAccess™ capabilities are available to both MO HealthNet and DMH enrolled service providers. Additional health information exchange initiatives (e.g., CyberAccess™ screens for behavioral health claims history) are planned for the future.

4.4 Electronic Health Records

Implementing an Electronic Health Record (EHR) will require substantial time and money for the Department and their healthcare providers. The Department has defined the EHR to include the

[14] Department of Social Services. The Transformation of Missouri Medicaid to MO HealthNet, Recommendations Offered by the Departments of Social Services, Health and Senior Services and Mental Health, December 7, 2006, page 8.
[15] Ibid. Page 9.

total package of services provided for a lifetime of a patient – the dataset is more limited but would contain all patient episodes of care. The Electronic Medical Record (EMR) is defined as the record for a specific inpatient stay and includes a complete comprehensive record of a specific encounter.

In 2005, the DMH engaged a local consulting firm to perform a requirements analysis of Electronic Medical Record systems available and to facilitate meetings to address strategic options for DMH. The Tier Report identified the following functionalities as most important to the Department in implementing a health record: Note that functionalities already implemented and/or planned for implementation within CIMOR are indicated.

- Automated Scheduling
- CPOE
- Treatment Planning
- Clinical Progress Case Notes
- Documentation
- Clinical Assessments
- External Consultations
- Billing (CIMOR)
- Pharmacy (CIMOR)
- Dietary(CIMOR)
- Patient Admission, Discharge & Transfer (CIMOR)

Tier developed a list of 51 vendors from which an EHR market survey was conducted. The list was created using DMH Staff input, the HIMSS Top Vendor List and the AC Group Top Vendor lists as a basis.

- 13 vendors declined to participate or stated they were not the right answer for CIMOR
- 10 vendors no response to email or voice messages
- 10 vendors requested the survey but did not respond to the survey
- 18 vendors responded

Tier found no perfect fit for any of the systems reviewed. The capabilities most often missing included:

- Labs
- Pharmacy
- Dietary

As shown above in section 2.6 above, HL7 has recently published the Behavioral Health Profiles setting standards for Electronic Health Records for Mental Health Agencies. These profiles have identified criteria which are considered “Essential Now,” those that will be “Essential in the Future” and those that are “Optional.” Thus it will be necessary for DMH to

establish the requirements baseline and conduct a gap analysis of the requirements identified within the Tier Report and those now being required by HL7.

Also a reference to the FOX Other Market Offerings Report being produced simultaneously with this report must be made here. There have been many changes within Mental Health systems during the last two years. Some systems (e.g., Encompass and Meditech) are now available and have extensive capabilities but were not yet envisioned or implemented when the Tier Report was generated. Additionally some systems, which appeared to be viable two years ago, are not longer available in the marketplace (e.g., Qualifacts inform).

Technical recommendations that will be explored in subsequent FOX Recommendation and Cost Benefit Analysis Reports to be produced as part of Phase II of the project will include:

- Enhance CIMOR through internal development. Important considerations when using this approach include:
    - Internal development costs/expertise
    - Proprietary development causes proprietary maintenance costs
- Selecting a "Best of Breed" COTS approach would quickly bring functionality to the Department. Important considerations for bringing in a COTS product would include maintaining:
    - Interoperability through vendor capabilities
    - Interoperability through independent development
- Hybrid approach and CIMOR enhancement with vendor products integrated. With this option interoperability challenges remain and must be addressed.

4.5 CyberAccess™

The DMH clinicians currently have access to CyberAccess™ and are using the tool to access Medicaid eligibility, review their patient's Medicaid claims history, and submit prior authorization requests to Medicaid. The current RFP for continuation of CyberAccess™ includes implementation of ePrescribe functionality. Additionally MO HealthNet and DMH have discussed functionality to allow DMH clinicians to view DMH claims history through CyberAccess™, which would serve as a central hub interacting with DMH data systems to allow users easier access to participant data from Customer Information Management Outcomes and Reporting (CIMOR) system without direct inquiry into multiple state systems.

4.6 Use of Departmental Client Number (DCN) as Unique Patient ID

The Department is working with DSS Family Support Division to assign a unique patient ID to all consumers accessing care through the DMH healthcare delivery system. This change will allow DMH to track services provided to consumers going on and off Medicaid eligibility under both programs using the same unique identification number. The goal is to promote greater care coordination for consumers and improved data for reporting outcomes of mental health care provided.

