
HMA

HEALTH MANAGEMENT ASSOCIATES

Nebraska Study of Health Data Systems

Interim Report

LB 657 (2015)

PREPARED FOR THE NEBRASKA DEPARTMENT OF HEALTH AND HUMAN
SERVICES

BY

HEALTH MANAGEMENT ASSOCIATES

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*Research and Consulting in the Fields of Health and Human Services Policy, Health Economics
and Finance, Program Evaluation, Data Analysis, and Health System Restructuring*

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Summary

Introduction

The Information Technology (IT) systems the Nebraska Department of Health and Human Services (DHHS) uses to collect, manage, share and report data can impact DHHS's and the State's ability to identify opportunities to improve program quality and efficacy, achieve cost efficiencies, and improve health care effectiveness.¹ Having accessible, quality data is key to health system reform; without the right data or the IT infrastructure to easily manage and share that data, it is difficult if not impossible to analyze program capacity and effectiveness, create actionable reports, or make relevant clinical information available to clinicians and systems of care. Ultimately, this impedes providers' and systems' ability to proactively intervene across the spectrum of care and prevent unnecessary utilization and costs. To realize efficient, effective health care solutions, DHHS needs to be able to understand what data is necessary to achieve transformation and the best vehicles for not only collecting and aggregating the data, but for analyzing and reporting it in such a way that it is meaningful and actionable.

Interim Report to the Legislature

As requested by the Nebraska Legislature in LB 657 (2015), this interim report provides the following:

- Scope of Work
- Timeline and Schedule
- Status as of June 25, 2016

Scope of Work

Given the complex nature of the work and the short time frame for developing deliverables, HMA used a structured project management approach to ensure the work would be comprehensive enough to provide the level of information requested by the Nebraska State Legislature, and still be completed by the designated deadline. Additionally, while project participants acknowledged that including systems and data outside of DHHS would provide a more complete picture of the healthcare-related data and systems across the State enterprise, given the abbreviated timeline, stakeholders agreed to focus on the core data and IT systems at DHHS. However, there is general agreement that to truly understand the full impact and aspects of all State spending on health and healthcare services, it will be essential for the State to do similar analysis of data and systems across other agencies and related programs, including the Departments of Correctional Services, Education, and Insurance, as well as the Nebraska Health Information Initiative (NeHII) and others.

The project is divided into two primary components:

1. Analysis of the "current state" of data and IT systems, intended to provide a clear picture of what exists today, where it is, how it is being used, and who is using it.
 - a. Using existing documentation to map current data enterprise architecture and identify

¹ Throughout this report HMA uses "DHHS" to identify the Nebraska Department of Health and Human Services. Where "State" is used, this refers to the larger Nebraska government.

- gaps in data and data analytics.
 - b. Documenting how DHHS is collecting, warehousing, sharing, and using health, health care and social determinants of health data.
 - c. Cataloguing regulatory and legal challenges to enhancing data sharing and use.
2. Development of recommendations and a “roadmap” for moving toward a future “ideal state,” based on the analysis of the current state of data and IT systems, that incorporates and integrates various data and information more seamlessly and in ways that State officials and staff can better use to inform program decisions and management. The “to-be” should leverage existing infrastructure, systems, and software to the extent possible.

Scope of Work - Status

Review of current healthcare program documentation for data and IT systems. To date, HMA has reviewed a range of DHHS data and IT documentation, including the following:

- *Medicaid Information Technology Architecture (MITA)* – MITA is an initiative of the Centers for Medicare and Medicaid Services (CMS) used to establish national guidelines for technologies and processes that improve program administration for the State Medicaid Enterprise. CMS requires each state to complete a MITA 3.0 State Self-Assessment to obtain enhanced federal funding for its Medicaid program. All technology-related funding requests from the state Medicaid agency to CMS must reference MITA status and explain how MITA maturity will be enhanced through the funded work.
- *State Medicaid Health Information Technology Plan (SMHP)* – The SMHP identifies the health information technology (HIT) planning activities DHHS will engage in over the next five years that may be eligible for 90 Percent HIT Administrative Match from CMS.
- Nebraska DHHS Requests for Proposals, including:
 - *Medicaid Managed Care Organization Request for Proposals;*
 - *Request for Proposals 5330Z1 for the purpose of selecting a qualified contractor to provide Data Management and Analytics (DMA) Services;*
 - *Data Management and Analytics, RFP 5330Z1;*
 - *Implementation Advanced Planning Document (IAPD)* – The IAPD is used to submit a request to the CMS to get approval for proposed federally-supported IT projects; and
 - *Medicaid Management Information System (MMIS) Request for Proposal to identify a Data Management and Analytics vendor.*
- Minutes, Appropriations Committee, for the purpose of conducting a public hearing on LB154, LB532, LB533, LB560, LB417, LB110, LB593, LB496, LB108, and LB436 heard on March 03, 2015.

Data and IT Systems Survey. HMA developed and conducted a survey of DHHS Division leaders about DHHS programs and data (data collected, how information is collected, stored, used, secured, etc.), and barriers, challenges, opportunities, and priorities. The survey was designed to identify:

- The healthcare programs that reside in each Division and the data being collected for each program.
- Who collects the data.
- How data are collected and stored.
- What the data are used for and in what formats.

- Specific security, confidentiality and privacy requirements related to each program/system.
- Division staff who support data collection, data analytics and reporting, and the IT systems used for each (number, function, and skill sets).
- Perceived and real barriers and challenges to collecting high quality, timely, reliable healthcare program data and suggested solutions.
- Perceived and real barriers and challenges to sharing healthcare program data across DHHS and for aggregating data.
- Perceived priorities around unmet needs for data and information.

Key Informant Interviews. After the survey was administered, HMA interviewed Division leaders and other identified stakeholders to gather additional detail on current strengths and limitations of data and the IT systems used to collect, store, manage, and analyze data, as well as to begin assessing key stakeholders’ perceptions of what the ideal future state for health data and IT systems should look like in Nebraska. The interviews were also used to identify strengths of existing efforts and data, and areas upon which to build the “ideal state” roadmap.

Compilation and Analysis. HMA has begun to create a comprehensive list of Federal, State, Legislative, and internal program management reports and descriptions of the key data elements and metrics for each Division’s identified healthcare programs. The team has begun to develop a matrix of DHHS’s health care programs, the core data they collect, the software programs and IT systems that support them, any specific security/privacy requirements, and current analytic/IT staff support. Technological issues identified in the surveys or during subsequent conversations, such as data definition and mapping, extraction, transformation, and loading challenges, are being catalogued.

HMA has also begun creating an inventory of inter-agency data use/sharing agreements and agencies’ existing abilities to share and collaborate, including perceived regulatory barriers to sharing certain types of data (e.g., federal limitations on sharing substance use data under 42 CFR Part 2). Additionally, HMA has begun compiling high-level summaries of the core data that include: data elements; types of data; data collection methods; frequency of data collection; quality of data collected; data storage and access; data reporting; and sharing.

Gap Analysis. The information collected through document review, surveys, and interviews will be assessed to summarize and analyze the current state, assess the strengths and gaps across DHHS programs, data and systems. The analysis will support recommendations for immediate next steps and longer term improvements. This will include identifying “quick win” opportunities for sharing or aggregating data with minimal effort, as well as identifying where medium and longer-term program collaboration, software and systems upgrades, or new procurements may be required to achieve more comprehensive, DHHS-wide data analytics.

Interim Analysis and Findings

Assessment of the types of actionable information that are available within the current system.

Preliminary information gathered through the survey and stakeholder interviews has shown that for a variety of reasons, Nebraska DHHS has limited access to actionable data. Barriers include:

- Real and perceived legal barriers.
- Data governance issues, such as “source of truth,” access to sensitive data, universal definitions of data, etc.
- Limited ability for staff to easily obtain data needed to conduct programmatic work (role-based access limitations, etc.).
- Systems and software that do not support Divisions and program data needs.
- IT systems that lack the ability to “talk” to each other, are not “user friendly,” and other issues due to a formerly siloed approach to IT procurement.

Over the past few years, DHHS has begun to take a more organization-wide approach to systems and software that will enable it to comply with provisions of the Patient Protection and Affordable Care Act (ACA), the CMS MITA Framework, and the CMS seven standards and conditions that must be met by the states in order for Medicaid technology investments to be eligible for enhanced match funding. This will also enable the State to more effectively achieve its current and future objectives of providing higher quality, more cost efficient healthcare to its citizens. For example, DHHS has developed a Data Management Strategy, the foundation of which is a Data Management and Analytics (DMA) vendor, currently in the procurement stage. Though focused on Medicaid, contracted DMA is intended to establish a foundation that can also be used for other DHHS programs.

DHHS is concurrently moving the majority of Medicaid clients into managed care organizations while internally building out its data analytics capabilities. With the right tools, this will allow DHHS to focus more on information, outcomes, and quality, and less on day-to-day operations. DHHS’s Information Systems and Technology leadership is actively engaged in the process and has been working to harmonize procurement for all IT needs across Divisions, to ensure they map the DHHS plans and support the DMA. Their strategy includes a focus on promoting interoperability within DHHS, as well as across State agencies. The DMA itself is not a single solution; however, without architectural preparatory work and data governance structures in place, DHHS cannot realize the full power of the DMA. To complete these critical components, DHHS also needs a comprehensive understanding of all the healthcare and health-related data and IT systems across DHHS.

DHHS’s Divisions face significant challenges accessing and sharing timely data. The lack of information and data is less a barrier for DHHS than the challenges posed in accessing necessary data quickly and easily, and the difficulties in sharing data across programs. DHHS collects a lot of useful information; the problem is that many of its systems were not designed for reporting and data analytics at the level now required to support more sophisticated programs such as integrated care, complex case management, full-risk managed care and value based payment models. While most Divisions and programs have the resources and systems in place to capture and report necessary data to meet Federal, State and Legislative requests, staff spend an extraordinary amount of time compiling these reports because the systems are not easy to use.

Next Steps – Roadmap Development

Based on the analysis and findings of the current state, HMA will work with DHHS to develop a set of specific recommendations and a roadmap for DHHS and the State to use to move toward its ideal future

state for data management, data sharing, data analytics, and the IT systems and infrastructure necessary to support them. This roadmap will include:

- Options for software and systems available to DHHS to support identified gaps.
- Steps for improving sharing of data across systems, reducing data duplication, and using/accessing data more efficiently and effectively.
- Data and systems infrastructure (including workforce), governance and regulatory/compliance recommendations to support better data sharing and analytics.

Timeline

Due to delays in executing the contract between HMA and DHHS, the deadline for submission of the final Report was pushed out 10 weeks, to be submitted by August 12, 2016. The Gantt Chart provided in Appendix B shows the updated timeline for project activities and deliverables.

APPENDIX A: Key Informants Surveyed and Interviewed for this Project

The following individuals were surveyed and interviewed:

Behavioral Health

Tanner Mitten

Sara Steele

Stacey Werth-Sweeney

Heather Wood

Developmental Disabilities

Brad Wilson

Michelle Waller

Medicaid and Long-Term Care

Kris Azimi

Kim Collins (Financial Services)

Ruth Vineyard

Aaron Ziska

John Lasota (Contractor)

Keith Morehouse (Contractor)

Veterans Homes

Dawn Longwell

Information Systems & Technology

Chris Hill

Dave Walker

Interviews outstanding

Public Health: Ming Qu

Children and Family Services: Doug Beran

APPENDIX B: Project Timeline Gantt Chart

Nebraska Healthcare IT and Data Assessment