5 Missouri Health Information Technology Task Force

In 2006, Governor Blunt created the Missouri Healthcare Information Technology Task Force. The task force was charged with providing recommendations on how healthcare information can be made readily available to health care providers, consumers, and public health agencies. The task force reviewed the status of Healthcare information technology adopted by the state, and its report addressed issues related to the delivery of healthcare information, identified private resources and public/private partnerships to fund efforts to adopt interoperable heath information technology, explored the use of telemedicine and made recommendations for implementation.

Recommendations of the Task Force included:

- Follow initiatives at the national level by requiring all state-funded entities to develop a plan to adopt healthcare information technology.
- Reform the Medicaid system to embrace healthcare information technology in a manner that ensures interoperability, increases consumer involvement, and reduces cost and provides transparency of quality.
- Improve public health system to require the collection of timely, accurate and detailed information that will enable assessment of community health, risk factors, research and reporting of critical findings back to the public so that proactive informed decisions can be made.
- Expand the use of telehealth and telepharmacy resources in Missouri.[16]

[16] Missouri Healthcare Information Technology Task Force, Final Report Submitted to Governor Matt Blunt, September 2006.

6 National Health Information Exchange (HIE) Initiatives

It would be impossible to discuss state technology initiatives to collaborate on the exchange of healthcare information without placing the discussion within the national framework for Health Information Exchange (HIE). Thus a short discussion of the most important national work groups and their objectives is provided in this section of the report.

Health Information Exchange is defined as the mobilization of healthcare information electronically across organizations within a region or community. HIE provides the capability to electronically move clinical information between disparate healthcare information systems while maintaining the meaning of the information being exchanged. The goal of HIE is to facilitate access to and retrieval of clinical data to provide safer, more timely, efficient, effective, equitable, patient-centered care.[17]

6.1 Executive Order 13335

In 2004, the Federal Government announced its HIE intentions. President Bush's Executive Order 13335 called for…the widespread adoption of interoperable electronic health records (EHR) within 10 years and [establishment of] the Office of the National Coordinator of Health Information Technology (ONCHIT) to provide leadership to achieve this goal. The Office of the National Coordinator of Health Information Technology is supporting four key efforts to facilitate HIE:

- National health information standards harmonization
- Demonstration projects to establish a national health information infrastructure
- Certification of health information technology products
- Exploring privacy and security barriers and solutions

6.2 Regional Health Information Organizations (RHIOs)

An expectation of Executive Order 13335 is the formation of Regional Health Information Organizations (RHIO) that will serve as networks for the exchange of EHR information for all persons in a particular region. RHIO structural success is based upon ongoing "standardization activities" including:

- Widespread adoption of Health Level 7 (HL7) formatting and protocol standard, version 3
- Acceptance of the ASC X12N 275 Claims Attachment using HL7 version 3 functionality
- The ASC (American Standards Committee) X12N 275 transactions adoption of Logical Observation Identifiers, Names and Codes (LOINC)
- Adoption of the standards being developed by Health and Human Services, Certification Commission for Healthcare Information Technology (CCHIT) and HL7

[17] "Health Information Exchange." Wikipedia. 8 Aug. 2007. <http://en.wikipedia.org/wiki/Health_information_exchange_%28HIE%29>

Some states are setting up their regions as “state-wide” others have defined the “region” as some subset of the State’s population. The idea of data sharing among “regions”, regardless of defined parameters, is that patients rarely have all of their care and records contained in a single healthcare provider setting or small geographic area. The more “regions” that operate, the greater the interoperability between them and the closer the interoperable “regions” come to a national system of health information exchange.

6.3 Nationwide Health Information Network (NHIN)

The Nationwide Health Information Network (NHIN) created will almost certainly consist of a "network of networks.” A collection of interconnected, interoperable health information exchange (HIE) networks that are, in turn, a collection of interconnected, interoperable health information systems. To interconnect these HIEs, we need to establish consistency in the interfaces that transport data between the various subsystems. This consistency is required for both:

- Technology (What message formats will we use?)
- Common terminology and definitions (standards); and
- Policy (Is it appropriate to make data available to this type of user in this specific setting?).[18]

6.4 Barriers to Health Information Exchange

The concept of “nested” networks highlights the complexity of the HIE cross-organizational endeavor. National HIE efforts that help set foundations and standards lag industry adoption, creating asynchronous systems and reinforce the establishment of new barriers to information exchange. The industry has noted four major areas of concern that have surfaced in almost every HIE initiative. Recent experience adds a fourth barrier that may be the most difficult to overcome:

- *Organizational Alignment* – These issues manifest as the lack of commonality in stakeholder interest, a lack of clarity regarding the State-level HIE and the Federal NHIN roles and the absence of demonstrated strategies for success.
- *Privacy and Security* – The overall level of “trust” must be increased in order to share this highly sensitive data across the many organizational entities. Data sharing among competitors in the healthcare arena is a prerequisite for HIE success and must be effectively addressed. A long-term data “custodianship” structure has not been identified.
- *Funding and Long-term Sustainability* – The lack of a “standard” for business case development and the perceived “high cost of entry” are two of the aspects of funding that have surfaced in HIE efforts nationwide.[19]

[18] Marc Overhage. “Health Information Exchange: ‘Lex Parsimoniae.’” Health Affairs. Aug., 2007
[19] Cal RHIO Summit Report, “Barriers and Solutions to Health Information Exchange”

- *Standardized Data for Semantic and Systemic Interoperability* – Without widespread acceptance and adoption of a standard data model, organizations may be able to exchange data, but will not likely be able to correctly interpret information received.

These barriers may be overcome by implementing strong quality assurance measures:

- *Quality Planning* – Quality Planning involves identifying which quality standards are relevant to the project and determining how to satisfy them.
- *Quality Assurance* – Quality Assurance is all the planned and systematic activities implemented within the quality plan or system to provide confidence that the project will satisfy the relevant quality standards.
- *Quality Control/Independent Verification & Validation (IV&V)* – Quality Control and IV&V involve monitoring specific project results to determine if they comply with relevant quality standards, and identifying ways to eliminate causes of unsatisfactory results.

6.5 Medicaid Information Technology Architecture (MITA)

The original purpose of using technology was to address the need to automate manual processes and provide a mechanism for data storage and retrieval. Now that technology has been applied to several business areas associated with Medicaid (e.g., claims, eligibility, Program Integrity) for the last few decades, a primary focus is to make all those systems interoperable or to have the ability to 'talk to each other'. Achieving interoperability can be accomplished as each of the operational systems is replaced or modified if interoperability is recognized as an objective during the system replacement or modification and if industry standards are utilized. The Medicaid Information Technology Architecture (MITA) initiative has emphasized the need to plan for systems interoperability and the use of standardized components and protocols as new Medicaid systems are developed. When interoperability is achieved through system standards, States may be able to achieve further program efficiencies and cost savings through sharing system components.

MITA is the Center for Medicaid and State Operations' (CMSO) effort to provide a national Architecture Framework in which Medicaid business drives technology. MITA Framework 2.0 defines a set of principles and guidelines, models for documenting Medicaid business and technology, data and technical standards, recommended solutions for business and technology requirements, and guidelines for adapting MITA to state-specific goals and objectives. CMSO intends the MITA initiative to be a collaborative effort with the states, bolstered by governance to manage scope, change, and participation. MITA guidelines are intended to help states develop flexible enterprise architectures that meet federal expectations.

As shown in Table 2 below, the MITA Maturity Model is a pathway of continuous business improvement toward a realistic future state. Each higher level of maturity incorporates the best practices of the level below and, more importantly, introduces new higher level capabilities. When planning for future MMIS procurements, it is important to look at the state's goals and objectives 5 to 10 years into the future.

Table 2 MITA Levels of Maturity

Definition of State Medicaid Levels of Maturity				
Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Agency focuses on meeting compliance thresholds for State and Federal regulations, primarily targeting accurate enrollment of program members and timely and accurate payment of claims for appropriate services.	Agency focuses on cost management and improving quality of and access to care within structures designed to manage costs (e.g., managed care, catastrophic care management, and disease management). Focus on managing costs leads to program innovations.	Agency focuses on adopting national standards, collaborating with other agencies in developing reusable business processes, and promoting one-stop-shop solutions for providers and customers. Agency encourages intrastate data exchange.	Agency benefits from widespread and secure access to clinical data; focuses on improvement of health care outcomes, empowering beneficiaries and provider stakeholders, measuring objectives quantitatively, and ensuring overall program improvement.	Agency focuses on fine tuning and optimizing program management, planning, and evaluation since it has benefited from national (and international) interoperability and previously noted improvements that maximize automation of routine operations.

MITA continues to evolve and now includes the Business Architecture (business areas/ processes, business capabilities to support business processes and maturity model for advancement of levels); the Information Architecture (conceptual/logical data model); and the Technical Architecture (technical capability model). Some of the associated technology and standardization efforts include:

- Improvement of Business Process descriptions through CMS governance
- Development/Improvement of Capability Model through National Medicaid EDI HIPAA (NMEH) Work Group
- Development of process models utilizing Unified Modeling Language (UML) and HL7 methodology
- Adoption of underlying data structure based on HL7 V3 RIM

The Substance Abuse and Mental Health Services Administration (SAMHSA) has recently commissioned work on a Behavioral Health complement to MITA. This initiative is in its planning stages but is anticipated to affect Mental Health Agencies in the future. A definite timeline is not yet established.

In early 2005, SAMHSA and CMS joined forces to pilot, in a few States, the engagement of State MH and SA agencies with staff of their Medicaid program to build interoperable cross system data systems through participation in the MITA processes. The core work of the project is to create an infrastructure that allows for sharing administrative and clinical data across Medicaid and mental health and substance abuse agencies and through integration with MITA, building towards its incorporation into national standards. Goals of the CMS/SAMHSA interoperable State pilots were to:

- Be mutually beneficial to all State and Federal stakeholders
- Support State-wide client-centric systems (rather than provider-based systems) with information linked and organized at the consumer level
- Transform existing Medicaid and other State agency systems to create a richer information asset capable of serving multiple needs and constituencies
- Increase the States' "return on investment" by reducing duplicative costs and allocating costs to the benefiting programs based on federal procurement rules and sound management practices.

The new SAMHSA/CMS project, Adaption of MITA to Behavioral Health Business Processes, builds on many of the current accomplishments and other initiatives in health information technology and exchange. It is also aligned and furthers the work of the NHIN, and is intended to foster integrated business and information technology transformation and improve the administration of Medicaid agencies. It is also aligned with the DHHS Secretary Mike Leavitt's Value Driven Health Care Initiative which builds on collaborative efforts to promote four cornerstones for health care improvement. As a result, the behavioral health adaptations within MITA shall reflect not only State level operations and program interactions, but also the interactions between the Federal and State components of Medicaid.

6.6 Health Level 7 and SAMHSA Efforts

The Center for Substance Abuse Treatment and the Center for Mental Health Services (CMHS) within the Substance Abuse and Mental Health Services Administration (SAMHSA) is working with HL7 in creation of an EHR Functional model for Behavioral Health. This model will serve as the basis for CCHIT Testing. Results will be submitted to the HL7 EHR Technical Committee. The two behavioral health profiles are expected to address both outpatient and inpatient settings.

The Behavioral Health Profiles have been developed by the Behavioral Health Profile Working Group within HL7, which is sponsored and facilitated by:

- The Center for Mental Health Services
- The Center for Substance Abuse Treatment Substance Abuse and Mental Health Services Administration
- U.S. Department of Health and Human Services

In May 2006, a letter signed by the directors of the Center for Mental Health Services, A. Kathryn Power, and the Center for Substance Abuse Treatment, H. Wesley Clark, M.D., J.D. was distributed to more than one hundred thirty behavioral health professional and institutional providers, professional associations, provider trade associations, state and local mental health and substance abuse treatment agencies, and consumer groups.

The letter solicited volunteers to participate in a lengthy series of conference calls that would discuss the HL7 Electronic Health Record System (EHR-S) Functional Model, function by function, and conformance criterion by conformance criterion with the intent of determining its importance and utility for a behavioral health oriented EHR.

More than 65 volunteers came forward to contribute to this profile building endeavor. These behavioral health stakeholders included

- Psychiatrists
- Psychologists
- Clinical social workers
- American Psychiatric Association
- American Psychological Association
- Blue Cross Blue Shield Network
- Software and Technology Vendors Association
- Consumers and other interested parties

Each volunteer received a number of documents immediately before the two, two-hour per week conference calls that occurred between July 2006 and August 2007. These documents included a copy of the EHR-S Functional Model, a ballot spreadsheet for the entire functional model, an introductory paper explaining what was to be accomplished, and the procedures to be followed for balloting.

- The first two teleconferences stressed two themes.
    - Defining the capabilities a BH EHR-S should provide, not content, not architecture, not platform, and not what users were required to do.
    - This would be a consensus driven undertaking. To this end the group adopted the criterion that nothing would be adopted without a minimum two/thirds majority approving it.
- Once these issues were clarified, all participants were requested to complete the EHR-S functional model ballots that had been distributed.
- As with all of the ballots the BH Profile Group used during the construction of the profile, the ballot was a two worksheet spreadsheet.
    - The top layer replicated the information infrastructure (IN), support services (S), and the direct care (D) functions and conformance criteria verbatim.
    - The second layer contained abbreviated versions of the functions and criteria plus columns containing “Essential Now,” “Essential Future,” “Optional,” and “Reject” radio button for functions and “SHALL,” “SHOULD,” “MAY,” and “REJECT” radio buttons for conformance criteria, plus columns for comments and suggested restatements.

The Behavioral Health Profiles are based on the EHR-S Functional Model. The EHR-S FM provides a reference list of over 160 functions available in an EHR, based upon axes; functions and care settings, and described from a user’s perspective. Registration Release 1.0 was published on September 14, 2007.

The HL7 EHR Interoperability Model (EHR/IM) provides a reference list of characteristics and requirements for interoperable EHR records. EHR/IM conformance criteria permit EHR records to be validated (vis-à-vis the interoperability characteristics) at points of EHR record origination, transmission and receipt.

The EHR Personal Health Record Systems Functional Model (PH-S FM) is now available from the HL7 Technical Committee for public comment in preparation for balloting later this year.

7 Other States' Initiatives

This section of the report includes a summary of other States' initiatives to exchange health information through the implementation of technology to improve interoperability between programs.

7.1 Electronic Health Records

The SMHA Profiles System was developed by the NASMHPD Research Institute, Inc., under contract No. 280-99-0502 from the Substance Abuse and Mental Health Services Administration /Center for Mental health Services (CMHS/Division of State and Community Systems Development/Survey and Analysis Branch). Results are posted on their web site at: http://www.nri-inc.org. Highlights of this work considered when making recommendations to the Department are provided within this section.

In 2006, SAMHSA commissioned an assessment of the states to gather information on the status of implementation of Electronic Health Records (EHR) and Health Information. A total of 47 States reported their progress. The major findings of SMHA are:

- Seventy-two percent (72%) of States (32 of 47) reported implementing an EHR in their State Psychiatric Hospitals and/or their Community Mental Health System;
- Most SMHAs are using technology to help consumers access mental health care and treatment information; and,
- Eighty percent (80%) of SMHAs (35 of 44 states) reported being engaged in activities to promote the use of telemedicine to provide mental health services.

The EHR functions most commonly being implemented into SMHA systems are reproduced in Table 3 below. Note that a column denoting CIMOR functionalities have been added to the table to allow readers to quickly determine how Missouri DMH compares to other states.

Table 3 State Mental Health Implementation of EHR Functionality

State Mental Health Implementation of EHRs in 2006[20]	State Hospitals		Community Providers		Functionality In CIMOR	
	Percent	States	percent	States	Yes	No
Patient Admissions, Discharge, Transfers	91%	21	72%	13	√	
Billing as part of EHR system	82%	18	67%	12	√	
Pharmacy	83%	19	50%	7	√	
Treatment Planning	68%	15	56%	10		√
Clinical Assessments	67%	14	58%	11	√	
Dietary	68%	13	15%	2	√	

[20] State Profile Highlights. Implementation of Electronic Health Records and Health Information: 2006. Published at http://www.nri-inc.org)projects/profiles/profiles os/emr2006.pdf.

State Mental Health Implementation of EHRs in 2006[20]	State Hospitals		Community Providers		Functionality In CIMOR	
	Percent	States	percent	States	Yes	No
Progress/Case Documentation	63%	12	61%	11	√	
Physician Order Entry	52%	11	29%	4		√
Scheduling	53%	10	50%	8		√
Exchanging Client info with other providers	37%	7	33%	5	√	
External Consultations	39%	7	29%	4		√
Medication Algorithms	33%	6	7%	1		√
Other EMR Functions	50%	6	17%	1	√	

Only six states (AZ, MA, NC, NV, TX and UT) reported having agreements or rules that permit the sharing of electronic medical records among providers. Note that because there are as yet no nationally recognized standards for EMRs/EHRs, it should not be assumed that the content or functionality of the various states efforts are similar.

Nineteen (19) states reported having implemented an Electronic Pharmacy/Medications Ordering System in their state psychiatric hospitals. Four states reported having these systems available within their community mental health provider settings.

Most states have websites and publish educational information to assist consumers (e.g., locating community health centers, hotline numbers, and educate the public about mental illness). Using technology in this manner assists PC literate consumer's to find information about where and how to access mental health services. Only five states (CA, HI, NV, NJ, and UT) reported making electronic Personal Health Information accessible to consumers.

The use of telemedicine appears to be growing. Thirty-five (35) of forty-four (44) states reported being actively engaged in activities to promote the use of telemedicine to provide mental health services. Funding for such services was provided under the State Medicaid program and/or through SMHAs funds. Seven (7) states reported having changed their state licensure or scope-of-practice restrictions to promote and encourage the use of telemedicine.

7.2 Washington Medicaid Integration Partnership

To address quality issues and potentially reduce spending in the long term, some state Medicaid programs are creating programs to integrate physical and behavioral health services. Studies show that chronically ill patients with co-morbid behavioral health diagnoses, such as substance abuse or mental health problems, tend to experience significantly higher medical costs than those without, and that treating these mental health and substance abuse issues can lower health care costs for these patients overall.[21] One established program, the Washington Medicaid Integration Partnership (WMIP), has already documented success.

[21] Olfson, M., et al., Mental Health/Medical Care Offsets: Opportunities for Managed Care, Health Affairs March/April 1999, 18:2.

Washington State defines service integration as "bringing different Medicaid-funded health care services together in a coordinated, client-centered framework" to improve patient services and satisfaction.[22] The WMIP is a demonstration project that began in January 2005 and is currently serving 2,700 Medicaid enrollees who are eligible for supplemental security income (SSI) in Snohomish County. The demonstration is budgeted to enroll up to 6,000 individuals. Outreach efforts are being conducted to increase enrollment, including auto-enrollment and mailings to dual Medicaid-Medicare eligibles. The goal of WMIP is to integrate managed care services in mental health, drug and chemical dependency treatment, and medical care.

Results of a recent evaluation conducted by the Department of Social and Health Services (DSHS), with support from the Center for Health Care Strategies, found:

- Forty percent (40%) of patients included in this demonstration felt their care was better coordinated than before enrolling with WMIP's managed care contractor.
- Twenty-four percent (24%) reported that services provided by the health plan improved in that there were fewer delays while waiting for approval for care, shorter waiting times for appointments for routine care, and better customer service and less paperwork.
- Seven percent (7%) of clients thought their care coordination had declined. Levels of reported satisfaction with the managed care contractor were lower in terms of accessing assistance by phone during office hours, getting help for an injury or condition that required immediate care, and prescription drug coverage.

A recent DSHS study found that, by integrating mental health treatment with medical care, up to fifty percent (50%) of the cost of such treatment was offset. Adding psychotropic medication into the mix offset costs by up to 64 percent.[23]

Based upon the positive results thus far, the agency may add more counties to the program in 2008.

7.3 E-health Snapshot

Information and communication technologies offer promise for improving outreach to families with uninsured children. Although Web technologies are readily available in the United States, and widely used for business, to date these technologies have not been widely deployed to improve the administration of government healthcare programs such as Medicaid and./or SCHIP though there are many benefits to doing so more extensively. Promising practices for deploying outreach to families with uninsured children through the Web-based technologies identified in e-health snapshot include:

- Use available technology to educate families about the value of health insurance.[24]
- Simplify the enrollment and reenrollment processes used by families to keep children insured through allowing families to apply and renew coverage online from home. Examples of success stories include Pennsylvania's online screening and application tool COMPASS.[25]

[22] Innovative Medicaid Integration Pilot Project Shows Improvement Over Two Years, DSHS press release, January 26, 2007.
[23] "Integration of Medicaid Services to Improve Health Outcomes, "DSHS Fact Sheet, January 2007.
[24] www.usa.gov
[25] www.compass.state.pa.us

- Families submitting health program applications simultaneously with other programs applications. Linking Medicaid and SCHIP with other public programs can help reach more families as seen in California.[26]
- Engage health providers to help families apply through a "virtual gateway" created by Massachusetts that allows hospitals and community health care centers to help people apply for coverage online.[27]
- Allow for e-signatures to enroll children.
- Automate the collection of eligibility data and automatically enroll eligible children using database matching routines and information obtained from other public programs.
- Coordinate efforts across state agencies by sharing data as well as using enterprise service bus or other middleware to integrate applications across otherwise incompatible and siloed systems. Visioning technology system-wide can address the challenge of collaboration among and between public programs up front and ensure that each technology improvement serves the business functions of the whole enterprise – not just a single agency.[28]
- Where it is beneficial to share assets, doing so can free up resources to improve other technologies. Michigan saved $97 million in 2004-2005 by consolidating technology operations from 19 executive branch agencies. There are many functions that are common, for which agencies do not need specialized applications, such as e-mail, security, technical support, and data centers.
- Build security and firewall measures into all technology products to ensure families have provided consent before information can be exchanged; and establish Memorandums of Understanding between agencies to ensure data is only used for purposes of enrollment.
- Use data brokering systems to manage data, linking directly to primary records to get timely data and building error protections into electronic verification procedures.

The conclusion of the Children's Partnership was that web-based technology is available to make health insurance programs more accessible and responsible to family needs. Using this technology will make the programs more accountable to the public. Putting the new web-based technology tools to work will require commitment from federal and state leaders, philanthropic and corporate partners, to make the necessary investments, and to work collaboratively.[29]

[26] www.expresslaneinfo.org/ele/ca
[27] www.gateway.hhs.state.ma.us/portal/dt
[28] Liz Schott and Allison Logie, State of Washington, Improving Food Stamp, Medicaid and SCHIP Participation. Strategies and Challenges, Final Report (Princeton, N. J.: Mathematica Policy Research, Inc. Feb. 2002) xi.
[29] Beth Morrow with Dawn Horner, The Kaiser Commission on Medicaid and the Uninsured "Harnessing Technology to Improve Medicaid and SCHIP Enrollment and Retention Practices" prepared by the Children's Partnership, May 2007

8 Conclusions

The following conclusions have been drawn as a result of this review:

- Missouri has placed a high priority on bringing in new technology to assist in the administration of health care programs. This is readily apparent from the multitude of initiatives itemized within this report being undertaken within state government.
- Missouri has identified such technology improvements as EMR/EHR, telemedicine, web services technology for prior authorization and e-prescribe. These technologies have been recognized as viable and have been funded for development.
- MO HealthNet's EHR and CyberAccess™ capabilities bring technology to health care providers for better coordination of care. These capabilities can help support evidence based medicine and pay for performance. These technologies that are already being used by some Missouri health care practitioners have illuminated the potential for a much wider usage and stimulated the recognition of expanded applications.
- DMH is lagging behind other states in utilizing EHR technology in state psychiatric facilities. According to the 2006 SAMHSA survey most states reported having implemented an EHR in their state Psychiatric Hospitals and/or their Community Mental Health System.
- Some new technologies planned for MO HealthNet such as EHR, service-oriented architecture, enterprise service bus, and multi-tiered benefit plan capabilities will enable the Medicaid Management Information System (MMIS) to be more interoperable with ('talk to') other systems of the State. This is good timing as the MO HealthNet Division is just beginning requirements analysis under their new MMIS vendor contract. MO HealthNet has already received 90% federal funding to enhance the MMIS.
- A robust data warehouse will be needed to support the MO HealthNet initiatives identified for behavioral health. In order for the multiple state agencies involved in the delivery of health care, social services, and behavioral health care to make the best use of their data, a shared data warehouse will be needed. Agency end users expressed a strong need for an easy to use reporting capability.
- In an age of increased accountability and tightened budgets, DMH must be able to analysis treatment data to identify effective treatment practices. Once effective treatment practices are identified these can be used to implement policies concerning treatment and to establish performance standards and indicators to measure performance outcomes.

9 FOX Recommendations

The following recommendations are being made based on the analysis of information within this report:

- The DMH collaborate with MO HealthNet on their EHR and telemedicine initiatives.
- The DMH collaborate with MO HealthNet to define requirements for a robust data warehouse for use by all state agencies involved in healthcare.
- The DMH continue to keep abreast of the national standards setting activities related to behavioral health by:
    - Conducting a gap analysis of the latest Health Level 7 Behavioral Health Profiles to Tier report functionalities prior to planning procurement activities for EMR technology;
    - Getting involved with the HL7 standards setting process; and
    - Becoming an adopter state for the Behavioral Health Information Technology Architecture.